

DO IT YOURSELF
NATURAL EYESIGHT IMPROVEMENT
Original and Modern Bates Method
with Better Eyesight Magazine

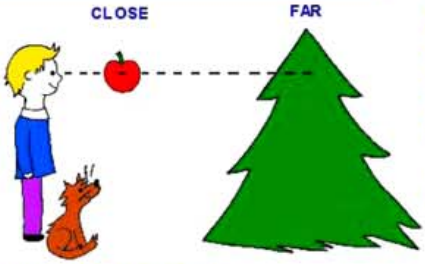


DELTA THETA	
7 LIGHT PURPLE ALPHA	
6 PURPLE	
5 BLUE	
4 GREEN	
3 YELLOW	
2 ORANGE	
1 RED BETA	

COLOR BREATHING RELAXATION CHART

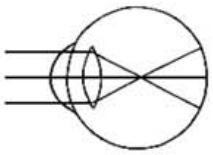
Practice Abdominal Breathing, Palming, Color Visualization, Deep Relaxation and Correct Vision Habits in the Alpha, Theta and Delta brain wave states with the Color Breathing Relaxation Chart to relax the mind, eyes, eye muscles, neck and body for clear eyesight. Notice that eyesight is clear when the mind, body, eyes are relaxed, in a positive state. See chapter 22-23.

Switch and shift on objects at close and far distances for 20/20 and clearer eyesight at all distances, close and far.
See Chapters 11-13.



A percent of profits from the sale of this book is donated to the blind, visually impaired: Guide Dog Schools, free Natural Eyesight Improvement Training.

This Book Teaches the Original and Modern Bates Method of Natural Eyesight Improvement Discovered by Ophthalmologist Dr. William Horatio Bates. The Clarity of Eyesight can be Improved to 20/20 and Clearer at All Distances.



NORMAL ROUND EYE SHAPE WITH CORRECT FOCUS OF LIGHT RAYS ON THE RETINA. EYESIGHT IS CLEAR.

The Bates Method of Natural Eyesight Improvement relaxes the mind, eye muscles, eyes, body, (entire visual system), returns the eye muscles, eyes to normal function, movement, coordination and activates, perfects; the normal function of the eyes: Saccadic Shifting Eye Movements, Central Fixation, Perfect Convergence, Accommodation: clear vision when looking at close distances, Un-Convergence (Divergence) Un-Accommodation: clear vision for far distances, Left and Right Brain Hemisphere Activation and Integration, Memory and Imagination, Positive Thinking, Emotions, Correct Posture, Neck, Shoulder Relaxation and all functions of the visual system.

Color treatment, Full Spectrum Sunlight, Physical Movement Activities, Acupressure Points, Physical Therapy, Improved Circulation to the head, brain, ears, eyes, eye muscles, retina, lens, cornea, Energy Strengthening-Circulation, EFT, Healthy Diet for Healthy Eyes and other natural activities are practiced. Learn how to permanently discontinue the use of eyeglasses.

Relaxation of the mind, body, neck, eye muscles, eyes, practicing, activating healthy correct vision habits (normal, relaxed eye function) and other natural treatments keeps the eye in normal shape with correct focus of light rays in the eye, on the retina for clear vision. Eye pressure returns to normal. Tension, strain is removed from the eyes. Health and function of the eyes, retina, lens, cornea, optic nerve, all parts of the eye returns to normal.

Saccadic Shifting - perfect, relaxed eye movements, including tiny microscopic movements are re-activated resulting in clear eyesight (clearer than 20/20: 20/15, 20/10...) at all distances, close and far, day and night.

Eyeglasses, bifocals, contact lenses, sunglasses, tinted/colored lenses, eye cornea laser surgery, all prescription and non-prescription drugs cause and increase vision impairment: blur, astigmatism, impairs the health, function of the eyes; results in cataracts, detached retina, glaucoma, cornea ulcers, macula degeneration and other eye, vision impairment.

The Bates Method of Natural Eyesight Improvement produces clear eyesight and healthy eyes.

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Do It Yourself-Natural Eyesight Improvement



Ophthalmologist
William H. Bates



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Your purchase supports free and low cost Natural Eyesight Improvement and Donations to the Guide Dog Schools, Perkins School for the Blind, DAV at; http://cleareyesight.info/id73.html

20 PDF E-Books: Natural Eyesight (Vision) Improvement Training

Do It Yourself-Natural Eyesight Improvement-Original and Modern Bates Method



Dr. Bates observes perfect light ray refraction (focus) with the glass and retinoscope as the patient sees fine print clear with relaxation.

+ A Exact Copy the Author's Natural Eyesight Improvement Website in book form, with all Training, Activities, Treatments, Text, Pictures, Downloads, Links.
+ Natural Eyesight Improvement Training Book with 100+ Color Pictures. Less reading: Easy to learn steps-Read the short directions on the pictures to quickly learn, apply a treatment, activity for Fast Vision Improvement. (All of Dr. Bates, Clark Night's Kindle, PDF and Paperback books are in this E-Book.)
+ Better Eyesight Magazine by Ophthalmologist William H. Bates - (Unedited, Full Set - 132 Magazine Issues - 11 Years-July, 1919 to June, 1930.) Illustrated with 500 Pictures and additional, up to date Modern Natural Eyesight Improvement Training.
+ Original Better Eyesight Magazine by Ophthalmologist William H. Bates - Photo copy of all his Original Antique Magazine Pages in the 1900's Print. (Unedited, Full Set 132 Magazine Issues - 11 Years-July, 1919 to June, 1930.) A History Book. Learn Natural Eyesight Improvement Treatments directly from the Original Eye Doctor that discovered and practiced this effective, safe, natural method! Magazines & Method Hidden from the public by eye surgeons, Optometrists, optical businesses for over 100 years because this method works and frees the patient from the need to purchase eyeglasses, drugs, unnecessary eye surgery. Yes, it can and has reversed cataracts and other eye conditions!
+ The Cure of Imperfect Sight by Treatment Without Glasses by Dr. Bates (Photo Copy of the Original Antique Book Pages) with Pictures. Dr. Bates First, Original Book. (Text version with Modern Treatments included.) 2nd Printing Title: Perfect Sight Without Glasses.
+ Medical Articles by Dr. Bates - with Pictures.
+ Stories From The Clinic by Emily C. A. Lierman/Bates. (Dr. Bates Clinic Assistant, Wife.)
+ Use Your Own Eyes by Dr. William B. MacCracken M.D. (Trained with Dr. Bates.)
+ Normal Sight Without Glasses by Dr. William B. MacCracken M.D.
+ Strengthening The Eyes by Bernarr MacFadden & Dr. Bates - with Pictures and Modern Training. (Trained with Dr. Bates. One of the First Physical Fitness Teachers.)
+ EFT Training Booklet - with Acupressure, Energy balance, strengthening, Positive Emotions. Easy step by step directions with Pictures.
+ Seeing, Reading Fine Print Clear, Clear Close Vision (Presbyopia Treatments) with Videos.
+ Eight Correct, Relaxed Vision Habits- A Quick Course in Natural Eyesight Improvement.
+ Astigmatism Removal Treatments - Natural Eyesight Improvement with Astigmatism Swings, Eyecharts and Videos.
+ Eyecharts Booklet with Natural Eyesight Improvement Basic Training.
+ Eyecharts - 15 Large, Small and Fine Print Big C, E Charts for Close and Distant Vision, White and Black Letter Charts, Tumbling E Chart, Astigmatism Test and Removal Charts, Behavioral Optometry Charts. Eyechart Video Lessons.
+ Audio Lessons in Every Chapter
+ Video Links in Training Chapters - Learn a Treatment, Activity Quick and Easy.
+ Videos Page: Links to 100+ Natural Eyesight Improvement Training Videos; YouTube and on the Author's Website. Download Videos to DVD with Real Player SP, Convert for Television. Watch YouTube Videos on Cable TV. Watch for new videos in 2015+; https://www.youtube.com/user/ClarkClydeNight/videos

E-Book contains over 1500 pages. 650+ Color Pictures. No password; print, bind all 20 books. Read the books, watch the videos for complete Natural Eyesight Improvement Training.

Check the 'New Stuff Page'; http://cleareyesight.info/id61.html for notice when new Chapters, Activities are added to the PDF, Kindle Books. Print the pages, add them to the paperback book.

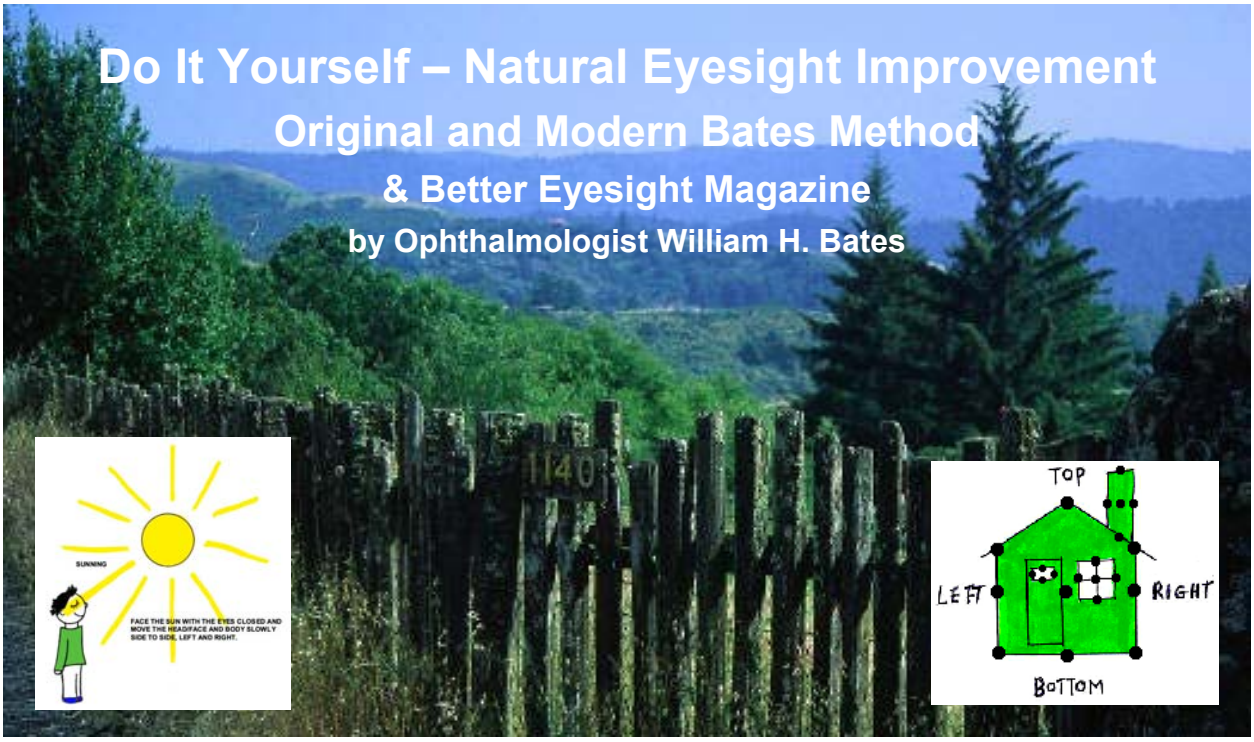
This list is limited. More books have been added; http://cleareyesight-batesmethod.info/id148.html

Many more books included; all the Author's books on Amazon; http://www.amazon.com/Clark-Night/e/B004HU1MNS/ref=dp_byline_cont_pop_book_1 This book included. All books, pictures in Color. Listen to Dr. Bates Better Eyesight Magazines on the Internet at; http://www.cleareyesight.info/naturalvisionimprovementoriginalandmodernbatesmethod/

Entire Introduction, Dedication to Dr. Bates, The Bates Method of Natural Eyesight Improvement History, Original and Modern Practices, Directions and Eyecharts are placed at the end of this book.

See the pictures with short directions to quickly learn the method. Then the Ophthalmology, technical part of the book, purpose for the eye, eye muscle... experiments and each practice taught by Dr. Bates will be easy to absorb, put into immediate practice for fast eyesight improvement.

This is a copy of the website http://www.cleareyesight-BatesMethod.info



Video-Click Here

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Double Click this symbol for Audio Natural Vision Improvement Lessons.

E-Books;

Better Eyesight Magazine Illustrated with 500 Pictures by Dr. William H. Bates
Stories From The Clinic by Emily C. Lierman/Bates
The Cure of Imperfect Sight by Treatment Without Glasses by Dr. Bates
Medical Articles by Dr. Bates
Use Your Own Eyes by Dr. William B. MacCracken
Normal Sight Without Glasses by Dr. William B. MacCracken
Strengthening The Eyes by Bernarr MacFadden
Reading, Seeing Fine Print Clear by Clark Night
EFT - Emotional Freedom Technique by Clark Night

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This is a new book edition. Watch for the final new edition in 2015! Some pages do not have page numbers. This will be fixed in 2015. For this edition; the bookmarks for new pages will be fixed in 2 weeks, prob by Jan 30th 2015. Need to get this new PDF on-line ASAP. It has new info. ,Dr. Bates will appreciate. Clark

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Read entire information on the following pages, end of this book and the PDF on the main Copyright, Directions, Disclaimer webpage; http://cleareyesight-batesmethod.info/id110 This is long but it's worth the read; it also describes how to detect, avoid unnatural methods, things to avoid when practicing Natural Eyesight Improvement;

Do not wear contact lenses. Be aware of conflicting results if the eyes have had surgeries, any treatment. Avoid strong eyeglasses. Strong prescriptions cause and increase cataract, detached retina, glaucoma, increased blur and other eye-eyesight problems. No glasses is the healthiest way to go. If glasses are needed; 20/40 reduced, 'weaker and weaker' eyeglass lenses can be used temporarily, only when needed for safety when driving, work... as the eyesight is improving with practice of The Bates Method. Read the directions to learn how to safely and legally reduce your prescription until you achieve clear eyesight and permanent freedom from eyeglasses.

The eyesight improves easier, faster and the eyes remain healthy when eyeglasses, contacts are avoided. See a Behavioral Optometrist, Ophthalmologist and on-line mail order Opticians for affordable eyeglasses.

Contact lenses must not be worn before, during, after practicing Natural Eyesight Improvement. Contacts will not fit the eye, cornea as they change to normal healthy shape and function with practice of Natural Eyesight Improvement. The contacts can scrape, infect and scar the cornea. This can occur even without practice of Natural Eyesight Improvement because the eye, cornea naturally change shape on their own. Stop use of contacts before practicing and do not return to them. Contact lens drops, cleaning solutions contain unhealthy ingredients and have caused cornea-eye infection, parasites.., blindness.

Natural Eyesight Improvement normalizes, corrects the eyes pressure, improves eye health. If there is any eye condition, glaucoma, cataract, surgery.., you are taking drugs, eye drops for glaucoma or other eye conditions to lower or raise the eyes pressure or any other drugs, treatments for any eye-eyesight condition; ask your eye doctor's advice first before practicing the Bates Method, Natural Eyesight Improvement. Eye drops, drugs, the drugs strength, amount to take, un-natural treatments for eye pressure, other treatments might need to be changed, reduced, discontinued. If the doctor allows the patient to practice, the doctor must monitor the eyes-eyesight, eye pressure and other eye conditions, functions as Natural Eyesight Improvement is practiced.

Natural Eyesight Improvement changes the eye, cornea, lens, retina... back to normal healthy shape and function. If the eye, cornea, lens, retina... has had surgery, if any treatment has been applied to the eyes; check with your eye doctor first before applying Natural Eyesight Improvement to be sure the surgery, treatment and Natural Eyesight Improvement do not conflict, interfere with eachother, with the eye shape, state the doctor has set, fit the surgery, treatment to. Natural Eyesight Improvement might help the surgery, eye to heal or it might work against the surgery because; Natural Eyesight Improvement brings the eye, cornea, lens, retina, vitreous... to normal shape but; the surgery may have been done to place, keep the eye in an abnormal shape, a shape it was in before the surgery or a new abnormal shape. Example; detached retina surgery done on an eye that is abnormally lengthened due to very tense outer eye muscles, advanced nearsight (myopia) from many years wearing minus eyeglasses may act differently if the patient practices Natural Eyesight Improvement and returns the eye to normal round shape, normal eye pressure, normal fluid, circulation flow, normal retina shape... Will it help strengthen the surgery and heal the eye, retina back into correct placement or impair the surgery, treatment, pull the surgery loose and detach the retina? Even if the eyes shape is normal, the doctor might tell the patient to wait until the surgery has fully healed before practice of Natural Eyesight Improvement. (Detached retina can also occur from tense outer eye muscles causing a shortened eye shape due to many years wearing reading 'plus' eyeglasses.)

Same warning for eye cornea laser surgery, other cornea, eye surgeries and some cataract surgeries, including artificial eye lens implants containing an eyeglass prescription. This places a permanent prescription inside the eye. All surgeries that place a prescription in the cornea or eye for nearsight, (myopia) farsight, presbyopia, astigmatism, bifocal... cannot be changed if the eyesight improves with practice of Natural Eyesight Improvement, or if the eyesight becomes more impaired without practice. (Prescriptions are addictive, cause more eyesight impairment.) Eyesight will be unclear; like trying to look through an incorrect, too strong or too weak eyeglass prescription, a prescription that is locked inside the eye. Only more surgery can change an eye, lens implant prescription and all surgery has risks.

(Doctors can place an artificial lens replacement without a unnatural prescription in it into the eyes after cataract surgery. This enables the person the option of wearing eyeglasses for one distance or practicing Natural

Eyesight Improvement. A artificial lens can be set to the eyes natural lens' focus for far distance, but patients are given the option of a close or far lens focus. Dr. Bates states the eye can lengthen like a camera to solely accommodate for clear close-reading eyesight, so; opting for far focus in the artificial lens is best. Be sure the lens refraction is natural, exactly as the normal healthy eye's focus. No myopia, farsight, presbyopia, astigmatism, bifocal... prescription in the artificial lens. In the old days some people had no replacement lens but they could see clear without a lens. In later years a real human eye's donor lens was tried; it contained the eyes natural focus and can change shape to accommodate for clear close eyesight and un-accommodate for clear far eyesight, if attached correct, is the correct size. It may have been placed into the original lens capsule or the entire lens implanted. The new modern artificial lens cannot change shape 'accommodate, un-accommodate' so doctors set it to one distance. Far eyesight will be blurry, un-accommodation cannot occur if you opt for the close focus lens setting.

Doctors are working on creating an artificial lens that can change shape for clear focus at all distances same as a natural lens. Note; plastic is toxic. Hopefully they will find a healthy, natural substance. Maybe grow a real human lens from cells, DNA with a perfect movement, focus 'refraction of close and far light rays'.)

More surgery on the cornea includes a high risk of injury, it further impairs the cornea's health, structure, function, weakens it, increases intolerance to light, impairs use of, function with light. Avoid elective cornea surgery, cornea prescription implants. Cornea surgery destroys the eyes natural tear production resulting in lifelong monthly prescriptions for eye drops and 'special kits'... Read more cornea surgery side effects in our books and at the FDA.

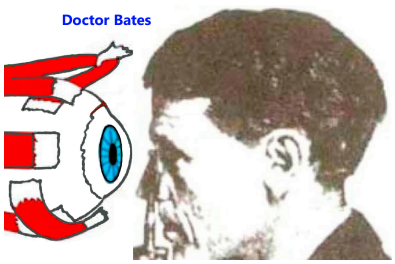
I have communicated with Natural Eyesight Improvement students that had; cataracts, glaucoma, holes, fluid leaking in the eyes retina, retinitis pigmentosa, other conditions and they have benefited, regained good eye health and clear eyesight from practicing Natural Eyesight Improvement, The Bates Method, stopping use of eyeglasses, contacts, sunglasses and by working with a Bates Method Ophthalmologist. People have returned to clear eyesight after some forms of unsuccessful eye surgery and eye muscle surgery but always check with an eye doctor and honest, true Bates Method teacher first. Choose an experienced Bates Method Natural Eyesight Improvement Behavioral Ophthalmologist, Optometrist, teacher with many excellent patient references. Choose doctors that prefer natural health treatment, prefer to teach Natural Eyesight Improvement and discontinue use of eyeglasses, keep the eyes healthy and avoid eye surgery, drugs. Avoid eye doctors selling laser and other eye cornea surgeries, drugs that are not needed, unnecessary lens removal/surgery, eyeglasses (especially strong over-corrected eyeglass lenses), addictive astigmatism sections in the glasses, bifocals, multi-section, multi-focal, mono-vision lenses, tinted, colored lenses, sunglasses, contact lenses, ortho-keratology, ortho C... and all types of eyeglasses.

An experienced eye doctor can detect health of the eyes and body by examining, looking at and into the eyes. Blood pressure, sugar levels, injury, stroke and many health conditions are reflected in the eyes, often in an early reversible stage.

An eye doctor experienced in iridology can determine health of organs, systems in the body. See the story of Ignatz Von Peczely, physician. He cured an injured owl and during treatment noticed that the owls eyes, iris were altered when the bird was sick, injured. The eyes, iris returned to normal as the bird's health healed.

Children - read/use the books, websites, videos, audios... all content only with direction of, supervised by parents and a Bates Method Eye Doctor. Children and adults; do not us the Sunglass (Burning Glass) and other methods that are listed for application only by an experienced Bates Method Ophthalmologist. If in doubt about how to apply a method; ask a Bates teacher and Bates Method eye doctor. For more information, extra modern training; read 'Better Eyesight Magazine Illustrated with 500 pictures' and the other free E-books.





Avoid Un-Natural, Harmful Eyesight Methods

There are dishonest teachers, authors altering Dr. Bates original books, method by adding unnatural practices that impair the eyesight, eyes health. Example; the harmful cataract, detached retina, astigmatism... producing 'Plus Lens Method'. (Also called Anti-Corrective Lenses.) It consists of forcing the eyes to look through blurry, incorrect, too strong close eyesight reading eyeglass prescriptions. Avoid this! The method is addictive, it causes unclear eyesight to develop. The method forces the ciliary-lens muscle and other inner, outer eye muscles and the lens to become stiff, immobile. Circulation in the eye is lowered, health of the eyes, lens is impaired. The eyes natural refraction, movement is blocked. Tense outer eye muscles press on the eye altering its shape, cause tension in the eye, retina, lens. Bleeding in the retina, blind spots develop. Notice people that wear stronger and stronger reading glasses develop cataract and are then sold surgery. All eyeglasses, - minus and + plus lenses, prisms, astigmatism... lead to addiction to stronger eyeglasses, cataract, detached retina, glaucoma and other eye problems. Cataract, glaucoma... are also a side effect of drugs taken for certain medical and eye conditions. Eyeglasses increase the risk.

Another method to avoid is Artificial 3-D Fusion eye exercises. (Autostereogram, single-image stereogram, SIS, magic eyes pictures...) It creates an optical illusion of depth, distance. It consists of staring straight ahead into space before or beyond 2 objects that are placed on the left and right sides of the face-eyes (in the eyes peripheral field) to form an illusion of a 3rd merged object of the 2 objects in front of the face between the left and right eyes. The object is not truly in the central field. This method is not natural, it blocks, impairs central-fixation, eye shifting, relaxation and normal eye-brain function. Staring is a main cause of unclear eyesight. Only a Behavioral Optometrist, Ophthalmologist can apply this Artificial 3-D correct. It must be done a specific way for each individual patient, condition and used only if absolutely necessary after first trying The Bates Method which is a safe, effective, truly natural method to correct strabismus. The false 3-D method is often not needed when the Bates Method alone is practiced. The artificial 3-D pictures are amusing but they can cause strabismus, impaired eye movement, un-balanced-uneven eyesight in the left and right eyes, double vision, astigmatism, blurry eyesight and impaired convergence, divergence, accommodation, un-accommodation when looking at close and far distances by disrupting the way the brain, left and right hemispheres, visual cortex, nerves work with the eyes, eye muscles, retina, depth, distance perception...

Practice of the Bates Method can help reverse impairment to the visual system, eyesight that the artificial 3-D has caused. 3-D video games, TV's, computer screens, electronic readers, phones produce another form of harmful artificial 3-D.

People selling Dr. Bates books, his Better Eyesight Magazine for 4 times the normal price tried to get our copy of Dr. Bates paperback Better Eyesight Magazine, books and the free Better Eyesight Magazines on our website, GoogleBooks un-published. We had to prove copyright, public domain three times. The assembler, illustrator of this book was attacked though computer hacking and other ways seven times by people trying to prevent this book and Dr. Bates Original Antique Better Eyesight Magazines from being published for a lower price than they sell for. *Dr. Bates magazines, books belong to the public.*

Clearsight Publishing Co. posts the truth about these dishonest teachers, authors. Our books will never contain un-natural, harmful treatments, practices. The books include essential modern information needed for clarity, safety. Our mission is to preserve Dr. Bates genuine work, publish *True* Natural Eyesight Improvement for clear eyesight and healthy eyes.

Clearsight Publishing Co. keeps Dr. Bates book prices low. Black & white copies of the color are created for a reduced price so all people, regardless of financial level have access to Dr. Bates Method. A color, printable PDF E-book copy of this book in 'King-Size' version with more teachers, training, pictures and 20 E-books are FREE at; www.cleareyesight-batesmethod.info ***Training is always free to the blind.***



Hadley - Ten years of service

If you have read this book or the free E-books; please teach it, help other people learn The Bates Method and avoid unclear eyesight, cataract, other eye-eyesight problems, addiction to eyeglasses and unnecessary eye surgeries.

Author Clark Night provides 'Free Natural Eyesight Improvement Training' to the blind, visually disabled by Phone, Skype.., in Person, E-Books and Audio-Video. Part of our profit from paperback.., kindle book sales is given to the blind, Perkins and Guide Dog Schools;

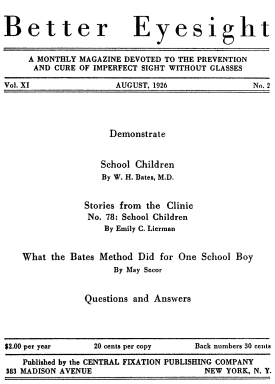
http://www.cleareyesight.info/id73

Donation receipts, yearly records available to the public.



The Perkins Institution for the Blind. South Boston, c. 1840
Courtesy Boston Public Library Print Department.

This Book and Dr. Bates 132 Better Eyesight Magazine Issues are Preserved by Eye Doctors, Bates Teachers



SCHOOL NUMBER

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. XI — AUGUST, 1926 — No. 2

Demonstrate

School Children
By W. H. Bates, M.D.

Stories from the Clinic
No. 78: School Children
By Emily C. Lierman

What the Bates Method Did for One School Boy
By May Secor

Questions and Answers

$2.00 per year — 20 cents per copy — Back numbers 30 cents

Published by the CENTRAL FIXATION PUBLISHING COMPANY
363 MADISON AVENUE — NEW YORK, N. Y.

Ophthalmologist William Horatio Bates Better Eyesight Magazine and books contain the true principles of the eyes function, Natural Eyesight Improvement, the Bates Method. Taught directly from the eye doctor that discovered this healthy effective practice. Improves function of the eyes, eyesight, mind and body (Visual System). An independent 'Do It Yourself' home study course.

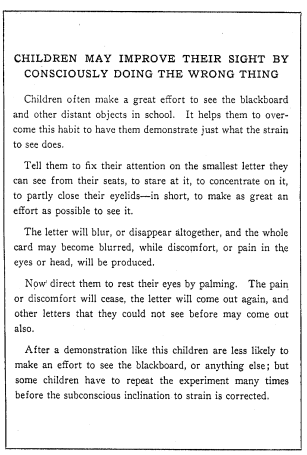
Dr. Bates magazines and books (in their original, unedited, antique print from the 1900's) were destroyed, hidden from the public by eye doctors/surgeons, the optical industry for many years after Dr. Bates death. Most eye doctors prefer to sell eyeglasses, eye surgery, drugs and hide Natural Eyesight Improvement from their patients. Honest doctors who tried to teach, preserve the Bates Method, Dr. Bates work were outcast, risked losing their medical license. Dr. Bates worked to prevent this during his lifetime. After Dr. Bates passed away in 1931; Emily A. Bates, Bates teachers, students and a few honest eye doctors (Dr. Harold M. Peppard...) preserved Dr. Bates original 'Better Eyesight Magazines', book 'Perfect Sight Without Glasses' and 'Medical Articles', hid them from eye doctors, the optical industry in order to prevent their destruction. Dr. Monroe J. Hirsch preserved Dr. Bates work in optometry, ophthalmology college libraries. (In later years people made photocopies, then converted to books.)

Bates Method teachers were taken to court as eye doctors tried to stop them from teaching. See cases of Margaret Corbett and famous writer Aldous Huxley. They won the right to practice, teach and preserve the Bates Method! Huxley was saved from blindness, his eyesight restored by Margaret Corbett teaching him how to practice the Bates Method. He then wrote 'The Art of Seeing'.
Jealous people attacked him when he used his glasses for a moment to read a paper in public one day. He was almost blind before the Bates Method! Most of the time he went without glasses. (Nervousness, trying to see when under pressure, stress, people working against you can temporarily lower the eyesight. This causes a lot of false eye exam results, unnecessary eyeglass prescriptions.)

As time went on natural cures became popular, the public realized the harm that eyeglasses, drugs, certain eye surgeries (elective cornea laser...) cause. Public demand, true freedom of the press on the Internet made it safe for Dr. Bates magazines, books to be returned to the public without fear of imprisonment, fines... The Alexander Technique by F. Matthias Alexander (endorsed by Dr. Bates), massage, myofascial release of muscle knots in the shoulders, neck, body, movement and relaxation... methods combined with Dr. Bates practice. There are now more honest ophthalmologists, optometrists teaching Natural Eyesight Improvement. Opticians, optical businesses work with Bates Method Behavioral Optometrists, Ophthalmologists, Natural Eyesight Improvement teachers and students to provide low cost, weaker and weaker reduced eyeglass prescriptions (used temporarily, only if needed for safety; driving, work...) as the Bates Method student reverses his/her eyesight back to perfect clarity with practice of Natural Eyesight Improvement. They obtain 20/20 and clearer eyesight, freedom from eyeglasses. (There are many eye doctors, people posing as Bates Method teachers but they are not true teachers. They teach unnatural methods that impair the eyesight, eyes health, sell eyeglasses and eye surgery. *Avoid them*.)

Most Modern Natural Eyesight Improvement teachers do not provide their students access to Dr. Bates original magazines, books. They hide their information, source of knowledge so they can charge a high price for training, 'hundreds, thousands of dollars' and prevent people from becoming perfect teachers, *their competition.* Thomas Quackenbush, a famous, honest Natural Eyesight Improvement Teacher, teaching full time since 1983, (trained by Janet Goodrich, another great teacher) published Dr. Bates magazines in 2001. 1st book in 1997 contained some magazines; 'Relearning to See-Improve Your Eyesight Naturally'. This re-enlightened the public to the existence of Dr. Bates magazines, books and medical articles. I attended Tom's student class in 1999 at age 40 and obtained clear close reading eyesight (presbyopia healed) and clearer than 20/20 distant eyesight! Present age 57, Aug., 2014 and still see clear even after a neck injury in 2009 caused many eye, eyesight problems. The Bates Method brought the eyesight back to 20/20 and clearer.

Dr. Bates work is preserved free in Color PDF E-books at; www.cleareyesight-batesmethod.info Includes Dr. Bates original first book *Perfect Sight Without Glasses*, his *Medical Articles, Stories From The Clinic* by his devote wife, New York City Clinic assistant Emily C. A. Lierman/Bates and the entire collection of Dr. Bates Original, Unedited, Antique *Better Eyesight Magazine* in the 1900's print. 11 years, 132 issues, every year, month, page. Over 2400 pages and a text copy of the magazines with 500 color pictures and additional modern practices. Pass this knowledge along freely, help others enjoy perfect eyesight, healthy eyes. (Thank you, Clark Night)



CHILDREN MAY IMPROVE THEIR SIGHT BY CONSCIOUSLY DOING THE WRONG THING

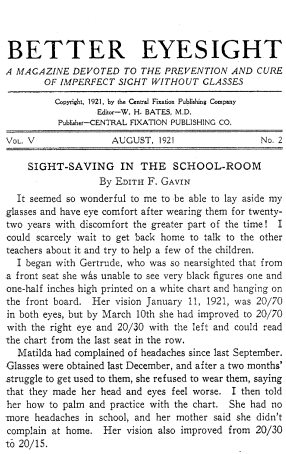
Children often make a great effort to see the blackboard and other distant objects in school. It helps them to overcome this habit to have them demonstrate just what the strain to see does.

Tell them to fix their attention on the smallest letter they can see from their seats, to stare at it, to concentrate on it, to partly close their eyelids—in short, to make as great an effort as possible to see it.

The letter will blur, or disappear altogether, and the whole card may become blurred, while discomfort, or pain in the eyes or head, will be produced.

Now direct them to rest their eyes by palming. The pain or discomfort will cease, the letter will come out again, and other letters that they could not see before may come out also.

After a demonstration like this children are less likely to make an effort to see the blackboard, or anything else; but some children have to repeat the experiment many times before the subconscious inclination to strain is corrected.



BETTER EYESIGHT

A MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

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Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. V — AUGUST, 1921 — No. 2

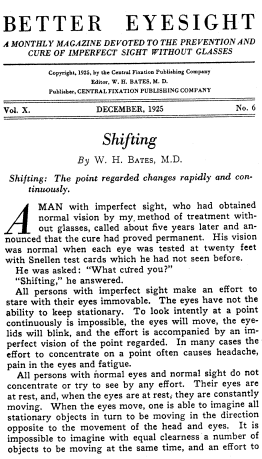
SIGHT-SAVING IN THE SCHOOL-ROOM

By Edith F. Gavin

It seemed so wonderful to me to be able to lay aside my glasses and have eye comfort after wearing them for twenty-two years with discomfort the greater part of the time! I could scarcely wait to get back home to talk to the other teachers about it and try to help a few of the children.

I began with Gertrude, who was so nearsighted that from a front seat she was unable to see very black figures one and one-half inches high printed on a white chart and hanging on the front board. Her vision January 11, 1921, was 20/70 in both eyes, but by March 10th she had improved to 20/70 with the right eye and 20/30 with the left and could read the chart from the last seat in the row.

Matilda had complained of headaches since last September. Glasses were obtained last December, and after a two months' struggle to get used to them, she refused to wear them, saying that they made her head and eyes feel worse. I then told her how to palm and practice with the chart. She had no more headaches in school, and her mother said she didn't complain at home. Her vision also improved from 20/30 to 20/15.



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Publisher, CENTRAL FIXATION PUBLISHING COMPANY

Vol. X. — DECEMBER, 1925 — No. 6

Shifting

By W. H. Bates, M.D.

Shifting: The point regarded changes rapidly and continuously.

A MAN with imperfect sight, who had obtained normal vision by my method of treatment without glasses, called about five years later and announced that the cure had proved permanent. His vision was normal when each eye was tested at twenty feet with Snellen test cards which he had not seen before.

He was asked: "What cured you?"

"Shifting," he answered.

All persons with imperfect sight make an effort to stare with their eyes immovable. The eyes have not the ability to keep stationary. To look intently at a point continuously is impossible, the eyes will move, the eyelids will blink, and the effort is accompanied by an imperfect vision of the point regarded. In many cases the effort to concentrate on a point often causes headache, pain in the eyes and fatigue.

All persons with normal eyes and normal sight do not concentrate or try to see by any effort. Their eyes are at rest, and, when the eyes are at rest, they are constantly moving. When the eyes move, one is able to imagine all stationary objects in turn to be moving in the direction opposite to the movement of the head and eyes. It is impossible to imagine with equal clearness a number of objects to be moving at the same time, and an effort to

Better Eyesight Magazine by William H. Bates M.D.

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. I JULY, 1919 No. 1

Foreword

Fundamental Facts

Central Fixation

A Teacher's Experiences

Army Officer Cures Himself

$2.00 per year 20 cents per copy

Published by the CENTRAL FIXATION PUBLISHING COMPANY
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REI
B4

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

Copyright, W. H. Bates
Oct. 28. 1924

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Vol. XI AUGUST, 1926 No. 2

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Vol. I JULY, 1919 No. 1

FOREWORD.

WHEN the United States entered the European war recruits for general military service were required to have a visual acuity of 20/40 in one eye and 20/100 in the other.[1] This very low standard, although it is a matter of common knowledge that it was interpreted with great liberality, proved to be the greatest physical obstacle to the raising of an army. Under it 21.68 per cent. of the registrants were rejected, 13 per cent. more than for any other single cause.[2]

Later the standard was lowered[3] so that men might be "unconditionally accepted for general military service" with a vision of 20/100 in each eye without glasses, provided one eye was correctible to 20/40. For special or limited service they might be accepted with only 20/200 in each eye without glasses, provided one was correctible to 20/40. At the same time a great many defects other than errors of refraction were admitted in both classes, such as squint not interferring with vision, slight nystagmus, and color blindness. Even total blindness in one eye was not a cause for rejection in the limited service class, provided it was not due to progressive or organic change, and the vision of the other eye was normal. Under this incredible standard eye defects still remained one of three leading causes of rejection.

[1]Havard: Manual of Military Hygiene for the Military services of the United States, third revised edition 1917, p. 195.

[2]Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917.

[3]Standards of Physical Examination for the Use of Local Boards, District Boards and Medical Advisory Boards under the Selective Service Act, Form 75, issued through office of the Provost Marshal General.

132 Issues of Better Eyesight Magazine containing a variety of Dr. Bates natural cures, practices for every eye, vision condition. 11 years practice in his Clinic in New York City. Free in the PDF E-Books. This book 'Perfect Sight Without Glasses' and the Magazines contain an entire Bates Method, Natural Vision Improvement course. 132 'PAGE TWO' Best Training Practices by Dr. Bates from his Better Eyesight Magazines in Small Print and extra Modern Practices, Pictures are placed at the end of this book. Read or Listen to Better Eyesight Magazine in any Language; *http://www.cleareyesight.info/naturalvisionimprovementoriginalandmodernbatesmethod/*

The Cure of Imperfect Sight by Treatment Without Glasses
by Ophthalmologist William H. Bates
Dr. Bates First, Original Book



Ophthalmologist
William Horatio Bates

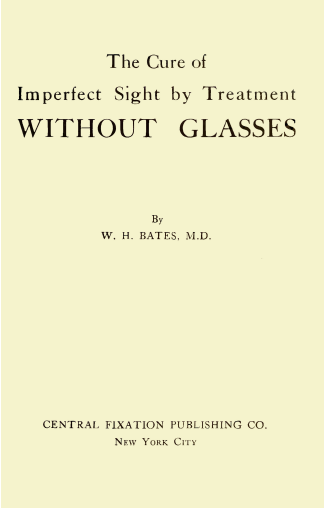
Ophthalmologist William Horatio Bates discovered the natural function-principles of the eyes, eyesight 'visual system'. The Bates Method of Natural Eyesight Improvement. He cured thousands of patient's eyesight without use of eyeglasses, surgery, drugs; Unclear Distant and Close Vision, (Nearsight, Farsight, Presbyopia), Astigmatism, Crossed/Wandering eyes (Strabismus), Amblyopia, Cataracts, Glaucoma, Cornea Ulcers and Scars, Optic Nerve function, Retinitis Pigmentosa, Retina health-function, Color Blindness, various types of Blindness and other conditions. Surgery, drugs were used only when absolutely necessary; eye injury, specific conditions.

Author of 'The Cure of Imperfect Sight by Treatment Without Glasses' (Perfect Sight Without Glasses), 'Better Eyesight Magazine' and a variety of 'Medical Articles' beginning after college in 1881.



Emily C. Lierman, Bates

This is Dr. Bates original 1919-1920 book. In later editions after 1940, after Dr. Bates passed away many methods were removed, changed. Example; Open Eyes Sunning, 'Sun-Gazing'. The new treatment is; Sun-Gazing, Sunning is mainly practiced with the eyes closed, but looking at the bright sunny sky away from the sun with the eyes open is allowed. When Sunning, Sun-Gazing, facing the sun or near it with the eyes open or closed; keep the eyes and head moving, shifting side to side, up, down... across the sun and sky. The head moves with the eyes in the same direction. Open Eyes Sunning is done a specific way, for a brief time, few seconds and with the eyes, head constantly moving 'eyes shifting' and blinking. Never stare into the sun. Keep the eyes moving, look away from the sun often. More time is allowed when looking at the sunset, sunrise on the horizon when the sun's strength is low. The sunlight practices along with the entire Bates Method has cured various forms of blindness. See the end of this book for the entire directions, precautions.



There are many old very effective methods in Dr. Bates original books that are not included in later editions. This is due to teachers, authors fearing organized eye surgeons, doctors, businesses (who prefer to sell eye surgery, eyeglasses, contacts and drugs) bringing Bates Teachers to court in an attempt to stop them from teaching this healthy practice. Teacher, author's Margaret Corbett and Aldous Huxley won all cases brought against them and preserved the right for all people to practice, teach The Bates Method. To this day teachers have to keep a low profile, limit advertising.

The 1940 edition of Perfect Sight Without Glasses contains extra practices from Dr. Bates Better Eyesight Magazine added by his wife, assistant Emily C. Lierman (A. Bates). She also wrote 'Stories From The Clinic' (originally in Better Eyesight) describing many of their patient's eye conditions, the natural treatments applied by Dr. Bates and Emily... in his New York City Clinic and other locations. They also taught in California. Many teachers were trained. Movies were created in Los Angeles, CA illustrating the Bates Method for curing imperfect sight. The Method is used in Schools, the Military, Airforce to cure, prevent unclear eyesight enabling people to enter their profession, the service with clear, legal eyesight.

Bates Method teachers, students prefer Dr. Bates original practices in this book and his Better Eyesight Magazine, Medical Articles. Dr. Bates' original treatments, experiments, directions are necessary to understand the true method, training from the mind of the Original Bates Teacher, the Eye Doctor that discovered, practiced, taught Natural Eyesight Improvement. True life stories, 12+ years of recorded treatments, practice by the doctors, patients, parents, children, school teachers, adults, seniors and certified Bates Teachers.

www.cleareyesight-batesmethod.info preserves Dr. Bates books with extra practices, pictures, Original and Modern Training, entire 132 Issues of Dr. Bates Better Eyesight Magazine - Years 1919-1930. All books, magazines in the Original Antique Print, Unedited, preserved in the 1st print edition. Includes 'Better Eyesight Magazine Illustrated with 500 Pictures', Emily's book 'Stories From The Clinic', her extra Suggestions-Fundamental Principles from the 1940 edition and 20 E-Books containing other doctor's, author's books.

Blue and Navy print, extra pictures in this book are by Natural Vision Improvement Teacher, Author Clark Night to describe new modern practices, additions to a few of the older, original treatments.

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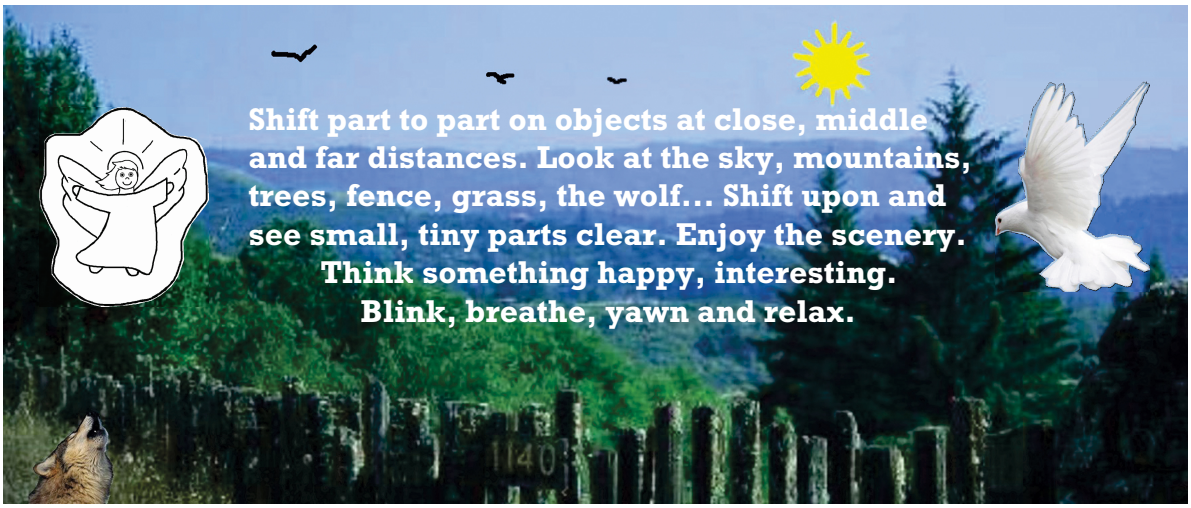
TO THE MEMORY OF THE PIONEERS OF OPHTHALMOLOGY
THIS BOOK IS GRATEFULLY DEDICATED



Throw Away Your Glasses and See With Your Eyes

Glasses prevent the eyes from functioning normally. They impede the progress of perfect sight and cause greater eyestrain. If you use your eyes right, glasses are unnecessary. Everyone with defective vision is doing something wrong to obtain that bad sight. Give your eyes half a chance to act naturally and the improvement will be amazing.

PERFECT SIGHT WITHOUT GLASSES, the book written by Dr. Bates, contains a detailed explanation of his discoveries, research work, and experiments, which lasted through a period of thirty-eight years. Old fallacies and theories relative to the physiology of the eye have been disproved by his facts. Instructions for self-help are included.

We shall be pleased to send this C. O. D. on approval for five days. If it does not meet your needs, you may return it and receive your check in refund.

Central Fixation Publishing Company
383 Madison Avenue, New York City

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THOS. B. BROOKS, INC.
NEW YORK

Use Your Eyes Not Your Glasses

No home should be without this book, THE CURE OF IMPERFECT SIGHT WITHOUT GLASSES, by W. H. Bates, M.D.

What would you take for your eyesight? Can you estimate its value?

Learn to use your eyes properly so that the defects can be remedied: not temporarily but *permanently*.

In this book all diseases of the eye are covered, and by leaving your glasses *off* and practicing the methods a few minutes a day as outlined by Dr. Bates, the results will be astonishing.

Surely your eyes are worth this much.

To avoid delay, we are sending these books C.O.D. on approval for five days. If it is not all we say it is, you have the privilege of returning it and upon its receipt in this office our check in refund will be sent immediately.

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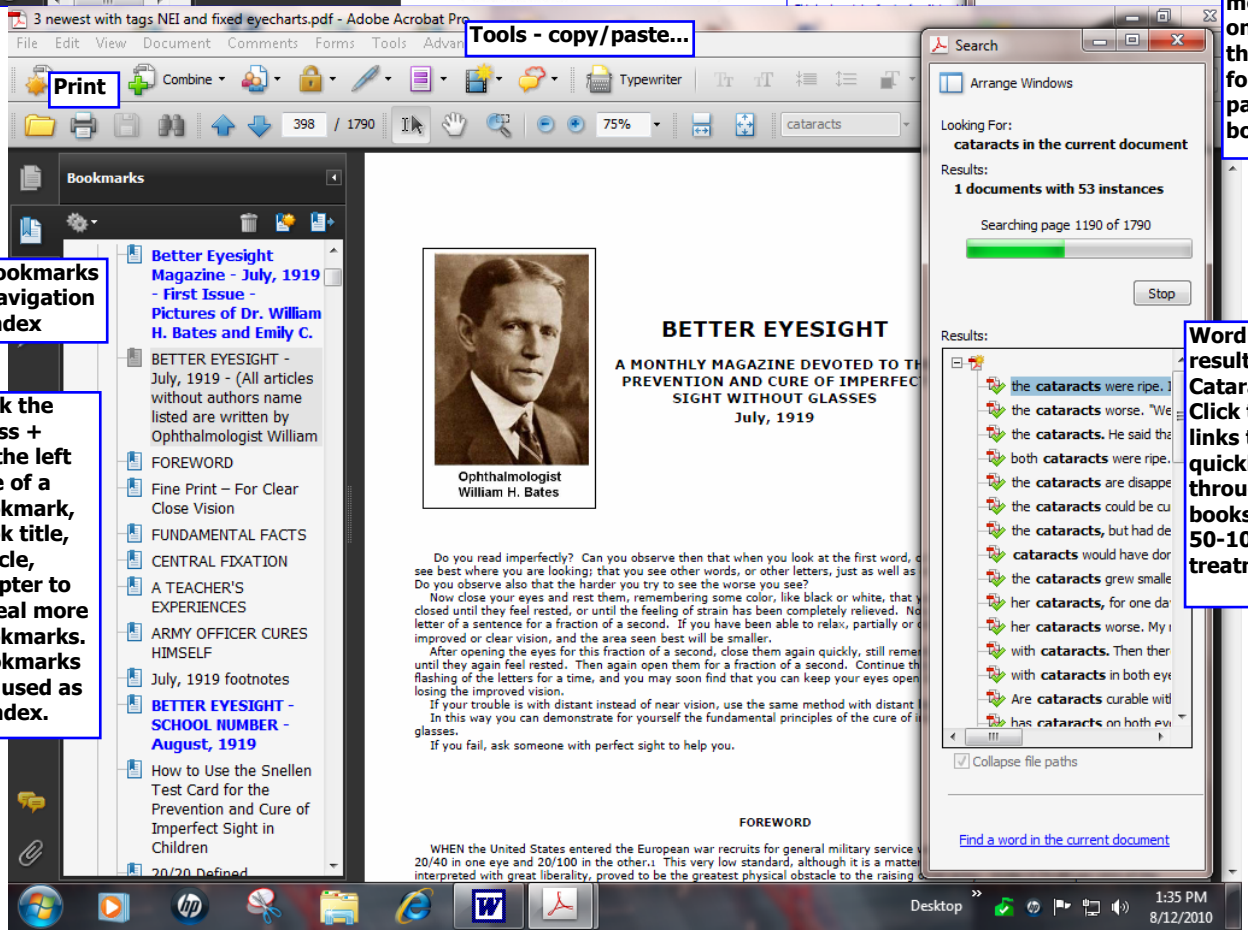

Videos – How to Use This Book & Natural Eyesight Improvement Training

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http://www.youtube.com/watch?v=ZsiBKELMxDw
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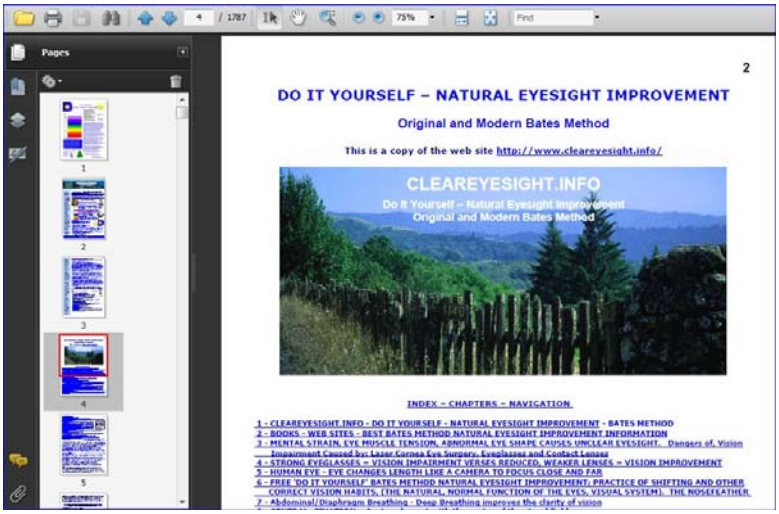

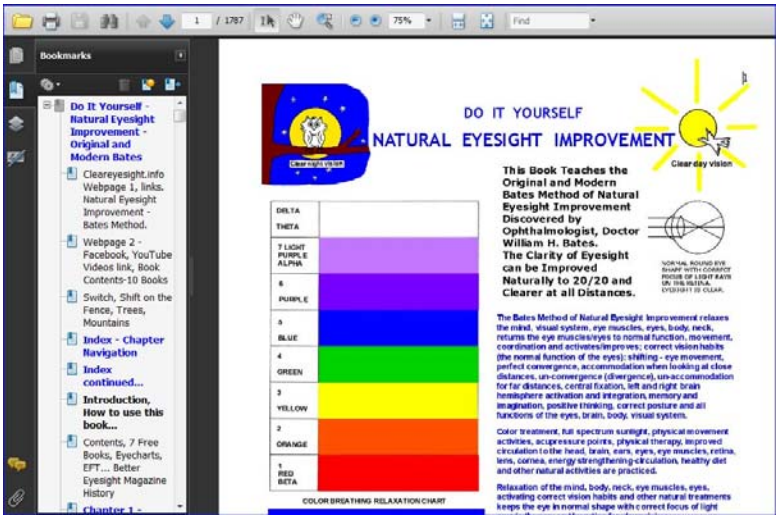

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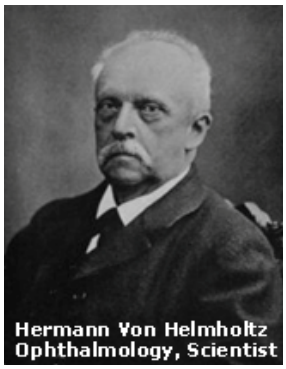
Ophthalmologist
William H. Bates

Chapter 1

Do It Yourself - Natural Eyesight Improvement
Original and Modern Bates Method



Improve the clarity of vision to 20/20 and clearer at all distances, close and far with; The Bates Method of Natural Eyesight (Vision) Improvement discovered by Doctor, Ophthalmologist William H. Bates.

+ Dr. Bates discovered Natural Vision Improvement, the true principles, function of the eyes, visual system. The Bates Method.

+ Dr. Helmholtz discovered many functions of the eyes and invented instruments (Ophthalmoscope) to see inside the eye, detect focus of light rays, health of the eyes, body.

Read their story in this book and Better Eyesight Magazine.

This book/website is written by a Bates Method Natural Vision Improvement Graduate Student and Self-Trained Bates Teacher that has kept her vision 20/20 and clearer for 35 years using the Bates Method, Original and Modern Natural Vision Improvement.
The author teaches friends, family, the public how to obtain clear vision. Free and low cost training.
This book contains Bates Method, Natural Vision Improvement lessons with color pictures, videos, audios for easy, quick learning & application of the activities, fast attainment of clear vision. Students with low vision, busy schedule often cannot see or have the time to read lengthy directions. This book provides the option for entire study of the Bates Method and/or the short basic training.

Natural Vision Improvement Teachers must give free lessons!

There are hundreds of schools, websites, advertising Natural Vision Improvement for about $40.00 to $500.00+ and up to $7000.00 to be trained as a Natural Vision Improvement Teacher. Very few provide free, complete, genuine training. Honest teachers will charge a decent price, give full training.
Choose a teacher carefully. I understand that teachers must charge a fee to exist as a teacher, pay their bills for housing... but some teachers are becoming as greedy as the Optical, Medical and Drug Industry. There are teachers that have organized together and are trying to raise the price to be trained as a Bates Method Natural Vision Improvement Teacher to $10,000.00 and up and may be trying to pass laws preventing students, the public from being teachers unless they pay this price. If that law passes, the price will be raised again. This is exactly like the corruption that exists in the Medical Profession, Drug Industry. Colleges are corrupt, charge thousands of dollars to be a Doctor, Optician, Optometrist, Ophthalmologist, Lawyer... An honest person with low income often cannot afford the money and time to go to college. There are honest, good hearted teachers out there.
See list of teachers, low cost Bates Training in this book, chapter 2.

It is legal for a mother to teach a child to walk, read, learn.
Teaching the Bates Method is a human right.
A person that has clear vision, successful Bates Method Natural Vision Improvement experience can teach other people to obtain clear vision. Dr. Bates describes in his books, Better Eyesight Magazine how many patients, (including children) cured of unclear vision teach others to see clear.
Many people that have never been taught the Bates Method begin to use it naturally, an automatic eye, brain function (especially when eyeglasses are avoided or lost, broken, cannot be worn) and their vision improves because; 'It is the normal, natural function of the eyes.'
Sailors have used it to navigate on the ocean for hundreds of years.
People with clear vision use it all the time.

Clear Eyesight is the Birthright of All People.
Clear Eyesight Improves the Quality of Life.

It is a cruel, heartless crime for Eye Doctors, Opticians to purposely sell stronger and stronger eyeglass lenses, laser cornea eye surgery knowing that it leads to increased vision impairment, more eye surgeries and can result in near or complete blindness.

Author, Clark Night was cured of unclear close vision (presbyopia) at age 40 and distant vision improved to clearer than 20/20 in San Francisco, California by Thomas Quackenbush, one of the most skilled Bates Method Natural Vision Improvement Teachers, author of the book 'Relearning to see-Improve Your Eyesight Naturally' and the teacher that preserved and brought Dr. Bates 'Better Eyesight Magazine' to the modern public. Before this time the magazines were destroyed and hidden from the public.

For people that are too busy to read this entire book; chapter 12 describes the Eight Correct, Natural Vision Habits, the Basics of The Bates Method, Natural Vision Improvement. 1st Training Lesson-Chapter 6. These are the main Bates Method activities that produce clear vision. (See extra list in this Intro.) These are not eye exercises. The activities imitate and activate normal, correct function of the eyes, brain, body (visual system) to produce clear vision. Practice them in a relaxed, easy manner. No effort. Correct, relaxed vision habits are the normal function of the eyes.
Practicing Correct Vision Habits is the act of 'imitating normal eye, brain function' that occurs when vision is clear. This 'practice' will gently coax the eyes, visual system back to correct, normal function. After practice of Correct Vision Habits; the brain, eyes will activate Correct Vision Habits, (shifting, central-fixation, relaxation...) automatically, subconsciously, easy, effortless (without the person thinking about it, without practicing) resulting in clear vision.

People often obtain fast vision improvement by practicing just a few main activities; relaxation, shifting, central-fixation, memory and imagination, switching close and far, abdominal breathing and blinking. Other chapters in this book provide more detailed descriptions of each activity and additional vision improvement activities, tools.

Natural Vision Improvement, Correct Vision Habits and other activities in this book are derived from Ophthalmologist Bates 'Better Eyesight Magazine', books and Original, Modern Bates Method Teachers Training, Classes.

The print size for this book is small/medium to enable people with unclear vision to see it. The Bates Method teaches that small and fine print is easier to read, relaxes the mind, eyes, improves central-fixation, the clarity of vision at close and far distances and health of the eyes.
The reader can print the E-Book to smaller or larger print size as is preferred using the view, print settings in Adobe Reader.

Text in this book is in a variety of colors. Color activates and integrates the left and right brain hemispheres, improves mood, activates different positive emotions, energy levels, relaxation and improves the clarity of vision at all distances. (See Palming and Color Treatment - chapter 19)
White, blue, green... print relaxes the mind, eyes, is better for reading than black print. Purple is used to remind the reader to eat bilberries, blackberries, blueberries: dark red, purple pigmented fruit, yellow and dark green leafy vegetables for healthy eyes, clear day and night vision.

The words Eyesight and Vision in this book;
+Eyesight; the eyes, the sight.
+Vision; holistic, the entire visual system; eyesight, eyes, eye muscles, nerves, brain, body, thoughts, emotions, spirit.
The word Eyesight is placed in the books title because it simplifies the meaning; What do you want? To learn about the eyes and how to improve the sight: Clear Eyesight.


White Bull-Cheyenne Medicine Man

All E-Books are free to Native Americans. Click this link for Indian Videos

http://www.youtube.com/watch?v=iI6RLXQyGIw&feature=PlayList&p=A2582888A75F146F&playnext_from=PL&playnext=1&index=29http://www.youtube.com/watch?v=iI6RLXQyGIw&feature=PlayList&p=A2582888A75F146F&playnext_from=PL&playnext=1&index=29

Natural Vision Improvement has been in existence before Dr. Bates discovered it. Eye doctors and the public have used it in the 1800's and earlier. Sailors have used it for hundreds of years to navigate the sea by looking at the stars in the sky, flow of ocean water, landmarks, lighthouses, other ships, flight, migration of birds, fish. Natural Vision Improvement is the normal function of the eyes and has been in existence since the beginning of humans/animals on this planet and the evolution, development of the eye. The eye works with and needs sunlight. It developed due to the action, response to sunlight.

Practice only the Bates method. It is the true natural function of the eyes, visual system.
The Bates method teaches; relaxation of the mind, body, eye muscles, eyes, neck, shoulders, correct posture, correct, relaxed vision habits (the normal function of the eyes), tests/improvement of accommodation and convergence, un-accommodation, divergence, movement, left and right brain hemisphere activation and integration, color treatment, full spectrum sunlight (sunning), and other natural activities that produce 20/20 and clearer vision at all distances, close and far, day and night.
The Bates method returns the eyes, eye muscles, brain, visual system to normal function, maintaining clear vision automatically, on its own.
(The Bates method does not consist of eye exercises. The method relaxes, improves to normal function, aligns, perfects eye muscle, eye function.)

Many vision improvement teachers (businesses) claim to teach the Bates method but they do not.
They teach tension inducing eye exercises and other unnatural treatments that cause mental strain, eyestrain, eye muscle tension, headaches, unclear vision and other side effects.
Eye exercises are not natural and do not produce perfect and permanent clear vision.
Avoid these teachers.
Websites that teach the True Bates Method and provide free Natural Vision Improvement books, downloads and discussion Forums, Groups are;

+Thomas Quackenbush - Europe, Netherlands www.naturalvisioncenter.com

- Radio Shows, Free Training, Preview to a real Student Class! Nutrition.

+Janet Goodrich, Carina Goodrich - Europe www.janetgoodrichmethod.com

- Free Training, Videos, Audios, Blog. Nutrition.

http://cleareyesight.info/id93.html -Forum for Links to all Groups, Blogs.

Teachers that provide complete, easy to learn Natural Vision Improvement training, information;

You Tube has free Bates Method Natural Vision Improvement video lessons. Type in; You Tube Bates Method Natural Vision Improvement. https://www.youtube.com/user/ClarkClydeNight/videos

Many Natural Vision Improvement websites have a Guestbook, Discussion Forums, Blogs where people can post subjects on the Bates method, Natural Vision Improvement, ask questions and learn from others that have improved their vision. A few people on Forums, Groups state incorrect, harmful advice and/or hide Bates information, try to make it seem difficult, complicated so they can sell it.
The Bates method is easy, simple, a 'Do It Yourself' method. 95% of the writers on these forums are honest, very helpful, but there are a few persons that go on these forums giving the impression that they are strict Bates method followers, though in reality they are providing links (often Affiliate links)

to websites that sell eyeglasses, (the optical industry) and other harmful products, treatments. Avoid: Non-Bates Method Behavioral Optometrists, Eye doctors, Teachers selling Laser Eye Cornea Surgery, Plus Lens Eyeglasses Treatments, Contact Lenses, Artificial 3-D Fusion images. These 3-D Fusion exercises for Strabismus can be harmful and cause wandering, crossed eyes, astigmatism and other eye, eye muscle dysfunction when not taught by an experienced Eye doctor. The Bates Method does not teach with these Artificial 3-D fusion images. The Bates Method alone can cure Strabismus.

Special Note: I do not advise Artificial 3-D Fusion Repetitive Eye Exercises. Some teachers use this but it can impair convergence, divergence if done incorrect, too much or if their is a slight or advanced strabismus or other eye, medical problem.
See our 3-D Fusion Page: http://www.cleareyesight.info/id103.html

Avoid other unnecessary cornea eye surgeries and use of contact lenses to force the cornea, eye to change shape (Ortho-keratology, Orthoculogy-Ortho C). These treatments are not the Bates Method and cause cornea injury, impair eye muscle function, cause vision impairment, cataracts, impaired light tolerance and can result in blindness.

A few vision improvement teachers receive money from these Optometrists by referring students to them through affiliate links on their websites.

Choose a Bates Method Behavioral Optometrist only - No cornea surgery, no contact lenses, no plus lenses.

Dedication

To Ophthalmologist William H. Bates



Dr. William H. Bates
Ophthalmologist - M.D.
Eye, Ear, Nose & Throat.
Discovered the Principles
of Eye Function-Natural
Eyesight Improvement.

William H. Bates, Ophthalmologist discovered and perfected Natural Eyesight Improvement, 'The Bates Method'. He discovered the natural principles, true, normal function of the eyes (visual system) and applied natural methods, relaxation to return the eyes, eye muscles, nerves, mind/brain, thought patterns, body (entire visual system) to natural, normal function with healthy eyes and clear vision.

The Bates Method of Natural Eyesight Improvement.

He cured; unclear close and distant vision, astigmatism, crossed, wandering eyes, cataracts, glaucoma, and other eye conditions. Natural Eyesight (Vision) Improvement was practiced years before Dr. Bates discovered it. It is the normal, natural function of the eyes. Hidden from the public by eye surgeons, optometrists, optical businesses for over 100 years because this method works, is easy, anyone can learn, teach it, including children. It produces healthy eyes, clear vision and frees the patient from the need to purchase eyeglasses, drugs, unnecessary eye surgery. Yes, it can and has reversed cataracts!

Dr. Bates worked his entire life treating people successfully with Natural Eyesight Improvement. When he cured the eyes, vision of many patients, medical students and other doctors in the hospital where he worked with natural treatments, without use of eyeglasses, surgery, drugs and proved his method is fact and that some of the old theories of eye function are incorrect, only theories; the doctors, eye surgeons that preferred to sell eyeglasses, surgery, drugs became angry and expelled him. (See: 'Reason and Authority' and 'Dr. Bates Lecture' in Better Eyesight Magazine: November, 1919, April, 1923 and Articles in his book.)

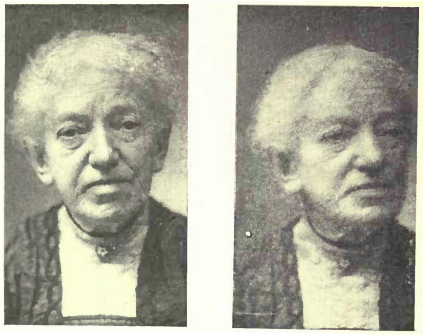


Fig. 37. Myopic Astigmatism comes and Goes According as the Subject Looks at Distant Objects With or Without Strain

No. 1.—Patient regarding the Snellen test card at ten feet without effort and reading the bottom line with normal vision.

No. 2.—The same patient making an effort to see a picture at twenty feet. The retinoscope indicated compound myopic astigmatism.

Dr. Bates then opened his own office, a Clinic in Harlem, New York City. He treated thousands of people by natural methods, including many of the poor people that had little money. He kept his price for medical treatment low and also provided no charge office visits 'Free Clinic Days' for people that could not afford to pay for a visit to an Ophthalmologist. His treatments were successful. He cured the young and old, people of all ages, nationalities, cured a variety of eye conditions.

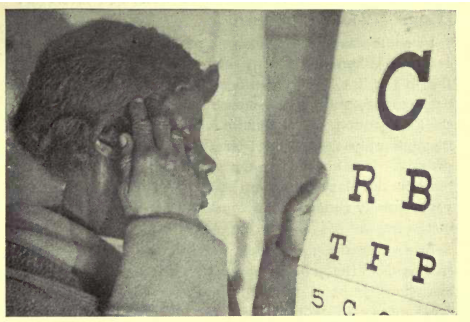


Fig. 43

Patient with atrophy of the optic nerve gets flashes of improved vision after palming.

The Bates Method is so simple and effective that many of his cured patients, 'often children' then went on to cure their friends, family, parents, teachers and other children of defective vision including crossed, wandering eyes. Read the 'true story of the two little girls that restored a blind mans eyesight' in the Oct. 1925 Magazine Issue. Read Dr. Bates full story in 'Better Eyesight Magazine' and his book 'The Cure of Imperfect Sight by Treatment Without Glasses'.

Dr. Bates recorded 11 years of work in his clinic, his patients and their varied treatments in his Better Eyesight Magazines, Books and Medical Articles. Dr. Bates Better Eyesight Magazines contain many Natural Treatments, a variety of Activities, Directions, Articles describing how Dr. Bates, Emily Lierman Bates, (his Clinic assistant, wife) and other eye Doctors, School Teachers, Bates Method Students, Bates Teachers, Children and Parents used Natural Treatments to remove, correct, prevent many different eye problems: unclear close and distant vision (nearsight, myopia, farsight, presbyopia), astigmatism, cataracts, glaucoma, conical cornea, cornea ulcers & scars, retinitis pigmentosa, wandering/crossed eyes (strabismus), amblyopia and other eye conditions. Done without eyeglasses, surgery, drugs. Dr. Bates used surgery, drugs only when necessary, (Eye injury, infection...).

The magazines contain `True Life Stories' of the doctors, assistants, patients, treatments. Interesting, entertaining, fun to read. A History book, life in the early 1900's. Vision improvement based `Fairy Stories' and other articles for children are included. The stories produce a positive, relaxed state of mind, activate,

improve the memory and imagination, teach Natural Eyesight Improvement, normal, correct eye functions. This improves the eyesight.

Dr. Bates discovered Natural Eyesight Improvement over 100 years ago - Started around the year 1886. Dr. Bates Better Eyesight Magazines, books are the original source of The Bates Method and true Natural Eyesight Improvement. The Original Better Eyesight Magazine collection is proof that Ophthalmologist William H. Bates discovered the Bates Method, Natural Eyesight (Vision) Improvement and is the True Author of the Magazine.

The Optical, Medical Industry/Association and most Eye Doctors, Opticians have hidden Dr. Bates work, magazines, books, articles, Natural Eyesight Improvement from the public for over 100 years because: The Bates Method improves the clarity of vision, eye function, Dr. Bates writings are proof that Natural Eyesight Improvement works, produces clear vision, healthy eyes, it describes, teaches people how to apply Natural Eyesight Improvement & obtain clear vision 'on their own' and prevents the need for purchasing eyeglasses, contact lenses, sunglasses, eye surgery and drugs. The Bates Method is safe, healthy for the eyes, reverses and prevents vision impairment.

After Dr. Bates death, the Optical Industry, Medical Doctors/Association destroyed Dr. Bates magazines, books, articles, removed them from libraries, schools, colleges, bookstores in an attempt to hide the truth about Natural Eyesight Improvement from the public, prevent people from curing their eyesight.

They bribed dishonest politicians, judges to pass laws preventing the public from teaching Natural Eyesight Improvement. They passed a law stating that only an eye doctor can teach the Bates Method. Most doctors refused to teach it. Ophthalmology, Optometry, Optician Colleges hid it, refused to teach it and Eye Doctors were taught in College to ignore the Bates Method. Honest eye doctors were afraid to teach it, were told that they would lose their medical license if they used it in their practice.

A few honest Eye Doctors, Bates Teachers, Students, Libraries from the 1900's - present have preserved and republished Dr. Bates magazines, books and continued to teach the Bates Method despite harassment from the Optical, Medical Industry: Emily Lierman/Bates, Dr. Harold Peppard, Cecil S. Price, Dr. William B. MacCracken, Bernarr MacFadden, Clara Hackett, Margaret Corbett, Aldous Huxley, Janet Goodrich and others. (See the case of Margaret Corbett and Aldous Huxley, New York City, USA; The Optical/Medical Industry, Association brought her to court, accused her of practicing Optometry without a license. She won all cases brought against her and cured the eyesight of many people that were in the courtroom. Aldous Huxley (famous Author) was a witness for Margaret Corbett, proved to the court how she reversed his near blindness, improved his eyesight. He later wrote the book: 'The Art of Seeing'. Many cured people were witnesses.

The Optical, Medical and Drug Industry prefers to sell eyeglasses, contact lenses, dangerous destructive cornea laser eye surgery, cataract lens surgery, other eye operations and drugs. They continue to suppress, hide the Bates Method from their patients, the public.

Dishonest Eye Doctors prescribe stronger and stronger eyeglass lenses, bifocals, unneeded astigmatism sections in the eyeglass lenses, tinted/UV blocking lenses & sunglasses knowing that this causes and increases vision impairment, eye muscle tension, abnormal pressure, tension on/in the eye, retina, lens.., dependence on stronger eyeglasses and leads to development of cataracts, detached retina, other eye health impairment and thousands of dollars profit from performing cataract, retina, cornea... surgery. I suspect that some Opticians, Optometrists that sell stronger and stronger eyeglasses receive money, 'kickbacks' from eye surgeons when the business sends a patient that has developed a cataract or other eye problem, 'advanced and ready for surgery', to the eye surgeon for a operation.

Senior citizens are their main victim, 'customer', abused by their doctors, told to wait for surgery until the cataract grows large enough while the doctor sells stronger and stronger eyeglass lenses, bifocals, unnecessary astigmatism sections in the glasses, sunglasses... knowing that this practice will cause more vision impairment, increase, speed the growth, development of the cataract and prevent a natural reversal, cure of the cataract. Reading glasses, astigmatism sections in the lenses are a main cause of cataract.

A sales pitch for laser eye cornea surgery is often done after the patient's eyesight is greatly impaired from being prescribed addictive, stronger and stronger eyeglass lenses, bifocals and astigmatism lenses. When the patient feels helpless, scared, they are pressured into agreeing to eye cornea laser surgery.

Laser cornea eye surgeons destroy the health, structure of the eyes cornea knowing it will lead to a variety of eye, vision impairments, sale of eyeglasses, more eye surgery. Many patients have experienced extreme, disabling vision problems, eye pain and blindness has occurred. Patients have committed suicide, explaining to their family they would rather die than live with the greatly impaired vision, pain and poor quality of life that the laser cornea eye surgery caused. See the FDA 'Cornea Surgery Side Effects Warning' links at http://www.fda.gov & YouTube: http://www.youtube.com/watch?v=976O9G6Dno0 http://www.lasikcomplications.com . The law states that eye doctors do not have to tell their patients all the dangers, side effects of cornea eye surgeries. Laser surgery destroys the cornea's health, function and often results in more eye surgeries to correct the damage done by the first laser surgery. Even though the TV

news stations and newspapers receive a lot of money for advertising Laser surgery they post reports on laser cornea eye surgery side effects.

An honest eye doctor prefers to get the patient to stop use of eyeglasses, will not prescribe strong eyeglasses, bifocals, tinted, UV blocking lenses, sunglasses, unnecessary astigmatism sections, laser cornea eye surgery. He/she teaches the patient how to reverse, prevent unclear vision, astigmatism, cataracts and other abnormal eye conditions.

Due to the truth about Natural Medicine being available to the modern public, interest in Natural Cures; Dr. Bates Better Eyesight Magazines, books, work has been recovered from individual owners, re-published and brought back to the public. Many Ophthalmologists, Optometrists are now learning, teaching the Bates Method and monitoring, recording their patients Natural Eyesight Improvement progress.

Dr. William H. Bates Life & The Bates Method History

Dr. Bates started his career as an orthodox ophthalmologist following the old, long time rules of the practice; prescribing eyeglasses...

During his practice, working with different patients, eye conditions, he realized that unclear close, distant vision, astigmatism and other conditions often cured itself, reversed back to clear vision, especially when his patients stopped wearing their eyeglasses. He noticed that wearing glasses weakened the eyes, resulted in stronger and stronger eyeglass lens prescriptions being needed in order to see clear through the glasses. He began his own studies on the eye and its function. This led him to discover that many of the old ophthalmologist, optometry 'supposed facts' about the eye, lens and its function and cause of unclear vision... are incorrect. Dr. Bates began teaching his patients to avoid eyeglasses, stop wearing their glasses. He taught them natural methods, including relaxation, correct use of the eyes, practice of normal, natural eye function to improve the vision. Dr. Bates cured his own eyesight, close vision, presbyopia. Distant vision also clear. He wrote an Article in his book, magazines describing how he did it with Memory, Imagination, Relaxation. He controlled, changed the focus of light rays in his eyes with his mind.

Dr. Bates performed experiments on the eyes of animals, and observed the function of thousands of animal, patient's eyes under different conditions, situations, state of mind, body, thoughts and emotions. He used the retinoscope to see the refraction, focus of light rays in the eye under these various conditions. He proved that the refraction, clarity of vision changes often and when the eyes are left alone, eyeglasses avoided, the refraction, clarity returns to normal, clear vision. He proved that the state of the mind, thoughts change the refraction of the eye, clarity of vision. Example: when the mind, body is relaxed, positive, happy thoughts, emotions: the refraction is normal and vision is clear. When the mind, body is under stress, strain: the refraction is abnormal and vision is unclear. Dr. Bates discovered that the main cause of unclear vision and other eye problems is: Wearing Eyeglasses, Mental Strain, Mental, Visual Effort to See, Incorrect Vision Habits (incorrect use of the eyes: squinting, staring, not shifting, lack of central-fixation, low memory, imagination...). Perfect Sight occurs only with Perfect Relaxation (deep or active/dynamic relaxation - See Aldous Huxley's book: The Art of Seeing). Relaxation occurs first and then the eyesight becomes clear.

His experiments on the outer eye muscles proved that tension in these muscles disrupts their function, the eyes movement, accommodation, convergence, un-accommodation, divergence, causes pressure, tension on/in the eye, alters the eyes shape, (and lens), disrupts focus of light rays on the retina and the clarity of vision. Circulation in the eyes is also affected.
Mental strain, stress, strain in the mind, negative thoughts, emotions cause eye muscle tension. Neck muscle tension causes eye muscle tension and neck tension is caused by mental strain, negative thoughts, emotions, incorrect posture, injury: vertebrae out of alignment). Inner eye muscle tension; ciliary/lens, iris, tear gland muscle... also occurs. When the mind is strained, tense, the brain and retina do not communicate, function together at optimum level, function of the retina is lowered.

Dr. Bates proved that MENTAL STRAIN causes unclear vision. RELAXATION of the mind produces clear vision. Dr. Bates used his retinoscope to show that the refraction/focus of light rays in the eye are disrupted resulting in unclear vision when a person lies. Lying causes a bit of mental strain. When the person tells the truth-no strain occurs, the refraction is perfect and vision clear. Many things can cause mental strain. Avoid eyeglasses, remove the stress, strain and vision returns to clear. Practice of Natural Eyesight Improvement can uncover old, forgotten stressful experiences, resulting in strong emotions, feelings being remembered, activated. Once the memory, feelings are acknowledged, released and new positive thoughts, emotions placed into the brain, system: often the vision immediately returns to normal 20/20 and clearer. No other practice is needed. The eyes relax, move, 'shift'... correct on their own.

Dr. Bates published Medical Articles, Books describing his experiments on the eyes, eye muscles, the effect of memory on the eyes, vision and the effect of the clarity of vision on the memory: 1891 'A Study of

Images Reflected from the Cornea, Iris, Lens, and Sclera' & 'Memory as an Aid to Vision'. These Articles and others are placed in his 1920 book: The Cure of Imperfect Sight by Treatment without Glasses, Better Eyesight Magazine and his Medical Articles E-Book.
Dr. Bates created Natural Treatments, Activities to cure: reverse, correct and prevent unclear vision and other eye conditions based on his discoveries. This became know as 'The Bates Method'. Glaucoma, cataracts and other eye conditions were also reversed successfully with Dr. Bates Natural Treatments.

He made other discoveries, eye surgery inventions. Later, after he discovered the natural function of the eyes, vision, he stopped use of certain surgeries and cured the eyes-vision with his natural method.

Dr. Bates History - Dates

1860 - Born December, 23rd - New Jersey, USA.

1881 - Graduate - B.S. (Bachelor of Science) Agriculture - Cornell University in New York.

1885 - Graduate - MD (Medical Degree - Doctor of Medicine) - College of Physicians & Surgeons - Columbia University, New York.

1886 - Invented new operation for a type of deafness by incising the ear drum membrane and published article.
Published more articles on the Eye, Eye Muscles, Lens, Cornea, Cataracts, Accommodation, Myopia... from this date onward.
Discovered and published Article on properties of the aqueous extract of the suprarenal capsule, 'Adrenalin'.

1886 - First Natural Eyesight Improvement Application - Dr. Bates cures a medical student of unclear distant vision, 'Myopia' without eyeglasses, surgery, drugs.

1886 -1902 - Eye surgeon - Instructor of Ophthalmology - New York Postgraduate Medical School, Hospital. Dr. Bates teaches the other doctors, medical students to stop wearing their eyeglasses and how to cure their eyesight, myopia with Natural Methods. Dr. Bates natural treatments were successful. He states, proves the natural cure for Myopia, unclear distant vision.
(1891 - Dr. Roosa, the chief director of the institution, expelled Dr. Bates in an attempt to hide Natural Eyesight Improvement from the public and maintain the practice of solely prescribing eyeglasses, surgery and drugs.)
Dr. Bates then opens his own office, clinic and works for better hospitals.

Attending Physician, Surgeon, Clinic Assistant - Manhattan Eye & Ear hospital, Bellevue hospital, New York Eye Infirmary-Northern, Northeastern, Northwestern dispensary & Harlem Hospital.
Invented Astigmatic Keratotomy, an operation to correct astigmatism. He discontinued applying this operation after he realized through further study of Natural Eyesight Improvement that the operation eventually impairs the eyes function, cornea, vision, health. It works against the natural function of the eye.

Dr. Bates discontinued his hospital schedules for a while and started experimental work, studied the eyes natural function at the laboratory at Columbia University.., Research at the Pathology Laboratory of Dr. Pruden at the College of Physicians and Surgeons, Columbia University.

Dr. Bates goes to Grand Forks, North Dakota, (Medical License) and teaches his Natural Eyesight Improvement Method, correct natural use of Snellen Eyecharts in the schools, brings clear vision to the children and teachers. Elected president of the Grand Forks district Medical Society.

Back to New York, worked as Attending Physician - Harlem Hospital in New York City. Teaches his method, use of Snellen Eyecharts in the schools, brings clear vision to the children and teachers in New York City.

1911+ - Met Emily C. Lierman. Dr. Bates cured her eyesight, then hired her as his assistant clinic nurse -They worked his experiments in the Physiological Laboratory at the College of Physicians and Surgeons in New York and treated patient's eyesight with natural methods in the Harlem Hospital, Clinic. Many years giving free treatments to the Public. They Married in 1928.
Dr Bates performs experiments on the eyes of Animals, Fish proving that the outer eye muscles when tense can alter the shape of the eye, lens and cause unclear vision, cataracts and other conditions. He proves the outer eye muscles, oblique can accommodate the eyes for clear close vision.

1918 - 1924 - Course, book 'Strengthening the Eyes' by Bernarr Macfadden & Dr. W. H. Bates - Physical Culture Publishing Co. In later book editions, Only MacFadden's name was listed on the book.

1919 -1930 - Dr. Bates Published his Monthly 'Better Eyesight Magazine' - Central-Fixation Publishing Co. - 11 Years-132 Issues recording various Natural Treatments for many different eye conditions of the patients of Dr. Bates, Emily and other doctor's... patients. A Gold Mine, History of Natural Eyesight Improvement Methods, Applications.

1920 - Dr. Bates published his book: 'The Cure of Imperfect Sight by Treatment Without Glasses'. (Perfect Sight Without Glasses).

Medical Article - The American Journal of Clinical Medicine 'A Clinical and Experimental Study of Physiological Optics with a view to the Cure of Imperfect Sight Without glasses'. Basic information on The Bates Method. Many Medical Articles proving the effectiveness of The Bates Method were published though the years.

Elected Vice President of Allied Medical Associations of America.

Stopped work at Harlem Hospital, Clinic and starts Free Clinic treatments day at new location.

1926 - Emily C. A. Lierman (Bates) writes, publishes the book: 'Stories From The Clinic' describing The Bates Method, various natural treatments Dr. Bates and Emily applied to cure many different eye conditions for patients in their Clinic.

1931, July 10th - Dr. Bates Deceased, age 70 at his home in New York City.
Emily Lierman/Bates, Dr. Harold Peppard, Dr. William B. MacCracken, C.S. Price, Clara Hackett, Margaret Corbett, Aldous Huxley and others continue to teach The Bates Method. Better Eyesight Magazine and Bates Books, Articles were Preserved. Bates Teachers work in Cities in the U.S.A., England, Germany, Spanish Teachers, South Africa,..

1940 - Emily Lierman, Bates re-published Dr. Bates book with an additional chapter teaching The Bates Method's Application: The Fundamental Principles of Treatment. (The list of treatments is placed in this introduction and is derived from Better Eyesight Magazine, June, 1921 and other issues & Dr. Bates original books). Sometime during her teaching profession she and others continued to bring the Bates Method to California and other states, countries. Thousands of person's eyesight cured naturally. Emily and other teachers made a Movie on 'How to Apply The Bates Method'. It is hard to find.

1940 -1941+ - Natural Eyesight Improvement Teachers are sued by the Optical, Medical Industry, Association in an attempt to stop them from teaching The Bates Method. (See Margaret Corbett, Aldous Huxley case in this book.) Optical Industry, AMA, Eye Doctors destroy Dr. Bates Books, Magazines, Articles, remove them from Colleges, Libraries, Bookstores...

1943 - Emily Lierman/Bates re-publishes Dr. Bates book with a new title 'Better Eyesight Without Glasses'. Many treatments in the book are removed causing The Bates Method to be mis-understood by students. Students confused Natural Eyesight Improvement with Eye Exercises. (The Bates Method uses relaxation of the mind, body, eye muscles and eyes. Exercise, hard effort is not applied.)
Emily wrote this new limited book out of fear of Law Suits, Abuse, Imprisonment by the Medical People (Optical Industry, AMA...) that preferred to continue selling harmful Eyeglasses, Eye Surgery, Drugs and hide Natural Eyesight Improvement from the public.
Emily and other Natural Eyesight Improvement Bates Teachers, a few honest Eye Doctors secretly preserved Dr. Bates Original Books, Medical Articles, Better Eyesight Magazines in the U.S.A. and other countries.

A Bates teacher stated that toward the end of Dr. Bates' life the eye doctors that wanted to hide The Bates Method, to sell only eyeglasses, eye surgery and drugs ganged together, were taking Dr. Bates to court in an attempt to stop him from teaching Natural Eyesight Improvement. They wanted to take away his ophthalmology-medical license. Dr. Bates died before they could bring him to court. Some people wonder if the cause of his death was natural, really the flu or was it a conspiracy. Was he murdered by 'certain organizations'? Some drug companies and other businesses, corrupt politicians would have been happy to help, possibly exposed Dr. Bates to a 'mysterious virus'.

Teaching, working under adverse conditions, harassment for years may have been challenging. Dr. Bates disappeared, reappeared, worked in different locations, hospitals. He learned, taught much in his travels and found friends, support among other honest eye doctors.

After Dr. Bates passed away and time went by, people could not find his original unedited magazines, books, articles and other books he and Emily may have or had been in process of creating. See Better Eyesight Magazine, April, 1930; "*... Dr. Bates and Mrs. Bates to devote more time to the writing of new books on treatment alone for which there has been a very great demand during the past year*". Emily stated in Better Eyesight Magazine, May, 1927 that they were showing training movies in California; *"Mrs. Lierman is delivering lectures throughout California and is showing moving pictures which illustrate the Bates Method of curing imperfect sight."* ('Showing' = the movies were already created and were being shown?) No one has found the movies or new books... to this date. Were they destroyed? Are they being hidden by people afraid to come forward, were people threatened? Are some vision teachers hiding the movies, books due to ego, a power-control type of mindset. I appeal to your conscience, heart and humanity's education; come forward, preserve this great work. Do it anonymously if privacy, safety is the issue.

If I find them I will place on YouTube and publish the books free in PDF e-book and paperback.

Bates life, work time-line originally researched by a variety of Bates Teachers

2 - BATES METHOD HISTORY – TEACHERS, BOOKS, WEBSITES

IN HISTORICAL ORDER, YEARS 1800's, 1901 to PRESENT

The Best Natural Eyesight Improvement Training



Ophthalmologist William H. Bates



Emily C. Lierman, Bates

+THE CURE OF IMPERFECT SIGHT BY TREATMENT WITHOUT GLASSES (Perfect Sight Without Glasses), 1920-1940. 9 print editions. By Ophthalmologist William Horatio Bates, M.D., Eye, Ear, Nose and Throat. Authors name on book; W. H. Bates. Advertised in Better Eyesight Magazine Sept., 1919.

Dr. Bates wrote Medical Articles, invented operations, discovered adrenalin, began his experiments and started to cure patient's eyesight naturally in 1886. He published STRENGTHENING THE EYES - A New Course in Scientific Eye Training in 28 Lessons, a kit-book with Bernarr MacFadden, a Natural Health teacher, body builder in 1918. Dr. Bates worked in hospitals, colleges treating patients without eyeglasses, surgery, drugs. He cured other doctor's eyesight, taught them Ophthalmology and Natural Eyesight Improvement. This resulted in the head surgeon (Dr. Roosa, New York Post Graduate Hospital, Medical School) daring Dr. Bates to prove his statements about natural eye function are fact, then expelling Dr. Bates after Dr. Bates proved his discoveries are a fact and the natural practice is effective. (Read *Reason and Authority - Man Not a Reasoning Being* in the final chapter of Perfect Sight Without Glasses.)

Dr. Bates and the Bates Method survived. He was welcome in many hospitals, colleges as he continued to prove his method works. He opened his own office, clinic in New York City. Thousands of people were cured of unclear eyesight, cataract, glaucoma and other conditions. Often Dr. Bates and Emily, his assistant provided free-no charge for treatment clinic days. See his Better Eyesight Magazine for hundreds of documented natural eyesight cures.

Perfect Sight Without Glasses is Dr. Bates original, first book, it contains the complete, unedited antique edition. Treatments for blindness and other conditions. Some prints from 1920 to 1940 have a picture removed, new added, bit of text changed in the fine print section... and the printers, address are different. The 1940 final print of the book contains; a certificate, letter from T. K. Peters, Oglethorpe University, Ga., Oct., 18th, 1938 stating the book is *preserved in the Crypt of Civilization for future generations*. A small C eyechart with *Suggestions To Patients* and step by step directions *How To Demonstrate the Fundamental Principles of Treatment* are added by Emily A. Bates and an *Appreciation by Dr. Bates' Church Reverend, Dr. Rev. Daniel Poling*. Editions after 1940 have different titles, are not the complete version of Dr. Bates original book. Many of his natural treatments (The Sunglass, other Sunlight Treatments that can cure blindness, cataract...), his experiments and all pictures are removed.

5 original editions combined in one book are free in PDF E-book on our website and preserved in paperback. All 9 editions will be combined. I found 8 editions as of Sept, 2014. Single editions will also be created in paperback.

+BETTER EYESIGHT (Better Eyesight Magazine) - A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES By Ophthalmologist William H. Bates. 1919 11 Years, July, 1919 to June, 1930. 132 Issues, 2400+ pages. Includes 'STORIES FROM THE CLINIC' By Emily C. Lierman, A. Bates. 123 True Stories of Dr. Bates' patient's, treatments. Better Eyesight Magazine describes how Dr. Bates and Emily Lierman/Bates and other teachers, doctors applied Natural Eyesight Improvement, the Bates Method to cure patients of unclear vision, 'myopia, farsight, presbyopia, astigmatism', crossed-wandering eyes, cataracts, glaucoma, blindness, conical cornea, cornea scars, retinitis pigmentosa and many other eye-vision problems, disease without use of eyeglasses, surgery, drugs. The true method, it's origin. They teach how they did it and how to do it yourself. This proves the Bates Method works, is safe and healthy.

Eye doctors, surgeons and the optical industry became angry, feared they would lose a lot of money as people were being cured naturally and did not need to purchase eyeglasses, surgery and drugs. The eye doctors, opticians tried to stop Dr. Bates from curing his patient's eyes-vision naturally, teaching Natural Eyesight Improvement to the public and certifying teachers. To date; year 2014+, eye doctors, businesses that prefer to sell; eyeglasses, contact lenses, eye drops, drugs, cornea lasik, cataract... eye surgery continue to hide Natural Eyesight Improvement, the Bates Method, to prevent the public from learning how to obtain clear eyesight and cure, prevent eye problems, disease naturally, *on their own*. Dr. Bates life history; http://cleareyesight-batesmethod.info/id110.html

Better Eyesight Magazine and all Dr. Bates, Clark Night's books listed on this page are free in 20PDF E-books at; http://cleareyesight-batesmethod.info/id148.html 'Print your own book'. Read, listen to Dr. Bates Better Eyesight Magazine website; http://www.cleareyesight.info/naturalvisionimprovementoriginalandmodernbatesmethod Magazines in Paperback or E-book in Original Antique Print and Modern Print in Color with 500 Pictures. See the website homepage navigation on the left for low cost paperback books, other doctors, teacher's books; copy/paste any book title from this page into the bookstores search bar. Teachers trained and certified directly by Dr. Bates are listed in his Better Eyesight Magazine, in this book's introduction and on the website.

+STORIES FROM THE CLINIC By Emily C. Lierman 1926

Doctor, patient experiences, natural treatments in Dr. Bates New York City Clinic, offices. Emily C. Lierman's eyesight was cured by Ophthalmologist William H. Bates. She then worked as Dr. Bates assistant in his Clinic in New York City, U.S.A. for many years. They married in 1928. Her name changed to Emily A. Bates.

Emily Lierman, Bates is known for her kind, gentle, understanding way of treating, teaching adults and children how to obtain clear eyesight and healthy eyes naturally, and for her devotion to Dr. Bates work. She continued teaching The Bates Method of Natural Eyesight Improvement after Dr. Bates passed away in 1931 and preserved his books, Better Eyesight Magazine. The book contains true stories of their patients, describes the natural treatments that Dr. Bates and Emily applied without use of eyeglasses, surgery, drugs to cure; Unclear Close and Distant Vision (Myopia, Farsight, Presbyopia), Astigmatism, Crossed, Wandering Eyes (Squint-Strabismus), Cataracts, Glaucoma, Cornea Ulcers, Scars, Blindness and other eye problems. A variety of patients, their eye-vision conditions were treated. Dr. Bates, Emily's patients became teachers, applied Natural Eyesight Improvement to cure many people in the United States and other countries. Children cured by Dr. Bates and Emily then cured their friends, parents, school teachers with the Bates Method. Emily's 'Stories From The Clinic' were originally published in 'Better Eyesight Magazine' by Ophthalmologist William H. Bates, Central Fixation Publishing Co., New York City, U.S.A.

The stories in her book contain a few different, additional sentences, descriptions. ***Free on this website.***

+THE BATES METHOD FOR BETTER EYESIGHT WITHOUT GLASSES By William H. Bates and Emily C. Lierman, A. Bates 1943 Emily A. Bates published the 1940 and 1943 editions of Dr. Bates book.

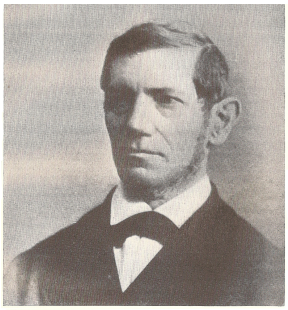
European version; GOOD SIGHT WITHOUT GLASSES

1943 and later editions are not the complete version of Dr. Bates original book. Blindness cures; looking into the sun with eyes open (the correct way, specific directions, time limit, eyes moving, blinking...), the sunglass and other original treatments, experiments and all pictures are removed from the book. (Fear of imprisonment, fines due to pressure from eye doctors, optical businesses trying to destroy Dr. Bates work, hide the truth.) Emily may have been reluctant to continue publishing Dr. Bates original book and its true title after Dr. Bates passed away in 1931 and Margaret Corbett, other Bates Method teachers were taken to court in the 1940's by dishonest eye doctors trying to suppress the Bates Method so they can continue selling eyeglasses, surgery, drugs. Right before Dr. Bates died in 1931 the dishonest eye surgeons... planned to take him to court, take away his medical license and stop him from teaching his natural method. Emily A. Bates' list of the basic practices '*Fundamental Principles of Treatment*' are placed at the end of the 1940, 1943 books. My two copies state; copyright; 1940, 1943 by Emily A. Bates. 1940 is the original, has extra pages. 1943 has a full-size Big C Eyechart. Page 53; picture of the human eye. 1968, 18th printing. Owl Book edition 1981. Other books are labeled by different titles. Some people alter, corrupt the book's method.

(Clearsight Publishing Co. has all of Emily's treatments included 'legally, public domain' from Dr. Bates Better Eyesight Magazine in our reproduction of Dr. Bates original 1920 to 1940 editions combined.)

Two of the Best Eye Doctors, Scientists That Studied the Human Eye, Lens, Accommodation and Refraction Of Light Rays;


Hermann von Helmholtz


FERDINAND VON ARLT
(1812-1887)

Distinguished Austrian ophthalmologist, Professor of Diseases of the Eye at Vienna, who believed for a time that accommodation was produced by an elongation of the visual axis, but finally accepted the conclusions of Cramer and Helmholtz.


Helmholtz


Helmholtz

Hermann Ludwig Ferdinand von Helmholtz, Great German Scientist, inventor, philosopher, physics, contributed to optics, electrodynamics, mathematics, physiology, meteorology, measured the speed of the nerve impulse, submitted a theory of color vision, the perception of musical tones. From 'Psychology and Life', 6th edition. Read the chapter on vision, page 264. Great description of eye movements, fixations, left and right brain hemisphere function with the eyes... He studied the eyes' lens and invented instruments to inspect the inside of the eye, light rays, retina, lens... 'the *ophthalmoscope and ophthalmometer*'. He stated his experiments developed the theory that the eyes lens changes shape to produce accommodation, clear close vision. Dr. Bates disagreed with this and produced experiments, stated that the eye changes shape during accommodation but the lens does not. He stated the eye lengthens from front to back during accommodation, 'for clear close vision'. Dr. Bates definitely proved as fact that the outer eye muscles, 'oblique and recti', when tense alter the eyes shape, the eyes refraction of light rays, pressure.., clarity of vision at close and far distances

causing; unclear vision, astigmatism, cataract, glaucoma, strabismus and other eye-vision conditions. When the mind, body and eye muscles relax, these conditions are reversed, cured. Ophthalmologist Ferdinand Von Arlt originally studied the theory that the eye accommodates by lengthening, 'like a camera'. Modern eye doctors state they have proved that the lens and eye change shape during accommodation. The eye lengthens a bit when the lens changes shape. So, Dr. Bates and Arlt, Helmholtz are right. Tension in any eye muscle; the outer oblique, recti and inner ciliary-lens, iris-pupil muscles and even the tear gland and eyelid-blinking muscles can affect eachother's function, the eyes function and the clarity of vision. Neck, shoulder and even back, body muscle tension, incorrect posture can affect the eye muscles and clarity of vision.

+STRENGTHENING THE EYES - A New Course in Scientific Eye Training in 28 Lessons By Bernarr A. Macfadden and William H. Bates, M.D. 1918, 1924, 1925. His first book;
+STRONG EYES - HOW WEAK EYES CAN BE STRENGTHENED AND SPECTACLES DISCARDED 1901.

Possibly the first person or one of the first people to write a book about Natural Eyesight Improvement. 1901 is a good book, has wonderful poetry.., but needed some improvement. Contains a few practices I do not recommend. In later years, MacFadden with the help of Dr. Bates wrote a new book with many changes, additions; The 1918, 1924-1925 book 'eyesight kit' editions of 'STRENGTHENING THE EYES' is a result of Bernarr MacFadden learning Ophthalmologist William H. Bates Method of Natural Eyesight Improvement, in person training from Dr. Bates. MacFadden published Physical Culture ; A fitness, natural health, food, body building magazine. In this magazine and other magazines, newspapers Dr. Bates and MacFadden advertised the Bates Method, their 'Strengthening the Eyes' Natural Eyesight Course consisting of training booklets, 28 lessons and an eyechart. This and Dr. Bates Medical Articles, work around 1886 started the Natural Eyesight (Vision) Improvement revolution. In later years MacFadden turned the kit into a book.

Dr. Bates name was on most 1918-1925 red cover kits as author with MacFadden. Later book editions were authored only by MacFadden. Did Dr. Bates want to change, improve some of the practices in the book? Or maybe he preferred to place all his attention on his projects; Better Eyesight Magazine, Perfect Sight Without Glasses, Medical Articles, Clinic work. Bates 1919-1920 book, magazines contain many new practices. *(Clearsight Publishing Co., www.cleareyesight-batesmethod.info has added the Original and Modern Bates Method training to MacFadden's book; changed, corrected some practices, treatments and added new practices while maintaining the original text, pictures, practices 'entire book'.)*

MacFadden's practice of looking at 'shifting on' small parts of a close object (pencil), then looking beyond it to a far object on the horizon; looking at the far object's small parts, then back to the pencil, then far, then pencil... improves the eyesight quickly to 20/20 and clearer. Perfect convergence, divergence improve all eye-vision function. Bernarr MacFadden is one of the first Natural Health, Physical Fitness teachers. Sadly, he died in 1955 from a urinary tract infection after refusing standard medical doctor's treatment. Many people have improved their vision with the Bates Method. It is hidden by the medical community due to its success, competition; prevents need for glasses, surgery... The Bates Method works if the patient will learn and apply it. Many people prefer eyeglasses or surgery; a quick fix with no study, practice. Glasses, contacts, surgery are addictive, maintain and increase eye-vision problems, cause cataract, detached retina... With a little practice the Bates Method 'natural eye-vision function' becomes automatic and conscious practice is not needed.

+EL USO NATURAL DE LA VISION (THE NATURAL USE OF VISION) By Dr. Ramon Ruiz Arnau, M.D. 1924
Spanish - Berkley, CA Optometry Library; http://oskicat.berkeley.edu/search~S1?/cRE925+.R93+1924/cre++925+r93+1924/-3%2C-1%2C0%2CB/frameset&FF=cre++925+r93+1924&1%2C1%2C Also preserved in the Library of Congress.
Studied, successfully taught Dr. Bates Method. From Dr. Bates in Better Eyesight Magazine, Nov., 1924;

"This book should appeal to Spanish-speaking people, because it contains numerous demonstrations of the truth which make it possible to cure imperfect sight by treatment without glasses. In the magazine, "Better Eyesight," of May, 1920, is an article by Dr. Arnau with the title "My Headaches" in which he describes at length how he was cured of chronic headaches and imperfect sight by treatment without glasses. As a result of his cure he has become able to give relief to his patients. The author's most important contribution is his claim that the true use of the ciliary muscle is not to increase the curvature of the lens when the eye is focused for reading at the near point, but just the opposite: The ciliary muscle prevents any change of form in the curvature of the crystalline lens. He has written a great deal about mind strain as the real and only cause of defective eye-sight. He discusses the unconscious movements of the vegetative functions of the body, circulation, respiration and the constant mental shifting as entirely in accord with the new ideas of Einstein, Korbzyski and others. The Tachorthoscope was discovered by Dr. Arnau. It is an apparatus for the treatment of patients who are not benefited promptly by other methods. (It shows that voluntary or artificial attention, as is with spontaneous attention, oscillates, needs alternate contractions and relaxations. Forcing one fixation causes fatigue, lowers the vision.., perfect perception. Constant voluntary muscle contraction creates spasms, results in many impaired body, mind... functions.) *He has also investigated the use of music by which some patients find an easy way to obtain a short swing through the auditory memory."*

Here's another Spanish book on Scribd; Different author listed. EL MÉTODO NATURAL DEL OFTALMÓLOGO NORTE AMERICANO DOCTOR W. H. BATES J. de S'Agaró Como se recupera la VISIÓN NORMAL SIN GAFAS; http://www.scribd.com/doc/89556144/Vision-Sin-Gafas I have not read it entirely, can't read full Spanish.

+BETTER SIGHT WITHOUT GLASSES OR CONTACT LENSES By Harry Benjamin N. D. 1929
Also wrote a book on his experience with Myopia, books on Diet and Vegetarianism. Cured many people of defective sight. Describes how glasses impair the eyes natural accommodation, other functions. Good chapter on Mental Strain. Lot of pictures, easy to learn; the sway, swing, looking close and far to return natural accommodation, memory, imagination... Nutrition for the eyes. Very good book. Possibly trained with Dr. Bates.

+THE IMPROVEMENT OF SIGHT BY NATURAL METHODS - A Complete Treatise Upon the Newer Methods of Treating all Conditions of Imperfect Sight by Natural Means, and Obviating the Necessity for Glasses, Drugs, or Operations 1934 By Cecil S. Price

Trained by Ophthalmologist Bates. Captain of the Australian Army Medical Corps, Principal of the School of Eyesight Training (London). This is from Dr. Bates in Better Eyesight Magazine, Jan., and Mar., 1925;

"Capt. C. S. Price, of London, England, will visit Dr. Bates around the latter part of January. He is planning to discuss with Dr. Bates the best methods which are employed for the cure of imperfect sight without glasses. The spread of Dr. Bates' method in England is largely due to Capt. Price's enthusiasm and success in helping others. There are now two clinics, and a Better Eyesight League in England, all reporting favorable results. Capt. Price has been the guest of Dr. Bates for several weeks. Dr. Bates wishes to announce that he finds Captain Price thoroughly capable of curing imperfect sight by his methods."

+SIGHT WITHOUT GLASSES By Optometrist, Dr. Harold M. Peppard 1936

Worked with and was trained in The Bates Method by Ophthalmologist Bates. Continued Dr. Bates work in New York City with Dr. Bates' wife Emily A. Bates after Dr. Bates death in 1931.

Book has step by step Bates Method directions for various eye problems. The effect health, stress, diet, neck, shoulder tension and headaches... have on the eyes, vision. He states that imperfect, slow-stiff close distance eye convergence *sometimes* occurs as we age and is the cause of presbyopia, unclear reading vision. It is easily corrected. The Bates Method, long swing and reading fine, microscopic print is the natural cure. Glasses cause stiffness, impair convergence, accommodation.

After Dr. Bates passed away, the eye doctors that prefer to sell eyeglasses, eye surgery and drugs, to hide the Bates Method, Dr. Bates work and discoveries tried to destroy Dr. Bates books, Better Eyesight Magazines. Emily Lierman, A. Bates and others preserved Dr. Bates work. Dr. Peppard and other honest doctors helped to protect Emily during this time and preserve Dr. Bates Original unedited book *'Perfect Sight Without Glasses'*, His *Medical Articles* and *132 Monthly Better Eyesight Magazine Issues*. See picture on the right > Dr. Monroe J. Hirsch preserves Dr. Bates magazines in a medical college library. (Movies, books Dr. Bates and Emily stated they created and were in process of creating are 'missing'.)



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GIVEN WITH LOVE TO THE
OPTOMETRY LIBRARY
BY
MONROE J. HIRSCH, O.D., Ph.D.

+USE YOUR OWN EYES 1937

+NORMAL SIGHT WITHOUT GLASSES By Dr. William B. MacCracken, M.D. 1945

Trained by Dr. Bates. Very successful in his medial practice curing his patient's eyesight with the Bates Method. A blind student I work with has success with this doctor's book. From the book;

In many cases it is quite practicable to teach a patient who is having trouble with eyesight how to correct the abnormal function and regain good normal vision. There are different techniques, or procedures, in the method originated by Dr. Bates. They are all very simple, and they are varied so that they are adaptable to every kind of condition, and temperament and opportunity. In this book all of these practices will be described so that it will be possible to learn definitely from the text how to carry them out.

Dr. MacCracken's books are free to download on this website.

+SEEING WITHOUT GLASSES By Dr. Emery C. Ingham 1941 Dr. Ingham was trained in the Bates Method of Natural Eyesight Improvement by her mother, Doctor Clara Ingham who was trained in person by Ophthalmologist Bates, the founder of the Bates Method of Natural Eyesight Improvement. Both had clear eyesight their entire life. She is mentioned in Dr. Bates monthly magazine as a qualified teacher and she posted in the magazine;

By Dr. Bates; *Dr. Ingham, who also practices by Dr. Bates' method, is going back to Oregon. She will have access to the orphanage, and expects to start the system there free of charge. Dr. Ingham is a true member of the League. She not only gives her time, but her valuable experience in curing defective eyesight. She is most enthusiastic and we hope to hear very favorable results of her work in Oregon, and that a BETTER EYESIGHT LEAGUE is established there.*
Perfect Book! Video; https://www.youtube.com/watch?v=ELLV_aHBoME&list=UU8f8jhrxbwrHc-4v0fz7qcQ

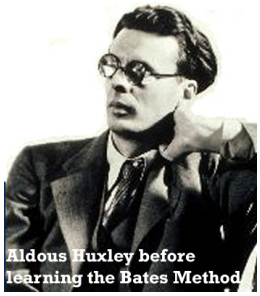
+THE ART OF SEEING By Aldous Huxley 1942 Almost blind, he learned the Bates Method, was trained by Margaret Corbett and improved his eyesight, could see without glasses, prevented the full, permanent blindness that his eye doctors stated would definitely occur. Sunlight and palming were two of his favorite practices. Famous writer *'Brave New World'* and other books. Read his experience in Margaret Corbett's story below. The easy directions, practices in his book helped many people achieve clear eyesight. My first Bates Teacher. Corrected my eyesight, removed myopia in high school at age 17 and presbyopia at age 40. Now age 57, 2014 still see clear.

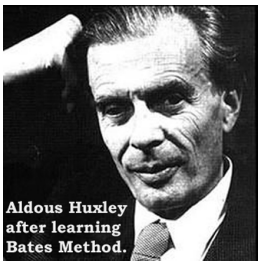


+EYES - THEIR USE AND ABUSE - How to Improve Defective Sight 1948 By Ethel Beswick
Worked with Cecil S. Price and other teachers, studied Dr. Bates work. Nice short book, straight to the subject, contains the basic training, variety of information.

+HOW TO IMPROVE YOUR SIGHT - SIMPLE DAILY DRILLS IN RELAXATION (How to Improve Your Eyes) 1938 +HELP YOURSELF TO BETTER SIGHT 1949 +A QUICK GUIDE TO BETTER VISION; HOW TO HAVE GOOD EYESIGHT WITHOUT GLASSES By Margaret Corbett 1957


Margaret Corbett


Aldous Huxley before learning the Bates Method


Aldous Huxley after learning Bates Method.

Margaret Corbett was a Natural Eyesight Improvement teacher that worked with and was trained as a Bates teacher by Dr. Bates. She cured famous writer Aldous Huxley's eyesight, saved him from blindness. She improved the eyesight of many people, including pilots and people of various professions in the military, stars in Hollywood, Los Angeles, CA, USA.

In the 1940's, California; eye doctors and people in the optical-medical profession tried to stop Margaret Corbett and her assistant from teaching the public how to improve their eyesight naturally and stop use of eyeglasses. They accused her of practicing optometry without a license. They brought her and others to court a few times. Aldous Huxley and other cured Bates Method graduates were witnesses, testified for Margaret Corbett. Huxley proved that she improved his eyesight, he sees clear without glasses. Many people proved she cured them of cataract, near blindness and other eye-vision conditions, proved they had healthy retinas due to Bates' sunlight practice and obtained clear eyesight, freedom from eyeglasses. She won the 2 cases brought against her and later improved the eyesight of more people that were in the courtroom that day and worldwide. Other teachers won similar cases.

She was accused of violating the Medical Practice Act of CA for treating the eyes without a license. Mrs. Corbett explained in court that she was not practicing optometry or ophthalmology, is not acting as a doctor. That she is only an instructor of eyesight training. After she won the cases; the optometrists and ophthalmologists fought back by proposing a bill in the CA State Legislature to cause eyesight education to be illegal without an optometry... or medical license. The bill was defeated. New York succeeded in passing bills. Emily A. Bates, in N.Y. was affected by this abuse. The bills were eventually discontinued.

Huxley wrote the book; '**The Art of Seeing**' in 1942 to describe the Bates Method and how his eyesight was cured. See his pictures on the right > ; top picture - strong, thick eyeglasses, unclear eyesight, near blindness before Natural Eyesight Improvement. Bottom picture - without eyeglasses, he has clear eyesight after his eyes-sight was cured by the Bates Method.

Critics state that later in life, Huxley was giving a speech and could not read part of a page without using a magnifier glass. People must realize that it is normal for the clarity of vision to fluctuate and especially when under pressure, a bit nervous giving a speech while knowing 'certain people' will be working against him, hoping his vision won't be perfect. Aldous Huxley had a major eye problem, was almost completely blind before treatment from Margaret Corbett. Age 16; attack of keratitis punctate, had opacities on the cornea blocking his vision, hyperopia, astigmatism. He wore very strong glasses for years and used a powerful magnifying glass to read. These things further impaired his vision. The Bates Method helped correct this. His eye injuries were not 100% cured but after the Bates Method he could see well. Due to the injuries he used a magnifier occasionally, mainly to see in dim light. Read Aldous wife's book for facts; his eyesight and the Bates Method; **This Timeless Moment; A Personal View of Aldous Huxley** by Laura Archera Huxley. *Margaret Corbett published other books.*

For many years, since eyeglasses were invented and sold to the public, eye doctors and optical businesses that prefer to hide the truth about Natural Eyesight Improvement and to prescribe/sell eyeglasses, eye surgery and drugs have tried to stop true Bates Method teachers from teaching the public how to cure unclear eyesight and other eye problems naturally without glasses, surgery and drugs. Bates teachers are often threatened with lawsuits, fines, imprisonment by organized eye doctors, surgeons. Eyeglasses are addictive, lead to prescriptions for stronger and stronger lenses, cause and increase; mental strain, eye muscle tension, eyestrain, vision impairment, abnormal eye, cornea, lens shape, tension on and inside the eye, cornea, lens, retina, optic nerve, eye muscle nerves, capillaries and all parts of the eye, increase eye pressure resulting in; unclear eyesight, astigmatism, crossed/wandering eyes, cataracts, detached retina, broken retina blood vessels, macula degeneration, glaucoma and other eye problems. Eye doctors prescribe laser and other cornea surgeries which are very harmful to the eyes and result in unclear day and night vision, blindness, pain, light streaks, halos, impaired light tolerance and other eye-vision problems. Lifelong sales of eye drops, other treatments, more destructive surgery and eyeglasses after cornea surgery profit the doctors and drug companies. (Some honest eye doctors are teaching the Bates Method.) Natural Eyesight Improvement improves the clarity of eyesight and health of the eyes without side effects.

+RELAX AND SEE; A DAILY GUIDE TO BETTER VISION By Clara A. Hackett 1955 Great Natural Vision Improvement teacher. One of the first Bates Method Teachers. She placed some of her training in audio. I heard it once. Can't find a copy. May have trained with Dr. Bates, Margaret Corbett and other Bates teachers.

+YOUR INNATE POWER 1967 By Olive Lyle Brown Very interesting, uplifting book. Combines methods of Dr. Roger Vittoz, F. Matthias Alexander, Dr. William H. Bates and others. Healthy Mind/Body technique, healing on all levels. Shows how to think, control thoughts a certain 'correct' way to improve function, health of mind, body and spirit. Positive effect on the eyesight. These old techniques are different, very effective from their original creator.



+NATURAL VISION IMPROVEMENT By Janet Goodrich 1985
+HELP YOUR CHILD TO PERFECT EYESIGHT WITHOUT GLASSES By Janet Goodrich 1996
Famous Natural Vision Improvement Teacher. Variety of Original and Modern Bates Method practices. Reichian Therapy. Free videos, audios. Covers all aspects of Natural Vision practice. Wrote other books. Thomas Quackenbush was trained, certified to be a Natural Vision Teacher by Janet Goodrich. www.janetgoodrichmethod.com Janet passed away in 1999. Worked as a teacher, author; 1970 -1999.

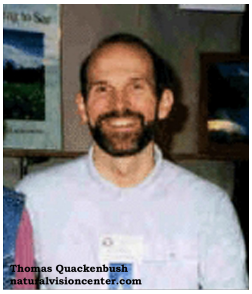
CARINA GOODRICH (Janet Goodrich's daughter) now runs the school and published a book;
+THE PRACTICAL GUIDE TO NATURAL VISION IMPROVEMENT 2010
Original and Modern Natural Vision Improvement. She has a lifetime of experience learning and teaching this method with her mom and family. Very good book! I do not use the artificial 3-D fusion *'Merging Circles'*... in the Goodrich books. Prefer it to be applied by an eye doctor. (also called Auto-Streograms.) It's only for an Optometrist, Ophthalmologist to apply a specific way for each individual case if necessary to treat strabismus. The Bates Method alone can correct crossed, wandering eyes without the artificial 3-D. The Goodrich books, school also has natural 3-D practices.
Read more on the following pages.

+HEALTH AND LIGHT By John N. Ott 1973 One of the first to study sunlight and it's benefit to life, health, eyesight, sleep, brain function. With his experiments he proved the healthy effects sunlight has on the body, brain, eyes and eyesight. Dr. Bates observed and proved many times that lack of sunlight causes unclear vision, cataracts, many eye diseases and blindness. The eyes must have full spectrum sunlight, no eyeglasses, to remain healthy and see clear.

+TAKE OFF YOUR GLASSES AND SEE - A Mind/Body Approach to Expanding Your Eyesight and Insight
+LIGHT; MEDICINE OF THE FUTURE By Jacob Liberman, Optometrist 1995 1991 Liberman and Ott teach the subject of light perfect! Experiments, directions included. Indoor full spectrum lightbulbs improve health, eyesight.

+EYE EXERCISE CARD - DO IT YOURSELF - NATURAL EYESIGHT IMPROVEMENT 1996, 1999, 2007, 2008
Copyrights, 4 books Ophthalmologist William H. Bates books, magazines and books by Clark Night preserved in paperback and PDF. Click #1, my name, then #1 to see books; http://cocatalog.loc.gov/cgi-bin/Pwebrecon.cgi?Search_Arg=EYE+EXERCISE+CARD&Search_Code=TALL&PID=mu2dCN42gFzP8kromYRd_blKVH&SEQ=20131103082801&CNT=25&HIST=1
+DO IT YOURSELF - NATURAL EYESIGHT IMPROVEMENT - Original and Modern Bates Method With Better Eyesight Magazine By Ophthalmologist William H. Bates
+BETTER EYESIGHT MAGAZINES BY OPHTHALMOLOGIST WILLIAM H. BATES by Clark Night, (Mary Iva Oliver), Clearsight Publishing Co., www.cleareyesight-batesmethod.info Books authored, assembled by owner of the website. We also preserve Dr. Bates, Emily C. Lierman, A. Bates books, Medical Articles and 132 Better Eyesight Magazine issues in text with 500 pictures and in the original antique print. They are public domain. Other books copyrighted with a 'poor mans' old fashioned copyright, self and professionally published.

+RELEARNING TO SEE - IMPROVE YOUR EYESIGHT NATURALLY! 1997
By Thomas R. Quackenbush
+BETTER EYESIGHT; THE COMPLETE MAGAZINES OF WILLIAM H. BATES 2001 Edited By Thomas R. Quackenbush www.naturalvisioncenter.com



Thomas Quackenbush is an Original and Modern Bates Method, Natural Vision Improvement teacher. He is the first person, *the pioneer* (after Dr. Bates) that restored Dr. Bates Better Eyesight Magazine, preserved 11 years, 132 issues into one book. Tom's book, the magazines brought Dr. Bates work, the entire Bates Method, true Natural Vision Improvement to the modern public.
Tom is the first modern teacher that has not hidden Dr. Bates Better Eyesight Magazine, books. Many teachers before him took full credit for Ophthalmologist Bates work and hid Dr. Bates magazines, books so the public could not learn for free, have complete training. This true source of the Bates Method was and still is hidden because; it is simple, easy and people do not have to pay money to learn, apply and teach it. It's free in libraries in the U.S., Europe. Mr. Quackenbush's books also enable people that are low income, cannot travel to have access to the best, complete and honest priced Natural Vision Improvement Training.
Tom is one of my 1st Natural Vision Improvement Teachers. I obtained clearer than 20/20 eyesight at close and far distances as a result of taking a natural vision course from him at his school when he taught in San Francisco, California. I studied his books, the original Better Eyesight Magazines and learned all practices of the TRUE Original and the Modern Bates Method. Resulted in seeing the small bottom 10 eyechart line and smaller lines at 20 to 40 feet! My ability to relax, state of mind, self-esteem, emotions, intelligent and creative thinking improved. I quit a dangerous job at a hotel in South San Francisco, CA, quit drinking too much beer and found an honest doctor that cured a neck injury/dizziness after insights about natural alternative medicine, therapy from taking Thomas Quackenbush's class.
See Tom's website for free Natural Vision Improvement information, nutrition... links. Download the *Tom Q Radio Talk Shows* on the 'Healthy Vision Program' for free Bates Method, Natural Vision discussion by Thomas Quackenbush and an Ophthalmologist who is also a graduate of Tom's school. Click; NVCRadio1.mp3 and NVCRadio2.mp3 .
See his link to the FDA for warnings about vision impairment, blindness caused by laser and other cornea surgery. See pictures of his school, the teacher and students in action! http://www.naturalvisioncenter.com/CoursesSeminars.html

Tom trained thousands of students and certified hundreds of students to be teachers. If you can't travel to the Netherlands to visit Tom's school; contact him for the best teachers in your area. See my video review of his book, palming and other things I learned in his school; http://www.youtube.com/watch?v=Wy7666JJBO0 His books are free in public libraries.

RESTORING YOUR EYESIGHT - A TAOIST APPROACH By Doug Marsh, Foreword By Thomas R. Quackenbush 2006
Excellent Natural Vision training and in depth information about how the mind, emotions, thoughts... influence eyesight. Describes how eyeglasses injure the eyes, vision; how they are most always prescribed too strong and incorrect leading to fast impairment of the vision and eyes' health causing addiction to stronger and stronger eyeglass lenses. One example; Abnormal lighting in the exam room and eye test machine ups the prescription; its too strong. Mr. Marsh attended Thomas Quackenbush's school, studied his books and other teacher's books, training. I learned a lot from this book.

BOOKS TEACHING LEFT AND RIGHT BRAIN HEMISPHERE ACTIVATION AND INTEGRATION
For equal, perfect clear eyesight in the left and right eyes at all distances (close, middle, far) and improvement of all brain functions with the visual system and perfect function of eye muscles. (This advanced study, practice started in the 1960's.) ;

+PERSONALIZED WHOLE BRAIN INTEGRATION 1985 By Paul E. Dennison and Gail E. Hargrove
+BRAIN GYM By Paul E. Dennison and Gail E. Dennison http://www.braingym.com http://www.braingym.org
+SWITCHING ON By Paul E. Dennison (They have more books)
+DRAWING ON THE RIGHT SIDE OF THE BRAIN 1979, 1989, 1999 By Betty Edwards
Left and right brain hemisphere activation and integration for equally clear eyesight in the left and right eyes at all distances close, middle and far. Awakens, improves all brain functions and areas of the brain not always used in this modern time. Improves artistic skills, creativity, memory, imagination, math, science, sports performance, emotions, all skills-functions of the brain, brain hemispheres, visual cortex, body and many other functions. The exercises, methods in these 4 books also help correct unclear vision, astigmatism, crossed-wandering eyes, amblyopia and other eye, eyesight problems. As the brain, body function, relaxation improves, this automatically improves the eyesight.

+JOURNEYS OUT OF THE BODY and FAR JOURNEYS, ULTIMATE JOURNEY 1971+
By Robert A. Monroe Left and right brain hemisphere activation, integration, synchronization, deep relaxation into the alpha, theta, delta brain wave states. Improves memory, imagination, color visualization, energy strengthening and control, freedom from negative emotions, thought patterns. Spiritual growth, travel and other practices. All improve the eyesight! I like his Discovery Wave 1, 6 DVDs. I have 6 WAVE packages with 6 training level DVDs in each and his Hemi Sync DVDs. Great! Prepare to GROW! http://www.monroeinstitute.org Also see the book; Captain of My Ship, Master of My Soul BY F. Holmes Atwater, (Skip Atwater) and Joseph McMoneagle Military training in remote viewing 'a type of astral projection' for protection of the United States and Allies. I have experienced Astral 'Sprit' Travel and sprit-body *protection* from using the original method Robert Monroe and his partners created during his lifetime. Like it! Check out the colored energy, energy bar tool, balloon!



PSYCHO-CYBERNETICS, A New Way to Get More Living Out of Life 1967 By Maxwell Maltz M.D., F.I.C.S.
Plastic surgeon notices; after many patients' facial and other abnormalities are corrected by surgery, the patient still acts shy, their self-image is low, they continue to have problems achieving success and confidence. Dr. Maltz studies this and develops a method to control the brain, thoughts, emotions and release, increase your inner brain... power, achieve your goals. This method really works! A bit like self-hypnosis but different. Changed my life. My school grades improved, I left a destructive gang. Mind never stopped growing after learning this method. Also has a positive spiritual effect.

+THE EFT MANUAL - Emotional Freedom Techniques 2008 By Gary and Tina Craig Similar to Acupressure, Karate energy control. Aligns, corrects and strengthens the body's energy 'chi' and other energies. When energy blocks are removed, energy flows correct and negative emotions, trauma... is removed from the mind/brain. Mental and physical health improves. Helps military persons cure post-traumatic stress, anxiety-panic attack disorder (PTSD). Works for removing mental, emotional blocks that cause unclear eyesight. http://www.emofree.com/

THE MIDWEST CENTER for Stress and Anxiety By Lucinda Bassett http://www.midwestcenter.com
I like this teacher, have her course, tapes and books. She gave the course to me free. Over $300.00 value. She does that a lot. On many TV talk shows providing free training, people cured of extreme fear. A great and very good hearted natural drug free anxiety, depression, stress cures teacher, motivational speaker. Rational Emotive, Cognitive-Behavior Therapy.

THE SMALL BOOK 1989 and RATIONAL RECOVERY 1996 By Jack Trimpey and Albert Ellis Ph. D.
Natural alternative to Alcoholics Anonymous and other often ineffective, destructive *phony* psychology, psychiatry and religious methods. Rational Recovery, 'RR', Rational Emotive & Cognitive-Behavior Therapy puts YOU in control, power over your own mind, emotions, health and life. Freedom from dependence upon others and use, abuse by others.

HEALING BACK PAIN - The Mind-Body Connection John E. Sarno, M.D 1979+ Many books, natural pain... cures.

+The ALEXANDER TECHNIQUE, Yoga, Tai Chi, Qi Gong, Dance, Physical Therapy and other methods to correct the posture, movement, balance, coordination, function of the body with the eyes and eyesight; brings clear eyesight, improved hearing and other health benefits. Incorrect posture-movement causes tension, pressure, pulling of the vertebrae, muscles in the body, back and especially the neck, shoulders and head. This causes tension, pressure and pulling on the spine, spinal cord, brainstem, nerves, blood, lymph vessels in the spine, body, neck, and those that travel to the head, brain, ears, sinus.., eyes, retina, eye muscles. This disrupts function of the eyes, eye muscles, retina, lens, hearing, balance and even the brain and optic nerve. This results in unclear eyesight, impaired eye health and impairs coordinated, relaxed movement of the head, body with the eyes and a relaxed mobile neck. Correct, relaxed eye movement (shifting, convergence, divergence...) is restricted, stiff and unbalanced. Correct posture, movement, relaxation, good diet returns the body, mind/brain, eyes and eye muscles to normal health and function resulting in clear eyesight. I prefer Physical Therapy, Movement, Tai Chi and other natural movements, postures like the Alexander Technique invented by Frederick Matthias Alexander. Dr. Bates likes these methods, doctors. Three teacher's books on movement, the mind;

+ THE ALEXANDER TECHNIQUE: THE ESSENTIAL WRITINGS OF Frederick Matthias Alexander.
Also known by F. M. Alexander.
+ Man's Supreme Inheritance: Conscious Guidance and Control in Relation to Human Evolution
+ Constructive Conscious Control of the Individual (Man's Supreme Inheritance, V. 2)
+ The Use of the Self (He has other books)

THE FELDENKRAIS METHOD By Moshé Feldenkrais;
+ Awareness Through Movement: Health Exercises for Personal Growth, to Improve Your Posture, Vision, Imagination, and Personal Awareness
+ The Potent Self: A Study of Spontaneity and Compulsion
+ Body Awareness as Healing Therapy: The Case of Nora (He has other books)

DR. ROGER VITTOZ;
+ Treatment of neurasthenia by teaching of brain control (1911)
+ Treatment of neurasthenia by means of brain control (1913)
+ Les confréries de Lausanne au Moyen Âge

Be sure to obtain THEIR books. Not new ones created by different teachers that alter or impersonate the method. A few originals are free on GoogleBooks. Public domain books are on the website e-books page and the GuestPage; http://naturaleyesightimprovement-batesmethod.com/GuestPage/forumdisplay.php?fid=15

BOOKS TEACHING HOW THE BODY, BRAIN and EYES CONNECT, WORK TOGETHER; How the body, neck muscles, nerves, circulation affect, connect to the head, brain, certain parts, functions of the brain, eyes, ears-hearing, sinus and other systems. Some teachers combine training of the Alexander Method... with other movement... methods. Some teachers are very good but others impersonate the original teachers, authors and teach incorrect. Choose carefully. I have used two spine, neck alignment methods 'without touching, twisting... my neck, spine'. They are safe alternatives to the risky, often dangerous method of chiropractic. Also used various physical therapy/movement methods, some yoga. I prefer to stay with the original books by Frederick Matthias Alexander and other safe methods. One popular eye-body teacher is strange; he sells unnatural methods such as pinhole glasses without listing the side effects. Much of his training seems to be 'made up', missing parts, not teaching the true connection of the body, nerves, muscles with the eyes and brain.

I prefer study of ophthalmology, nervous, circulatory, lymph, energy systems, muscles, massage, myofascial release (to relax contracted muscles, muscle knots, improve blood, lymph flow, and improve the muscle stretch reflex), acupressure and EFT. The spiritual, energy bodies also affect the health of the physical body and mind. Healing from a higher ^ level.

My experience with other teachers, good and bad; After years of study, application I disagree with some teacher's methods. I do not like most of a very popular high priced teacher's eyesight training. It's unnatural.

***Example; his blocking the eyes' central field with a black paper while using only the peripheral field to see with.* This is directly against Ophthalmologist Bates #1 practice of central-fixation and normal eye shifting 'movement'. Central-fixation, 'central vision' with normal, completely free eye shifting is essential for clear eyesight, healthy eyes. It cures glaucoma, cataract, macular degeneration, myopia, presbyopia, astigmatism and other eye-vision problems, keeps the central vision perfectly clear, better than 20/20 and the peripheral at its maximum normal function. Using the peripheral field to see the object of mental-visual attention (placing the object you want to see in the eyes peripheral field) causes glaucoma, cataract, macular degeneration, myopia, presbyopia, astigmatism and other eye-vision problems.**

The unnatural teacher's physical movement, yoga book made me realize there are alternative ways to heal a neck, spine injury that was caused by a dishonest chiropractor, but; he teaches some movements, muscle practices wrong. His specialty is supposed to be movement, muscle relaxation, posture but he teaches things that impair these functions. His 'palming' hands position is set with the hands straight up, side by side. This causes neck, head and shoulder tension (a main cause of unclear eyesight) and prevents brain hemisphere integration and activation of a major chi-charka energy center.
The hands fingers must be crossed on the forehead for complete benefit. Try it and feel the difference; http://cleareyesight-batesmethod.info/id49.html One of his movements helped. I then searched for other movement, posture teachers. It took many different physical therapists, doctor's books, tools, methods and better movements to correct the neck, spine.

I don't like teachers that alter, corrupt Dr. Bates Method, make it unnatural in order to 'create their own method' so it attracts attention, can be mass marketed, sold for a very high price by the hour lessons, expensive seminars, endless $300.00 to $5000.00+ multi-level training, teach things that are harmful, hold back training and hide the true, easy Bates Method.
Be aware of this and avoid them. Many videos on the internet contain partial or incorrect training.

I now refuse to allow most doctors and even natural healers to touch my head, neck, spine... The chiropractors injured me on purpose. They did not like my webpage that describes how chiropractic has become corrupt, the main secret method they use to misalign the spine, back, hips, neck and head in order to sell endless treatments. I quit chiropractors after a few broke, dislocated my neck resulting in vertigo, ringing ears.., hospital visits. It is dangerous even when in the hands of a honest doctor. A bad masseuse pressed hard on my lower spine vertebrae and caused loss of feeling in my legs. A good masseuse and doctor corrected it and permanently cured back pain. The DORN Method by Thomas Zudrell is very good. I was advised not to use the tool on my 'broken' neck but the movements and other treatments are great and aligned my body naturally! I used the tool on some areas. http://www.dorn-method.com A few honest chiropractors taught me what the dishonest ones did to injure me, then taught me how to undo the injuries, misalignments without using the invasive bone, cartilage twisting forms of chiropractic. Read experiences here; http://cleareyesight-batesmethod.info/id150.htm

**Many teacher's prices for in person training and teacher certification are extremely high. I wish their greedy leader and others would give free training to the blind. Many blind, semi-blind people called him and a famous lady teacher and other high priced teachers; asked about this and they answered; "they do not help the blind or anyone for free". Just a seminar (but that's limited and mainly for advertisement). Semi-blind people also asked them; "If a person is going blind, is wearing strong -6, -8 and up glasses; should they stop wearing the glasses?" The teachers said NO, to keep wearing the glasses. This is very bad advice from these teachers, their leader and his staff. *Eyeglasses, especially strong prescriptions cause and increase detached retina, other retina problems, macula degeneration, cataract, glaucoma, myopia, presbyopia, astigmatism and most all eye-vision problems. Wearing the glasses can lead to retina detachment, blindness. Stopping the use of eyeglasses will help the retina heal and reverse blindness, other eye problems.* The dishonest teachers also told us they cannot say if the leader's method is Ophthalmologist Bates Method and said; "That question has to be asked to the leader in person only, you must travel to his location, pay $". But in his books, school he uses Dr. Bates' name. (*deceptive*)
This teacher alters, corrupts the Bates Method. He hides Dr. Bates true method, book and Better Eyesight Magazines.**

Many people with retina conditions, cataract, glaucoma, partially or full blind, advanced myopia, presbyopia, astigmatism, cross eye... have contacted me for free help after teachers have taken their money and not given complete training, then ask for more money, have given incorrect training or refused to give free training. It is cruel, inhuman to allow a person to go blind because they have little money. Many blind people are on disability, a limited income.

The blind people the popular teacher and other dishonest teachers reject can be helped. It's so easy to teach; just tell them to stop wearing the eyeglasses and give them the basic ten steps in our free e-books and Dr. Bates book, Better Eyesight Magazines. Many have regained their vision with these simple practices and some, including senior citizens on pensions are now teaching, curing others for free. A Mormon in Utah is integrating the Bates Method with the Bible and its natural health cures. His pure salt and water recipes greatly helped heal my neck and other injuries. *Glasses prevent normal eye, brain function. When glasses are removed the eyes activate Natural Eyesight Improvement automatically, 'on their own', the normal eye-visual system function.* Dishonest teachers hide this fact. They make the Bates Method seem long, complicated. Avoid these crooks charging hundreds, thousands of dollars for classes, more for teacher training. Note; if a teacher will not give the full training free to help a blind, partially blind person; they are dishonest. Avoid them.

The popular high priced teacher in San Francisco, CA states he was blind at birth, had cataracts, eye operations that caused lens injury and other eye problems. He states he cured his eyesight naturally, can now see clear to drive without glasses. His sight is not 20/20 clear but he achieved a lot if he is telling the truth about his past eye conditions and surgery results. I sometimes suspect he is hiding the full truth. He states the Bates Method cured his sight. But he teaches so much of it wrong. If it healed him; I think he is hiding the true, entire Bates Method which he used for himself, is refusing to fully reveal it to others. Or he only learned some of it. He invents his own stuff but it's not healthy and often not entirely effective. This enables him to sell more and more classes, holding back training until more money is paid and then he still hides complete training. Many bad teachers do this. I wish he would give due credit to Dr. Bates by telling the truth and preserving and providing Dr. Bates books, Better Eyesight Magazines which are free-public domain and contain complete Natural Eyesight Improvement training. Please teach the entire and true, correct method. I wish these teachers would stop altering, corrupting and hiding Dr. Bates Method in order to make it 'their own method' so they can charge a high price.

To all teachers that use these underhanded practices; PLEASE change your heart, stop destroying Dr. Bates great method. Teach it correct, for an honest price and set up free help for the blind and low vision people. At least give 1 day a week and 30 min. to 1 hour a day in person or Skype, Google, Phone. Give the gift of sight that heaven gave you to others.

All Dr. Bates books, magazines are free on our website. Distribute them free to the public when you train people. Don't lie to us, saying your method is superior to Dr. Bates. That's just an excuse to take people's money. Dr. Bates' method is true and free. *These bad guys also corrupt Dr. Bates method because dishonest eye doctors like this, will endorse it.*

If a teacher does not provide Ophthalmologist Bates Better Eyesight Magazines, books, Medical Articles and his wife Emily Lierman's book Stories From The Clinic; then the teacher is withholding the true, entire method.

Avoid teachers charging hundreds of dollars for Dr. Bates Better Eyesight Magazines, books. (The books, magazines are free in the Library Of Congress and some Optometry, Ophthalmology college libraries, on our website and GoogleBooks.)

There are other teachers, people that have preserved Dr. Bates work but they use Dr. Bates' name, books and magazines to sell eyeglasses, eye-cornea surgery and other unnatural treatments, products. I will not list them. Endorsing corrupt

behavior gives the person the idea that he, she has a license to continue these practices that harm the public's health, sight.

Even some teachers that are certified to teach by famous, excellent teachers become corrupt; after they get their diploma, they then alter the Bates method, make it unnatural, teach it wrong and speak against their teacher. They do this so the method they teach is different, they can call it 'their own' and charge a high price, direct students away from the honest teacher that certified them.

Best Teachers, Websites that Teach the True Bates Method and Provide Free and Honest Priced, High Quality Natural Eyesight Improvement, Books are;

www.NaturalVisionCenter.com - Thomas Quackenbush. Netherlands. My teacher. Professional, easy to learn complete course. Great books. He can refer people to teachers he has trained in the USA and other countries. See a real Natural Eyesight Improvement school in action! Natural health information, full spectrum lights, natural dentists, free introductory lectures and review classes. Colored light treatment. Includes strabismus correction. Totally holistic.

www.janetgoodrichmethod.com - Janet and Carina. Great! Years of experience teaching this method, one of the first original/modern teachers after Bates, Lierman, Corbett, Hackett, Peppard... Trained, certified Thomas Quackenbush. Free audios, videos. Books, kits, courses in person and home study. Janet and Carina have taught Natural Vision Improvement in their school for many years, helped people remove a variety of eye-vision problems. Also wrote books for correction of children's vision. Relaxation, positive thoughts, emotions, movement, games, brain hemisphere balancing, color and other techniques. Also provides treatment for strabismus, books for adults, and parents to help baby's and children's vision. I read all of the Goodrich books. Learned much from her books and website. They improved my teaching skills and keep my eyesight clear. Like the diverse practices, breathing and relaxation with positive thoughts, emotions. Janet cured her eye-vision conditions naturally; she had a very strong astigmatism prescription around -5 with -6 myopia and strabismus. Took her 2 ½ years to cure them all, see clear, pass her driving test without glasses.

(Some people experience quick cures, 1-2 days to 2-3 months, get perfect clarity when they remove their glasses and practice the Bates Method. It can take other people longer, but with practice they will achieve clear eyesight, permanent freedom from glasses. Depends upon the type, amount of tension in the visual system, eyes, eye muscles, the mind, body. Many years wearing glasses often disrupts the eyes movement and causes neck tension, advanced eye muscle tension... Coordinating and relaxing eye movement, improving, equalizing the clarity of sight in both eyes often brings fast results. Emotions have an effect. But, some who wore glasses for years get quick cures.)

(I don't use the 'Merging Circles'... Artificial 3-D Fusion, (Autostereograms-Magic Eyes pictures) in the Goodrich books. It's not the Bates Method. I prefer Dr. Bates Method of looking close and far and the Bead String, Phoria Swings... Janet, Carina also teach these and many more natural fusion practices. I prefer auto-stereograms to be applied only by an eye doctor. Done a certain way with direction by an optometrist, ophthalmologist 'Behavioral Optometry'; a specific type of Artificial 3-D might correct strabismus, (crossed, wandering eyes) but it can cause it if done wrong, trying to do it alone from a book... Read my and others experience with Artificial 3-D on the website, in my book and on the following pages. Try the Bates Method first. If you need the extras, contact an eye doctor. Find an expert in brain hemisphere and other brain area functions, its effect on relaxation, contraction, un-contraction of eye muscles and eye movement (shifting and looking close and far) and how mind-brain strain can cause eye muscle tension. Some eye doctors know this. The Goodrich school teaches this. Also start here; Edu-Kinesthetics, Whole Brain Learning. http://www.braingym.com I don't use pinhole glasses. The Goodrichs state that they are not natural and provide insight on their function. If needed; I prefer a different type pinhole glasses; one hole in the cardboard per eye so the fovea is not blocked when the eyes move. Move the head with the eyes. Use only if necessary. Not for driving... due to much of the peripheral field is blocked. Mainly for reading, quick glance at a object. (I am not familiar with all the other teachers, doctors linked on the Goodrich website. One is my teacher but I don't list him. They should also place Thomas Quackenbush, Janet's best on there!) Preserve all of Janet and Carina's books. Some of Janet's books (Natural Vision Improvement) might not be listed, so check used bookstores.

www.cleareyesight-batesmethod.info - By Clark Night, (Mary I. Oliver). Books by Ophthalmologist William H. Bates, Emily C. Lierman, A. Bates, other doctors, teachers. Dr. Bates Better Eyesight Magazine website, contains entire 132 issues - 11 years, 3x spell check, linked index and bookmarks navigation for every year, month. Translator, speaker reads aloud; http://www.cleareyesight-batesmethod.info/naturalvisionimprovementoriginalandmodernbatesmethod
YouTube Channel; https://www.youtube.com/user/ClarkClydeNight/videos?flow=grid&view=0

Original and modern teachers, books are listed in the bookstores; http://cleareyesight-batesmethod.info/id92.html
See my book, vitamin and product reviews on Amazon, the good and the bad teachers, authors;
https://www.amazon.com/gp/pdp/profile/A9ARVDAUZEHDM?ie=UTF8&ref_=cm_aya_bb_pdp

There are more true Bates teachers that provide perfect training but have no school, books. They teach for free on-line. Their internet names are available on request. See the training certificates webpage and chapter in this book and here; http://cleareyesight-batesmethod.info/id60.html Teachers trained and certified directly by Dr. Bates posted in his Better Eyesight Magazine; PDF list , and here; http://cleareyesight-batesmethod.info/id4.html and below.

THERE ARE OTHER VERY GOOD TEACHERS in the USA and OTHER COUNTRIES; I do not list-endorse them if I have not taken their in person or home study course and/or studied their books. I have certificates, receipts from 5. Some teachers I have taken courses from, read their books are ½ to ¾ percent natural, they teach some very effective, healthy methods. Contact me for names and information, the beneficial methods they teach and the unnatural methods to avoid.

I have learned from more teachers but I don't list them because they have gone against their original training and are selling unnatural methods and products, cornea laser surgery and other harmful cornea, eye surgeries, dangerous eye-vision experimental retina and other surgery 'done on perfectly healthy eyes!', practices that impair the vision, eyes' movement and health. Some are advising all children, adults to wear glasses. That IS NOT the Bates Method.

Three teachers asked me to raise the price of my e-books and charge money for the videos; $175.00. They continually try to prevent free public access to the books, videos, Dr. Bates magazines. After I refused to raise the price and then set all the e-books for free download; the teachers have become abusive, lot of cruel messages in emails, phone, online forums.

Some Natural Vision teachers are organized into groups and post their members, prices on their website. Teachers must pay a yearly fee to be part of the group and listed. Note they limit free books, training unless you pay. I don't like some of the arrogant teachers that charge high prices and endorse lasik, contact lenses, magic eyes, pinhole glasses... They flip-flop on issues so they can please everyone 'customers', even if that means allowing unnatural methods that impair the eyesight. Teachers are creating laws to present to dishonest politicians, doctors to force the public to pay thousands of dollars to be certified as a teacher, by them. This will make it illegal to teach the public the Bates Method unless you are certified.

For true Natural Eyesight Improvement; I prefer to stay solely with Ophthalmologist Bates original training from his book 'Perfect Sight Without Glasses', his 'Better Eyesight Magazine' and *Thomas Quackenbush* (my favorite teacher) for student and teacher training, certification and a few other teachers that stay with the true, natural Bates Method. Modern training is also beneficial if it is natural. I am confident in Thomas Quackenbush's way of training. I can send people to him knowing they will be in a safe place. Tom provides all Dr. Bates Better Eyesight Magazines, his own book Relearning To See-Improve Your Eyesight Naturally, complete original and modern training for a honest price.

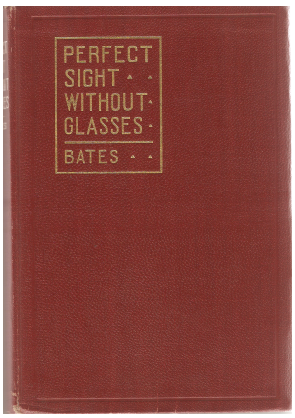
Other teachers I like are from the old days; Dr. Bates, Emily C. Lierman/Bates, Optometrist Harold M. Peppard, Dr. Emery C. Ingham and her mother - a doctor that was trained directly by Dr. Bates; Dr. Clara Ingham, C. S. Price, Margaret Corbett, Aldous Huxley, Clara Hackett, Dr. R. Ruiz Arnau, M.D. and other original teachers. Many that were trained in person by Dr. Bates are listed in his Better Eyesight Magazine. Search for their books. Also check members of Dr. Bates, Emily's *Better Eyesight League*. Started in the USA and grew in Europe, many countries. They preserved Dr. Bates method, books.

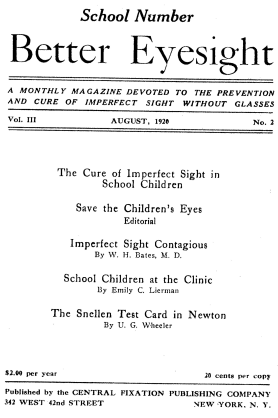
Better Eyesight and the League are listed in the Library Of Congress. Search for Dr. Bates *Better Eyesight* (with and without the word magazine) preserved in 14 Volumes. Maybe others are preserved. They have Dr. Bates book *Perfect Sight Without Glasses* 1st and 1940 editions, often titled *The Cure Of Imperfect Sight By Treatment Without Glasses*, Ruiz Arnau's book *El Uso Natural De La Vision* and Emily Lierman's book *Stories From The Clinic*. These are in original antique print. The Copyright office http://www.copyright.gov/ is different from the library of Congress. Search both; http://catalog.loc.gov/vwebv/holdingsInfo?searchId=6088&recCount=25&recPointer=2&bibId=8731874

A lot of school teachers, doctors and the military applied the method with success. I like teachers that describe the benefits of sunlight, color treatment, left and right brain hemisphere activation and integration, memory, imagination, relaxation, EFT, acupressure, massage, movement and other practices. I am studying more of the brain's function with the eyes to discover which areas of the brain, its actions, emotions and nerves, body muscles when tense can cause a specific eye muscle to be tight resulting in strabismus. There's other causes of strabismus. Left, right hemisphere, certain brain areas' balance, coordination, development is also a cause of crossed, wandering eyes and less clear vision in one eye, a distance.

Three of the Best Original Books;

Dr. William H. Bates Book and Magazine Emily C. Lierman Dr. Harold M. Peppard




School Number

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. III AUGUST, 1920 No. 2

The Cure of Imperfect Sight in School Children

Save the Children's Eyes
Editorial

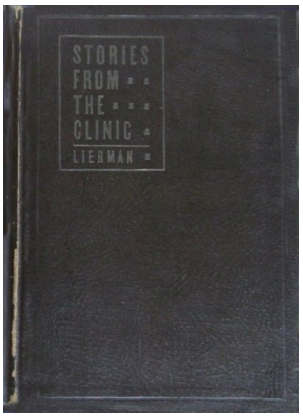
Imperfect Sight Contagious
By W. H. Bates, M. D.

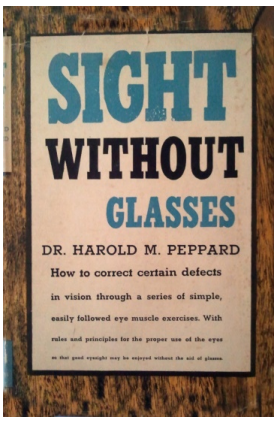
School Children at the Clinic
By Emily C. Lierman

The Snellen Test Card in Newton
By U. G. Wheeler

$2.00 per year 20 cents per copy

Published by the CENTRAL FIXATION PUBLISHING COMPANY
342 WEST 42nd STREET NEW YORK, N. Y.





Dr. Bates, Emily Lierman (A Bates) and Dr. Peppard worked together in New York City.

An Ophthalmologist (Eye, Ear, Nose and Throat), a Clinic Assistant-Teacher-Wife and Optometrist.

Warning; Choose a Natural Eyesight (Vision) Improvement Teacher, Books, Forum-Group Carefully! Investigate, Seek Truly Natural Original & Modern Bates Method Practices

Natural Eyesight Improvement has been in existence before Dr. Bates discovered it. Eye doctors and the public have used it in the 1800's and earlier. Sailors have used it for hundreds of years to navigate the sea by looking at the stars, moon, sun, planets in the sky, flow of ocean water, seeking other ships, landmarks, birds, fish migration, wind... and lighthouses. Hunters use it in ancient and modern times. It's also used when looking at close distances to create tools, shelter, inspect, sort food, draw and write to preserve heritage, education... Natural Eyesight Improvement is the normal function of the eyes and vision and brain, body function with the eyes, vision, 'the entire visual system'. It has been in existence since the creation of life, fish, animals, humans on this planet, the evolution-development of the eye and its function with light and dark, response to sunlight. The eye needs sunlight. Light, survival and movement created the eyes. I suspect Mother Natural threw in beauty, happiness and love. Sunlight maintains the eyes health and function. Trees, plants, microscopic life have a visual instinct, function. They react to light, are drawn to it and grow healthy due to sunlight.

Practice only the Bates Method. It is the true natural eyesight practice. The Bates Method teaches; relaxation of the mind, body, eye muscles, eyes, neck, shoulders and correct posture, movement, '*correct relaxed, natural vision habits* ' (imitating, inducing the normal function of the eyes, visual system; *shifting, central-fixation 'centralizing', memory, imagination, the opposite swing, blinking*...), tests for and perfects accommodation, convergence, un-accommodation, divergence, normal eye movement, body movement, left and right brain hemisphere activation and integration, color treatment, full spectrum sunlight (sunning), breathing and other natural activities. This produces 20/20 and clearer eyesight at all distances, close and far, day and night. The Bates method returns the eyes, vision, eye muscles, brain, body 'entire visual system' to normal function, maintaining clear eyesight automatically, on its own. After some practice, you don't need to consciously practice.

***The Bates Method does not consist of repetitive, forceful eye exercises, eye stretches*...**
The Bates Method relaxes and aligns the left and right eyes and eye muscles' movement, perfects their function. Switching, shifting on close and far objects (looking close and far) is 'kind of an exercise', but; it is done in a relaxed way, integrating Dr. Bates natural practices. It is very effective. See Switching and Shifting in the books and on the website.

Many eyesight improvement teachers claim to teach the Bates Method but they do not. They teach tension, effort inducing eye exercises and other unnatural treatments that cause mental strain, eyestrain, eye muscle tension, headaches, neck tension, unclear vision and other side effects. Forceful eye exercises are not natural and do not produce perfect and permanent clear eyesight. Eye or eye muscle injury can occur. Avoid teachers that refuse to give free help for advanced eye, vision conditions, blindness. A honest teacher will help you free of charge, has years of experience, written one or more books and provides their book and Dr. Bates Better Eyesight Magazines, books (complete training) for a honest, affordable price or free. Clear eyesight, healthy eyes is the birthright of ALL people. Dr. Bates always helped the blind, people needing eyesight improvement. He charged a low price and often trained free in his New York City Clinic, Offices.

I notice many teachers books teach tracing on objects (with or without the nosefeather) incorrectly; they have the person looking into space near but not on the object. This is diffusion, the opposite of central-fixation. Their pictures should show the nosefeather and 'central field' tracing line - - - - - directly ON the edge of the object you are tracing on. (or if looking at a part; on the edge of the part of the object.) Not off to the side into space. Example; looking at, tracing on the edge of the roof of a house. Trace on the edge. Do NOT trace on the sky away from the edge. Even when you use the big fluffy feather with no point on the end; the eyes' central field still moves on the edge of the object. 'Central-Fixation with Shifting'. See the Nosefeather Chapter in the book and on the website; http://cleareyesight-batesmethod.info/id56.html

Many Teachers Teach Things That are Unnatural, Wrong, Unsafe, are Not the True Original Bates Method;

Avoid teachers, websites, forums that teach, sell and/or refer to eye doctors that sell these harmful, unnatural methods; Lasik and other Cornea Eye Surgeries, use of Contact Lenses or Contact Lens Treatments to try to force the cornea/eye to change shape (Ortho-keratology, Ortho-k, Orthoculogy-Ortho C... This can injure, warp the cornea.), Eyeglasses, the harmful, unhealthy Plus Lens method. Also called Anti-Corrective-Stress Relieving Eyeglass method (It CAUSES stress, cataract, detached retina, astigmatism, eye muscle tension-dysfunction, eye and vision impairment... It consists of wearing stronger and stronger addictive plus or minus eyeglasses.), Bifocals, Progressive, no-line Bifocals, Trifocals.., Multi-Section and Mono-Vision Glasses, Sunglasses, Tinted/Colored Eyeglass Lenses, Autostereograms (Artificial 3-D Fusion Exercises, 3-Cups, Magic Eyes pictures... They can impair the eye muscles and eyes movement. Read more below.), Eye Muscle Surgery and Prisms for Crossed/Wandering Eyes (Strabismus), Eye-Eye Muscle Stretching (forcing the eyes to look, stay far left, right, up, down... and keeping the head in the opposite direction), Chiropractic and other unnatural methods.

Try to avoid implanted eyeglass myopia, farsight, presbyopia, astigmatism, bifocal... prescriptions in cataract surgery artificial lens replacement inside the eyes; it traps you with an eyeglass prescription that cannot be changed-removed without more surgery. More surgery has risks. A prescription in the eye is also addictive, increases vision impairment.

Read our entire Warnings, Directions PDF; http://cleareyesight-batesmethod.info/id110.html and in our book copyright.

Cornea laser surgery is similar; the lasik and other cornea surgeries place a prescription in the cornea. More cornea surgery to change it can result in cornea injury, blindness.

All these unnatural treatments, exercises, surgeries are not the Bates Method. They cause cornea injury, strabismus, impair eye muscle, eye function and movement, impair the clarity of vision, cause astigmatism, conical cornea, cataracts, glaucoma, detached retina, other eye-vision problems, impaired eye health and can result in blindness. They disrupt the brains function with the eyes-vision. I do not endorse, advise use of lasik, Artificial 3-D eye exercises, Plus Lens method, Contact Lenses, any unnatural method.

I disagree with the use of pinhole glasses and do not like teachers that sell them without warning of the side effects, without teaching healthy alternatives. Reason is posted on the website with video and PDF; http://cleareyesight-batesmethod.info/id114.html They block many natural eye-vision functions, can impair the vision, eyes health. The smaller the holes are in the glasses, the more they impair the visual system's function. The black areas constantly move over-block the eyes fovea-macula; the exact central field, the main area of the retina that produces clear eyesight.

I don't like teachers that sell colored eyewear 'color treatment glasses'. This imbalances the sun's natural healthy full light spectrum. It turns healthy sunlight into partial unhealthy light that imbalances the visual system, brain and body's function, chemical, hormone production. Sunglasses, colored, tinted and even plain glass, plastic block full spectrum sunlight. It impairs the eye, cornea, iris-pupil, lens and retina's function and health. True color therapy and colored light therapy does not involve wearing colored glasses. I prefer the original natural colored light treatment (without colored glasses) taught by Thomas Quackenbush and other natural teachers and plain good old sunlight which contains all colors.

See the real method here; http://cleareyesight-batesmethod.info/id59.html and here; http://cleareyesight-batesmethod.info/id37.html and in the paperback or e-book *Do it Yourself - Natural Eyesight Improvement* in the Sunlight and Color, Colored Light Treatment chapters; http://cleareyesight-batesmethod.info/id148.html

The website, books list all the unnatural methods, eyeglasses to avoid. Choose a Bates Method Behavioral Optometrist, Ophthalmologist only, if an eye doctor is needed. AVOID LASER... CORNEA SURGERY! No cornea surgery, no contact lenses, no plus lens method... Don't let them sway, sweet talk you. Some vision improvement teachers receive money 'kickbacks' from Optometrists, Ophthalmologists, Opticians, Chiropractors and other businesses by referring students to them through links on their website or in private chats, messages, in person. Avoid teachers that endorse contacting their 'affiliate' Behavioral Optometrists or other eye doctors, teachers that sell, teach the harmful practices listed here as 'to avoid'. Some eye doctors are ok, they teach the true Bates Method, but some are not natural, they prefer to sell eyeglasses, lasik and other eye surgery, contact lenses, the plus lens method, other unnatural practices. They want you to develop cataract so they can sell that expensive surgery. Know the side effects, risks of chiropractic. See the Chiropractic Warning page; http://cleareyesight-batesmethod.info/id26.html and http://cleareyesight-batesmethod.info/id150.htm

I do not allow people I am training to use contact lenses. They cause cornea, eye injury. Contact lenses are never a perfect fit for the cornea because the eye, cornea naturally change shape, often. This occurs more frequently as the eyes, cornea return to normal healthy shape with practice of Natural Eyesight Improvement. The contacts will not fit; they can easily scrape, injure, infect and scar the cornea. Contact lens cleaning solutions, eye drops get contaminated with bacteria, parasites. People have gone blind, lost their entire eye. Some teachers allow use of contact lenses, strong eyeglasses and other destructive methods because they want endorsement from eye doctors to help sell their training and books.

True Bates Method teachers, schools teach that only reduced *weaker and weaker* eyeglass lenses, usually 20/40 clarity (no contacts) are used and only temporarily, only *if needed* for driving, safety at work... as the vision is improving with practice of the Bates Method. Example; a person with -3.00 eyeglasses for myopia might try reducing to -2.50 or -2.00.
The eyechart will show 20/40 clarity with glasses on. Avoid glasses as much as possible. Keep practicing the Bates Method. Then continue to reduce until seeing clear without glasses. A person with +3.00 eyeglasses for presbyopia, farsight might reduce to +2.50 or +2.00 and continue to reduce. If the eyeglasses have uneven lens strength for the left, right eyes; try to get the strength even. See directions on the eyeglasses page; http://cleareyesight-batesmethod.info/id36.html and here;

If the eyeglasses have uneven prescription strength in the left and right eyeglass lenses;

It's best to change the lenses to equal strength; Don't use the stronger lens from the less clear vision eye's eyeglass lens because it will impair-lower the vision in the best-clearest vision eye. Use the *weakest eyeglass lens* from the best *clearest vision* eye and place it in both left and right eyeglass lens' frame. Then; reduce (weaken) both the left and right lenses strength equally. Ask your eye doctor for the number; maybe reduce 0.50 or 1.00 diopter. + or - depending on the prescription. Some people reduce more; 2.00. The clearest vision eye will see 20/40 clarity through its reduced eyeglass lens. (20 feet, #40 eyechart line.) The less clear vision eye will have the same strength eyeglass lens but it must catch up (improve its vision) to see 20/40 through its lens, see equally clear as the clearest vision eye. Note that the clearest vision eye will also be improving; so do some extra Bates Method practice with the less clear eye (without glasses). The goal is to get the clarity of vision improved and equal in the left and right eyes when not wearing glasses. When glasses are worn; the left and right eyeglass lenses are equal strength and the eyes see at an equal level through the reduced eyeglass lenses.

If the lenses are too weak or too strong; vision through the eyeglasses will be too blurry and cause strain, effort to see, headache. Find a balance where the glasses are weaker, not 20/20 clear but just right to see comfortable with no strain.

Uneven vision and uneven eyeglass lenses cause imbalance, tension in the visual system, brain, eyes, retinas, eye

muscles and slows vision improvement. Correcting this and removing bifocal, multi-section, astigmatism, prism, UV blocking, tinting, coating... from the eyeglass lenses enables easy, faster vision improvement, helps to reverse addiction to glasses and is not as harmful to the eye's health as glasses with multiple and strong prescriptions. No eyeglasses is the healthiest option. Glasses, level of clarity with and without glasses must be legal, safe for driving, work...

If you cannot get the left and right eyeglass lens strength equal; it's still important to reduce the strength of each lens. Getting the lenses equal and reduced is the best option, but some people have a large difference in the left, right eyes clarity so equalizing the eyeglass lenses may feel uncomfortable, at first, so they reduce only. An option is to buy 2 pair of glasses; the *equal and reduced* and *reduced only*. Then; wean your way into the equal and reduced as the vision improves.

When buying; reduce the equal and reduced strength glasses a bit more to fit improvement in the vision. All glasses need more reduction as the sight improves and the lenses become too strong. Before glasses give 20/20; its time to reduce.

No bifocal! If you need to reduce for far and close vision; buy two pair of glasses; one reduced for far. One reduced for close. Wear them around your neck on a string. One higher to prevent scratching. Use glasses as little as possible.

The P.D., centering and height of the left and right eyeglass lenses, exact fit of the frames, handles... must be placed in the prescription. Here's an optician that teaches about the P.D., height and other eyeglass settings that some online opticians don't tell you; https://www.youtube.com/watch?v=7Hc81FJTMaw&list=UURZDLUHjkNwkm-4QMrqyTNA

P.D., eyeglass lens, frames measurement; http://cleareyesight-batesmethod.info/id36.html

Most people can do without glasses when the vision is clear at 20/70 to 20/50. Some at 20/100 or more unclear prefer to go without glasses. No glasses = eyesight improves faster. (Always stay legal, safe for driving, work, hobbies...) Eyeglasses are discontinued permanently as soon as possible. It is best to try and stop use of eyeglasses immediately. If the prescription is strong, the eyes contain cataract, detached retina, retina, optic nerve problem, glaucoma, potential for these or any eye health condition; STOP WEARING EYEGLASSES! Eyeglasses cause and increase cataract, detached retina, torn, leaking blood vessels, capillaries in the eye, retina and most all eye health problems. (Strong prescriptions will advance these conditions.) Eyeglasses can interfere with healing of an eye injury. Contact lenses also cause all of these problems.

A man who wore strong glasses for many years started to see flashing blue lights. He told his eye doctor. The eye doctor then increased the eyeglass prescription, prescribed the strongest glasses the man ever wore. He then saw more blue lights, had a bout of temporary blindness. Doctor told him to keep wearing the glasses. Then more blue lights, then blindness. A blood vessel burst in his retina, glaucoma came back and black cataract in both eyes.

In the past this man stopped wearing eyeglasses for a couple years and used the Bates Method. He cured cataract in both eyes and 80% of his glaucoma and myopia. Then he had a lot of stress in his life, lost his home and family. His vision blurred a bit from the stress. *Stress can lower the vision*. If glasses are avoided, relaxation obtained; the vision returns to clear. Unfortunately he followed his eye doctor's advice and went back to glasses. This is when the trouble started, strong glasses prescribed which lead to blindness. Eye surgery was performed on the broken retina blood vessel. He is now staying away from glasses *forever* and works to restore his sight naturally. He refuses surgery for the cataracts because many of his eye problems occurred years ago due to eye surgery so he's reluctant to trust doctors, hard to find a good one.

Some teachers, businesses that sell books, courses on Natural vision Improvement sell vitamins, nutrients for the eyes. The health of the liver, kidneys, gall bladder, spleen, digestion... affect vision, the eyes health. There are healthy effective remedies that improve function of the body organs, circulation... Choose carefully. Some herbs, vitamins, minerals... can be toxic, impair body chemistry, hormones, health and vision. Some teachers sell herbs, ingredients in their eye vitamins, formulas that have side effects, impair the eyes health and clarity of vision. They do not warn about this.

Healthy food, good nutrition has a positive effect on the clarity of vision, health of the body and eyes. Most vitamins, nutrients... are beneficial but they are best acquired from fresh food. If taken in pill form; it must be created from food, not artificially from chemicals... No additives. Read the Nutrition Chapter; cleareyesight-batesmethod.info/id21.html and avoid products containing bilberry leaf, eyebright, sulfite's, sulfate, nitrites, nitrate and other unhealthy ingredients, certain herbs, preservatives, chemicals. Natural sulfur from cabbage... is healthy. Chemical versions are not. Sulfite's, sulfate, nitrites, MSG, hydrolyzed... protein, corn, soy, yeast.., aspirin, aspirin type herbs, other herbs can cause temporary migraine headaches with flashing lights, blind spots in the visual field, impaired memory, a variety of health problems. Read the labels, check all the ingredients. MSG is also called flavor enhancer. MSG and other chemicals are labeled under many different names that the govt. has legalized so the food industry, restaurants can hide ingredients. Aspirin causes kidney, stomach damage, headache, other health impairment. It's addictive. Acetaminophen, NSAID's cause kidney, liver, joint damage, heart attacks, impairs eye health, vision and is the cause of many health problems. Avoid calcium in pill form. It causes deposits in the body, kidneys... Drug store (and also many phony natural) eye drops contain chemicals, toxins. Diet, injuries, drugs, chemicals, sinus sprays (sinus sprays, chemicals cause glaucoma, cataract, lower central and peripheral vision, color perception), eye drops, some eye medicine, sinus infection or congestion, mold allergy, lead, tooth cavities are other causes of eye-vision problems. Bilberry berries are healthy. When buying bilberry, ask for pure organic bilberry fruit, the berries only, no leaf. (Bilberry leaf CAN be toxic.) The berries are excellent. Pure bilberries improve eye health and day, night vision. It's an old World War Two pilots food for clear night vision when flying. They ate it as bilberry jam. Best without adding processed sugar. True bilberry contains a lot of dark red/purple juice inside the berry and the skin. It temporarily stains the skin when the berry is compressed in the fingers, as a blackberry or wild blueberry does. This juice and entire berry is healthy for the eyes, retina, its cells, cones-rods light receptors. Lutein and other nutrients, carrots, spinach, lemon-orange peels, cornsilk, certain types of chrysanthemum... are also beneficial.

Many Natural Vision Improvement websites have discussion forums, groups, guestbooks, blogs where people can post subjects on the Bates Method-Natural Vision Improvement, ask questions and learn from others that have improved their vision. When you connect with the right people it is a very positive experience. Life evolves through the exchange of ideas, sharing experience, cooperation and new creations. Beware of some Natural Vision Teachers that 'hang out' on groups, forums giving limited help; they often are trying to lure people into taking private lessons for $50.00 to $200.00+ per hour, $300.00 - $5000.00 and up seminars. Sellers also post for them. Most of the people on these forums are honest, very helpful, but there are a few that go on the forums giving the impression that they are strict Bates Method people but in reality they are providing links to websites, eye doctors that sell unnatural use of eyeglasses 'plus lens method'.., lasik and other cornea surgery, contact lenses, artificial 3-D, pinhole glasses and other harmful products, treatments. Some people state incorrect, harmful advice and/or hide true Bates Method training. They try to make it seem difficult, complicated, state that only a highly intelligent personality can understand it and be successful. This is false. The Bates Method is easy, simple, a 'Do It Yourself' practice. Children learn it, are cured and become effective teachers. Many people obtain clear eyesight by only removing their glasses, learning to relax and shift, know what central-fixation is. A quick 10-30 minute lesson.

Be careful downloading free software from websites and typing, clicking on a forum chat, e-mail forum post or private message notifications. I was hacked many times on a forum chat and other ways by competing teachers, authors from Iowa, Kiev-Ukraine, Russia, Italy and their partners in other countries. Some websites, software contain spyware, hacker viruses. A popular Better Eyesight Magazine website gives free software for the computer screen, eyesight but it acts as a virus, slows the computer.., produces pop-ups asking for money. Some teachers link to it on their websites and advertise it in their books. It's hard to remove, hides in the computer. You can use Norton tools; Power Eraser (careful; hackers sneak in and corrupt it), other virus, spyware... removal or find a good repair/detective guy to remove it. The magazines on that website have many spelling mistakes and missing issues. For years I have offered the owner help to fix the magazines but he does not reply. Site has some kind of tracker, cookie that locks into your computer. He may have just moved on, does not care to work on the magazines but I find that a very strange thing to do. I suspect there is a new 'secret owner or co-owner', they prefer the magazines to stay incomplete, mis-spelled so they can sell high priced paperback, PDF complete copies. This type of people hacked me 7 times trying to shut down our free magazines, bookstores on Amazon... and link to that and two other duplicate websites in the U.S., Kiev, Russia... They use Dr. Bates name, picture... to sell unhealthy adult content, drugs... They want to stop honest teachers from providing Dr. Bates books, magazines for free and low price. They sell for a very high price. There are bad people in the world. The good must stand up and protect Dr. Bates work!

For Natural Eyesight Improvement Bates Method forums, groups, discussion websites and book reviews, comments at bookstores; Note that some group... owners and members posting have become corrupt and are selling advertisements. Avoid their ads for lasik and other eye surgery, unnatural vision courses, eyeglasses, contact lenses, eyedrops, some vitamins, herbs... It's so sad that Dr. Bates name and work are being used in this way. Speak up against this corruption!

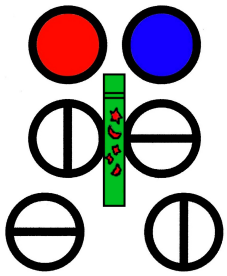
Read more information on the different types of teachers, authors, books - the good and the bad, what's best, all the unnatural methods, eyeglasses to avoid; See the 2 *Warnings, Directions*... PDF's on top of this page; http://cleareyesight-batesmethod.info/id110.html and here; http://cleareyesight-batesmethod.info/id36.html Study these so you can detect a false teacher. My videos on YouTube show how all eyeglasses; plus and minus lens, astigmatism lens, contacts, prisms harm the eyes, eyesight. Watch for new videos in 2015 showing more natural cures for myopia, farsight, presbyopia.

For the antique books I preserve, publish and sell on the website, Amazon...; about 3% of the training in some doctors, teacher's antique books have modern practices included to update or add to some of their original methods. New practices, clarifications are in blue. I never remove the antique pages, pictures, training. Modern practices and pictures are added while maintaining the original work. Other teacher's books I like and list have 100-97% perfect training, but a few contain 3% unnatural practice. It's worth it to read, learn from their books. Things to avoid such as artificial 3-D, pinhole and colored glasses... are posted here and on the website.

People have been stealing my website, books' content and using that and Dr. Bates books to create their books with unnatural methods, use of eyeglasses... added. I do not endorse, do not allow this. In Sept., 2014 Amazon took control of my Amazon Author's page; http://www.amazon.com/William-H.-Bates/e/B004H9DOBC/ref=ntt_athr_dp_pel_pop_1 that I created for Dr. Bates and his books. It's a public domain law Amazon must follow. Other authors might now be posting their books on that page under Dr. Bates name and any Amazon page that contains Dr. Bates books. This means that books with unnatural content added might get mixed in with Dr. Bates true, natural method books I have assembled. I cannot stop this. Amazon allows me total free speech, videos, pictures, twitter, blog... on my Clark Night page. Read directions for selecting Dr. Bates true books without unnatural methods added; http://www.amazon.com/Clark-Night/e/B004HU1MNS/ref=dp_byline_cont_pop_book_1 Amazon might create a publishers page with only the publisher's books allowed. The best option is to find our books by the titles, authors and covers on the website; http://cleareyesight-batesmethod.info I'm building a new Dr. William H. Bates Author's Page for our books on the website and linking to Amazon. Be careful; other author's books might sneak onto the Amazon page. Will invite true natural teachers and antique dealers to also post their and Dr. Bates authentic books on the website.

I removed the names of the dishonest and high priced teachers, the ones described in this book, website that teach harmful methods. I did this to avoid harassment, frivolous lawsuits and to be kind to the teachers that do teach beneficial practices, but unfortunately also teach unnatural practices. I will give their names to people that contact me by phone or e-mail so you can avoid them, prevent harm to your eyes, vision and also check out the good practices that some teachers provide. You have these pages and our Warnings, Directions PDFs listed in this book, website to protect you; so you know what to watch for; what is healthy, beneficial, safe to practice and what must be avoided. Some teachers, authors tried to do a hostile takeover of my business, website, book rights after I refused to sell it to them. I have lawyers on retainer. The Bates Method works! That's why so many people are fighting over who can sell it and most eye doctors, surgeons hide it. Stay with the true original Bates Method for clear eyesight and healthy eyes.

Warnings, Descriptions For Artificial 3-D Fusion Autostereograms, Magic Eyes Pictures;



I do not teach, advise Artificial 3-D Fusion Eye Exercises, Also labeled as; 'Autostereograms, Magic Eyes Pictures, Merging Objects, 3-Cup Images...' It can cause strabismus, *crossed, wandering eyes*, impair the eyes convergence, divergence, accommodation, un-accommodation, the eye muscles and eyes movement, cause eye muscle tension, double vision, astigmatism and blur in normal eyes and more so if there is a slight or advanced strabismus or other eye, medical problem, imbalance of the brain hemispheres or other brain functions, neck injury-tension, mis-aligned skull bones, other conditions. The Artificial 3-D can make a slight strabismus condition worse. It causes strain, tension, stress and confusion in the brain, eyes, retina and eye muscles. *It is not the Bates Method.*

Artificial 3-D Fusion exercises are not necessary to obtain clear vision, normal eye movement. It was not taught by Ophthalmologist Bates. The Bates Method alone can cure strabismus; there are plenty of other activities, methods with *true* fusion, 3-D to obtain clear, balanced vision, coordinated eye movement in Dr. Bates book, magazine. Dr. Bates and modern Bates Method Natural Eyesight (Vision) Improvement teachers teach different activities, natural ones with true 3-D (Three-Dimensional vision, depth, distance... perception) for correcting crossed, wandering eyes 'strabismus' and amblyopia, unclear vision.

The picture on the right shows an artificial 3-D example; looking at the pen placed in the central field, between and before the 2 red-blue circles which are in the peripheral field, to create an illusion of a 3rd circle between them. (Many teachers make this even more abnormal by not using the pen; the eyes just stare into space. The pen brings at least some normal effect.) Thinking red makes the circle turn red. Thinking blue makes it turn blue. This strains, confuses the brain, eyes, retina and eye muscles. See the Artificial 3-D warning at; http://cleareyesight-batesmethod.info/id103.html and in our books. Dr. Bates has extra 'similar but different' practices that correct strabismus naturally. Search treatments for squint, crossed eyes, double vision... in his book *Perfect Sight Without Glasses* and *Better Eyesight Magazine*.

Look for the practice using a candle flame and the girl that learned to turn the eyes in any direction and avoid tension.

Some Behavioral Optometrists, Ophthalmologists teach forms of Artificial 3-D Fusion as activities, tests a special way for each individual person's strabismus condition and obtain good results. It should be used for strabismus (crossed, wandering eyes) only. Ask a Bates Method Behavioral Optometrist, Ophthalmologist for guidance if you have tried the Bates Method FIRST, worked with a Bates teacher and still need additional help. Follow your doctor's directions. Do not copy it from a book, website created by an unqualified person. The doctor's activity might help correct imperfect convergence, divergence, fusion, strabismus when applied correct. It must be practiced with the guidance of a Bates Method Behavioral Optometrist, Ophthalmologist. The eye doctor will teach the patient which activities are to be done for specific conditions, distances that the patient's eye movement, convergence, divergence, fusion... needs improvement. The doctor might have the patient practice with the 3-D image card placed at only one, two distances or at a variety of close, middle and far distances, fusing the two images into a 3rd by looking at one or a variety of different close distances/objects before the card and/or one or a variety of different far distances/objects beyond the card. (one distance at a time.) Distance of the card might be varied. Spacing between the two images might be at a variety of widths or limited. Merging, fusing images that are further apart or closer together being accomplished with advanced fusion training if needed. How many are practiced, length of time each or only some of these activities, routines are practiced is determined by the student's condition; convergence or divergence impairment, eye, eyes in, out, up, down, angled.., degree of impairment and other eye-vision and brain conditions. Other old and new treatments, pictures... might be applied.

This is NOT a one size fits all, just carelessly thrown in a book, webpage for every person's treatment! Only a professional can prescribe a safe, correct, *precise* routine for each individual. Practicing too much or too little at a specific distance, at the wrong distance, on pictures spaced a specific width that's not needed, the wrong activity… can impair convergence, divergence and cause other eye, vision problems, astigmatism, cause and increase amblyopia.

Some teachers place the Artificial 3-D in their books, school to attract attention, seem professional. They teach it wrong. They should warn about the side effects. It effects how the brain works with the eyes, retina, eye muscles. It is not to be toyed with. Do not interfere with a child or adult's natural brain, eye development, function. It must be applied by a professional experienced in the function of the eyes, the brain, brain hemispheres, visual cortex, nerves, eye muscles and other functions. Accommodation, un-accommodation of the eyes and lens work-occur with the eyes convergence, divergence, fusion. All are affected, improved or impaired when the activities, tests are done correct or incorrect.

Most vision teachers do not teach this the correct way, do not warn about the side effects of doing it wrong because they cannot prescribe for every individual person's condition in the class, in books and usually do not know the entire, correct Behavioral Optometry treatment. Even a Behavioral Optometrist, Ophthalmologist needs the best training and experience, know exactly what part of the brain needs work. They also need to learn the Bates Method of Natural Eyesight Improvement so they can give their patient an option; true natural (Bates Method) treatment, or if needed, the artificial 3-D and be sure it's done correct, and apply both methods; the Bates Method and the professional Artificial 3-D. The artificial 3-D is a temporary treatment. The Bates Method is a permanent practice, an art, natural correct vision function.

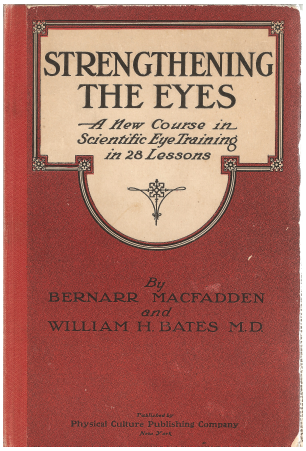
The Artificial 3-D activities do produce a natural 3-D effect created by the eyes, retina, brain, left and right brain hemispheres, visual cortex. Seeing the correct fused image indicates the brain, eyes and eye muscles are working together, eyes are balanced-aligned. But; I call the activities *Artificial* 3-D because it is not the normal way a person uses the eyes-vision to see an object clear. The Artificial 3-D has the person staring into space between, and before or beyond 2 objects

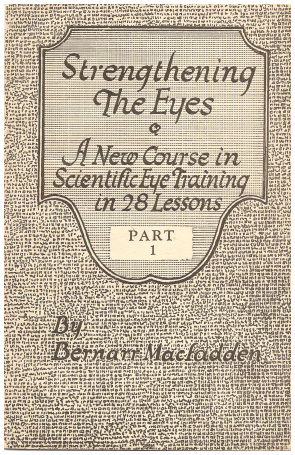
placed in the left and right peripheral field, merging these two into a 3rd object which shows an illusion of it being in the central field. In reality it is 2 areas/objects of the peripheral field combined and still in the peripheral. The person is using the peripheral vision to see with. Diffusion occurs. This prevents Dr. Bates #1 natural practice of central-fixation (true central vision). Shifting, natural eye movement is also prevented, impaired. Artificial 3-D causes strain, tension, confusion in the brain, eyes, dizziness and other side effects. Impairing the eyes natural movement leads to unclear eyesight.

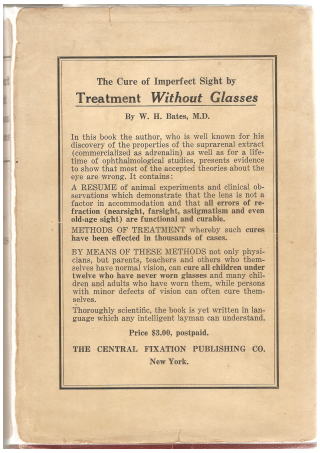
True completely natural 3-D vision for healthy eyes, correct eye-brain function, clear vision occurs when; looking directly at the object you want to see, directly at the distance the object is at, in the *true central field* with the mind, eyes 'mental-visual attention' on/at that object, distance. And; the central field, (the retina's fovea) 'visual-mental attention' are moving 'shifting' part to part upon the object. *True natural fusion* produces a completely natural 3-D vision created by the eyes, retina, brain, left and right hemispheres, visual cortex. You can determine true depth, distance of objects, time, speed to travel to, from one object to another... You see the object's texture, shape, all parts large to tiny, light, shadows.

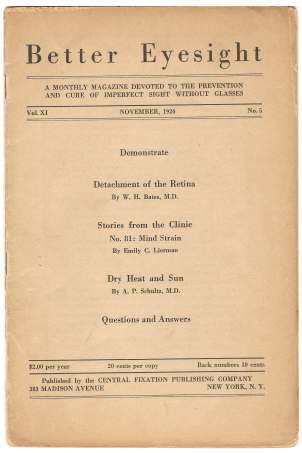
Try the Bates Method first; relaxation, central-fixation (centralizing), shifting, switching (looking close and far), bead string, pens in a row (*natural* healthy fusion with *true* 3-D), phoria swings, memory and imagination, natural movement, long swing, left and right brain hemisphere activation and integration, color treatment and other natural methods are usually all that are needed. See the Switching, Bead String and other chapters in the books to test and correct the vision.

Bernarr MacFadden & Dr. William H. Bates first book-kit, 1918 & Dr. Bates 1920 book Perfect Sight Without Glasses & his Better Eyesight Magazine, 1919 to 1930;









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NEW YORK CITY

Central-Fixation Publishing Co. - 1919, 1920-1940

Natural Vision Improvement GuestPage-Forum; http://naturaleyesightimprovement-batesmethod.com/GuestPage

Google Hangouts, Video Chat; http://cleareyesight-batesmethod.info/id93.html

YouTube 120 videos; https://www.youtube.com/user/ClarkClydeNight/videos?flow=grid&view=0

Facebook; https://www.facebook.com/MaryIOliver?ref=profile

Twitter; https://twitter.com/mclearsight

Skype; mary.oliver981

Go to; http://cleareyesight-batesmethod.info for free e-books, paperbacks, vitamins, colored lights and other products.

Questions; E-mail; mclearsight@aol.com Phone; 1-508-754-0162 Address; Broadway-8th St. South Boston, MA

This book is also dedicated to all the teachers listed in this *Bates Method History, Teachers, Books* chapter (Dedicated in Historical order.) They worked with Dr. Bates & Emily and/or continued their work and wrote books on Natural Eyesight Improvement.

Dr. Bates listed many of his personally trained 'certified' Bates Method teachers in his Better Eyesight Magazine.

The bottom of the next page and following pages list Bates Method teachers that were trained in person, directly by Dr. Bates from 1918 to 1931. Some have written excellent books. It's created for people that want to search for these teachers' books, movies... and possible books, creations by their ancestors. Top of the list belongs to;

Doctor William Horatio Bates

& his New York City Clinic Assistant, Wife Emily C. Lierman (Emily A. Bates)

In 1918 William H. Bates M.D. and Bernarr A. Macfadden wrote;
Strengthening The Eyes - A New Course in Scientific Eye Training in 28 Lessons

Announcements

We are publishing the following names to aid those who cannot consult Dr. Bates personally, but who wish to follow his method correctly. These pupils have taken his course of treatment and are qualified to help others. They are constantly in touch with Dr. Bates' work and learn immediately of his latest discoveries.

CALIFORNIA

Dr. E. Sisson, 1611 Castro Street, Oakland

COLORADO

Dr. H. F. Fisher, Barth Bldg., Denver

Dr. M. W. MacManus, 434 Empire Bldg., Denver

FLORIDA

Dr. N. S. Berry, 1902 Morgan Bldg., Tampa.

Dr. E. M. Jones, 476 First Avenue, N. St. Petersburg

GEORGIA

Mrs. R. S. Bottenfield, D. O., 102 East 9th Street, Atlanta.

ILLINOIS

Dr. E. T. Fisher, 29 East Madison Street, Chicago

Miss Elisabeth D. Hansen, 308 N. Prospect Avenue, Park Ridge

MASSACHUSETTS

Mrs. F. S. Low, Danvers

MINNESOTA

Miss R. Mitchell, 508 First Avenue, St. Cloud

Mrs. W. W. Morse, 1635 West 26th Street, Minneapolis

MISSOURI

Dr. H. J. Geis, Kirksville

NEW JERSEY

Dr. M. E. Gore, 51 Main Street, Orange

Dr. G. W. Reade, 517 Main Street, East Orange

Miss Mildred Shepard, 50 Main Street, East Orange

Dr. J. M. Watters, 2 Lombardy Street, Newark

Mrs. A. L. Reed, East Orange (away for summer)

J. L. MacKinnon, D.C., 260 Fair Street, Kingston

NEW YORK CITY

Dr. C. E. Achorn, 6 West 51st Street

Miss May Secor, 521 West 122nd Street

Dr. R. Arnau, 238 West 106th Street

Dr. L. Stanton, 49 West 57th Street

Miss Anna Woessner, 220 West 42nd Street, Room 1205. Tuesday and Thursday, 5 to 7.

BROOKLYN

Miss K. Hurty, 177 Woodruff Avenue

OREGON

Dr. Clara Ingham, 306 Alisky Bldg., Portland

PENNSYLVANIA

Dr. X. G. Couch, 304 Empire Bldg., Philadelphia

VERMONT

Mrs. L. J. Hathaway, Middlebury

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Announcements

Space does not permit us to print the entire list of Dr. Bates' authorized representatives in the United States, Canada and Europe, which we should like to do for the benefit of our subscribers. The following, however, is a list of those who have taken courses of instruction in the Bates Method within the past few months. Those subscribers who wish to know if there is an authorized representative in their city may obtain this information by writing direct to Dr. Bates at 210 Madison Avenue, New York City.

Miss Clara M. Brewster, Studio 6, Aquila Court, Omaha, Nebraska.

Miss Mary E. Wilson, 2538 Channing Way, Berkeley, Calif.

Dr. Paul J. Dodge, 911 New Industrial Trust Bldg., Providence, R. I.

Mrs. D. L. Corbett, 1712½ Fifth Ave., Los Angeles, Calif.

Miss Jane Button, 249 Harvey St., Germantown, Pa.

Mr. Fred Baechtold, 572 12th St., West New York, N. J. Tel.—Palisade 6-7735

Mr. Harold E. Ensley, 112 West 104th St., New York City.

Dr. Med. E. Schluter, Hamburg, Mundsburgerdamm 11, Germany.

Mrs. R. Norman Jolliffe, 171 West 71st St., New York City.

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Announcements

We take pleasure in announcing that the following have recently completed courses of instruction at Dr. Bates' office and are qualified to practice the Bates Method:

Dr. Paul J. Dodge,
911 New Industrial Trust Building, Providence, R. I.

Dr. med. E. Schlüter (prominent eye specialist),
Hamburg, Mundsburgerdamm 11, Germany

See the 'Bates Method History, Teachers, Books' Page on the website;
http://cleareyesight-batesmethod.info/id4.html

More Teachers Trained Directly By Dr. Bates & Listed in His Better Eyesight Magazine as Qualified To Teach;

April 1924;

Announcement

Miss Mildred Shepard, 50 Main St., Orange, N. J., is now a certified teacher of better eyesight. She is well qualified to cure imperfect sight by treatment without glasses. The Editor of Better Eyesight takes great pleasure in recommending her to any who may need her services.

Nov 1924;

El Uso Natural de La Vision

(The Natural Use of Vision)
By **R. RUIZ ARNAU, M.D.**

THIS book should appeal to Spanish-speaking people, because it contains numerous demonstrations of the truth which make it possible to cure imperfect sight by treatment without glasses. In the magazine, "Better Eyesight," of May, 1920, is an article by Dr. Arnau with the title "My Headaches" in which he describes at length how he was cured of chronic headaches and imperfect sight by treatment without glasses. As a result of his cure he has become able to give relief to his patients. **The author's most important contribution is his claim that the true use of the ciliary muscle is not to increase the curvature of the lens when the eye is focused for reading at the near point, but just the opposite: The ciliary muscle prevents any change of form in the curvature of the crystalline lens.**

He has written a great deal about mind strain as the real and only cause of defective eye-sight. He discusses the unconscious movements of the vegetative functions of the body, circulation, respiration and the constant mental shifting as entirely in accord with the new ideas of Einstein, Korbzyski and others.

The Tachorthoscope was discovered by Dr. Arnau. It is an apparatus for the treatment of patients who are not benefited promptly by other methods. He has also investigated the use of music by which some patients find an easy way to obtain a short swing through the auditory memory.

Dr. Ruiz Arnau of Madrid, who is now there introducing Dr. Bates' method into schools, and to those medical doctors who desire to learn a better way of obtaining perfect vision, than the use of eyeglasses. Dr. Arnau became intere sted in the Bates Method some years ago when he himself was suffering with continual headaches and other discomforts caused by mind and eyestrain. He came from San Juan, Porto Rico, leaving a good practice to seek the only Doctor who could help him. Dr. Arnau has shown his appreciation for what Dr. Bates has done for him by writing a book entitled, "El Uso Natural de la Vision," which he dedicated to Dr. Bates.

Jan 1925;

Announcement

We are pleased to announce that Capt. C. S. Price,, of London, England, will visit Dr. Bates around the latter part of January. He is planning to discuss with Dr. Bates the best methods which are employed for the cure of imperfect sight without glasses. The spread of Dr. Bates' method in England is largely due to Capt. Price's enthusiasm and success in helping others. There are now two clinics, and a Better Eyesight League in England, all reporting favorable results. We are hopeful that Capt. Price will attend the February meeting of the League.

April 1925;

Announcements

THE WORK IN ENGLAND

Capt. C. S. Price, of London, England, has been the guest of Dr. Bat es for s everal weeks. Dr. Bates wishes to announce that he finds Captain Price thoroughly capable of curing imperfect sight by his methods.

July 1925;

Announcements

Correction

Dr. J. L. MacKinnon, a student of Dr. Bates, is using his method successfully in Kingston, New York. The June issue of “Better Eyesight” removed him from Kingston, New Jersey, in error.

Aug 1925;

Announcement

Our readers may be interested to know that of November first, Miss S. I. Paisley, formerly of Washington, D. C., will be in Los Angeles as a representative of Dr. Bates. Other representatives who have just completed Dr. Bates' Course on the "Cure of Imperfect Sight Treatment Without Glasses" are:

DR. J. B. CLAVERIE,
1467 East 53rd Street,
CHICAGO, ILLINOIS,

DR ST. GEORGE FECHTIG,
97 Madison Avenue,
NEW YORK CITY,
and
PALM HARBOR,
Pinellas County, Florida.

Dec 1926;

Announcement
Miss Katherine Hayes, of the Central Fixation Publishing Company, will be pleased to improve cases of imperfect sight by treatment without glasses at 303 West 122nd Street, New York City, Telephone—Cathedral 3450.

May 1927;

Announcement
Because of the increased demand for the Bates Method in California, Emily C. Lierman, assistant to Dr. W. H. Bates for fourteen years and also manager of the Central Fixation Publishing Company of New York City, has opened an office at 609 South Grand Avenue, Los Angeles, California, where she is treating patients. Mrs. Lierman is also giving courses of instruction to those who desire to cure imperfect sight by the Bates method. At the completion of the course, the student receives a certificate authorizing him or her to improve defective vision by treatment without glasses. Mrs. Lierman is delivering lectures throughout California and is ***showing moving pictures which illustrate the Bates Method of curing imperfect sight***.

May 1927;

Announcement
Dr. H.M. Peppard, of 71 Park Avenue, is a representative of Dr. Bates and is qualified to improve or cure imperfect sight by the Bates method. Office hours – 9:30 to 6:00 Telephone Caledonia 4694

Oct 1927;

Announcement
Dr. Bates wishes to announce that Mrs. E. C. Lierman, his assistant for fifteen years, has finished her work in California, and has resumed her work at his office.

Oct 1929;

Announcement
Dr. Bates takes pleasure in announcing that Dr. John A. Rath of 111 North West Ave., Jackson, Mich., has recently completed a course of instruction under him and is fully qualified to practice the Bates Method.

Feb 1930

Announcement
Dr. Bates takes pleasure in announcing that the following have recently completed courses of instruction under him and he highly recommends them to anyone desiring their services:

Miss Clara M. Brewster,
Studio 6, Aquila Court,
Omaha, Nebraska.

Was Clara trained by Dr. William H. Bates or one of his trained teachers? **Miss Clara M. Brewster** is listed as a certified teacher in Dr. Bates Feb., 1930 issue. Was this her maiden name? Or, maybe she was trained by Margaret Corbett. Clara's Book, Relax and See, A Daily Guide To Better Vision, 1955.

Mr. Fred Baechtold,
633 Hudson Ave.,
West New York, New Jersey.

Mr. Baechtold will be pleased to visit those patients who desire to receive treatment at home. Appointments can be arranged by telephoning him at Palisade 7735.

Mar 1930;

Announcements
Dr. Bates wishes to announce that the following have recently completed courses of instruction and are authorized to practice the Bates Method:

Miss Mary E. Wilson,
2538 Charming Way,
Berkeley, Calif.
Miss Wilson is the principal of the Anna Head School for Girls in Berkeley and plans to introduce the method into the school for the prevention and cure of imperfect sight in her pupils.

Mr. Harold E. Ensley,
112 West 104th Street, Tel. Academy 6941, and 45 W. 45th Street, New York City, Tel. Regent 9483. Mr. Ensley was formerly a student at Princeton University.

April 1930;

We desire to inform our subscribers that the "Better Eyesight" magazine will be discontinued after the June, 1930, issue. This will enable ***Dr. Bates and Mrs. Bates to devote more time to the writing of new books on treatment alone for which there has been a very great demand during the past year***. Subscriptions for the remaining months, however, are being received. We request that all those who desire to be notified upon the publication of new books kindly send us their names and addresses, which will be kept on file.

May 1930

We take pleasure in announcing that the following have recently completed courses of instruction at Dr. Bates' office and are qualified to practice the Bates Method:
Dr. Paul J. Dodge,
911 New Industrial Trust Building, Providence, R. I.
Dr. med. E. Schluter (prominent eye specialist),
Hamburg, Mundsburgerdamm 11, Germany

I'm sure there are more teachers. Search in the magazines, his books, articles, advertisements.

OCTOBER MEETING

PERHAPS no speaker has brought greater encouragement to those endeavoring to gain better eyesight than Miss Florian Shepard, of Orange, N. J., who spoke to our League on October ninth. The special significance of her cure lies in the fact that it has been one of the unusually slow ones. Miss Shepard told the history of her case and related the gradual steps in her progress. At first nothing seemed to work. Palming, swinging, everything produced strain instead of relaxation. It was only by long perseverance that she was able to arrive at any real success. Again and again Miss Shepard spoke of the marvelous patience and understanding with which Dr. Bates helped her find a way out of all her difficulties. Her testimony proves that Dr. Bates can succeed not only with easy cases but also with hard and unresponsive ones.

Miss Shepard spoke of the trick of timing the swing with the thumb and finger, and Dr. Bates later discussed this point. Attention was called to the fact that the September magazine had an article on the subject.

At Dr. Bates' request Miss Mildred Shepard gave a short account of her cure. The most interesting part of all was perhaps the fact that since her eyes have become normal she is much less tense and consequently less nervous in all phases of her life. She spoke of herself as having become "happy-go-lucky."

LEAGUE BUSINESS

Miss May Secor, of 521 West 122nd Street, has been elected corresponding secretary.

The League has voted to amend the constitution to make the dues $1 a year instead of $3. The subscription to the magazine will not be included. Anyone wishing to join the League now will have paid up to January, 1925.

Of Special Interest

Throw Away Your Glasses

DOCTOR BATES' article in the September issue of Hearst's International Magazine awakened more interest in his method of treatment than any previous writings. Hundreds of letters were relayed from Norman Hapgood, Editor, to Dr. Bates and contained congratulations, inquiries and appointments for treatment. A special notice of this article was placed in the New York Times by the editor of Hearst's.

In view of this fact we have had reprints made of the article and will fill orders immediately upon receipt.

The title is THROW AWAY YOUR GLASSES, and it explains how this can be accomplished. Everyone interested in curing their own sight will be enlightened on many points by reading this reprint.

Don't wait until the initial supply is exhausted before placing your order. Price 35c.

Are You Nearsighted—Farsighted—Astigmatic?
Have You Cataract—Glaucoma?

Then send for the number of the BETTER EYESIGHT MAGAZINE which deals with each of these defects individually. Dr. Bates explains the cause of each and how it can be cured by his treatment. These instructions can be followed by the layman.

ALL BACK NUMBERS 30c.

Bound Better Eyesight
July, 1922—June, 1923—Price $4.25

Bound in leather the same color as the book, and both together make an attractive set. This volume contains many helpful suggestions and instructions for the use of the various swings, shifting and palming. Progressive myopia, astigmatism and other defects are treated and their cause and cure explained. The cure of eye defects in children is described in various parts of the book.

Dedication to persons that directly and indirectly helped me to write this book

Robert Monroe - www.monroeinstitute.org
Author of 'Journeys out of the Body', Far Journey's & Ultimate Journey.

THE MONROE INSTITUTE
365 ROBERTS MOUNTAIN ROAD
FABER, VA 22938
866-881-3440 See his YouTube videos; http://www.youtube.com/watch?v=VoZWOLWnQkw

Read more about Robert Monroe in the Authors Natural Eyesight Improvement Experience below.

Dedication to My Mom


Mom at Christmas

To Mrs. Nancy Oliver, Wilder. For raising me alone without a father, working for minimum wage in a hot laundry mat for years while we lived in a small apartment. We often did not have enough food. I would sneak outside and dig for empty soda bottles to cash in for money to buy crackers. I remember the day a man at the recycling store yelled at me, stating I cannot bring him bottles from the trash! Men would be cruel to Mom, try to corrupt her, but she would not break from her Catholic faith and favorite Saint, St. Anne. Mom saved her money and bought a Art Instruction Schools Course for me when I was 7 years old.
(The school that is advertised on matchbook covers and in TV Guide.) I remember thinking how boring it was to draw the stick figures of people, thinking its not helping my ability to draw and I wanted to go back to just copying cartoon pictures of Moose Miller, Fred Flintstone, Bugs Bunny, Donald Duck, Popeye, Dr. Strange... from the comics. I now realize at age 53 that the course helped me to draw the pictures in Better Eyesight Magazine and other books.
My Aunt Betty is a very good artist, used to draw lifelike pictures of baseball players, boxers, my grandfather when he was a Middle Weight Champion Boxer, Police Sergeant in New England, Massachusetts. She also drew cartoons and now paints. She helped to teach me how to draw. I cannot draw as well as most artists, but the basic skills helped to create this book.

The Author's Experience with Natural Eyesight Improvement

In 4th grade Elementary School I had to wear eyeglasses to see the blackboard from the back of the classroom. Mom bought the eyeglasses for me though she could not afford to spend the money. Stress can cause unclear vision. I was in constant fear at school due to a large boy that would bully me every day, wait to scare me, threaten to beat me up after school at the end of a long dirt road. I can still see him standing there, picking out kids to bully, knowing I was next along the line.
I do not remember him actually hitting me, mainly just coming up to me and acting like he was going to in order to scare me. Frazzled my nerves daily. During childhood and adult life I was hit in the head, face a few times by other children and adult men. (Snow, ice balls, and violent people.) I know this contributed to unclear vision, and a very slight wandering eyes condition. Neck vertebrae, collarbone or skull, eye socket, joints, bones misalignment?
My teacher also wore glasses. Children pick up eyestrain, incorrect use of the eyes, tension and lowered vision from being around people that wear glasses and stressful experiences in school... I hated the glasses and threw them out in a couple weeks. I sat closer to the blackboard and this prevented strain, effort to see and the vision returned to clear. I could then see clear from the back of the class when necessary. Mom made friends with the bully's family, then he decided to be my friend. We played 'The Long Ranger' make believe game together.
Mom could not afford to pay for the glasses but was kind and let me go without wearing glasses. My vision remained about 20/20-20/40 for years and it never bothered me. (Wish I knew The Bates Method back then, would have had 20/20 and clearer vision.)
In 10th grade high school Mom had to buy glasses for me again to read the distant blackboard in school. Learning Algebra and French, did not like these subjects. I threw the glasses out after 2 days. At this time I found Aldous Huxley's book: 'The Art of Seeing' in a old bookstore in Brookfield, MA and practiced Switching

and Shifting on objects at close and far distances with: both eyes together, one eye at a time, both eyes together again. My left eye needed more vision improvement than the right so I practiced extra time with the left eye. Shifting was combined with the Switching. I understood and practiced a little Central-Fixation. The first time, few seconds that I shifted on an object, distant tree, my vision improved. Within only 5 minutes my vision improved to 20/20 and in 2 days was perfect, clear. Vision was so clear in both eyes that I could not remember which eye used to have less clear vision. My mind felt more balanced, relaxed. It is often easy for children, young people to improve their vision.

Practicing the Bates Method, having the power to improve my vision on my own resulted in an improvement in my mental, emotional state. It was easy to learn, remember at school, my grades improved, I gained confidence. The Bates Method activates, integrates, improves functions of the left and right brain hemispheres, all brain functions. I left a gang of kids that were a destructive influence and learned to have compassion for others and respect myself. I realized the mind has more functions, abilities, 'power' than we are taught in school, including college. Went into study of Psycho-Cybernetics, other science and spiritual subjects. (Human potential seems to be suppressed by our leaders. Politicians and some religions are trying to remove history and other books from libraries, bookstores, schools, the Internet.)

My vision remained about 20/20-20/30 for years and it never bothered me. Mainly 20/20, sometimes clearer.

In the U.S. Army I was forced to wear glasses: distant eyesight 20/40 at times. (It's normal for vision to fluctuate. Glasses prevent natural fluctuation back to clear vision.) I refused to wear the glasses. One day while in a foxhole shooting my rifle at the distant target, the Sergeant made me wear the glasses. I could not hit the target after many shots while wearing the glasses. I got mad and took off the glasses and threw them in the dirt. Then aimed the rifle and hit the target easily for the remaining shots. Sargent then allowed me to permanently discontinue use of the glasses.

Did not need glasses for the rest of my life until age 40, Year 1997 – unclear close vision –
In the year 1995 the author of this book was listening to Robert Monroe's relaxation tapes. I worked a very high stress job in a old hotel dealing with violent, abusive people, life and death situations. I suffered with dizziness from an assault, neck injury. Drank too much beer at times to block out the stress. The tapes produced a great amount of relaxation and also teach a variety of tools to improve function of the brain, body. At the time I was reading Aldous Huxley's book 'The Art of Seeing' to try and improve my close vision & remove eye floaters at age 40. Practiced Bates Method activities: shifting, central-fixation, switching... at close distances. Also read fine print in the sunlight with relaxation, shifting, central-fixation, memory, imagination. It worked!

One night after falling asleep listening to Monroe's tape 'Focus 10', I heard a man's voice in a dream say; "Write a book on Natural Eyesight Improvement". The dream seemed very real and it woke me up. I remembered the mans voice and thought later that it would be a good idea to write a book on my experience with distant and close vision improvement for 30 years. I began writing the book: 'Do It Yourself – Natural Eyesight Improvement' and searching for more Bates Method Natural Vision Improvement books to study. This led me to teachings of Janet Goodrich, Martin Sussman-Cambridge Institute-The Program for Better Vision course, Carrie Anderson training at the Learning Annex, then in person training course and books by Thomas Quackenbush in San Francisco, CA, and further study of Dr. Bates Better Eyesight Magazines and other books. Distant and close vision improved to 20/20 and clearer. (I don't advise all in the Cambridge course)

Robert Monroe's tapes teach spiritual development, sprit travel and improvement of brain, body functions and produce natural states taught by Natural Vision Improvement Teachers: Deep, perfect relaxation in the beta, alpha, theta, delta brain wave states, dynamic relaxation, left and right brain hemisphere activation/integration, visualization of clear mental pictures, color treatment, creativity, imagination, memory, release of negative thoughts, emotions, energy strengthening, circulation, control. The activities on the tapes improve all functions of the brain.
All of these conditions improve the clarity of vision. Listening to his tapes improved my ability to write and create pictures for this book. Many famous scientists, artists speak of entering into a deep relaxed state, contacting the subconscious mind to obtain greater power of the brain, improve skills, solve scientific theories, formulas... Monroe's tapes activate this state. (See books by Dion Fortune for further study.)

In Oct., 2009 I experienced a neck injury from a dishonest, inefficient chiropractor in Worcester, MA and it affected my vision: double vision, eyes divergence, converge, balance, hearing impaired, astigmatism... All from misaligned neck vertebrae and neck, back injury. Neck is healing with new doctor's treatment for 15 months and use of Natural Eyesight Improvement, Bates Method has returned the vision to clear. Occasional slight fluctuations in vision to 20/30 and eye movement problem returns a little when the neck injury flares up, sinus congestion in air polluted city. Neck muscle relaxation, Physical Therapy, Home 'do it yourself' non-invasive chiropractic, Clean air in Boston, MA by the Sea, less computer work, and The Bates Method always returns the vision to 20/20 and clearer. Vision remains clear at age 54. I know from experience that The Bates Method works!

Dedication To:





To Don Dixon - Best friend, Retired Air Force Pilot. Neighbor, landlord for 9 years in San Francisco Bay Area. Thanks for the Pilot Wings and taking me over the Golden Gate Bridge to the Marin Flea Market where I bought an Antique French Military Rifle.

Greg Dean and his Mom, Dad - Art and Jackie. Truly rare, strong, great people, best friends. RIP Greg. See you up there eventually. Stay out of trouble; 'or not' - Ha-Ha!

To Richard Hess, 'Best friend' Cherokee, German at the Metro.

To all the Senior Citizens and Young People in California. I learnt many things from the diversified personalities in Los Angeles, San Diego, San Mateo, South San Francisco, San Francisco! Farmers Market Bar on Main Street, Broadway, Watts in Downtown Los Angeles and all the wild, fun American Indians, Vets, Old Italian Men, ladies in Daly City, CA, The Homeless. Learning from a variety of people makes a person grow on all levels, strengthens the personality, mind, sprit.

Thank you to Barbara Gibbons at the Metropolitan Hotel in South San Francisco for a great place to live, work and write!

Picture = Christmas Tree on San Bruno Mountain-South San Francisco, CA - View from room #40, Metropolitan Hotel.

I used to watch my TV reflected in this window at night and 'switch' to the distant mountain and watch 'shift' on the Christmas Tree, cars moving along the hill, lights in the houses, stars, planes in the sky, people in the buildings, street lights, people walking on Grand Avenue, good looking Italian Man working at the Liquor store.

At this time even though the job was stressful, I was very happy, lots of friends, jokes, active. A positive mental, emotional state has a major beneficial effect on the clarity of vision. Relaxed, positive mind=clear vision. Physically active job, good posture. My vision was improved to better than 20/20 close and far while living here. Thomas Quackenbush, Natural Vision Improvement Teacher's School was over the mountain in San Francisco near the beach and Golden Gate Park.



Moving objects on the TV screen reflected in the window also keeps the eyes moving, shifting easy, relaxed, vision clear.

How to Use The E-Book

This is a Natural Eyesight Improvement Paperback and Adobe Reader/Kindle PDF E-Book consisting of 1700+ pages. Chapter, Sub-Chapter, Title Navigation Bookmarks, Page Thumbnails, Multiple Pages view are on the left side of the E-book and a linked Chapter Index for moving quickly to any page, section of the book. A + sign is to the left of the main bookmarks; click it to reveal more bookmarks, books, pages, chapters.

Word Search for all 12 E-books; Type in a word, Example; Cataracts, Nearsight, Myopia, Farsight.., and all areas of the book that provide information on cause/cure of these eye conditions will be listed. Example; If Nearsight or Myopia is typed; 50+ different treatments to cure unclear distant vision will be listed with chapter, article title, page number. Click a link to go directly to a page, treatment.

Adobe Reader & Kindle read aloud for persons with low vision, blindness. Language conversion, translates to Italian, Spanish, German... Click the View Tab in Adobe. Kindle and Adobe print can be enlarged for the visually impaired.

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This book is unlocked, no security. The reader can copy, paste, print and change the size of the print. Print your own book with home computer/printer or copy the book to a CD and bring it to a printer for printing, book binding. Print in color or black ink. Any size paper. Choose spiral binding so the book opens fully when set on a book holder - prevents the need to hold the book open with the hands for relaxed arms, shoulders, neck when reading.

Adobe can print in large, medium, small, fine & microscopic print. Fine print is healthy for the eyes, cures unclear close and distant vision when read correct with relaxation, shifting, central-fixation. Set Adobe Reader to print 2 or more pages per page for small print. 4 to 6... pages per page for a fine and microscopic print for perfect central-fixation, saccadic shifting, fine detailed vision at close and far distances. The Zoom Function also changes print size.
Create mini fine and microscopic print booklets to read in the sunlight daily. Practice the treatments described to prevent unclear vision, cataracts and other eye conditions.

In the Adobe Reader Print Setup: Select % of normal size, a number less than 100% or use page scaling. This will fit all text, pictures onto the paper, reduce the size to create a margin on the edge of the page for binding a printed book. Or print normal size 100% on larger paper.

Select 'Print Document and Comments/Markups' in the Adobe print box to print all page numbers on the upper right corner and text boxes in the book. Print pictures large for kids to color or to hang on a wall for Natural Vision Improvement Training. Adobe Acrobat 30 day Free Trail can be downloaded free from http://www.adobe.com to arrange the book pages as preferred.

For Better Eyesight Magazine

This book contains all publications of Dr. Bates Monthly 'Better Eyesight Magazine' – Unedited, everything included, July 1919 - June 1930, all of his original treatments and modern versions of older treatments.

- **Text in light blue are comments added by author Clark Night, Bates Method Natural Eyesight Improvement, Graduated Student, to clarify Modern Natural Eyesight Improvement versions of a few older methods described and to correct a few spelling errors in the original magazines.**
- **Print in bold, black specifies Bates Method Natural Eyesight Improvement treatments for a variety of eye conditions, military articles, and other items of importance.**
- **Print in bold, dark navy blue are specific Bates treatments, activities, steps for vision improvement.**
- **This book contains 500 pictures placed on the right margin of the magazine pages to help the reader quickly understand every Bates Method treatment described.**
- **The First Article and usually the 2nd article of each monthly Better Eyesight Magazine and other articles not labeled by author are written by Ophthalmologist Bates.**
- **The First Article on page 2 (inside cover in the original magazines) consists of some of the best treatments, activities taught by Dr. Bates, specific directions for a Bates Method Natural Eyesight Improvement treatment.**

Example; July 1919 magazine PAGE TWO - Do You Read Imperfectly?

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

Dr. Bates Instructions for PAGE TWO

+The original photo copies of Better Eyesight Magazine are included with this book so the reader can verify the modern version, treatments in this book with the original printed magazines from the 1900's. See original sample page on the right, previous pg. >

Dr. Bates 'Better Eyesight Magazines' contain hundreds of different natural treatments that he and his assistant Emily Lierman/Bates and other eye doctors applied to cure: unclear distant and close vision, (nearsight, farsight) astigmatism, cataracts, glaucoma, cornea scars, wandering/crossed eyes, amblyopia and other eye problems. A few Eye Doctors, Ophthalmology College Libraries have preserved these magazines. See Monroe J. Hirsch O.D. Ph. D.

Pictures in This book

A main Bates Method activity to relax the mind, body, eyes and bring clear vision is to improve the memory, imagination of mental pictures. This is a normal function of the eyes, brain, visual system to produce clear vision. A baby (and adults) see a unfamiliar, new object clear by first 'shifting on it' (looking at different parts, moving the visual attention part to part on the object, examining small details). The object becomes clear, familiar, memorized, a clear memory picture of the object is stored in the brain. The next time the baby looks at the object it is familiar, remembered clear and the brain quickly activates the correct eye movements on the object, no effort to see it, relaxation occurs and it is seen clear.
This process is done for every new object encountered. The brain stores thousands of pictures of objects.
Example:



A baby sees an apple for the first time and it may be imperfectly clear due to it being a unfamiliar, new object. At first, the baby's eyes move, 'shift' slowly on the apple part to part as the baby's eyes, brain investigate the new object, become familiar with it. The baby's eyes, visual attention move from part to part on the apple, the brain registering, storing a image of each part the eyes look at. A image of the apple forms in the brain, memory each time the baby sees the apple again. Each time the apple is seen, a clearer and clearer, more familiar mental, visual picture of the apple is created and stored in the brain, memory and it is easier to see; the brain activates eye movement, shifting on the round, red object easy, relaxed and the eyes movement is improved, quicker. Smaller saccadic eye movements occur. A perfectly clear image of the apple is stored in the brain, memory and it is now a familiar object. When the baby looks at it, the brain moves the eye muscles, eyes correct, quick and easy, part to part on the apple and it remains clear.



When the brain remembers, imagines, creates, stores clear pictures in the mind, in color, motion like a real life movie: the mind, body, eyes relax, eyes move easy and vision is clear. (Even a stationary object appears to move, with 'oppositional movement' (The Swing) as the eyes shift part to part on it.)



Blind people use mental pictures, touch... and other senses. One treatment to help cure blindness, near blindness is to improve the memory, mental pictures of objects. Improve the memory, imagination, clear mental pictures to obtain clear vision. Read Helen Keller's story in Better Eyesight Magazine Illustrated with 500 Pictures.

The pictures, true life stories and fairy tales in Better Eyesight Magazine cause the person to create clear mental pictures, like an active motion 'movie' picture occurring in the mind. The stories are entertaining, interesting and fun to read.
This relaxes the mind, eyes, brings the mind to a positive state. All these keep the vision clear.

When the mind is positive, relaxed, vision clear: the memory and imagination improve and the improved memory, imagination further improve relaxation and the vision. Then the clearer vision further improves the memory, imagination, relaxation. More vision improvement occurs. Ability to remember, imagine and see a object clear is greatly improved. It's easy, relaxing to remember, imagine a clear object. Practice imagining, remembering objects clear. All functions of the visual system are connected. Improve one and all improve.

700+ pictures are placed in the main E-book and in Better Eyesight Magazine to help the reader easily see/imagine in the mind, learn and apply each treatment, activity Dr. Bates describes. Less reading, fast eyesight improvement.
Each picture teaches a Natural Eyesight Improvement treatment. Read the print below the picture for a quick lesson.

Remembering, imagining, creating clear mental/visual pictures is a main Natural Eyesight Improvement treatment, normal function of the visual system. The brain works with the eyes to produce clear vision.

Babies, children and adults learn to see clear by first shifting on a new object: moving the visual attention, central field from part to part on the object, becoming familiar with it, the brain visualizing, creating, storing a clear mental and visual picture of the object in the memory. In this way, the object is seen clear by the function of the brain activating, retrieving the clear memory picture of the object each time the eyes look at the object. The brain works with the eyes, eye muscles to move the eyes, (visual attention) on the object correct and see it clear. The object becomes familiar, easy to see and the brain, eyes relax, function perfect,

the object is seen clear.
Familiar objects are easy to see, relax the mind, eyes, produce clear vision.
The imagination also works with the memory to produce clear objects, vision.

The pattern of eye movement can change, move freely, vary each time the eyes look at the object but the brain will also produce certain eye movements for that specific object; the brain knows how to move the eyes, visual attention on that objects specific shape; Example: The brain moves the eyes, visual attention on a round object in a different pattern than when moving on a square object; The eyes, visual attention (center of the visual field) move in a certain basic pattern on the round shape, areas of a apple: the center, areas within the circular shape, along curved edges, top, bottom, sides...

If the eyes, visual attention try to move on the apple as if it has a square shape, squared edges and other shapes... (as in the middle picture, painting hanging on the wall), then the eyes will be moving, looking out into space sometimes, away from the apple (see 3rd picture). This will be diffusion, eccentric fixation, no central-fixation because the eyes are not on the object when looking away from it. Moving the visual attention, center of the visual field along, around the edge of an apple is different than moving along the edge, corner of a square. (See example; looking at the #7 on the bus in the Memory, Imagination chapter.)

A memorized, familiar object activates easy, mentally stored eye movements, shifting part to part, perfectly, automatically on the object. Perfect central-fixation, the object is seen clear. New, different eye movements are also added for each individual object and each time the object is viewed again because the eyes move freely and the eye movements on the object, scenery is also affected by thoughts in the mind, what the brain is thinking about the object or other subjects, the distance, angle the object is at, lighting, contrast, size...



Familiar objects are easy to see, relax the mind, eyes and produce clear vision. This is why Dr. Bates advises keeping a familiar, memorized Eyechart in the classroom to practice on, keep the children's vision clear.

Books that contain entertaining, interesting pictures improve the brain, visual systems memory, imagination of clear pictures of objects. This improves eye function with the brain and clarity of vision. Children enjoy books with pictures. The small pictures in the book can be printed larger for children to assemble into a coloring book. The child will learn the Bates Method as the parent describes what each picture is.

Coloring - eyes moving with the crayon, filling in small details, using a variety of colors activates eye movement 'shifting', central-fixation, relaxation, positive mind, left and right brain hemisphere activation, integration. These are Bates Method natural eye functions that produce clear vision and straight eyes.

Reading Comic books improve the clarity of vision due to the many colorful action pictures, interesting, fun to read stories engaging the memory and imagination. Eye movement, shifting is activated, improved as the eyes, mind look at a picture and move from picture to picture and on the bubbles of printed words.

The small pictures in this book prove that Natural Eyesight Improvement works! Most pictures in this book are drawn by the author. As stated earlier, the author of this book attained clear close vision at age 40 by using Aldous Huxley's book and taking a Bates Method Natural Vision Improvement course from Thomas Quackenbush in San Francisco, CA. At age 54 my close and distant vision is still clear. 500+ pictures were drawn by hand, in small size 1½ inches height/width using my memory, imagination as I read each article in Better Eyesight Magazines. Pictures were drawn on paper, then traced over on a window pane two times, sunlight shining through the window, looking at the pictures 1 inch to 6-20 inches and up to 5 ft. from the eyes seeing the fine details of pictures clear on paper.

Pictures were then scanned into a computer, refined again in Microsoft Digital Image and Photoshop. All this was done without eyeglasses or magnifiers. The Bates Method works!!

Clark Nights E-books are allowed to be distributed free by 4 Bates Teachers and all book customers. Be aware that a few photograph and other pictures in the book were taken from the Internet, Microsoft Free Clipart, historical sources that gave permission to use the pictures, Dr. Bates books, Articles and other old copyright free books. They stated the pictures are 'royalty free' but I did not get this in writing, only by phone and E-mail. I take full responsibility for all pictures in my books. 95% in the 2 main books are drawn, copyright by Clark Night.

The Natural Eyesight Improvement student must get an eye exam, to check the health of the eyes, preferably from an eye doctor experienced with the Bates Method of Natural Eyesight Improvement. A eye exam from a natural based eye doctor that performs exams without constant use of eye drops, without drugs, machines, time limits for reading charts is most healthy for the eyes and will result in the best, accurate prescription, not over prescribed/too strong in eyeglass strength.

Looking into a machine, mechanical or electronic device to test the clarity of vision blocks many natural eye functions, can cause temporary: increased visual blur, stiff neck, block relaxed, normal eye movements and result in a unnecessary eyeglass prescription and too strong prescription. This will maintain, increase vision impairment and interfere with application of Natural Eyesight Improvement, prevent the eyes from returning to normal function, clear vision. I do not trust the new 'Eye Scan Machines. Artificial light... into the eyes, directly on the retina.

An old fashioned paper eyechart hung on a wall with sunlight on the chart, no glare, used when the eyes, mind are relaxed, no pressure to hurry is the best way to test for the true level of visual clarity, along with the old time

retinoscope and other harmless instruments to look into, inspect the eye. Natural Bates Method Eye Doctors will do this. They give the patient time to read the chart.

Eye drops are used to widen the eyes pupil so the doctor can look into the eyes and completely check the eyes health. This may be necessary to insure a though eye exam but constant use of eyedrops on every exam can impair the eyes health. The eyedrops cause; a paralyzed eye muscle, widened pupil, blurred vision, light sensitivity... I personally will not allow eyedrops when taking an eye exam. The drug companies are placing harmful and unnecessary chemicals, toxins in the eyedrops, various drugs for the eyes, tear production drugs and drugs for other medical conditions. This causes eye, vision, health impairment. Toxins, chemicals are placed in vaccines, flu shots, even our food, water supply. Contact lens solutions have been contaminated with bacteria resulting in eye infections, blindness. Chemicals in Sinus, Nasal sprays cause Glaucoma, Cataracts, vision impairment.
Modern Natural Eye Doctor's are seeking a safe alternative to eyedrops, drugs.

Disclaimer

The Author of this book; (Do It Yourself – Natural Eyesight Improvement – Original and Modern Bates Method & Better Eyesight Magazine Illustrated with 500 Pictures, EFT and all books by the Author) must place a disclaimer in this book to protect herself from lawsuits, imprisonment, destruction of this book by the Medical Association, Drug/Optical Industries, corrupt politicians, fraudulent vision improvement teachers that attempt to prevent the public from acquiring free, authentic Natural Eyesight Improvement information, training;

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This book and other books, videos, website by the author consist solely of Educational Information for improving the clarity of vision and health/function of the eyes along with the student's communication with an Optometrist, Ophthalmologist. Always obtain an eye exam by an Ophthalmologist and medical exam by a Medical Doctor.

Choose a Bates Method Behavioral Ophthalmologist, Optometrist and Medical Doctor that prefers natural health treatment, prefers to teach Natural Eyesight Improvement, discontinue use of eyeglasses, keep the eyes healthy and prevent use of eye surgery, drugs. Avoid eye doctors selling laser and other eye cornea surgeries, drugs that are not needed, unnecessary lens removal/surgery, eyeglasses (especially strong over-corrected eyeglass lenses), unnecessary, addictive astigmatism sections in the glasses, contact lenses, bifocals, mono-vision lenses, plus lens treatment, tinted, colored lenses, sunglasses and all types of eyeglasses. (Legal 20/40 reduced, weaker eyeglass lenses can be used temporarily, only if needed for driving, work... safety as the vision is improving. See a Behavioral Optometrist and on-line mail order low cost optical stores.)

An experienced eye doctor can detect health of the eyes and body by examining, looking at and into the eyes. Blood pressure, sugar levels, injury, stroke and many health conditions are reflected in the eyes, often in an early reversible stage.

An eye doctor experienced in iridology can determine health of organs, systems in the body. See the story of Ignatz Von Peczely, Physician, a man that cured a injured owl and noticed that the owls eyes, iris was altered when the bird was sick, injured and it returned to normal as the birds health healed.

Children - Read/use this books contents only with direction of, supervised by parents and a Bates Method Eye Doctor. Children and adults: do not us the Sunglass and other methods that are for application only by an experienced Bates Method Ophthalmologist. If in doubt about how to apply a method; ask a Bates Teacher and Bates Method Eye doctor. See 'Better Eyesight Magazine Illustrated with 500 pictures'.

Natural Eyesight Improvement normalizes, corrects the eyes pressure. If a person is taking drugs, eye drops... for Glaucoma, eye pressure or other eye conditions; to lower or raise the pressure; ask your eye doctor's advice first before applying Natural Eyesight Improvement. The drugs strength, amount to take, may need to be changed or the drug may need to be discontinued. The doctor must monitor the eyes pressure as the person practices Natural Eyesight Improvement. Natural Eyesight Improvement also changes the eyes, corneas shape; back to normal, healthy shape. If the eye, cornea, retina has been operated upon, surgery; speak to your eye doctor first before applying Natural Eyesight Improvement to be sure it does not interfere with the surgery. Detached retina surgery... Read the laser cornea surgery articles in this book. I have communicated with Natural Eyesight Improvement Students that had; cataracts, glaucoma, holes, fluid leaking in the eyes retina, retinitis pigmentosa, other conditions and they have only benefited, regained good eye health and clear vision from practicing Natural Eyesight Improvement, The Bates Method and working with a Bates Method Ophthalmologist.

The Following Words Describe Eye Conditions Listed in This Book

+Emmetropia=Normal Round Eye=clear distant vision.

Dr. Bates states that the eye lengthens slightly (due to action of the outer oblique eye muscles) to produce accommodation for clear close vision. Other eye doctors state that the lens, or lens and eye, change shape (lens; due to action of the ciliary, inner eye muscle) to produce accommodation, others theorize the lens may move, as in a camera. The iris, pupil size, iris muscle also affects the function of the eye, light rays.., clarity of vision.

+Myopia=Nearsighted=abnormally lengthened eyeball=unclear distant vision.

+Hypermetropia=Hyperopia=Farsighted=abnormally shortened eyeball=unclear close vision.

+Presbyopia=abnormally shortened or greatly lengthened eyeball due to outer eye muscle tension, and/or the lens is inflexible, ciliary muscle stiff=unclear close 'Reading' Vision. Extreme neck muscle tension, arthritis lowering blood, oxygen, nutrient flow to the head, eyes, retina, lens and causing neck muscle tension to travel into the outer and inner eye muscles can cause unclear close, distant vision, cataracts and other eye problems.
The Bates Method, nutrition, sunlight, posture, movement.., corrects this condition.
Reading fine print cures presbyopia. See the Close Vision chapter and Better Eyesight Magazine.

+Astigmatism=irregular, abnormal cornea, lens, eye shape, due to outer, inner eye muscle tension, dysfunction.
Vision/objects are distorted, blurred, unclear in various areas of the visual field at close and/or far distances. Headaches, dizziness can be experienced due to distortion of objects in the visual field. Objects can appear to move, produce a variety of visual effects when the eyes move and the astigmatism area of the eyes cornea passes over objects. It is usually the eye and cornea that have the abnormal shape, not often the lens.
Headaches, sinus congestion, pressure can also affect the eyes nerves, muscles, eye movement, entire eye, eye shape and cause unclear vision, astigmatism, a variety of visual disturbances. Check with your doctor if a sinus infection is suspected. Usually is harmless but occasionally infection can travel. See the Nutrition Chapter for natural prevention of sinus congestion, infection. Extreme neck muscle tension, misaligned neck vertebrae can affect eye muscle, nerve, ear, sinus... function causing many different eye, vision problems.
Relax the neck, stay healthy, use the Bates Method to avoid astigmatism, blur, eyeglasses.

+Amblyopia=Amblyopia Ex Anopsia=Dim, low, no vision or less clear vision in one eye, often in a wandering/crossed eye due to lack of use of the eye or the brain shutting off the image in the wandering/crossed eye to prevent double vision. Can occur in both eyes. Can occur in an eye with very unclear, blurry vision.

+Squint=Strabismus=Wandering/Crossed/Lazy Eye - Dr. Bates uses the word 'Squint' to describe this condition.
A tense outer eye muscle pulls the eye in, out, up, down... causing strabismus, slow, stiff, un-coordinated eye movement, imperfect convergence, divergence, double vision. The state of convergence, for close vision, divergence for distant vision functions with and affects accommodation for clear close vision, un-accommodation for clear distant vision.
Strain in the mind, left and right brain hemisphere imbalance, one hemisphere or part of the brain not working correct with a eye muscle, not activating its movement or partially activating it can cause strabismus, imperfect eye movement. Exercises, games, Bates Method corrects this condition.

Imperfect Left and right brain hemisphere function, imbalance, interfering with a baby's crawling, natural walking stage, use of baby walkers, (This disrupts natural left and right brain hemisphere development, activation & integration as the baby grows, learns to craw and walk. The brain, hemispheres work with the eyes, eye muscles, eye development, clarity of vision.), injury from forceps birth delivery, (incorrect handling of the baby at birth, doctors forcing mothers to avoid natural, healthy instincts of safe ways to massage, caress the baby's body, head that naturally insures perfect skull bone alignment after passing through the birth canal, 'like animals do with their tongue'), misaligned skull & eye socket bones and/or neck, back vertebrae, collarbones, other bones, pressure, pulling on nerves, muscles in/along the spine, neck, skull, eye socket can also cause eye muscle tension, eye/eye muscle dysfunction, strabismus, blur, astigmatism and other eye problems. Usually;
Mental strain, eye muscle tension, eyestrain, staring, not shifting, lack of central-fixation and other incorrect use of the eyes, wearing eyeglasses, sunglasses, lack of sunlight, using incorrect posture, is the cause of defective vision; blur, astigmatism, strabismus...
Stress, negative emotions, thoughts, experiences can also strain, tense the mind/brain, eye muscles, cause Brain Hemisphere imbalance and un-coordinated eye muscle function, vision impairment. Stress can temporarily shut off part of the brain, lower certain brain functions, communication with the eyes, eye muscles, retina. Computer use; looking all day at that one close distance, at the artificial 3-D images on the screen can tense up the eye muscles and eye movement in one or both eyes, cause one brain hemisphere to be dominant and one eye to be dominant at close distances, less clear vision at other distances... Divergence when looking to the distance after hours on the computer can be slow, double vision, one or both eyes movement almost frozen for close distance. (Looking at print, images, videos on the computer screen is different than looking at real print, pictures on a piece of paper. The computer screen strains the eyes when overdone.) Diet also affects the eyes health and vision.

Dr. Bates proved that all these eye conditions are most always caused by mental strain, incorrect use of the eyes and outer eye muscle tension placing pressure, pulling, stretching, tension on/in the eye, cornea, lens, retina, distorting their shape, function, disrupting the focus of light rays in the eye, on the retina, impairing blood, oxygen, nutrient, fluid, energy circulation to, in, out of the eyes and tear production. (Tears contribute to clear vision by acting as a natural contact lens and keeping the cornea, eye healthy. People state their vision improves to clear, even cataracts clearing from the eyes after crying. Crying improves eye circulation, cleansing inside and outside the eye, and stretches, relaxes the muscles in the eyes, head, neck, shoulders.) Sunlight on the eyes, no eye or sun-glasses cures many eye problems, improves the clarity of vision. Outer & Inner eye muscle tension affects eye, lens, iris/pupil, tear... function, health of the eye, clarity of vision.

Neck, shoulder muscle tension is a major cause of eye muscle tension, eye muscle and eye nerve dysfunction, impaired circulation in the head, eyes and unclear vision. Extreme neck muscle tension can pull or tilt a neck vertebra temporarily out of alignment, placing pressure, pulling on the nerves in the neck that travel to/connect to the brain stem, brain, eyes, retina, eye muscles, ears. (Eyes, ears, balance and vision are connected, work together.) Blood, lymph vessels can be affected. Neck muscle tension alone can do this to a lesser degree.

The Author, assembler (Clark Night) of this book experienced a crossed/wandering eye condition with astigmatism, double vision, sinus inflammation, congestion, ear ringing, balance impairment from a neck injury, misaligned vertebrae, torn muscles, ligaments, injured nerves in the neck from a dishonest chiropractor. The Bates Method and a new, good chiropractor corrected the eye, vision, sinus condition.

Natural Eyesight Improvement, Dr. Bates Method relaxes the mind/brain, body, eye muscles, eyes, neck, returns all parts of the eye to normal shape, function, circulation, correct focus of light rays in the eyes for healthy eyes and clear vision at all distances.

THE SWINGING CURE

If you see a letter perfectly, you may note that it appears to pulsate, or move slightly in various directions. If your sight is imperfect, the letter will appear to be stationary. The apparent movement is caused by the unconscious shifting of the eye. The lack of movement is due to the fact that the eye stares, or looks too long at one point. This is an invariable symptom of imperfect sight, and may often be relieved by the following method:

Close your eyes and cover them with the palms of the hands so as to exclude all the light, and shift mentally from one side of a black letter to the other. As you do this, the mental picture of the letter will appear to move back and forth in a direction contrary to the imagined movement of the eye. Just so long as you imagine that the letter is moving, or swinging, you will find that you are able to remember it, and the shorter and more regular the swing, the blacker and more distinct the letter will appear. If you are able to imagine the letter stationary, which may be difficult, you will find that your memory of it will be much less perfect.

Now open your eyes and look first at one side and then at the other of the real letter. If it appears to move in a direction opposite to the movement of the eye, you will find that your vision has improved. If you can imagine the swing of the letter as well with your eyes open as with your eyes closed, as short, as regular and as continuous, your vision will be normal.

BETTER EYESIGHT

A MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Copyright, 1919, by the Central Fixation Publishing Company
Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I OCTOBER, 1919 No. 4

SIMULTANEOUS RETINOSCOPY

Much of my information about the eye has been obtained by means of simultaneous retinoscopy.

The retinoscope is an instrument used to measure the refraction of the eye. It throws a beam of light into the pupil by reflection from a mirror, the light being either outside the instrument—above and behind the subject—or arranged within it by means of an electric battery. On looking through the sight-hole one sees a larger or smaller part of the pupil filled with light, which in normal human eyes is a reddish yellow, because this is the color of the retina, but which is green in a cat's eye, and might be white if the retina were diseased. Unless the eye is exactly focussed at the point from which it is being observed, one sees also a dark shadow at the edge of the pupil, and it is the behavior of this shadow when the mirror is moved in various directions which reveals the refractive condition of the eye. If the instrument is used at a distance of six feet or more, and the shadow moves in a direction opposite to the movement of the mirror, the eye is myopic. If it moves in the same direction as the mirror, the eye is either hypermetropic or normal; but in the case of hypermetropia

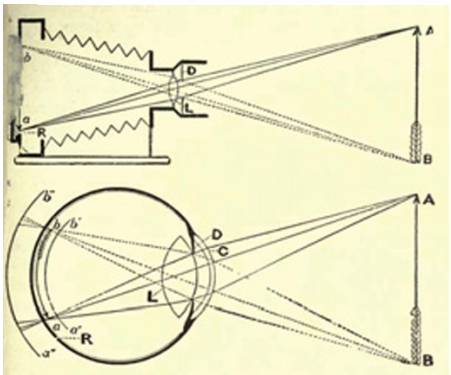

Fig. 5. The Eye As a Camera

The photographic apparatus; D, diaphragm made of circular overlapping plates of metal by means of which the opening through which the rays of light enter the chamber can be enlarged or contracted; L, lens; R, sensitive plate (the retina of the eye ; AB, object to be photographed; ab, image on the sensitive plate.

The eye: C, cornea where the rays of light undergo a first refraction; D, iris (the diaphragm of the camera); L, lens, where the light rays are again refracted; R, retina of the normal eye; AB, object of vision; ab, image in the normal or emmetropic eye; a' b', image in the hypermetropic eye; a" b", image in the myopic eye. Note that in a' b' and a" b", the rays are spread out upon the retina instead of being brought to a focus as in ab, the result being the formation of a blurred image.

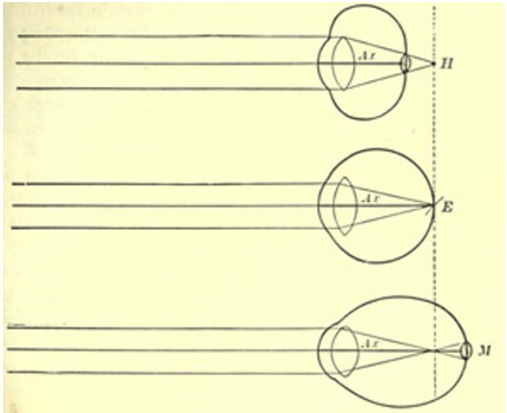

Fig. 4. Diagram of the Hypermetropic, Emmetropic and Myopic Eyeballs

H, hypermetropia; E, emmetropia; M, myopia; Ax, optic axis. Note that in hypermetropia and myopia the rays, instead of coming to a focus, form a round spot upon the retina.

SAVE A TREE – PLEASE PRINT THIS BOOK ON 100% RECYCLED PAPER WITH ORGANIC ENVIRONMENTALLY SAFE INK

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. I JULY, 1919 No. 1

Foreword

Fundamental Facts

Central Fixation

A Teacher's Experiences

Army Officer Cures Himself

$2.00 per year 20 cents per copy

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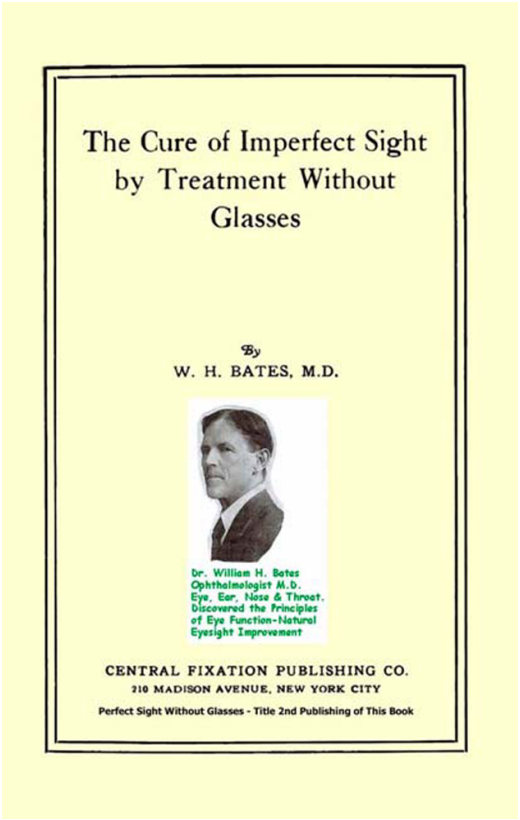

Ophthalmologist Bates Better Eyesight Magazine Illustrated with 500 Pictures and other books, videos are included on a CD or download link with the Paperback copy of this E-book. 11 of the E-Books are included, attached to the E-book. The Original Better Eyesight Magazines (as shown here) and a few new books are provided in separate E-books.

How to Use the Snellen Test Card
FOR THE
Prevention and Cure of Imperfect Sight in Children

The Snellen Test Card is placed permanently upon the wall of the classroom, and every day the children silently read the smallest letters they can see from their seats with each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. This takes no appreciable amount of time, and is sufficient to improve the sight of all children in one week and to cure all errors of refraction after some months, a year, or longer.

Children with markedly defective vision should be encouraged to read the card more frequently.

Records may be kept as follows:

John Smith, 10, Sept. 15, 1918.
R. V. (vision of the right eye) 20/40.
L. V. (vision of the left eye) 20/20.

John Smith, 11, Jan. 1, 1919.
R. V. 20/30.
L. V. 20/15.

The numerator of the fraction indicates the distance of the test card from the pupil; the denominator denotes the line read, as designated by the figures printed above the middle of each line of the Snellen Test Card.

A certain amount of supervision is absolutely necessary. At least once a year some one who understands the method should visit each classroom for the purpose of answering questions, encouraging the teachers to continue the use of the method, and making a report to the proper authorities.

It is not necessary that either the inspector, the teachers, or the children, should understand anything about the physiology of the eye.

BETTER EYESIGHT

A MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

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Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I AUGUST, 1919 No. 2

A HOUSE BUILT ON SAND

That the results of the present method of treating defects of vision are far from satisfactory is something which no one would attempt to deny. It is well known that many patients wander from one specalist to another, seeking vainly for relief, while others give up in despair and either bear their visual ills as best they may without assistance, or else resort to Christian Science, mental science, osteopathy, physical culture, or some of the other healing cults to which the incompetence of orthodox medicine has given birth. The specialists themselves, having daily to handle each other's failures, are scarcely better satisfied. Privately they criticize each other with great asperity and freedom, and publicly they indulge in much speculation as to the underlying causes of this deplorable state of affairs.

At the recent meeting of the Ophthalmological Section of the American Medical Association, Dr. E. J. Gardiner, of Chicago, in a paper on *The Present Status of Refraction Work*,[1] finds that ignorance is responsible for the largest quota of failure to get satisfactory results from what he calls the "rich heritage" of ophthalmic science, but that a considerable percentage must be attributed to other causes. Among these causes he enumerates a too great dependence on measuring devices, the delegation of refraction work to assistants, and the tendency to eliminate cycloplegics, in

[1] For reports of all the papers quoted, see Jour. Am. Med. Assn, June 21, 1919.

The Original Method for Practicing Natural Eyesight Improvement Described by Ophthalmologist William H. Bates

BETTER EYESIGHT

September 1927

Perfect Sight

By William H. Bates

If you learn the fundamental principles of perfect sight and will consciously keep them in mind your defective vision will disappear. The following discoveries were made by W. H. Bates, M. D., and his method is based on them. With it he has cured so-called incurable cases:

I. Many blind people are curable.

II. All errors of refraction are functional, therefore curable.

III. All defective vision is due to strain in some form.

You can demonstrate to your own satisfaction that strain lowers the vision. When you stare, you strain. Look fixedly at one object for five seconds or longer. What happens? The object blurs and finally disappears. Also, your eyes are made uncomfortable by this experiment. When you rest your eyes for a few moments the vision is improved and the discomfort relieved.

IV. Strain is relieved by relaxation.

To use your eyes correctly all day long, it is necessary that you:

1. Blink frequently. Staring is a strain and always lowers the vision.

2. Shift your glance constantly from one point to another, seeing the part regarded best and other parts not so clearly.
That is, when you look at a chair, do not try to see the whole object at once; look first at the back of it, seeing that part best and other parts worse. Remember to blink as you quickly shift your glance from the back to the seat and legs, seeing each part best, in turn. This is central-fixation. (with shifting.)

3. Your head and eyes are moving all day long. Imagine that stationary objects are moving in the direction opposite to the movement of your head and eyes. When you walk about the room or on the street, notice that the floor or pavement seems to come toward you, while objects on either side appear to move in the direction opposite to the movement of your body.

BETTER EYESIGHT

December 1927

INSTRUCTIONS FOR HOME TREATMENT

By William H. Bates

The most important fact is to impress upon the patient the necessity of discarding his glasses. He is told that when glasses are used temporarily a relapse always follows and the patient loses for a short time, at least, everything that has been gained. If it is impossible or unnecessary for the patient to return at regular intervals for further treatment and supervision, he is given instructions for home practice to suit his individual case, and is asked to report his progress or difficulties at frequent intervals.

The importance of practicing certain parts of the routine treatment at all times, such as blinking, central-fixation, shifting and imagining stationary objects to be moving opposite to the movement of his head and eyes, is stressed. The normal eye does these things unconsciously, and the imperfect eye must at first practice them consciously until it becomes an unconscious habit.

The Natural Vision Improvement student practices, imitates these normal, natural eye functions (relaxed, natural, Correct Vision Habits) to gently coax the brain, eyes, eye muscles, body (visual system) back to normal, relaxed function and clear vision. Then, the eyes, brain… function correct, automatically 'on their own' maintaining clear vision.

The Fundamental Principles of Treatment

Derived from Dr. Bates Better Eyesight Magazine -June, 1921 & other Issues

HOW TO DEMONSTRATE THE FUNDAMENTAL PRINCIPLE OF TREATMENT

Experience, demonstrate that strain, lowers the vision: think something disagreeable, some physical-discomfort, or something seen imperfectly. When the eyes are opened, it will be found that the vision has been lowered. Staring causes strain, blurred vision. Next: repeat and think something pleasant, happy - notice clear vision.

BASIC TREATMENTS

Resting the Eyes

Palming

Shifting and Swinging

Memory

Imagination

Flashing or Blinking

Central-fixation

Sun Treatment

How to Practice With the Test Card
Reading small, Familiar Letters Daily

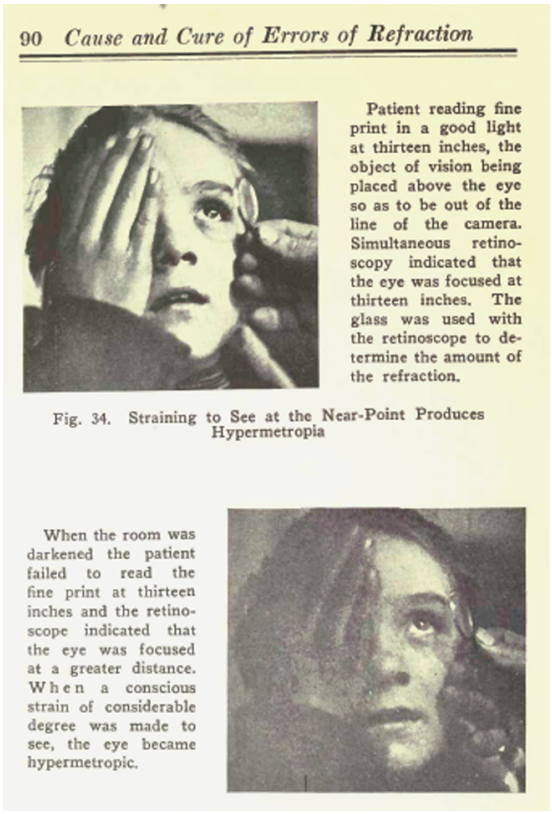
Use the Adobe PDF E-Book to search for the complete directions for these steps in Better Eyesight Magazine and Dr. Bates Books. Also, see the latest version of 'Better Eyesight Without Glasses' 1940+ book editions, final extra chapter by Emily C. A. Lierman, Bates - her list, directions for these Treatments. They are basically the same as are described in Dr. Bates old copyright free books and 132 Issues of Better Eyesight magazine.

Adults can experience free Natural Eyesight Improvement Training by watching how children (that have clear vision) use their eyes: Relaxed, their eyes move, 'shift' often, easily, clear vision occurs effortless, automatically without thinking about, controlling their eyes and vision. (Do not let the child know you are watching their eyes because this might cause them to start thinking about their eyes, clarity of vision, try to control eye function and this will interfere with completely natural, normal eye function and visual clarity. Similar to a teacher placing a lot of pressure on a child to see an eyechart clear. The child must be allowed to see the chart in a relaxed state, memorize the letters.) Relaxation, good memory produces clear eyesight. Imitate, practice the child's correct eye function.

Read the Free PDF E-Book;
'Do It Yourself-Natural Eyesight Improvement-Original and Modern Bates Method' for directions on how to reduce the strength of eyeglass lenses, wear weaker and weaker lenses and permanently discontinue use of Eyeglasses. Lenses are worn only if absolutely necessary for driving, safety at work… Not wearing eyeglasses is the fastest, easiest way to obtain perfect, clear 20/20 and better vision at all distances, close and far.



AVOID EYEGLASSES, SURGERY AND DRUGS.
EYEGLASSES, SURGERY AND DRUGS CAUSE AND INCREASE EYE MUSCLE TENSION, MENTAL STRAIN, ABNORMAL EYE SHAPE, UNCLEAR VISION, CATARACTS AND ALL EYE PROBLEMS.

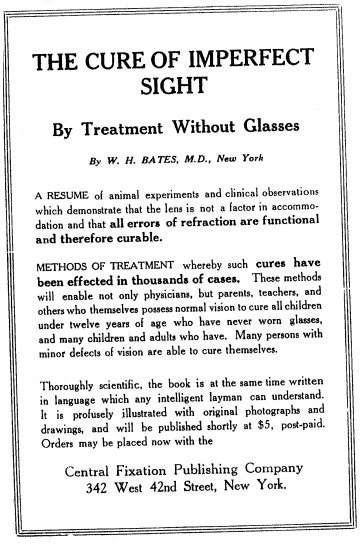


90 *Cause and Cure of Errors of Refraction*

Patient reading fine print in a good light at thirteen inches, the object of vision being placed above the eye so as to be out of the line of the camera. Simultaneous retinoscopy indicated that the eye was focused at thirteen inches. The glass was used with the retinoscope to determine the amount of the refraction.

Fig. 34. Straining to See at the Near-Point Produces Hypermetropia

When the room was darkened the patient failed to read the fine print at thirteen inches and the retinoscope indicated that the eye was focused at a greater distance. When a conscious strain of considerable degree was made to see, the eye became hypermetropic.



THE CURE OF IMPERFECT SIGHT

By Treatment Without Glasses

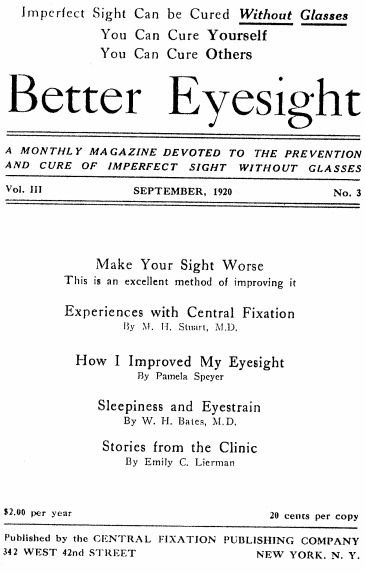
By W. H. BATES, M.D., New York

A RESUME of animal experiments and clinical observations which demonstrate that the lens is not a factor in accommodation and that **all errors of refraction are functional and therefore curable.**

METHODS OF TREATMENT whereby such **cures have been effected in thousands of cases.** These methods will enable not only physicians, but parents, teachers, and others who themselves possess normal vision to cure all children under twelve years of age who have never worn glasses, and many children and adults who have. Many persons with minor defects of vision are able to cure themselves.

Thoroughly scientific, the book is at the same time written in language which any intelligent layman can understand. It is profusely illustrated with original photographs and drawings, and will be published shortly at $5, post-paid. Orders may be placed now with the

Central Fixation Publishing Company
342 West 42nd Street, New York.



Imperfect Sight Can be Cured *Without Glasses*
You Can Cure **Yourself**
You Can Cure **Others**

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. III SEPTEMBER, 1920 No. 3

Make Your Sight Worse
This is an excellent method of improving it

Experiences with Central Fixation
By M. H. Stuart, M.D.

How I Improved My Eyesight
By Pamela Speyer

Sleepiness and Eyestrain
By W. H. Bates, M.D.

Stories from the Clinic
By Emily C. Lierman

$2.00 per year 20 cents per copy

Published by the CENTRAL FIXATION PUBLISHING COMPANY
342 WEST 42nd STREET NEW YORK, N. Y.



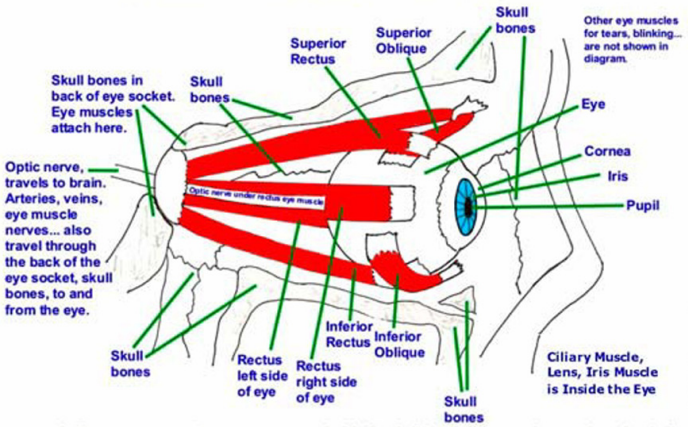
Ophthalmologist William H. Bates

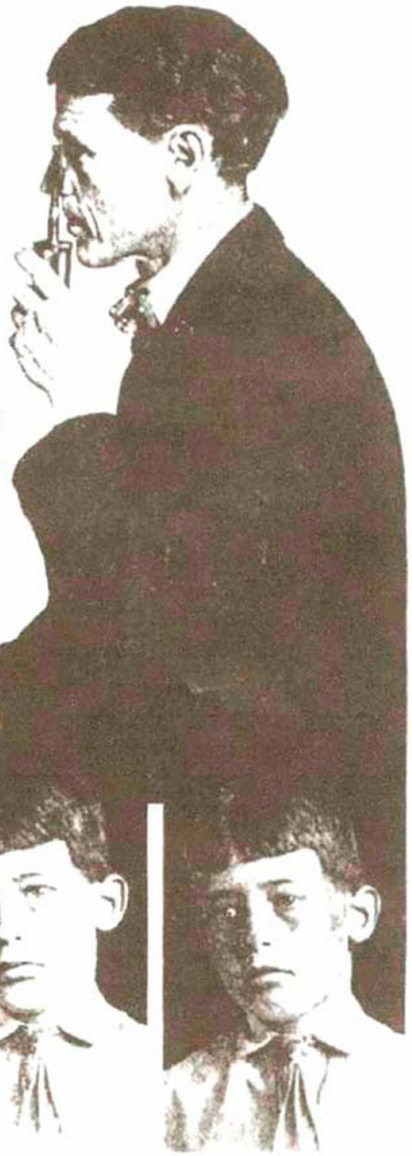
Discovered Natural Eyesight Improvement

Author of Better Eyesight Magazine



Eye socket, bones, eye, eye muscles, optic nerve.





The eye socket is composed of bone segments. These are connected with the skull bones. Eye muscles attach to the skull bones in the back of the eye socket. Eye muscle nerves, the optic nerve, blood, lymph vessels also travel from the spinal cord/brain stem, brain, neck through the eye socket, skull bones. Unclear vision is usually caused by mental strain, tense, incorrect use of the eyes, 'staring-squinting', incorrect posture, stress, negative thoughts, emotions. These can cause: outer and inner eye muscle tension, abnormal eye shape, disrupted focus of light rays in the eye, tension, abnormal pressure on/in the eye, impair circulation in the eye, resulting in unclear vision... Extreme neck, shoulder muscle tension, incorrect posture places pressure, tension, pulling on the nerves, blood, lymph vessels that travel from the spine, neck, brain stem to the eyes, eye muscles, retina, lens, brain. Neck muscle tension also travels directly up into the eye muscles. These conditions cause: tension, abnormal pressure on/in the eye, optic nerve, eye muscle nerves, retina, lens, outer and inner eye muscle tension/dysfunction, abnormal eye shape, disrupts focus of light rays in the eye, resulting in: unclear vision, astigmatism, crossed, wandering eyes, imperfect convergence, divergence, accommodation, un-accommodation, cataracts and other conditions. Circulation of blood, oxygen, lymph, fluid, tears... in the eye is impaired. Sinus, tension, migraine headaches, disrupted ear function can also occur and affect the vision.
Wearing eyeglasses creates, increases, maintains all of these causes and resulting conditions.



The Bates Method of Natural Eyesight Improvement, relaxation of the mind, neck, body, eye muscles, eyes, good posture returns the eyes to normal function with 20/20 and clearer close & distant Vision. Wandering, Crossed Eyes, Astigmatism are corrected. Cataracts and other eye conditions are reversed, removed without use of eyeglasses, eye surgery, drugs.

Does Your Boy Squint?
Avoid Squinting - Learn to 'Shift' for Clear Vision

Dr. Bates, Emily C. A. Lierman, Bates. Bates Method Student in Dr. Bates Clinic reading the Eyechart with strain, blur and without strain, blur.



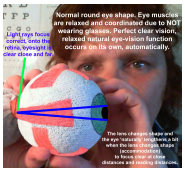
Eyeglasses cause strain, tension and increase visual blur.



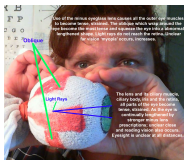
3 - MENTAL STRAIN, EYE MUSCLE TENSION, ABNORMAL EYE SHAPE CAUSES UNCLEAR EYESIGHT
Dangers of, Vision Impairment Caused by: Laser Cornea Eye Surgery, Eyeglasses and Contact Lenses



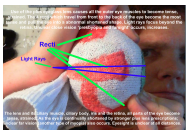
Strain, tension in the mind, visual system, incorrect posture, shoulder, neck muscle tension, Incorrect Vision Habits cause eye muscle tension.
Tension in the outer eye muscles places pressure on/in the eye causing abnormal eye shape, incorrect focus of light rays in the eye and unclear vision. Muscles inside the eye (ciliary...) also become tense; function of the lens, iris, retina are impaired.



+Picture # 1 shows the Normal Round Eye Shape.
Eye muscles are relaxed.
Light rays focus correct on the retina.
+ The central light ray focuses on the center of the fovea centralis in the macula, in the center of the retina. This produces the exact center of the visual field.
+ Peripheral light rays focus on the peripheral areas of the retina (all areas around, near and away from the macula and fovea) which produces the peripheral field of vision. Distant vision is clear.
Dr. Bates states; The oblique muscles around the outside of the eye contract to slightly lengthen the eye to accommodate, focus divergent light rays on the retina for clear close vision. (like a camera.) They un-contract, return the eye to a round shape for clear distant vision.



+Picture # 2 shows a Abnormal Lengthened Eye Shape.
The eye is lengthened too much and is kept in this state due to tension in the oblique outer eye muscles.
Light rays do not focus on the retina.
Light rays focus incorrect before the retina causing unclear distant vision.
Close vision may be clear if the eye is not lengthened too much, but it is never perfectly clear when the distant vision is unclear.
Increased eye muscle tension causes increased lengthening of the eye resulting in unclear distant and close vision. Addiction to eyeglasses is the main cause.



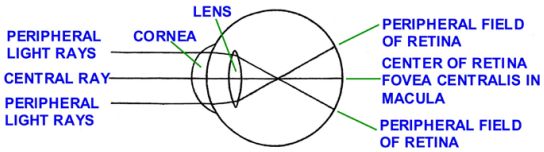
+Picture # 3 shows a Abnormal Shortened Eye Shape.
Caused by tension in the recti outer eye muscles pulling back on the front of the eye.
Light rays focus incorrect beyond the retina.
In early stages of eye muscle tension the eye may stay in a round shape unable to lengthen slightly when looking at close distances and the lens' normal full movement is blocked resulting in unclear close vision.
Distant vision may be clear, but is never perfectly clear when the close vision is unclear.
As eye muscle tension increases, the eye is pulled into a shortened shape causing unclear close and distant vision. Addiction to eyeglasses is the main cause.



+Picture # 4 shows a Irregular, Uneven Eye Shape.
Caused by tension in one or more outer eye muscles, oblique and/or recti. The shape of the cornea is also uneven. Astigmatism, unclear vision result. This condition can occur with a abnormal lengthened or shortened eye shape. Light rays focus incorrect; all or some light rays focus incorrect before and/or beyond the retina.
Uneven lens shape or dust, dirt... on the cornea, sinus pressure, incorrect posture, neck tension can also cause astigmatism. Addiction to eyeglasses is the main cause.

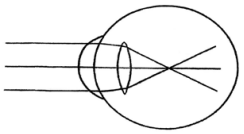
Eyeglasses, contact lenses CAUSE and INCREASE; strain, tension in the mind, eyes, eye muscles, abnormal eye shape, all the conditions listed in # 2, 3 and 4. Leads to detached retina, cataract, glaucoma and other conditions.

1 ROUND EYE - NORMAL
DISTANT VISION CLEAR
THE EYE LENGTHENS SLIGHTLY
FOR CLEAR CLOSE VISION



LIGHT RAYS FOCUS CORRECT ON THE RETINA

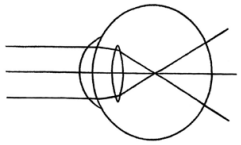
2 LENGTHENED EYE - ABNORMAL
DISTANT VISION UNCLEAR



LIGHT RAYS FOCUS INCORRECT BEFORE THE RETINA
CLOSE VISION MAY BE CLEAR IF THE EYE IS NOT LENGTHENED TOO MUCH

Caused and increased by - minus lens distant vision eyeglasses.

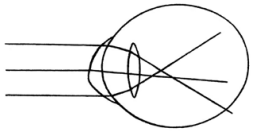
3 SHORTENED EYE - ABNORMAL
CLOSE AND DISTANT VISION UNCLEAR



LIGHT RAYS FOCUS INCORRECT BEYOND THE RETINA

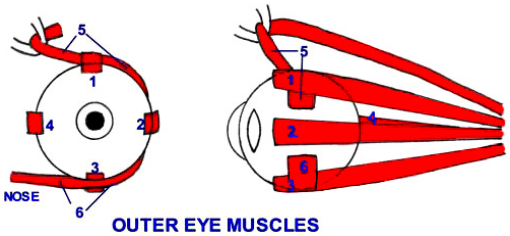
Caused and increased by + plus lens close vision eyeglasses.

4 IRREGULAR EYE/CORNEA SHAPE - ABNORMAL
ASTIGMATISM AND UNCLEAR VISION



LIGHT RAYS FOCUS INCORRECT BEFORE AND/OR BEYOND THE RETINA

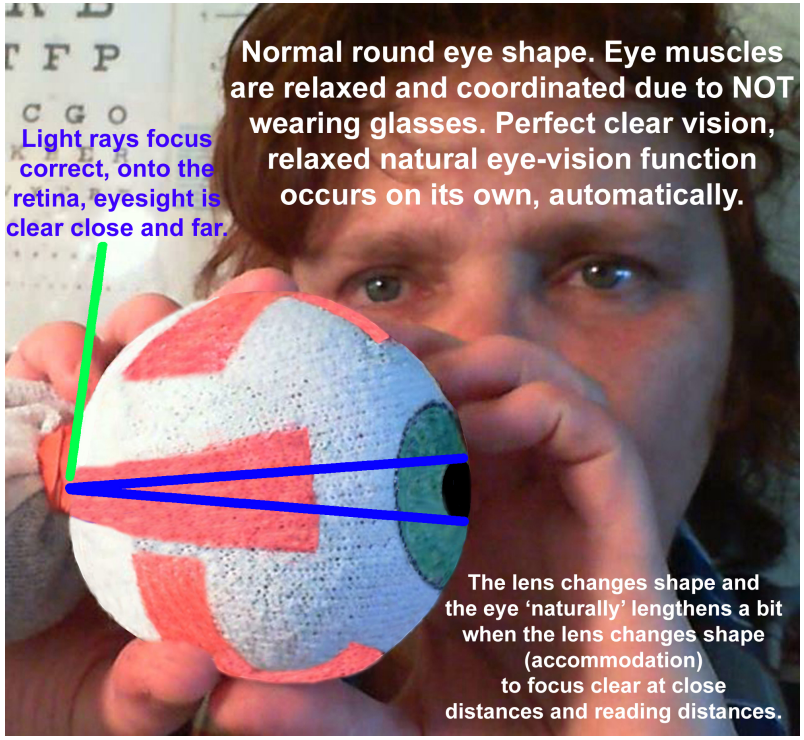
Caused and increased by - minus lens distant vision and/or + plus lens close vision eyeglasses. A uneven long or short eye occurs.

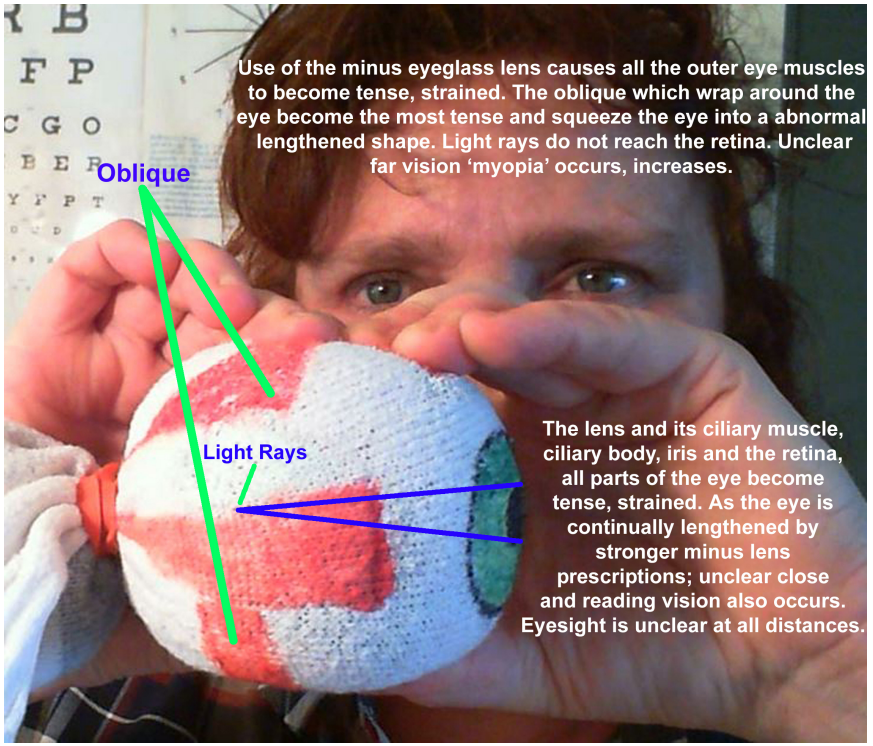


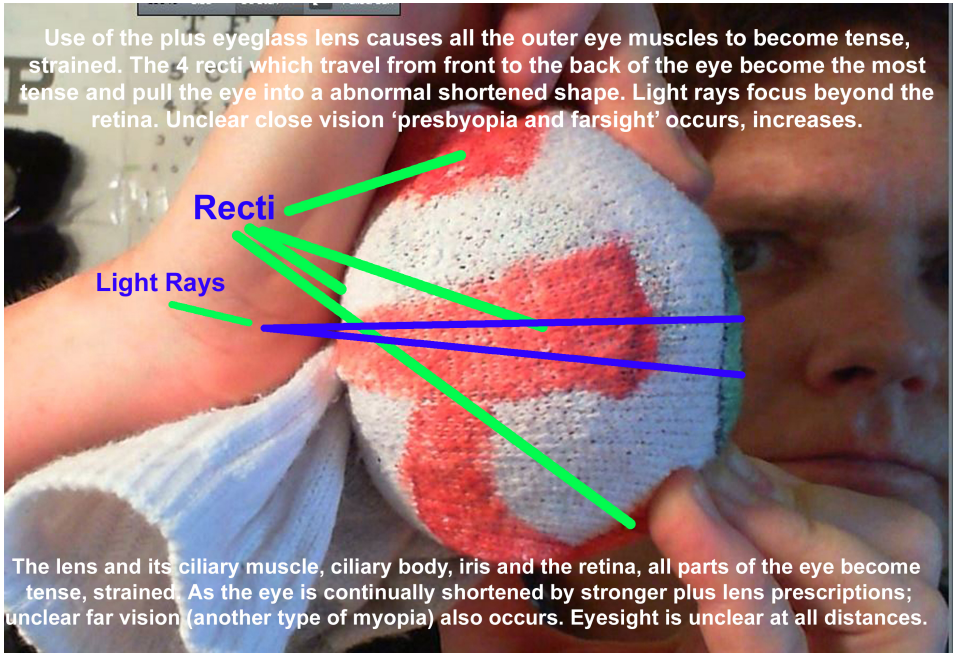
OUTER EYE MUSCLES
RECTI - # 1, 2, 3, 4
OBLIQUE - 5, 6

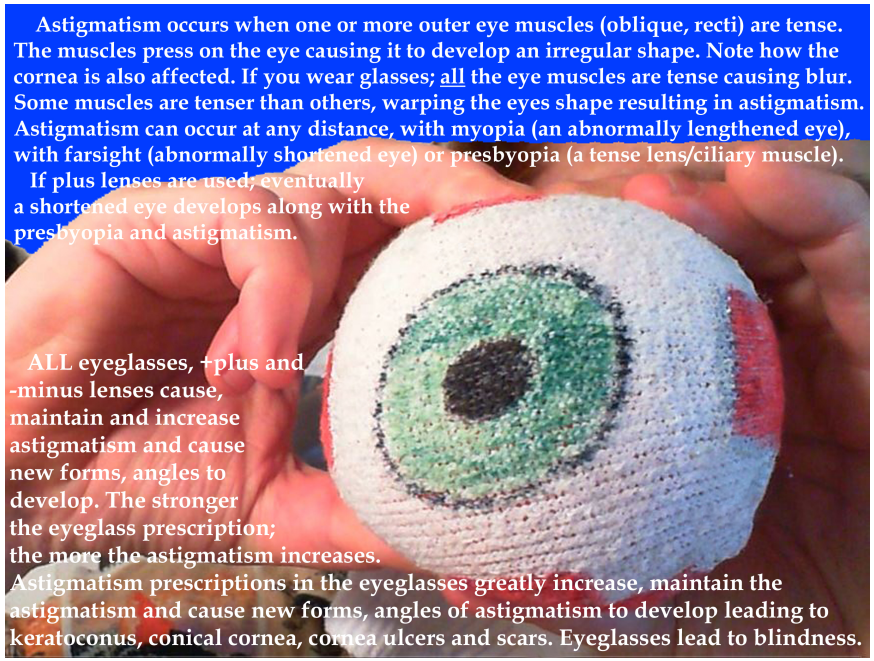
Incorrect vision habits, eye muscle tension, abnormal eye shape = The central ray might focus incorrect onto the peripheral area of the retina. Peripheral rays might focus incorrect onto the fovea centralis in the center of the retina. This impairs both central and peripheral vision, causes astigmatism and unclear vision at close and/or far distances. Eye movement 'shifting and convergence, divergence' are also affected in pictures 2, 3, 4. Incorrect focus of central and peripheral light rays onto the peripheral and central areas of the retina can also occur when the eye is abnormally lengthened, shortened without a uneven shape.

Diagrams of abnormal eye shapes are accentuated for easy view.


Normal round eye shape. Eye muscles are relaxed and coordinated due to NOT wearing glasses. Perfect clear vision, relaxed natural eye-vision function occurs on its own, automatically.
Light rays focus correct, onto the retina, eyesight is clear close and far.
The lens changes shape and the eye 'naturally' lengthens a bit when the lens changes shape (accommodation) to focus clear at close distances and reading distances.

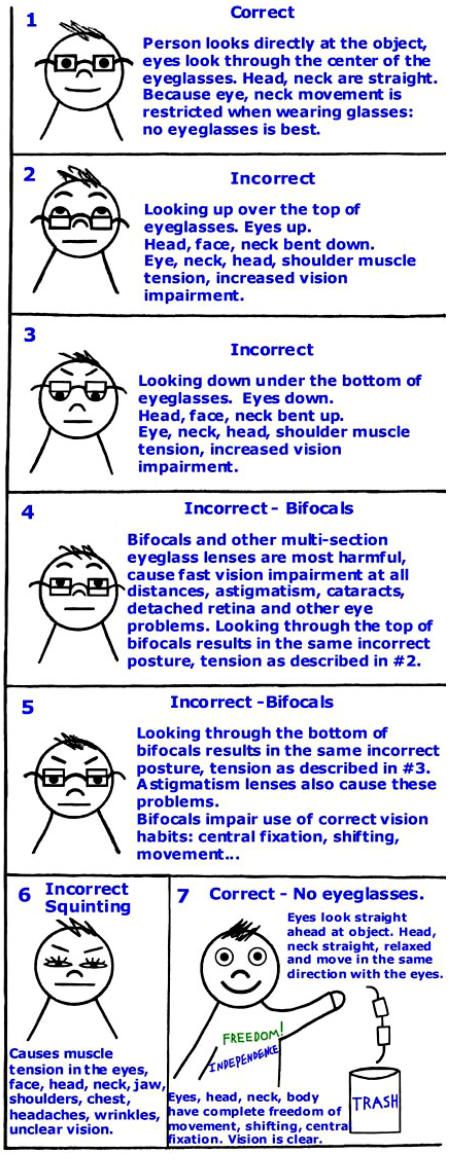

Use of the minus eyeglass lens causes all the outer eye muscles to become tense, strained. The oblique which wrap around the eye become the most tense and squeeze the eye into a abnormal lengthened shape. Light rays do not reach the retina. Unclear far vision 'myopia' occurs, increases.
Oblique
Light Rays
The lens and its ciliary muscle, ciliary body, iris and the retina, all parts of the eye become tense, strained. As the eye is continually lengthened by stronger minus lens prescriptions; unclear close and reading vision also occurs. Eyesight is unclear at all distances.


Use of the plus eyeglass lens causes all the outer eye muscles to become tense, strained. The 4 recti which travel from front to the back of the eye become the most tense and pull the eye into a abnormal shortened shape. Light rays focus beyond the retina. Unclear close vision 'presbyopia and farsight' occurs, increases.
Recti
Light Rays
The lens and its ciliary muscle, ciliary body, iris and the retina, all parts of the eye become tense, strained. As the eye is continually shortened by stronger plus lens prescriptions; unclear far vision (another type of myopia) also occurs. Eyesight is unclear at all distances.


Astigmatism occurs when one or more outer eye muscles (oblique, recti) are tense. The muscles press on the eye causing it to develop an irregular shape. Note how the cornea is also affected. If you wear glasses; all the eye muscles are tense causing blur. Some muscles are tenser than others, warping the eyes shape resulting in astigmatism. Astigmatism can occur at any distance, with myopia (an abnormally lengthened eye), with farsight (abnormally shortened eye) or presbyopia (a tense lens/ciliary muscle).
If plus lenses are used, eventually a shortened eye develops along with the presbyopia and astigmatism.
ALL eyeglasses, +plus and -minus lenses cause, maintain and increase astigmatism and cause new forms, angles to develop. The stronger the eyeglass prescription; the more the astigmatism increases.
Astigmatism prescriptions in the eyeglasses greatly increase, maintain the astigmatism and cause new forms, angles of astigmatism to develop leading to keratoconus, conical cornea, cornea ulcers and scars. Eyeglasses lead to blindness.

**The central ray might focus incorrect onto the peripheral area of the retina.
Peripheral rays might focus incorrect onto the fovea centralis in the center of the retina. This impairs both central and peripheral vision and causes astigmatism and unclear vision at close and/or far distances. Eye movement: shifting and convergence, divergence may be affected in pictures 1, 2, 3, 4.**

Incorrect focus of central and peripheral light rays onto the peripheral and central areas of the retina can also occur when the eye is abnormally lengthened, shortened without a uneven shape.



Pictures of abnormal eye shapes are accentuated for easy viewing.

Eyeglasses, especially Bifocals block, impair; normal eye functions: shifting, central-fixation.., eye, head, neck, body movement. Eyeglasses, bifocals cause: Neck, shoulder, chest, and eye muscle tension, incorrect posture, fast, increased vision impairment, cataracts and other eye function, health impairment. Contact lenses interfere with normal eye function.

Avoid the incorrect eye, head, neck postures shown in the picture; Looking out over, under the top, bottom, sides of the eyes and/or eyeglasses. This Incorrect Vision Habit causes incorrect posture, blocks coordinated, synchronized movement of the eyes and head, face, body with the eyes, blocks central-fixation, normal eye shifting. The postures result in neck, shoulder, head and eye muscle tension, abnormal, uneven eye shape, unclear vision, astigmatism.

When wearing bifocals, trifocals or other multi-section lenses it is easy to accidently look through the wrong section of the lense. This occurs frequently when the lenses are made to appear as one single lense and occurs constantly when the lenses are composed of many sections. This results in increased vision impairment at all distances. Car, Airplane, accidents have occurred due to wearing these lenses.

Looking through the bottom or top of the bifocal lense restricts normal eye functions: central-fixation, 'shifting' eye movement, blinking. Incorrect head, neck, eye posture, extreme muscle tension result. The chest muscles become tight restricting the breath. All these cause unclear vision.

**Avoid pushing, pulling the head, neck forward, up, down, back. Keep the head, neck aligned with the spine. Avoid moving the head up, down, left, right with the eyes in the opposite direction.
Looking over the top, bottom of eyeglasses and trying to look through the top or bottom section of bifocals, multi-section lenses causes these incorrect postures, habits.**

**Avoid eyeglasses, bifocals... Use correct posture:
Neck, head, back aligned, straight, relaxed.
Shoulders down, relaxed.
The eyes, head, face, body move together, in synchronization, face the same direction, at the object of visual attention, in the center of the visual field. See more pictures of incorrect postures in the Posture, Physical Therapy chapters.**

Mono-Vision, Bifocal, Trifocal and other Multi-Section eyeglass and contact lenses have been investigated as a cause of airplane, vehical and other accidents.

The FAA (Federal Aviation Administration) does not approve the use of these lenses for pilots.

Avoid Plus Lense Therapy

A major cause of vision impairment is wearing eyeglasses that are too strong and the wrong type of lense.
+Looking to the distance through a eyeglass lense made for close vision or
+Looking at a close object through a eyeglass lense made for distant vision causes extreme strain, tension, dysfunction in the visual system, brain, eye muscles, eyes and fast, increased vision impairment.
Some Eye doctors sell Plus Lense Therapy: wearing close vision eyeglass lenses to cure unclear distant vision. This causes the same problems that occur when looking through the wrong eyeglass lense. Cataracts and other eye, vision impairment occur.
More Plus Lense information and picture in Chapter 4, Strong Eyeglasses...

Reading Glasses, Close Vision Lenses cause fast and increased vision impairment. Stronger lenses are usually prescribed within a year. Cataracts often develop after wearing close vision, reading glasses. It's not the Senior Citizen's age that causes cataracts, it is the stronger and stronger close vision, reading glasses & bifocals they are prescribed. Distant vision becomes unclear after wearing close vision lenses. Good nutrition, sunlight and discontinuing use of close and distant eyeglasses, sunglasses can reverse cataracts.

Reading Fine Print in the sunlight, (no eyeglasses) and shifting point to point on small details on objects at close distances improves the clarity of close and distant vision, prevents, reverses cataracts.

When the eyes look at fine print, shift, move the eyes (center of the visual field) on it (even if its blurry when beginning to practice) the eyes produce perfect, exact convergence, accommodation, central-fixation, Saccadic eye movements and perfect relaxation of mind, body, eyes. Fine print can be read perfectly clear only with perfect relaxation and reading it induces this perfect relaxation. Very clear vision occurs with practice. The function of the eye muscles improves to normal, the shape of the eye returns to round (slightly lengthened) when looking at the close fine print.
Circulation in the eye, retina, lens improves. All this improves the clartiy of close vision and distant vision.
When the person looks from the fine print to the distance; the eye returns to a round shape (avoids abnormal lengthened shape) and distant vision is also clear.

Nutrition, relaxation and movement of the neck (improves circulation to the head, eyes and relaxes the eye muscles), avoiding drugs, sinus sprays also reverses, prevents cataracts and other eye health impairment. Senior citizens, people of any age develop cataracts, glaucoma... due to prescription and non-prescription drugs.

RELAXATION FROM FINE PRINT

A BUSINESS card, 3″ x 2″ with fine print on one side is held in front of the eyes as near as possible, the upper part in contact with the eyebrows, the lower part resting lightly on the nose.

The patient looks directly at the fine print without trying to see. Being so close to the eyes most people realize that it is impossible to read the fine print and do not try, in this way they obtain a measure of relaxation which is sufficient to benefit the sight very much.

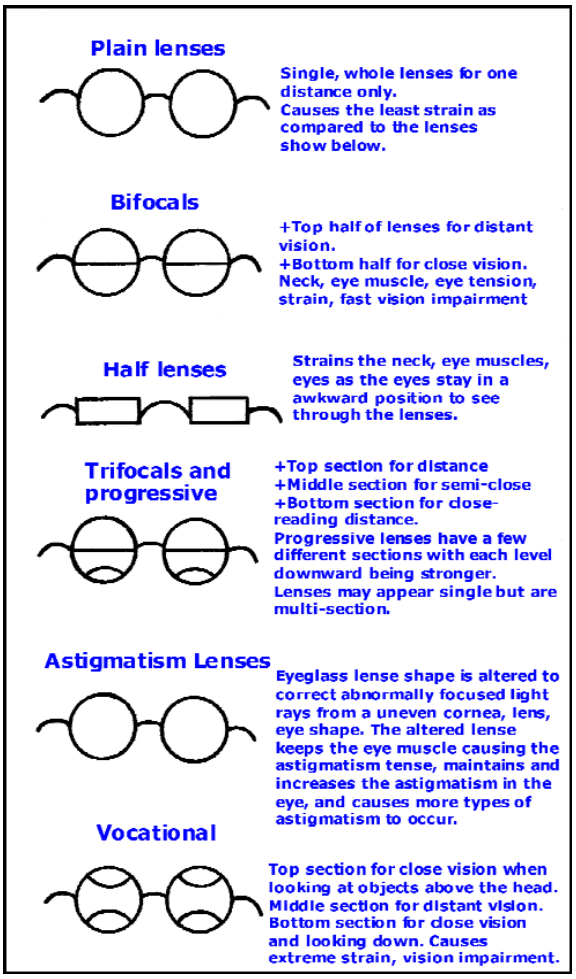
The patient moves the card from side to side a short distance slowly and sees the card moving provided the movement is not too short or too slow. The shorter the movement and the slower it is, the better.

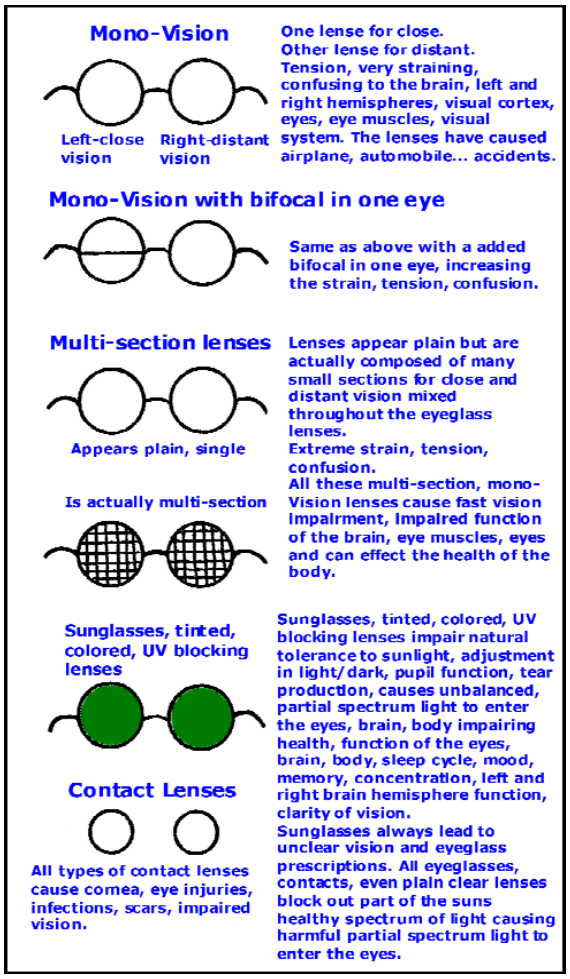
Some patients, although the card is held very close, note that the white spaces between the lines become whiter and the black letters become blacker and clearer. In some cases one or more words of the fine print will be seen in flashes or even continuously as long as no effort is made to see or to read the fine print.

This movement of the card should be kept up to obtain the best results, for many hours every day. The hand which holds the card may soon become fatigued; one may then use the hands alternately. Some patients vary this by holding the card with both hands at the same time.

The amount of light is not important.

Most eye doctors state that the lens changes shape top produce accommodation, clear close vision. Natural Vision Improvement also relaxes, returns the ciliary, iris, lens muscle to normal function.





Bifocals, Trifocals, Multi-section eyeglass lenses, Astigmatism lense additions, Mono-Vision lenses

Mono-vision eyeglasses: (lense for distant vision is in front of one eye and lense for close vision in front of the other eye.), and glasses with two different strength of lense for the left and right eyes (Example: lense for left eye stronger than lense for right), bifocals and all lenses shown in the picture cause chronic strain, tension, confusion, dysfunction in the visual system, brain, eye muscles, eyes. Coordination, contraction, un-contraction of the eye muscles is impaired. Shifting, central-fixation, true central vision, movement of the head/face and body with the eyes, switching close and far (convergence, accommodation, divergence, un-accommodation), binocular vision, fusion, peripheral vision, all correct eye functions are blocked, impaired. Function of the visual cortex, left and right brain hemisphere activation, integration, function and the entire brains function with the eyes, retina, nerves, eye muscles, eye movement.., memory, imagination, mathmatics.., debth, distance perception, 3-Dimensional vision, placement, size, shape of objects, time/speed/movement of objects, balance, coordination are all impaired. All brain functions are imperfect. Distance, size, time, speed... perception function together. When impaired: car... accidents can occur.

Movement of the neck is limited. Neck, shoulder tension, stiffness occur and travel into the body, back, legs, arms, head, face and eye muscles. Even the ear muscles, ear function is impaired. Dizziness from impaired eye/ear function, blur and astigmatism occurs.

Abnormal eye, cornea, lens shape occurs due to outer and inner eye muscle tension. This can cause unclear vision, astigmatism, cornea ulcers, detached retina, cataracts, macula degeneration, cross/wandering eyes.

Eyeglasses must have frames around the lenses. Without the frame, the cut edge of the eyeglass lens can act as a magnifying glass when the sun passes through the side of the lens at a specific angle. This can burn the eyes, skin.

The incorrect posture of the head, neck, body and extreme tension, pulling on the neck that occurs when looking over the top or under the bottom of eyeglass lenses or looking through bifocals, multi-section lenses is a main cause of lowered blood, nerve signal flow to the head, eyes & neck vertebrae mis-alignment, pulling, tension on the nerves, blood, lymph vessels in the neck, brain stem, eyes. This results in unclear vision, lowered eye health and other abnormal eye/vision conditions.

Mono Vision Eyeglass Lenses are very straining, confusing to the visual system, brain, eyes and is a frequent cause of car, pilot accidents: The person is forced to use one eye to see at a specific distance. The other eye sees objects unclear at that distance and clear at a different distance. All the eye problems listed above for multi-section and other lenses can occur. Amblyopia (dim, low, no vision in one or both eyes, brain shuts off the image in the eye/eyes.), crossed, wandering eyes can also develop.

Magnifying Glasses/glass, Microscopes, Telescopes, Binoculars, Prisms cause impaired vision. If you must use a magnifier, telescope, try to use it sparingly and integrate the Bates Method; Shift, central-fixation... when looking at a object through the instrument.
Look at other distances often, without the magnifier, telescope.

Astigmatism Lenses - The normal eye, corneas shape changes due to fluxuating 'eye muscle tension, malfunction' and 'relaxation, correct function'. The abnormal shape of the eye, cornea that is causing the astigmatism in the eye constantly changes, fluxuates. This makes it impossible to prescribe a correct prescription for astigmatism.

A prescription created for astigmatism occuring during a eye exam (often temporarily increased astigmatism due to nervousness, pressure to hurry and read the test card clear) is often incorrect. The person then wears glasses with a astigmatism correction that will cause the temporary astigmatism to remain and increase.
If the eye had astigmatism before the eye test, the astigmatism section in the eyeglass lense will maintain, increase the astigmatism, prevent it from fluxuating, reversing, removing itself from the eye. New types, angels of astigmatism occur.

If the eye does not have astigmatism, but the doctor finds 'or thinks he/she finds' a temporary astigmatism in the eye during the exam, the doctor will sell the patient eyeglass lenses with an astigmatism section in the lense. (Most of the standard eye doctor's eyechart tests for astigmatism can cause temporary astigmatism.)

The eye must now creat and maintain the specific amount, type of eye muscle tension, abnormal eye/cornea/lens shape to create, maintain the astigmatism in the eye in order to see clear through the astigmatism section in the eyeglass lense. The astigmatism is created, maintained, increased by the astigmatism section in the eyeglass lense and new types, angles of astigmatism and blur occur at all distances.

Plain single lense eyeglasses also cause the vision impairment listed in this chapter but not as much as multisection and astigmatism lenses.
Plain, reduced, weaker, 20/40 eyeglass lenses or no eyeglasses is best.

Sunglasses, Tinted, Colored, UV blocking Eyeglass and Contact Lenses

Sunlight enters the eyes, brain, body keeping the entire system healthy. (See the Sunlight and Color Treatment chapters.)

Sunglasses, tinted, colored, UV blocking eyeglass, contact lenses and plain eyeglass, contact lenses, windows block out part of the suns healthy full light spectrum causing a constant flow of unhealthy, unbalanced, partial spectrum light to enter the eyes, brain, body resulting in impaired health and function of the eyes, iris/pupil, lens, retina, all parts of the eye.

Unbalanced light energy travels into the brain and body resulting in disrupted function and lowered health of eyes, brain, body, all organs, glands, systems.



Function of the brain and brain with the eyes, left and right brain hemisphere activation/integration, memory, imagination, all brain functions are impaired.
Unclear vision, eye health impairment occurs, health of the cells in the retina, cones, rods, lens, all parts of the eyes are affected. Cataracts, macula degeneration and other eye problems develop.



The eyes, brain, body need Full Spectrum Sunlght.
Partial spectrum, unbalanced light disrupts the brain, body's production and balance of hormones, chemical actions such as melatonin, serotonin, HGH growth/repair hormone... Sleep cycle is disrupted. Depression, fatique, lowered immune system and other health impairment occurs.

The eyes, brain, body need UV light along with all of the suns light wavelengths, frequency's, that reach the planet consisting of all colors, the full spectrum.

Plain eyeglasses, contact lenses, sunglasses, tinted, colored and UV blocking lenses prevent the eyes normal, natural absorption of UV light, all light waves, full spectrum light. Adding UV blocking to any type of eyeglasse lense increases the amount of unbalanced light that enters the eyes.

Tinted eyeglass and contact lenses that automatically change color, darken: Change from light to dark when going outside into the sun and from dark to light when moving indoors are especially harmful to the eyes. They remain partially dark when inside causing a constant flow of unhealthy partial spectrum light to enter the eyes.
These and all eyeglasses, sunglasses, tinted... lenses impair function of the brain with the eyes, confuses the brain, impairs, weakens the eyes iris/pupil function: contraction in light, widening in dim light and the iris, eye, retina, cones, rods... natural adjustment to light and dark, production of visual purple...
The iris/pupil muscle is near, connects with the lens/ciliary muscle. When the iris muscle becomes impaired due to wearing sunglasses, any type of eyeglasses, the ciliary, lens muscle can also be affected.
Tolerance to sunlight and even indoor artificial light is lowered.
Abnormal glare, haze around lights occurs.
The person becomes addicted to the tinted and/or UV blocking eyeglass lenses and begins to wear sunglasses. This further weakens/impairs the eyes health, clarity of vision.
Most indoor artificial light is partial spectrum, unbalanced light. Wearing eyeglasses, tinted, colored lenses, sunglasses further decreases the light spectrum, increases the amount of unbalanced light entering the eyes.

Color Treatment: A natural Vision Improvement treatment: Exposing the eyes to colored light, all colors and if one brain hemisphere, part of the brain is supressed, extra exposure to specific colors for a certain length of time is done until the brain and hemispheres are balanced.
This improves vision at specific distances and in the left and right eyes.
All colors are also used to keep the brain balanced.
Colored eyeglass lenses are harmful: they cause one area, hemisphere of the brain to become dominant, suppressing other areas, hemispheres, brain functions.

Avoid sunglasses, all eyeglasses. Wear a hat with a wide brim to prevent over exposure to sunlight. Practice closed eye sunning and go outside daily, get natural full spectrum sunlight.

Avoid low cost reading glasses sold in 99 cent, drug stores

The lenses are not made by professionals. The lenses may contain uneven areas, waves in the glass/plastic, may not be balanced, centered properly.
This results in development of astigmatism, increased blur, unbalanced vision in the left and right eyes, impairs convergence, divergence, accommodation, un-accomodation, central-fixation, shifting, causes eyestrain, eye muscle tension, dysfunction, mental strain.

Avoid Second Hand eyeglasses from thrift stores, family, friends

Wearing eyeglasses that were prescribed for another person causes the new wearer to develop the same eye, vision condition that the lenses were prescribed, created for, the same eye condition the previous wearer had in addition to your present condition.
See the explaination in the section on astigmatism.
The eyes can only see clear through the second hand glasses by developing the specific eye problems, error of refraction the eyeglass lenses were made, prescribed for.
The eyeglass lenses will cause a specific form, level of eye muscle tension, dysfunction, abnormal eye/cornea shape, unbalanced, strained brain function to occur in order to develop the specific error of refraction (level/type of blur, astigmatism…) the eyeglass lenses were prescribed for in order to see clear through the lenses.

Use old Fashioned Wooden Eyeglass Frames Only.

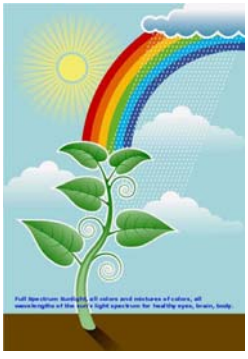
Pure wood, no chemicals, paint, varnish on/in the wood.
Avoid metal and plastic frames.
Metal eyeglass frames disrupt/block the body's natural chi and other energy flow in the body and around/in the eyes, head, brain. A Karate, Tai Chi instructor can explain this.
See chapters: Palming, Color Chart, Breathing, Energy Circulation. EFT.
Plastic frames contain toxic chemicals that can be absorbed through the skin.

Avoid Eyedrops.

Special note on eyedrops; Prescription and non-prescription eyedrops contain chemicals that impair eye health, lower the clarity of vision, cause headaches.
Sinus sprays also do this. The spray and chemicals travel into the eyes.

Eyedrops are addictive and cause dry eyes.
Eyedrops impair the eyes natural production of tears and the tears structure.
Eyedrops do not contain the same ingredients as natural tears.
Natural tears contain 3 layers consisting of water, salt, oil, natural antibiotic, nutrients…
Blink, shift, yawn to produce natural tears.
Use a warm steam humidifier with filtered water, no chlorine.
Avoid dry air, smoke, pollution. Drink water to avoid dry, red eyes.

Eyedrops placed in baby's eyes: silver nitrate… are mandatory in some countries to protect against eye infection/blindness at birth. Silver nitrate and other chemicals, some antibiotics, treatments cause eye injury, irritation, inflammation, redness, discharge of the eyes, lids, chemical conjunctivitis, infection, pain, impairs eye health, causes unclear vision for days after birth, blocking natural eye function and has led to permanent eye, vision damage, blindness.
The pain, distorted vision caused by the eye drops interferes with baby, mother bonding.
There must be a natural, safe treatment to prevent eye infection.





Full spectrum sunlight, all colors, mixtures of colors, all light wavelengths, frequencies, energy of the sun's light spectrum for healthy eyes, brain, body.

Full spectrum sunlight keeps day and night vision clear, improves the retinas production of visual purple, eyes adjustment to light and dark and other functions of the eye, retina, brain for clear day and night vision.



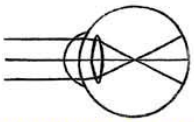






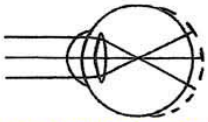
+RELAXED NORMALLY FUNCTIONING OUTER EYE MUSCLES = NORMAL EYE SHAPE = CORRECT FOCUS OF LIGHT RAYS ON THE RETINA = CLEAR VISION.
+TENSE EYE MUSCLES FUNCTION INCORRECT AND PLACE PRESSURE, TENSION, PULLING ON/IN THE EYE, CORNEA, LENS CAUSING ABNORMAL EYE, CORNEA, LENS SHAPE, INCORRECT FOCUS OF LIGHT RAYS IN THE EYE, BEFORE OR BEYOND THE RETINA AND UNCLEAR VISION.
WHEN THE LIGHT RAYS FOCUS CORRECT ON THE RETINA; THE CENTRAL RAY FOCUSES ON THE FOVEA CENTRALIS IN THE MACULA, CENTER OF THE RETINA.
THE PERIPHERAL RAYS FOCUS ON THE PERIPHERAL AREA OF THE RETINA. VISION IS CLEAR.
WHEN LIGHT RAYS FOCUS INCORRECT, BEFORE OR BEYOND THE RETINA, THE RETINA RECEIVES A UNFOCUSED IMAGE.
THE CENTRAL RAY FOCUSES INCORRECT ONTO THE PERIPHERAL FIELD OF THE RETINA AND THE PERIPHERAL RAYS FOCUS INCORRECT SCATTERING UNFOCUSED ON THE PERIPHERAL AREA OF THE RETINA AND ONTO THE FOVEA CENTRALIS IN THE CENTER OF THE MACULA/RETINA RESULTING IN UNCLEAR CLOSE AND DISTANT VISION AND ASTIGMATISM.

1 ROUND EYE - NORMAL DISTANT VISION CLEAR



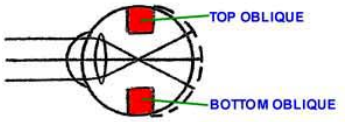
LIGHT RAYS FROM DISTANT OBJECTS FOCUS CORRECT ON THE RETINA.
THE OBLIQUE MUSCLES ARE RELAXED, DO NOT CONTRACT.
THE EYE REMAINS IN A ROUND SHAPE.

2 SLIGHTLY LENGTHENED EYE - NORMAL CLOSE VISION CLEAR



LIGHT RAYS FROM CLOSE OBJECTS FOCUS CORRECT ON THE RETINA (SEE DOTTED LINE, LENGTHENED EYE)

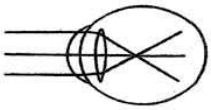
3 OBLIQUE OUTER EYE MUSCLES



THE OBLIQUE MUSCLES CONTRACT IN A RELAXED MANNER TO SLIGHTLY LENGTHEN THE EYE TO PRODUCE ACCOMMODATION AND CORRECT FOCUS OF LIGHT RAYS FROM CLOSE OBJECTS ON THE RETINA AND CLEAR CLOSE VISION.

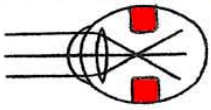
IN DIAGRAM # 4, LIGHT RAYS FROM DISTANT OBJECTS FOCUS BEFORE THE RETINA AND DISTANT VISION IS UNCLEAR. CLOSE VISION MAY BE CLEAR IF THE EYE IS NOT LENGTHENED TOO MUCH AND LIGHT RAYS FROM CLOSE OBJECTS CAN FOCUS CORRECT ON THE RETINA.

4 INCREASED LENGTHENED EYE - ABNORMAL DISTANT VISION UNCLEAR



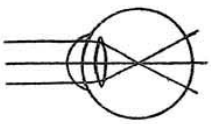
LIGHT RAYS FROM DISTANT OBJECTS FOCUS INCORRECT BEFORE THE RETINA

5 TENSE OBLIQUE MUSCLES CONTRACT TOO MUCH AND KEEP THE EYE IN A ABNORMAL, INCREASED LENGTHENED SHAPE.



INCREASED TENSION IN THE OBLIQUE MUSCLES CAUSES INCREASED LENGTHENING OF THE EYE.
LIGHT RAYS FROM DISTANT AND CLOSE OBJECTS FOCUS INCORRECT BEFORE THE RETINA RESULTING IN UNCLEAR DISTANT AND CLOSE VISION.

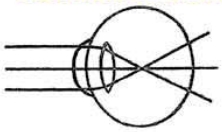
6 ROUND EYE - ABNORMAL FOR CLOSE VISION. CLOSE VISION UNCLEAR.



LIGHT RAYS FROM CLOSE OBJECTS FOCUS INCORRECT BEYOND THE RETINA.
TENSE RECTI MUSCLES KEEP THE EYE IN A ROUND SHAPE, PREVENTING THE EYE FROM LENGTHENING SLIGHTLY TO ACCOMMODATE AND ENABLE LIGHT RAYS FROM CLOSE OBJECTS TO FOCUS CORRECT ON THE RETINA.

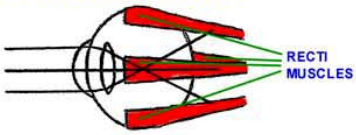
DISTANT VISION MAY BE CLEAR IF THE EYE REMAINS ROUND WHEN LOOKING AT DISTANT OBJECTS ENABLING LIGHT RAYS FROM DISTANT OBJECTS TO FOCUS CORRECT ON THE RETINA.

7 SHORTENED EYE - ABNORMAL CLOSE AND DISTANT VISION UNCLEAR



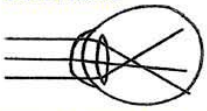
LIGHT RAYS FROM CLOSE AND DISTANT OBJECTS FOCUS INCORRECT BEYOND THE RETINA.

8 TENSE RECTI OUTER EYE MUSCLES KEEP THE EYE IN A ROUND OR SHORTENED SHAPE.

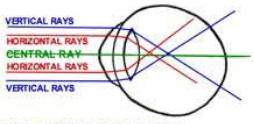


INCREASED TENSION IN THE RECTI MUSCLES CAUSE THE RECTI TO PULL BACK ON THE FRONT OF THE EYE, KEEPING THE EYE IN A SHORTENED SHAPE.
THE EYE CANNOT LENGTHEN SLIGHTLY FOR CLEAR CLOSE VISION AND CANNOT RETURN TO A ROUND SHAPE FOR CLEAR DISTANT VISION.
LIGHT RAYS FROM CLOSE AND DISTANT OBJECTS FOCUS INCORRECT BEYOND THE RETINA.
CLOSE AND DISTANT VISION ARE UNCLEAR.

9 IRREGULAR EYE, CORNEA SHAPE - ABNORMAL ASTIGMATISM AND UNCLEAR CLOSE AND DISTANT VISION.



10 ONE OR MORE TENSE OBLIQUE AND/OR RECTI EYE MUSCLES PULL, SQUEEZE THE EYE/CORNEA (AND SOMETIMES LENS) INTO A IRREGULAR SHAPE.



IN DIAGRAM # 9 AND 10; LIGHT RAYS FROM CLOSE AND/OR DISTANT OBJECTS FOCUS INCORRECT BEFORE AND/OR BEYOND THE RETINA.
THE IRREGULAR CORNEA, EYE, (SOMETIMES LENS) SHAPE BENDS THE LIGHT RAYS INCORRECTLY;
THE CENTRAL RAY MIGHT FOCUS INCORRECT AWAY FROM THE FOVEA CENTRALIS/CENTER OF THE RETINA AND FOCUS ONTO THE PERIPHERAL FIELD OF THE RETINA.
PERIPHERAL RAYS SCATTER UNFOCUSED ON THE PERIPHERAL FIELD AND ONTO THE FOVEA CENTRALIS IN THE CENTER OF THE RETINA.
VERTICAL AND/OR HORIZONTAL LIGHT RAYS FROM CLOSE AND/OR DISTANT OBJECTS FOCUS INCORRECT BEFORE AND/OR BEYOND THE RETINA RESULTING IN;
ASTIGMATISM; DISTORTED AREAS OF THE VISUAL FIELD; OBJECTS OR PARTS OF OBJECTS MAY APPEAR; WAVY, HAZY, DULL, BLURRED.
DOUBLE, TRIPLE...IMAGES OF OBJECTS MAY APPEAR.
THE EFFECT IS SIMILAR TO LOOKING THROUGH A WAVY PIECE OF GLASS.
DIZZINESS, IMPERFECT BALANCE CAN OCCUR DUE TO THE WAVY, AND OTHER ABNORMAL IMAGES IN THE VISUAL FIELD..
OTHER TYPES OF ASTIGMATISM WITH DIFFERENT FORMS OF INCORRECT FOCUS OF LIGHT RAYS CAN OCCUR.
ASTIGMATISM CAN OCCUR AT CLOSE AND/OR FAR DISTANCES AND USUALLY OCCURS WITH UNCLEAR VISION.
ASTIGMATISM CAN OCCUR IN ONE OR BOTH EYES.
ASTIGMATISM OFTEN CURES ITSELF. NATURAL EYESIGHT IMPROVEMENT REMOVES ASTIGMATISM.

STRONGER AND STRONGER EYE GLASS LENSES CAUSE AND INCREASE EYE MUSCLE TENSION, ABNORMAL EYE LENGTHENING, SHORTENING, IRREGULAR EYE SHAPE, VISION IMPAIRMENT AND LEADS TO CATARACTS, DETACHED RETINA, MACULA DEGENERATION, GLAUCOMA AND OTHER EYE PROBLEMS.

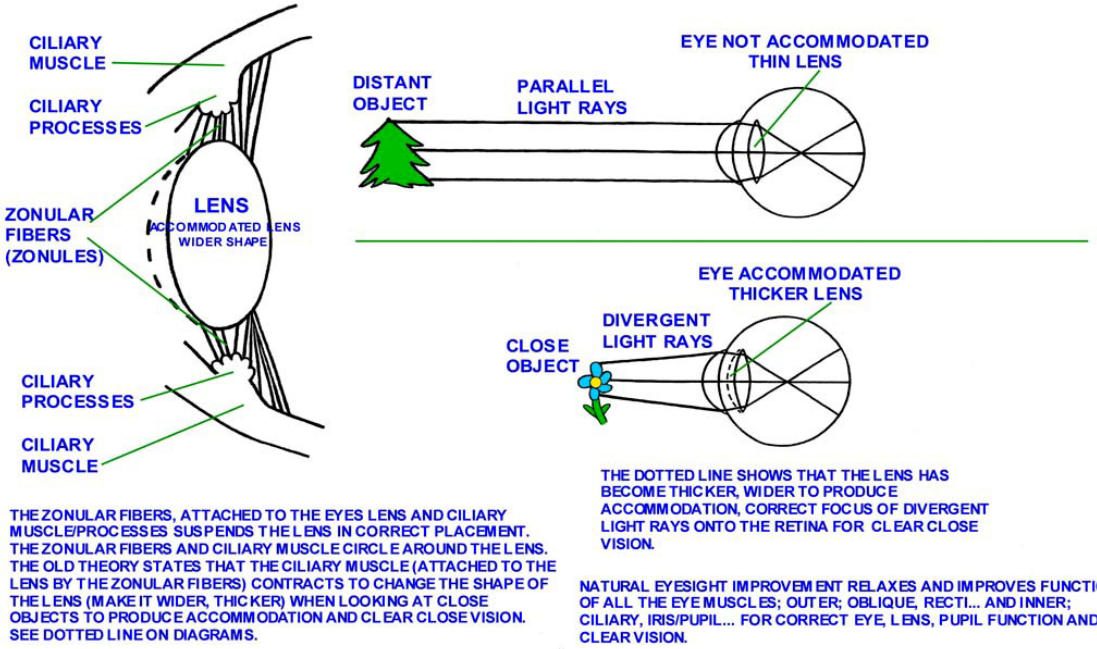
TENSION IN THE RECTI AND/OR OBLIQUE MUSCLES CAUSES CROSSED AND WANDERING EYES.

DIAGRAMS ARE ACCENTUATED FOR EASY VIEWING

The Bates method of Natural Vision Improvement relaxes the eye muscles, returns the eye and cornea to normal shape with correct focus of light rays in the eye, on the retina with clear close and distant vision. See picture # 1, 2 in the picture above.

OLD THEORY OF ACCOMMODATION;

+MOST EYE DOCTORS STATE THE OLD THEORY OF ACCOMMODATION; THAT THE CILIARY MUSCLE CHANGES THE SHAPE OF THE EYES LENS, MAKES IT THICKER TO PRODUCE ACCOMMODATION AND ENABLE THE EYE TO FOCUS DIVERGENT LIGHT RAYS FROM CLOSE OBJECTS CORRECT ONTO THE RETINA FOR CLEAR CLOSE VISION.
THEY STATE ;---- THE THEORY IS FACT AND THAT THE EYE DOES NOT CHANGE SHAPE.
+OTHER EYE DOCTORS AND BATES NATURAL EYESIGHT IMPROVEMENT TEACHERS STATE THAT BOTH THE SHAPE OF THE EYE AND LENS CHANGE TO PRODUCE ACCOMMODATION OR,
+THAT ONLY THE EYE CHANGES SHAPE, LENGTHENS.



THE ZONULAR FIBERS, ATTACHED TO THE EYES LENS AND CILIARY MUSCLE/PROCESSES SUSPENDS THE LENS IN CORRECT PLACEMENT. THE ZONULAR FIBERS AND CILIARY MUSCLE CIRCLE AROUND THE LENS. THE OLD THEORY STATES THAT THE CILIARY MUSCLE (ATTACHED TO THE LENS BY THE ZONULAR FIBERS) CONTRACTS TO CHANGE THE SHAPE OF THE LENS (MAKE IT WIDER, THICKER) WHEN LOOKING AT CLOSE OBJECTS TO PRODUCE ACCOMMODATION AND CLEAR CLOSE VISION. SEE DOTTED LINE ON DIAGRAMS.

THE DOTTED LINE SHOWS THAT THE LENS HAS BECOME THICKER, WIDER TO PRODUCE ACCOMMODATION, CORRECT FOCUS OF DIVERGENT LIGHT RAYS ONTO THE RETINA FOR CLEAR CLOSE VISION.

NATURAL EYESIGHT IMPROVEMENT RELAXES AND IMPROVES FUNCTION OF ALL THE EYE MUSCLES; OUTER; OBLIQUE, RECTI... AND INNER; CILIARY, IRIS/PUPIL... FOR CORRECT EYE, LENS, PUPIL FUNCTION AND CLEAR VISION.

Light rays from distant objects are parallel = and focus perfectly on the retina when the eyes shape is round and looking at distant objects.

Light rays from close objects diverge < causing the placement of light rays in the eye to change resulting in a need for the eyes to accommodate, change shape to produce correct focus of light rays on the retina when looking at close objects. See picture above and #1,2, 3 on the previous page.

Most eye doctors state the old theory that the ciliary muscle attached to the eyes lens causes the lens to change shape to produce accommodation and clear close vision and returns the lens to its original shape, un-accommodation for clear distant vision.
These doctors fight Dr. Bates by stating that the outer eye muscles do not affect the shape of the eye and clarity of vision and that the only treatment for unclear vision and other eye problems is eyeglasses and/or surgery and drugs.

Eye doctors state that the eye can acquire a abnormal lengthened shape that causes unclear distant vision, a abnormal shortened shape that causes unclear close vision and a irregular shape causing astigmatism but they state that they do not know what causes the lengthened and shortened shape and that there is not a cure for this condition so they prescribe eyeglasses or cornea surgery.
This causes more vision impairment.

Dr. Bates Natural Vision Improvement treatments and experiments on the eyes and eye muscles proved that tension in the outer eye muscles (oblique and recti) causes a abnormal lengthened, shortened and uneven eye shape with incorrect focus of light rays in the eye and unclear vision.
Eye muscle tension, abnormal eye shape also causes increased pressure on/in the eye, pressure, tension, pulling, stretching on/in the eye, retina, macula/fovea, lens, iris, cornea, tear gland, optic nerve, capillaries, cells, nerves in the retina, lens...all parts of the eye resulting in; unclear vision, astigmatism, cataracts, glaucoma, detached retina, macula degeneration, conical cornea, vitreous detachment, crossed and wandering eyes and other eye problems.

Dr. Bates proved that relaxation of the outer eye muscles returns the eye, cornea, lens, retina... to normal shape with correct focus of light rays in the eye, on the retina, returns the eye muscles to normal function, the eyes to normal movement: shifting, convergence, divergence, central-fixation.., removes abnormal pressure, tension, pulling, stretching on/in all parts of the eye, retina, macula/fovea, lens, cornea, optic nerve, eye muscle nerves, blood vessels, capillaries, cells, nerves...) resulting in removal of blur, astigmatism, cataracts and other eye problems.

Dr. Bates proved that tension, strain in the mind can cause strain, tension, dysfunction of the eye muscles, eye muscle nerves, optic nerve, retina, impairs function of the visual cortex, left and right brain hemispheres, memory, imagination, all areas, functions of the visual system, brain, eyes, body, and impairs reaction to, absorption and use of light rays entering the eye. This results in unclear vision with or without eye muscle tension and abnormal eye shape.
The mind has a major influence on the visual system and clarity of vision.

The Bates method of Natural Vision Improvement relaxes the mind, eye muscles, all nerves in the body, eyes, retina enabling the mind, eyes, retina to return to normal function with clear vision.
Every Bates Method activity, treatment produces relaxation. Practice of <u>any</u> normal eye function, correct, relaxed vision habits activates relaxation and improves all functions.

Bates teachers state that unclear vision is also functional; incorrect function, use of the eyes causes unclear vision. Unclear vision occurs when the eyes, visual system function incorrect; not moving, 'shifting' correct, not using central-fixation and other normal eye functions, imperfect convergence, accommodation, un-convergence, un-accommodation and when Incorrect Vision Habits occur; staring, squinting, straining.

Vision is clear when the eyes, visual system function correct; mind, eyes relaxed, eyes moving, shifting normally, central-fixation and all Correct, Natural vision Habits (normal, relaxed eye functions) occur, convergence, accommodation, un-convergence, un-accommodation are perfect.
Practicing Natural Vision Improvement, Imitating normal eye function, Correct Vision Habits; relaxation, shifting, central-fixation, switching close, middle, far.., relaxing the neck.., restores normal function to the eyes, visual system and clear vision.

The Bates method, by relaxing and bringing movement to the eyes, neck, body improves blood, oxygen, lymph, nutrient flow to the head, brain, eyes, retina, lens, cornea for healthy eyes and clear vision. The Bates method removes floaters, (floating specks) from the visual field and cures/prevents headaches.

Modern eye doctors state that use of new test instruments on the eye have proved that the eyes lens <u>does change shape</u> when looking from close to far and far to close distances.
Some eye doctors state that both the lens and eye may change shape, functioning together for clear close and distant vision.
A few doctors have theorized that the ciliary muscle might cause the entire lens to move slightly forward and backward (with or without the eye and lens changing shape) to produce accommodation, un-accommodation for clear close and distant vision.
Tension in the outer eye muscles, any outer, inner eye muscle nerves can cause tension in the inner ciliary, iris and other eye muscles.

Tension in the ciliary muscle can impair its function and its supposed ability to change the shape/movement of the lens and can impair the ciliary muscles function of bringing aqueous humor into the posterior chamber of the eye and may interfere with circulation of blood, oxygen, nutrients to/from the lens resulting in unclear vision, cataracts and other conditions.
The Bates method <u>relaxes all the eye muscles including the ciliary muscle</u>, returns the ciliary and lens to normal function resulting in clear vision, removal of cataracts and other abnormal eye conditions.

The Bates method works, keeping the eyes healthy and vision clear no matter which statements are true; the outer eye muscles changing the shape of the eye, the ciliary muscle changing the shape of the lens or both the eye and lens changing shape for clear close and distant vision.

AVOID WEARING EYEGLASSES, CONTACT LENSES AND SUNGLASSES.
AVOID EYE CORNEA SURGERY AND DRUGS FOR THE EYES.

Cornea surgery destroys the corneas natural shape and structure, often results in unclear vision, has caused many cases of blindness, eye injury, a variety of vision impairment.

Cataract surgery, when done to remove part or all of the eyes lens impairs structure, function of the lens resulting in unclear vision and impairs the lens ability to absorb/control the amount of sunlight and UV light entering the eyes.
The cornea also absorbs and controls the amount of sunlight/UV light entering the eyes.
Removing part of the lens, or the entire lens and/or part of the cornea impairs this function and can cause the eye, cornea, lens, retina to experience overexposure to sunlight and UV light.



AVOID EYEGLASSES, SURGERY AND DRUGS.
EYEGLASSES, SURGERY AND DRUGS CAUSE AND INCREASE EYE MUSCLE TENSION, MENTAL STRAIN, ABNORMAL EYE SHAPE, UNCLEAR VISION, CATARACTS AND ALL EYE PROBLEMS.

Many people waiting for their cataracts to grow larger so surgery can be performed have reversed and completely eliminated the cataracts by stopping use of eyeglasses, sunglasses, improving their diet, and by applying Natural Vision Improvement.

Ophthalmologist Bates 'Better Eyesight Magazines' describes many natural cures for cataracts and other eye problems. If vision is unclear after cataract lens surgery, Natural Vision Improvement can help improve the clarity of vision.
Natural Vision Improvement may or may not improve clarity of vision after unsuccessful cornea surgery. See the following pages.

Eyeglasses, contact lenses, eye surgery and drugs always make eye problems worse, cause development of additional eye problems, cause and increase; mental strain, tension, dysfunction of the ciliary muscle and outer eye muscles resulting in increased abnormal eye shape (lengthening or shortening, irregular), increased abnormal pressure on/in the eye, pressure, tension, pulling, stretching on/in the eye, cornea, lens, retina, optic and eye muscle nerves, nerves, cells, capillaries, cones , rods, macula/fovea in the retina and all parts of the eye.
Blood, oxygen, fluid circulation to the retina, lens all parts of the eye is impaired.
All these abnormal conditions cause; unclear close and distant vision, astigmatism, cataracts, macula degeneration, detached retina, glaucoma, conical cornea, impaired convergence/accommodation when looking at close distances and impaired un-convergence (divergence)/un-accommodation when looking at far distances, wandering, crossed eyes and other eye problems, health impairment.

As eyeglasses cause, increase eye muscle tension, abnormal eye shape, causing progressive vision impairment to occur resulting in prescriptions for stronger and stronger eyeglass lenses, development of the eye problems/disease listed above, the eye doctor then sells eye surgery, drugs.

Eye cornea/lens surgery involves removing part of the cornea and often removing part or all of the lens. This does not correct the underlying cause of unclear vision; mental strain, eye muscle tension, abnormal eye shape, pressure, tension... on/in the eye. After the cornea or lens is altered, impaired by surgery, the cornea/lens cannot return to normal shape and function. Eye function and vision is impaired.
If, in the future, after eye surgery, the eye muscles do relax due to natural causes enabling the eye to return to normal shape, vision becomes more impaired because the surgically altered cornea and lens cannot return to normal shape with the eye. Focus of light rays in the eye will be more impaired resulting in increased vision impairment. See pictures on following pages.

The eye can produce clear vision without the lens, but the cornea is essential to clear vision. The cornea refracts 80% of the light rays.

Eye doctors admit that stronger eyeglass lenses for unclear distant vision increases abnormal lengthening of the eye, resulting in tension, stretching, pulling on all areas of the eye including on the retina and the capillaries, tissue, cells, nerves, cones, rods, macula, fovea centralis... in the retina resulting in macula degeneration, detached retina and other conditions.

Strong close vision eyeglass lenses causing eye muscle tension and shortening of the eye also causes this type of eye, retina impairment and other eye conditions.

Most eye doctors will not teach their patients Natural Vision Improvement to eliminate use of eyeglasses and enable the eye muscles to relax, return the eye to normal shape with normal pressure on/in the eye and removal of tension, stretching, pulling on the retina, lens which will result in reversal and prevention of detached retina, macula degeneration, cataracts and other problems.
The eye doctor prefers to prescribe stronger and stronger eyeglass lenses, sunglasses, eye surgery and drugs.
Plain eyeglasses and contact lenses, sunglasses, tinted, colored, UV blocking lenses cause unclear vision, impaired light tolerance, cause unhealthy partial spectrum unbalanced light to enter the eyes and travel to the brain and body, result in stronger prescriptions for eyeglasses and lowered health of eyes, brain and body.

The optical industry and eye doctors place television ads promoting the sale of eyeglasses to children. The advertisements scare parents into believing their children will have learning disabilities and impaired vision if they do not wear eyeglasses.
This is a lie!
Eyeglasses are addictive, cause and increase vision impairment and lead to stronger and stronger eyeglass prescriptions for life and development of other eye problems/disease. Eyeglasses cause strain in the mind; impaired brain function, impairs: left and right brain hemisphere activation, integration and all left and right hemisphere functions; memory, imagination, concentration...math, science, language and other skills. Eyeglasses cause/increase learning disabilities, impair growth, development of the eyes, visual system, brain and body.

The optical industry advertisements are similar to the tobacco company's old advertisements aimed at young people; advertising to children to get them hooked, addicted to eyeglasses results in a customer that returns throughout life, purchasing stronger eyeglasses that leads to eye surgery and/or drugs.
The optical industry practices the same dishonest, harmful method the drug companies use. Drug companies prevent the public from learning about medicine and natural treatments that will permanently cure disease and how to prevent disease/medical problems from occurring.
The drug companies invent drugs that will only control or dull some of the symptoms of diseases, medical problems, but will never cure the diseases, medical problems.
The patient must continue to buy the drug, usually once a month for life.
The drug is purposely made to cause side effects that cause other health problems. The drug company will then sell more drugs with more side effects to treat but never cure the new medical problems.
The same is true of eyeglasses.
Eyeglasses do not cure unclear vision and other eye problems.
Eyeglasses cause and increase vision impairment and other eye problems.

It is normal for the clarity of vision to fluctuate occasionally (clear, less clear, clear) as a child's eyes grow and as the child enters school and may experience stress in a new environment, learning new things and sees, learns to identify new unfamiliar objects; letters, numbers, each new teachers unfamiliar handwriting on the blackboard... Being exposed to activities that activate only one brain hemisphere, (usually the left) in school also impairs the vision by creating a brain hemisphere imbalance.

Let the child sit closer to the blackboard when learning to visually, mentally identify new objects.
Parents must protect their child's vision. Never place eyeglasses on a child. Teach them Natural Vision Improvement (Bates Method). See books by Janet Goodrich chapter 2.
The clarity of vision can fluctuate from clear to less clear and back to clear at any age; child, adult, senior. Unclear vision is always a temporary condition.
The visual system will return vision to 20/20 and clearer when eyeglasses are avoided..

Unclear vision can occur due to tension, strain in the mind, body, eye muscle tension, incorrect posture causing neck muscle tension, Incorrect Vision Habits, staring, squinting, poor diet, state of health... All of these can be corrected without eyeglasses.
When eye muscle tension occurs without use of eyeglasses, the tension is slight, causing vision to be a little unclear. The muscle tension and unclear vision is easily reversed when eyeglasses are avoided.

Eyeglasses prevent vision improvement;
Wearing eyeglasses will lock, maintain and increase the eye muscle tension and other causes of unclear vision into the eyes, brain, visual system, maintain and increase tension in the mind, maintain and increase a abnormal eye shape and incorrect focus of light rays in the eye, and block/slow improvement of eye health, function, prevent the visual system from returning to normal function and prevent a return to clear vision.
Eyeglasses block use of Natural Vision Improvement, Correct Vision Habits. Eyeglasses block activation and integration of the left and right brain hemispheres and relaxation of mind, body, eyes.

Eyeglasses block use of all Correct Vision Habits; shifting, central-fixation, relaxation, movement, ability to remember and imagine objects perfectly clear, good posture, relaxed deep breathing... Eyeglasses do not provide a perfect size, shape... image of objects. Far objects appear smaller and close objects appear larger than normal size through eyeglass lenses. This confuses, strains the mind, eye muscles, retina, eyes.
Eyeglasses cause use of Incorrect Vision Habits; staring, strain, reduced eye movement, cause incorrect posture, neck muscle tension, immobility, headaches (all major causes of blur). Eyeglasses impair and weaken natural convergence, accommodation and un-convergence, un-accommodation.

The eyes can reveal health problems. Lowered health, malnutrition, eye, head, neck, body injury... affects the clarity of vision and health of the eyes. Routine eye exams by an Optometrist, Ophthalmologist that teaches Natural Vision Improvement and avoidance of eyeglasses keeps the eyes and body healthy. See the disclaimer in the Introduction for Iridology.

There are Optometrists, ophthalmologists that teach their patients the Bates method of Natural Vision Improvement. If eyeglasses are necessary for driving and other tasks requiring safety while vision is improving, the eye doctor will prescribe reduced, weaker eyeglass lenses; 20/40. The patient wears the glasses only when necessary, as little as possible and uses relaxed, Correct Vision Habits, shifting, central-fixation... when wearing the glasses and when not wearing glasses. Other Natural Vision Improvement activities are practiced without glasses. Each time the clarity of vision improves the eye doctor prescribes a weaker pair of lenses until the vision is clear enough to permanently stop wearing glasses.

Weak lenses do not block vision improvement as much as strong lenses.
Vision improves much easier and faster when eyeglasses are completely avoided.

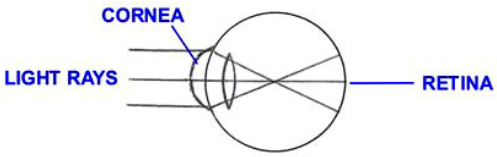
20/40 reduced distant vision eyeglass lenses are used for distant vision.
20/40 reduced lenses for distant vision are an incorrect prescription for close distances and will cause more vision impairment if used when looking at close distances.
A specific type of 20/40 reduced close vision lenses are used for close vision and reading distance.
20/40 reduced lenses for close vision are an incorrect prescription for distant vision and will cause more vision impairment if used for far distances.
Do not wear close lenses when looking to the distance.
Do not wear distant lenses when looking at close distances.
Specific type and strength of lenses are prescribed for close and far distances so be sure to check with your Optometrist for a correct prescription, separate pair of glasses for each distance.
Get plain lenses only. Avoid bifocals, half lenses, astigmatism lenses, tinted, colored and dark UV blocking lenses.
More reduced, weaker close and far distance lenses (20/50,) can be used when not driving or performing activities requiring safety. (Not too weak or the lenses will not provide enough clarity for comfort and strain can occur.) Weaker lenses allow for more relaxation of mind, body, eye muscles, eyes and easier, faster vision improvement. See complete directions in chapter 4.
If vision is clear at one distance, eyeglasses are not needed at that clear distance.

See list Natural Vision Improvement websites chapter 2 for contact information; eye doctors that teach the Bates method of Natural Vision Improvement and prescribe reduced, weaker eyeglass lenses. Many eye doctors are monitoring and keeping records of their patients eye/vision improvement as Natural Vision Improvement is practiced.

DANGERS OF LASER AND OTHER CORNEA EYE SURGERIES

LASER AND OTHER CORNEA EYE SURGERIES CAUSE CORNEA INJURY, UNCLEAR EYESIGHT AND OTHER EYE PROBLEMS

1 NORMAL ROUND EYE SHAPE.
CORNEA NORMAL, NO CORNEA SURGERY.



LIGHT RAYS FOCUS CORRECT ON THE RETINA.
DISTANT VISION IS CLEAR.
THE EYE LENGTHENS SLIGHTLY FOR CLEAR CLOSE VISION.

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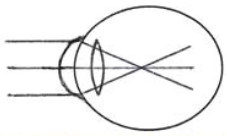
2 ABNORMAL LENGTHENED EYE SHAPE DUE TO OUTER EYE MUSCLE TENSION. NO CORNEA SURGERY.



LIGHT RAYS FOCUS INCORRECT BEFORE THE RETINA.
DISTANT VISION IS UNCLEAR.
CLOSE VISION ALSO BECOMES UNCLEAR IF INCREASED EYE MUSCLE TENSION AND LENGTHENING OF THE EYE OCCURS.

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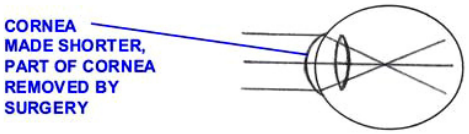
3 AFTER CORNEA SURGERY.
EYE SHAPE STILL ABNORMAL, LENGTHENED.
EYE MUSCLES STILL TENSE.



PART OF THE EYES CORNEA HAS BEEN PERMANENTLY REMOVED BY LASER OR OTHER SURGERY.
THE CORNEA IS SHORTENED IN AN ATTEMPT TO MAKE THE EYE CLOSER TO A ROUND SHAPE TO IMPROVE FOCUS OF LIGHT RAYS IN THE EYE. LIGHT RAYS FOCUS BETTER, CLOSER TO THE RETINA, BUT OFTEN FOCUS IMPERFECT. DISTANT VISION IS CLEARER BUT NOT PERFECT.

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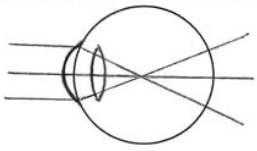
4 5 MONTHS AFTER CORNEA SURGERY. VISION IS MORE IMPAIRED THAN BEFORE SURGERY.

IN DIAGRAM # 4 IT IS 5 MONTHS AFTER CORNEA SURGERY.
THE EYE MUSCLES HAVE RELAXED, NATURALLY AND THE EYE HAS RETURNED TO NORMAL SHAPE.
THE LIGHT RAYS SHOULD FOCUS CORRECT AND DISTANT VISION SHOULD BE CLEAR, BUT,
THE CORNEA HAS BEEN PERMANENTLY SHORTENED, IMPAIRED BY SURGERY AND THE CORNEA CANNOT RETURN TO NORMAL SHAPE WITH THE EYE.



THIS CAUSES THE EYE TO BE TOO SHORT CAUSING LIGHT RAYS TO FOCUS INCORRECT BEYOND /BEHIND THE RETINA.
DISTANT AND CLOSE VISION ARE UNCLEAR.
THE CORNEAS STRUCTURE IS ALSO WEAKENED AND EASILY INJURED, INFECTED, SCARRED RESULTING IN ASTIGMATISM, HAZE, BLIND SPOTS, OTHER VISION PROBLEMS INCLUDING BLINDNESS.
THE CORNEA, IRIS, LENS, RETINA IS ALSO OVEREXPOSED TO LIGHT DUE TO IMPAIRED STRUCTURE, FUNCTION, SIZE, THICKNESS OF THE SURGICALLY ALTERED CORNEA. CATARACTS, MACULA DEGENERATION AND OTHER EYE INJURY OCCURS.
LASER AND OTHER CORNEA SURGERIES CANNOT BE REVERSED.

Eye muscle tension causes abnormal eye/cornea shape, incorrect focus of light rays in the eye and unclear vision. See picture # 2.

Natural Vision Improvement relaxes the eye muscles and returns the eye/cornea to normal shape with correct focus of light rays in the eye with clear vision at close and far distances without use of surgery, eyeglasses. The cornea remains whole, strong and healthy. See picture # 1.
A normal round eye shape, relaxed eye muscles keeps normal pressure/circulation in the eye, retina, lens, cornea... resulting in healthy eyes and prevention of cataracts, macula degeneration, glaucoma and other eye problems.

AVOID LASER CORNEA EYE SURGERY AND OTHER CORNEA SURGERIES.
LASER AND OTHER CORNEA EYE SURGERIES CAUSE EYE HEALTH IMPAIRMENT, UNCLEAR VISON, A VARITEY OF VISION PROBLEMS INCLUDING BLINDNESS

Eye surgeons advertise expensive cornea surgery to improve the clarity of distant and close vision but are not required to warn the patient about all of the side effects the surgery causes. The eye surgeon does not tell the patient the truth; that many different types of vision impairment and blindness can, has and will occur due to cornea laser surgery.
A woman on a television news show described how laser cornea surgery has caused her to be blind at night and in low light. She cannot go outside at night due to extreme glare, halos from lights.
Other vision impairments have developed, unclear daytime vision, reading vision. This condition is permanent. The woman says the cornea surgery has ruined her life.

In 2008 - Television news broadcast - a father telling about how his son was so depressed, his life miserable due to the incurable eye problems, near blindness, eye pain he suffered caused by laser cornea eye surgery. The son committed suicide.
Many people have impaired vision due to cornea surgery.
Read Laser surgery side effects warning at www.naturalvisioncenter.com
FDA side effects warning www.fda.gov Click medical devices, lasik.

See YouTube videos on eye/vision impairment caused by lasik.
Type in 'laser surgery, suicidal patients'. http://www.youtube.com/watch?v=976O9G6Dno0

Also see website, YouYube videos: www.lasikcomplications.com
Many patients are developing cataracts after laser cornea surgery.

Some of the side effects of laser and other cornea surgeries are;
The surgery destroys, weakens the cornea's structure. Part of the cornea is permanently removed. Cornea injury, ulcers, scars, infection in the cornea and eye, waves, uneven and torn areas in the cornea and other impairments occur resulting in; vision less clear than it was before surgery at close and far distances, double, triple vision, astigmatism, dizziness, cloudy, dull vision, haze, spots in the visual field, impaired tolerance to light and large halos, glare from indoor lights, from sunlight and from lights at night resulting in night blindness and low daylight vision.
The peripheral field of vision is lowered and the central field becomes unclear..
Increased cornea structure impairment occurs. Many people have become blind right after the surgery or a short time into the future after the surgery. The permanently weakened cornea is easily injured and the person must avoid certain activities, sports, climates, altitudes... for life. Even a soft touch of the hand, a blanket, sleeve... to the cornea can injure it. Cornea injury can occur from a light blow to the body, head. Pilots, various government, military persons and people in certain occupations are not allowed to have cornea surgery.
Some surgery results in clearer than 20/20 vision but this is temporary and the clarity of vision goes below 20/20 in a short time. Most people still need eyeglasses after cornea surgery.
Cornea surgery causes the eyes to feel tired and the clarity of vision to lower during the day and become more unclear at night. Most cornea surgery patients need permanent use of eyeglasses at night and in dim light. The eyeglasses then cause and increase eye muscle tension, abnormal eye/cornea shape and vision impairment resulting in eyeglass prescriptions for the day and night at close and far distances. More vision impairment occurs and stronger and stronger eyeglass prescriptions are prescribed causing increased eye muscle tension, abnormal eye shape with pulling, stretching, tension on/in the eye, cornea. The surgically weakened cornea develops waves, tears, ulcers. Multiple eye problems develop. Cornea transplants and other eye surgeries are needed.

The eyes cornea and lens absorb/control the amount of sunlight and UV light that enters the eye, protecting the eye from over exposure to sunlight, UV light. Cornea surgery; removing part of the cornea destroys this natural eye function. Cornea surgery leaves the cornea, iris/pupil, lens, retina overexposed to sunlight/UV light and overexposed to unhealthy partial spectrum artificial light.
This can result in impaired eye health, damage to the cornea, lens, retina... causing pupil malfunction, cataracts, macula degeneration, and other retina damage, unclear vision and other eye problems, including blindness.

Abnormal pupil enlargement in sunlight, artificial light and in dim light occurs. This also causes a abnormally large amount of sunlight and unhealthy partial spectrum light to enter the eyes. This causes the eye problems listed above. Cornea surgery impairs the eyes natural tolerance to sunlight and artificial light. The eyes hurt, are sensitive in all types of light. This causes the person to wear sunglasses, tinted and UV blocking eyeglass lenses which are addictive, cause and increase vision impairment, close and distant blur, and causes more abnormal pupil enlargement, further impairs the eyes tolerance to light. The enlarged pupil increases the eyes exposure to unhealthy partial spectrum light that passes through the sunglasses, tinted, UV blocking lenses.
All eyeglasses, contact lenses; plain, tinted, UV blocking, dark, colored...cause partial spectrum light to enter the eyes, brain, body, cause abnormal pupil enlargement and impair the eyes tolerance to light.

The sunglasses, tinted, UV blocking lenses also block out full spectrum sunlight causing a constant flow of unhealthy partial spectrum sunlight and even more unbalanced partial spectrum artificial light to enter the eyes, brain, body. Health and function of the eyes, brain, body become impaired.
Cataracts, macula degeneration, detached retina and other eye problems occur.
Sunglasses, tinted, UV blocking lenses and plain eyeglasses cause and increase vision impairment resulting in prescriptions for eyeglasses.

The cornea and lens refract, bend, focus light rays in the eyes. Cornea - 80% Lens - 10%.
Removing part of the cornea by surgery impairs the corneas natural focus of light rays.

Outer eye muscle tension can cause a abnormal eye/cornea shape with incorrect focus of light rays in the eyes and unclear vision. (see pictures 3 and 4 page 11). When the eye muscles relax due to natural causes; relief of stress and mental strain, improved diet and health, good posture, relaxation of the neck.., use of Natural Vision Improvement; Correct Vision Habits, relaxation... the eye returns to normal shape with correct focus of light rays and clear vision. (See picture 1- page 11.)
(Correct Vision Habits and other Natural Vision Improvement states can occur automatically, without the person learning, consciously using Natural Vision Improvement because; it is the normal function of the eyes. The visual system always returns the eyes to normal correct function.)

Cornea surgery does not correct the cause of unclear vision. Cornea surgery does not relax tense eye muscles, does not remove; stress, mental strain, use of Incorrect Vision Habits, does not return the eye to normal shape, does not remove abnormal pressure, tension, pulling, stretching on/in the eye, retina, lens, cornea, does not improve circulation to, in the eye.

Example; the eye surgeon cuts off part of the eyes cornea in an attempt to make the shape of the eye closer to a normal round shape with better focus of light rays in the eye for clearer distant vision. (see picture 3 page 25.)

If, in the future, after cornea surgery, the eye muscles relax due to natural conditions; relief of stress, strain, improved diet, health, better job, life situation... using the eyes correct with relaxation, Correct Vision Habits, Natural Vision Improvement, correct posture, relaxed neck and other natural causes and the eye returns to normal shape; the surgically altered, impaired cornea will be too flat and cannot return to normal shape and function with the eye. This causes the eye to be too short.
(see picture 4 page 25.) Focus of light rays in the eye are now more impaired than before surgery. Light rays focus beyond the retina resulting unclear close and distant vision.
The weakened, impaired cornea stretches, pulls, experiences tension, pressure as it tries to return to normal shape with the eye. This causes the cornea to develop waves, uneven areas, ulcers. Infection in the cornea and eye, scars occur resulting in unclear vision, astigmatism, blind spots, large halos, glare from lights and other eye problems.

The cornea also changes shape with the eye when the eye lengthens slightly when looking at close distances and returns to a round shape when looking at far distances. The surgically weakened, impaired cornea will not be able to change shape perfectly with the eye-the cornea will stretch, pull, develop waves, uneven areas causing blur, astigmatism, glare and other eye problems.

It is normal for the shape of the eye and cornea to change, fluctuate slightly and this can occur often; within a second, minute, hour, day...causing the clarity of vision to fluctuate slightly and temporarily; clear, little less clear and back to clear. A surgically altered cornea will cause the temporary state of

less clear vision to be increased. The vision is much more unclear.
When the cornea is normal, not altered by surgery, temporary states of less clear vision are slight and are usually not noticed. The clarity of vision always fluctuates back to normal when eyeglasses, surgery are avoided.

Natural Vision Improvement keeps the vision clearer than 20/20; to 20/15, 10, 5, 40/20...
When temporary fluctuations of clarity occur, vision goes from 20/5, 20/10 to 20/15, 20/20, occasionally to 20/30, 40 and then returns back to clearer than 20/20.
Vision rarely goes less clear than 20/20, 20/30.

Cornea surgery does not remove the underlying cause of unclear vision; does not remove eye muscle tension, mental strain, use of Incorrect Vision Habits, neck tension... and abnormal eye shape.

<u>After cornea surgery eye muscle tension may increase,</u> causing the shape of the eye to become more abnormal. This will also impair focus of light rays in the eye and result in unclear vision.
(Example; cornea surgery was done for a eye that is abnormally lengthened. The eye surgeon cut, shortened the shape of the cornea to fit that specific eye shape. If, after surgery, the eye muscle tension and abnormal eye shape increases: the surgically altered cornea will not fit the eye, cannot change shape with the eye.) Increased pulling, stretching on the cornea occurs resulting in cornea injury and vision impairment as described previously.

Wearing eyeglasses after cornea surgery will increase the eye muscle tension, abnormal eye shape (increased lengthened, shortened, irregular shape), vision impairment and cornea, eye injury. Stronger and stronger lenses are prescribed causing more vision impairment.

(Contact lenses must never be worn after cornea surgery because the contacts easily injure and infect the weakened cornea. Contacts cause injury even to a healthy, strong non-surgically altered cornea.)

The same side effects occur due to cornea surgery to steepen, (raise, lengthen) the cornea in an attempt to improve close vision and altering the shape of the cornea to treat astigmatism.
All these surgeries involve permanently removing part of the cornea, removing a healthy, normal part of the eye. This is poor medical practice, breaks a medical law: 'Do not harm, destroy healthy tissue'.
Notice that cornea surgery applied in an attempt to obtain clearer distant vision is done to make a lengthened eye more round and, that, cornea surgery to obtain clearer close vision is done to make a shortened eye longer but; eye doctors, surgeons refuse to admit that a abnormally lengthened or shortened eye/cornea shape is caused by outer eye muscle tension and that the eye muscles can be relaxed naturally with Natural Vision Improvement enabling the eye, cornea to return to normal shape with clear close and distant vision, thus avoiding cornea eye surgery.

(Cornea surgery is necessary sometimes for treating a eye cornea injury, possibly infection... if other, preferably natural methods, cannot save the eye, vision.)

Natural Vision Improvement (no glasses, no surgery) relaxes the eye muscles and returns the eye to normal healthy shape with clear vision at all distances.

Natural Vision Improvement may improve the clarity of vision by relaxing the eye muscles if the eye muscles have become <u>more tense</u> after cornea surgery, but may result in <u>less clear vision</u> if the eye muscles <u>completely relax</u> and returns the eye to normal shape because the surgically impaired cornea will not be able to return to normal shape with the eye.
Increased eye muscle tension, further impairing the shape of the eye, cornea also can result in more vision impairment after cornea surgery. See Article below:

Natural Vision Improvement After Unsuccessful Eye Cornea Surgery - Is it Safe? Can it Reverse the Cornea Damage, Vision Impairment Caused by the Cornea Surgery?

Often, people that have had eye cornea laser and other surgery develop unclear vision and/or astigmatism, light sensitivity and other types of vision impairment. This can occur immediately after the surgery or weeks, months, a year or more after surgery. They ask if Natural Vision Improvement can restore the vision?

The cornea, in some ways is like the human liver and skin: it can repair itself. Eyes with cornea injuries, scars can repair naturally, the cornea heals as the skin heals from a cut and clear vision returns. See Dr. Bates 'Better Eyesight Magazine'.

Cornea surgery removes part of the cornea, weakening it. The cornea might repair itself after surgery if Natural Vision Improvement is used but this is not definite. The cornea might be able to re-grow, return to full normal thickness, strength and shape.

Natural Vision Improvement relaxes tense eye muscles and returns the eyes shape to normal but this might interfere with the surgically altered cornea which has been formed by the surgery to work with an abnormal eye shape, function existing at the time of the surgery. Cornea surgery, alteration, removal of part of the eyes cornea is done to match the abnormal eye shape, state of eye muscle tension causing the abnormal eye shape existing at the time of the surgery. The eye and muscles must remain in this abnormal state for the eye to see clear through the surgically altered cornea. A surgically altered cornea is like an eyeglass lens constructed for a specific abnormal eye/vision state. If the state/shape of the eye changes; becomes more impaired or improves; the eye can no longer see clear through that eyeglass lens prescription. Eyeglass lens strength can be changed: reduced, increased but the surgically altered cornea cannot be changed. Some surgeons attempt this resulting in more vision impairment.

Natural Vision Improvement might help the cornea rebuild its structure and work with the eye producing clear vision as the Bates Method returns the eye to normal shape or:

The improved eye shape occurring from practice of the Bates Method might pull on the surgically weakened cornea, as the weakened cornea un-successfully tries to change shape with the eye as the eye changes back to normal shape. This results in impaired cornea function: waves, tears in the cornea, blur, astigmatism...

A patient might develop increased eye muscle tension (which increases abnormal eye shape) after the cornea surgery or, less muscle tension occurs (which changes the shape of the eye toward a normal shape). As the surgically altered cornea tries to reform to fit the changing eye shape, this results in unclear vision;

Eye muscles more tense=more impaired eye shape=more impaired cornea shape=blur.

Eye muscles less tense, relax=eye shape returns to normal but cornea cannot return to normal shape with the eye=cornea and eye do not fit/work together=blur.

If the cornea can return to normal shape with the eye, without tension, injury, then vision will be clear. If the surgically altered cornea cannot return to the correct shape to fit the changing eye shape, vision can blur and astigmatism and other vision impairment can occur.

The right amount of practice of the Bates method might help the eye/cornea stay within a workable state: the right amount of balance, amount of eye muscle relaxation with improved eye shape, but not too much all at once, and then, if the cornea can rebuild itself, in the future it might be able to fully, safely change shape with the eye into a state of complete, perfect eye/cornea shape, perfect muscle relaxation and clear vision.

If a Cornea Surgery Patient is getting clearer vision with the Bates method and does not feel, see any problems with the cornea, it may be alright to continue. If the cornea feels like it is pulling,

stretching... or things get really blurry, increased astigmatism.., take a break and let the cornea have a chance to catch up to the improvement in eye shape.
Check with your eye doctor.

Fluctuations in the vision are normal for everyone, and some slightly double 'astigmatism like effect' or blur can occur as the vision is improving, reversing back to normal eye/cornea shape, clear vision and this may not be a problem with the cornea. It would be normal and it clears up quickly with relaxation and Bates Method practice.
When the cornea is weakened, parts removed, due to laser surgery: the cornea, eyes natural protection, tolerance to sunlight is impaired. The cornea and lens protect the eye from over-exposure to sunlight. I do not know if Sunning is safe if the eyes have been treated with cornea surgery. If the cornea does not get some natural full spectrum sunlight, it will not stay healthy and growth, repair may be blocked. Closed Eye Sunning only and some sunlight exposure by taking a walk outside daily wearing a hat with a brim, worn on and off may help.
Check with your eye doctor first.

Is practicing Natural Vision Improvement after cataract surgery is safe, effective?

The lens structure is different than the cornea and since the lens is attached to the eye, like, but different than the cornea; if it has been treated with surgery, it may or may not be affected adversely when the eye changes back to normal shape with application of Natural Vision Improvement.
Also; If the lens changes shape with or without the eye to produce accommodation, un-accommodation as most eye doctors state; this function might be affected by surgery. Will the lens adjust to work with the eye, or can it be harmed as a surgically altered cornea is, as described above?

Dr. Bates writes about people that have had cataract lens surgery, then obtaining clear vision with The Bates Method of Natural Vision Improvement.
Cornea surgery is done to change the corneas shape to fit an abnormal eye shape.
Cataract surgery is done to remove part of or the entire lens to remove a cataract.

See Dr. Bates 'Better Eyesight Magazine' for cataract surgery and Bates Method treatment results after the surgery and Bates Method treatment to reverse, remove cataracts without surgery.

The cornea and lens absorb, control the amount of sunlight that enters the eye, protecting the eye from over-exposure, sunburn. Removing part of the cornea, lens impairs this function.



CONTACT LENSES CAUSE EYE INJURY

**Cornea injury and vision impairment occur often due to wearing of contact lenses;
It is normal for the shape of the eye/cornea to change often, naturally, on its own. The shape of the eye/cornea can change, fluctuate in a second, minute, hour, day... It is impossible to prescribe an exact size/fit for contact lenses because the size, shape of the cornea is always changing. The contacts will never fit the cornea and will scrape, infect, injure, scar the cornea and eye.
Contact lenses enable bacteria, and a variety of germs to grow on the cornea and on/in the eyes.
Contact lens solutions often contain bacteria, viruses and other contaminants that cause frequent cornea/eye infection and can and has caused blindness, loss of the infected eye.**

ORTHO-KERATOLOGY; Fitting the eyes corneas with contact lenses that are a different size/shape than the cornea, to be used as braces on the corneas to try to force the cornea to change shape in an attempt to remove close and distant blur, astigmatism results in frequent cornea injury.

**Because Natural Vision Improvement causes the shape of the eye and cornea to change as the eye muscles relax and the eye/cornea returns to normal shape; contact lenses must never be worn before, during and after use of Natural Vision Improvement - the contacts will not fit the changing cornea shape.
Never wear contacts at night, during sleep; the shape of the eye/cornea changes during sleep. The contacts will injure the eyes corneas during sleep. Any injury to the cornea can result in infection which can go into the eye and cause cornea/eye damage, vision impairment and blindness.**

The eye, cornea changes shape often, a natural, normal function, with or without Natural Vision Improvement. This makes it impossible to prescribe a correct contact lens size.

ORTHO C-ORTHOCULOGY - A new method using contact lenses to force the cornea, lens, eye to change shape, force some eye muscles to become tense, stretch, and other eye muscles to un-contract in a abnormal state. This is unnatural and dangerous. People selling this method warn the patient that there are risks; cornea, eye infection, injury, permanent damage, abnormal eye and eye muscle function, dependence on the method and other eye, vision impairment.
Avoid these and all unnatural methods.

The Bates Method teaches that all the eye muscles must relax, function together, contracting and un-contracting in a coordinated, relaxed state. The eye, cornea, lens returns to normal shape on its own.

Contact lenses impair the shape of the eyes cornea causing a uneven cornea shape and astigmatism.
A uneven cornea is easily scraped, injured by contact lenses.
Contact lenses must not be worn when the cornea/eye contains astigmatism.
Astigmatism is caused by a uneven area in the cornea and abnormal eye/cornea shape.
The degree, type, shape, and placement of the astigmatism/abnormal eye/cornea shape/wave causing the astigmatism changes frequently.
Contact lenses will never fit the changing cornea shape.
Contacts often injure the cornea that contains astigmatism.
Contact lenses impair tear production, coating of tears over the eyes/corneas, cause abnormal pupil enlargement, impair tolerance to light, block oxygen, nutrient flow to the cornea. The cornea becomes dry, weak and injured. All contact lenses; soft, flexible, night wear... cause eye injury and act as eyeglasses causing increased vision impairment leading to prescriptions for stronger and stronger contact lenses and eyeglasses. Contact lenses impair; balance, coordination, blinking, shifting and other Correct Vision Habits. Contact lenses completely block out all full spectrum sunlight causing the eyes, brain, body to be constantly exposed to unhealthy partial spectrum light. UV blocking, tinted and colored contacts cause light to be more unbalanced and increase abnormal pupil enlargement.
Eyeglasses allow some full spectrum sunlight to enter around the edges of the frames.
No eyeglasses is best.

Avoid all cornea surgeries, contact lenses and eyeglasses.
Use Natural Vision Improvement to relax the eye muscles and return the eye, cornea to normal shape with correct focus of light rays in the eye, clear vision at all distances and healthy eyes.

The Bates Method of Natural Vision Improvement cures many different eye problems. Natural Vision Improvement relaxes the outer and inner eye muscles causing the eye, cornea, lens to return to normal healthy shape, function. This condition along with neck muscle relaxation, movement improves circulation in the eye and normalizes eye pressure. This can reverse and cure glaucoma, cataracts and other eye problems.
(If taking drugs, eye drops to lower eye pressure to treat glaucoma, check with your eye doctor. As Natural Vision Improvement normalizes eye pressure, the drug may have to be reduced or discontinued.) Check with your Ophthalmologist if you have had or are going to have any eye surgery or are being treated with drugs for a eye condition and let him/her know you plan to apply Natural Vision Improvement. Most eye doctors prefer to sell surgery, drugs, eyeglasses and contact lenses. Find an eye doctor that teaches the Bates Method of Natural Vision Improvement and prefers to avoid surgery, drugs, eyeglasses, contacts.
See websites listed in chapter 2 for Bates Optometrists, Ophthalmologists.

Avoid Sunglasses. Sunglasses cause eye sensitivity to light, lowers natural light tolerance, lowers, impairs use of sunlight by the eyes, brain, body, causes watering, burning eyes, eye infections, sties, unclear vision, cataracts, and other eye diseases, impairs vitamin D and other nutrient absorption, hormone balance, sleep cycle and other functions. Sunglasses cause unbalanced, partial spectrum light to enter the eyes, brain, body. Sunglasses block healthy full spectrum sunlight.
Impairment of the health and function of the eyes, eye muscles, lens, retina, brain, left and right brain hemispheres and body occur due to lack of full spectrum sunlight and exposure to the unhealthy, unbalanced light entering the eyes through the sunglasses.
See chapter 18 - Sunlight, Sunning.

4 - STRONG EYEGLASSES = VISION IMPAIRMENT VERSES REDUCED, WEAKER LENSES = VISION IMPROVEMENT

WHAT GLASSES DO TO US

By W. H. BATES, M. D.

On a tomb in the Church of Santa Maria Maggiore in Florence was found the following inscription:
"Here lies Salvino degli Armati, Inventor of Spectacles. May God pardon him his sins."

The Florentines were doubtless mistaken in supposing that their fellow citizen was the inventor of the lenses now so commonly worn to correct errors of refraction. There has been much discussion as to the origin of these devices, but they are generally believed to have been known at a period much earlier than that of Salvino degli Armati. The Romans at least must have known something of the art of supplementing the powers of the eye, for Pliny tells us that Nero used to watch the games in the Coliseum through a concave gem set in a ring for that purpose. If, however, his contemporaries believed that Salvino of the Armati was the first to produce these aids to vision, they might well pray for the pardon of his sins; for while it is true that eyeglasses have brought to some people improved vision and relief from pain and discomfort, they have been to others simply an added torture, they always do more or less harm, and at their best they never improve the vision to normal.

That glasses cannot improve the sight to normal can be very simply demonstrated by looking at any color through a strong convex or concave glass. It will be noted that the color is always less intense than when seen with the naked eye; and since the perception of form depends upon the perception of color, it follows that both color and form must be less distinctly seen with glasses than without them. Even plane glass lowers the vision both for color and form, as everyone knows who has ever looked out of a window.

That glasses must injure the eye is evident from the fact that one cannot see through them unless one produces the degree of refractive error which they are designed to correct. But refractive errors, in the eye which is left to itself, are never constant. If one secures good vision by the aid of concave, or convex, or astigmatic lenses, therefore, it means that one is maintaining constantly a degree of refractive error which otherwise would not be maintained constantly. It is only to be expected that this should make the conditions worse, and it is a matter of common experience that it does. After people once begin to wear glasses their strength, in most cases, has to be steadily increased in order to maintain the degree of visual acuity secured by the aid of the first pair.

That the human eye resents glasses is a fact which no one would attempt to deny. Every oculist knows that patients have to "get used" to them, and that sometimes they never succeed in doing so. Patients with high degrees of myopia and hypermetropia have great difficulty in accustoming themselves to the full correction, and often are never able to do so. The strong concave glasses required by myopes of high degree make all objects seem much smaller than they really are while convex glasses enlarge them. These are unpleasantnesses that cannot be overcome. Patients with high degrees of astigmatism suffer some very disagreeable sensations when they first put on glasses, for which reason they are warned by one of the Conservation of Vision leaflets published by the Council on Health and Public Instruction of the American Medical Association to "get used to them at home before venturing where a misstep might cause a serious accident."

All glasses contract the field of vision to a greater or less degree. Even with very weak glasses patients are unable to see distinctly unless they look through the center of the lenses, with the frames at right angles to the line of vision; and not only is their vision lowered if they fail to do this, but annoying nervous symptoms, such as dizziness and headache, are sometimes produced. Therefore they are unable to turn their eyes freely in different directions. It is true that glasses are now ground in such a way that it is theoretically possible to look through them at any angle, but practically they seldom accomplish the desired result.

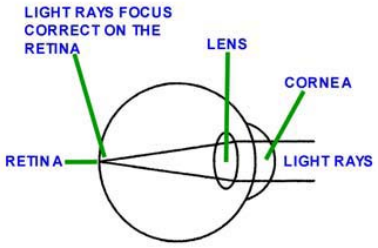
This Article from Ophthalmologist Bates 'Better Eyesight Magazine' July 1920.

Eyeglasses, contact lenses change the focus of light rays entering the abnormally shaped eye to bring the focus of light rays onto the retina resulting in clearer but not perfect vision through the eyeglass lenses. Eyeglasses, contacts do not improve the shape, function and health of the eye.
Eyeglasses, contact lenses cause and increase eye muscle tension, dysfunction, impairment of the shape, function, health of the eyes and clarity of vision.

Video-Behavioral Optometry
Weaker, Reduced Eyeglass Lenses

CLEAR DISTANT VISION

1

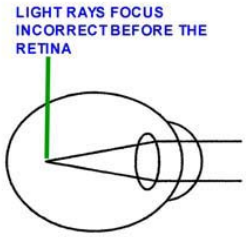


NORMAL HEALTHY ROUND EYE SHAPE.
CLEAR DISTANT VISION.
THE EYE LENGTHENS SLIGHTLY TO PRODUCE ACCOMMODATION AND CLEAR CLOSE VISION AND RETURNS TO A ROUND SHAPE FOR CLEAR DISTANT VISION.
THE LENS IS ALSO IN NORMAL SHAPE, CILIARY MUSCLE ATTACHED TO LENS FUNCTIONING CORRECT.
IF THE LENS ALSO CHANGES SHAPE TO PRODUCE ACCOMMODATION,
UNACCOMMODATION AS THE OLD THEORY STATES, THE LENS WILL FUNCTION CORRECT PRODUCING CLEAR VISION WHEN THE EYE IS IN NORMAL HEALTHY SHAPE.
THE CILIARY MUSCLE WILL ALSO PRODUCE ITS OTHER FUNCTIONS KEEPING THE EYE HEALTHY.

THE BATES METHOD OF NATURAL EYESIGHT IMPROVEMENT RELAXES THE EYE MUSCLES , KEEPS THE EYE IN NORMAL HEALTHY SHAPE AND FUNCTION WITH CORRECT FOCUS OF LIGHT RAYS ON THE RETINA AND CLEAR VISION AT ALL DISTANCES WITHOUT USE OF EYEGLASSES.

UNCLEAR DISTANT VISION

2



ABNORMAL LENGTHENED EYE SHAPE DUE TO TENSE OUTER EYE MUSCLES.
DISTANT VISION UNCLEAR.
CLOSE VISION CAN ALSO BECOME UNCLEAR IF THE EYE LENGTHENS TOO MUCH AS IS SHOWN IN THE DIAGRAM.

TENSE OUTER EYE MUSCLES PULLING THE EYE INTO A ABNORMAL SHORTENED SHAPE RESULTING IN UNCLEAR CLOSE VISION
ALSO CAUSES UNCLEAR DISTANT VISION IF THE EYE BECOMES TOO SHORT.

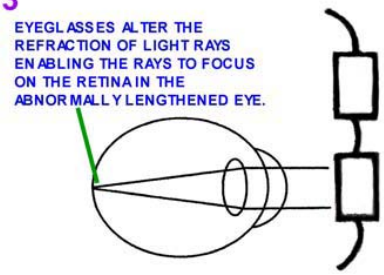
EYE GLASSES CAUSE, MAINTAIN AND INCREASE EYE MUSCLE TENSION,
ABNORMAL LENGTHENING, SHORTENING OF THE EYE AND A IRREGULAR EYE SHAPE THAT CAUSES ASTIGMATISM.
ALL THESE CONDITIONS CAUSE THE EYE PROBLEMS LISTED FOR DIAGRAM # 3.

NATURAL EYESIGHT IMPROVEMENT REVERSES PROGRESSIVE EYE MUSCLE TENSION, MALFUNCTION AND ABNORMAL LENGTHENING, SHORTENING, AND IRREGULAR SHAPE OF THE EYE CAUSED BY EYEGLASS LENSES.

WHEN THE EYE RETURNS TO NORMAL SHAPE; EYE PRESSURE RETURNS TO NORMAL, STRESS, TENSION, PULLING, STRETCHING ON/IN THE EYE, CORNEA, LENS, RETINA, NERVES, BLOOD VESSELS, ALL PARTS OF THE EYE IS REMOVED.
CIRCULATION IN THE EYE RETURNS TO NORMAL.
THE EYE REMAINS HEALTHY.
THE EYE PROBLEMS LISTED FOR DIAGRAMS # 2 AND 3 ARE REVERSED AND PREVENTED.

CLEARER DISTANT VISION WITH USE OF EYEGLASSES

3

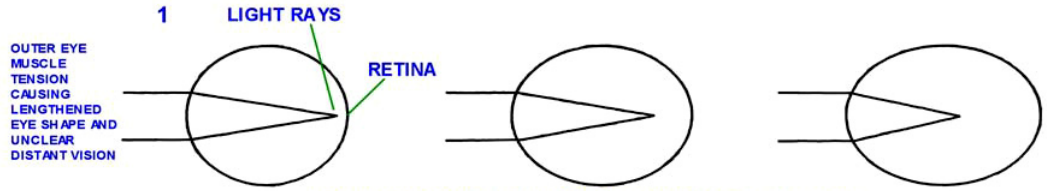


DISTANT VISION IS CLEARER WHEN WEARING EYEGLASSES BUT THE EYE REMAINS IN ABNORMAL LENGTHENED SHAPE.
EYEGLASSES DO NOT REMOVE EYE MUSCLE TENSION AND ABNORMAL EYE SHAPE.
EYEGLASSES CAUSE, MAINTAIN AND INCREASE EYE MUSCLE TENSION, ABNORMAL EYE SHAPE, RESULTING IN STRONGER AND STRONGER EYEGLASS LENSES BEING PRESCRIBED IN ORDER TO FOCUS LIGHT RAYS ON THE RETINA IN THE PROGRESSIVELY LENGTHENED EYE.

STRONGER LENSES CAUSE MORE EYE MUSCLE TENSION, INCREASED LENGTHENING OF THE EYE, INCREASED VISION IMPAIRMENT; BLUR, ASTIGMATISM AT CLOSE AND FAR DISTANCES, ABNORMAL INCREASED PRESSURE ON/IN THE EYE, CONSTANT PRESSURE, STRESS, TENSION, PULLING, STRETCHING ON/IN THE EYE, CORNEA, LENS, VITREOUS, RETINA, OPTIC AND EYE MUSCLE NERVES, BLOOD VESSELS, CAPILLARIES, CELLS IN THE EYE, LENS, RETINA BLOOD, OXYGEN, NUTRIENT, LYMPH, FLUID, ENERGY FLOW AND NERVE SIGNALS/FUNCTION TO/FROM, IN THE EYE, LENS, RETINA...ARE IMPAIRED.
EYE MUSCLE, LENS, RETINA, IRIS... HEALTH, FUNCTION ARE IMPAIRED RESULTING IN; UNCLEAR VISION AT ALL DISTANCES, ASTIGMATISM, CATARACTS, DETACHED RETINA, MACULA DEGENERATION, GLAUCOMA, CONICAL CORNEA AND ULCERS, WEAKENED SCLERAL TUNIC, VITREOUS DETACHMENT, UNBALANCED VISION IN THE LEFT AND RIGHT EYES, CROSSED/WANDERING EYES, FLOATERS, VISUAL DISTURBANCES AND OTHER EYE PROBLEMS.
CENTRAL AND PERIPHERAL VISION, COLOR, DEPTH, DISTANCE PERCEPTION, THREE DIMENSIONAL VISION, BALANCE, COORDINATION, LEFT AND RIGHT BRAIN HEMISPHERE ACTIVATION AND INTEGRATION, MEMORY AND IMAGINATION, SHIFTING/EYE MOVEMENT, CENTRAL FIXATION, CORRECT VISION HABITS AND OTHER EYE/BRAIN FUNCTIONS ARE IMPAIRED.

EYEGLASSES ARE ADDICTIVE.
STRONGER AND STRONGER EYEGLASS LENSES MAINTAIN, CAUSE AND INCREASE OUTER (OBLIQUE, RECTI...) AND INNER (CILIARY, IRIS) EYE MUSCLE TENSION, ABNORMAL EYE SHAPE AND PROGRESSIVE VISION IMPAIRMENT.
THE DIAGRAM BELOW SHOWS THE NEARSIGHTED EYE (UNCLEAR DISTANT VISION).
A SERIES OF STRONGER EYE GLASS LENSES ARE PRESCRIBED WHICH CAUSES INCREASED EYE MUSCLE TENSION, INCREASED ABNORMAL LENGTHENING OF THE EYE AND PROGRESSIVE VISION IMPAIRMENT; INCREASED PRESSURE, TENSION, PULLING, STRETCHING ON/IN THE EYE, CORNEA, LENS, RETINA, OPTIC AND EYE MUSCLE NERVES, BLOOD VESSELS, CAPILLARIES, CELLS IN THE RETINA, ALL PARTS OF THE EYE RESULTING IN IMPAIRED BLOOD, OXYGEN, NUTRIENT, LYMPH, NERVE, ENERGY FLOW IN THE EYES, CORNEA, LENS, RETINA, EYE MUSCLES... INCREASED BLUR, DEVELOPMENT OF ASTIGMATISM, CATARACTS, DETACHED RETINA, MACULA DEGENERATION, GLAUCOMA AND OTHER EYE PROBLEMS.
ABNORMAL EYE SHAPE, PRESSURE, TENSION CAN IMPAIR THE SHAPE HEALTH OF THE EYE, CORNEA, LENS, RETINA, IRIS, ALL PARTS OF THE EYE.
WHEN EYE MUSCLE TENSION ABNORMALLY LENGTHENS THE EYE, THE LIGHT RAYS DO NOT FOCUS CORRECT ON THE RETINA.
THE LIGHT RAYS FOCUS INCORRECT BEFORE THE RETINA RESULTING IN UNCLEAR VISION. SEE DIAGRAM 1 TOP LEFT.
WHEN EYEGLASSES ARE WORN, THE EYE MUSCLE TENSION IS MAINTAINED, INCREASED CAUSING INCREASED LENGTHENING OF THE EYE.
THE LIGHT RAYS FOCUS FARTHER AWAY FROM THE RETINA RESULTING IN INCREASED BLUR AND PRESCRIPTIONS FOR STRONGER EYEGLASS LENSES.

NEARSIGHTED - UNCLEAR DISTANT VISION

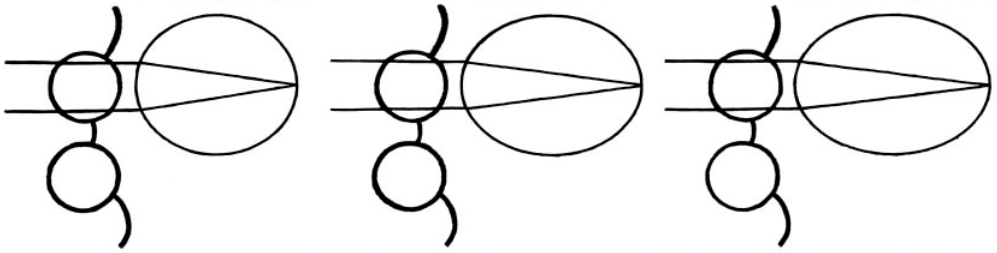


LIGHT RAYS FOCUS INCORRECT BEFORE THE RETINA

FIRST EYEGLASS PRESCRIPTION

STRONGER LENSES PRESCRIBED

MUCH STRONGER LENSES PRESCRIBED



STRONGER AND STRONGER EYEGLASS LENSES ARE NEEDED TO BRING THE FOCUS OF LIGHT RAYS ONTO THE RETINA.

EYE MUSCLE TENSION, ABNORMAL LENGTHENING OF THE EYE, UNCLEAR VISION MAINTAINED AND INCREASED BY THE EYEGLASSES.

EYE MUSCLE TENSION, ABNORMAL LENGTHENING OF THE EYE, UNCLEAR VISION MAINTAINED AND INCREASED MORE BY STRONGER EYEGLASS LENSES.

EYE MUSCLE TENSION, ABNORMAL LENGTHENING OF THE EYE, UNCLEAR DISTANT AND CLOSE VISION MAINTAINED AND PROGRESSIVELY INCREASED BY STRONGER AND STRONGER EYEGLASS LENSES. CATARACTS, DETACHED RETINA, GLAUCOMA, MACULA DEGENERATION AND OTHER EYE PROBLEMS DEVELOP.

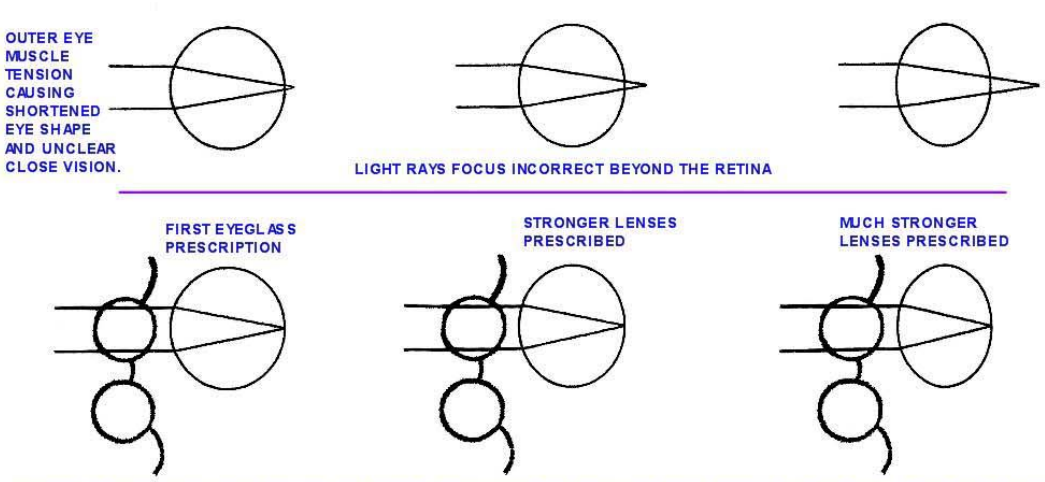
NATURAL EYESIGHT IMPROVEMENT RELAXES THE EYE MUSCLES AND RETURNS THE EYE, CORNEA, LENS, RETINA, OPTIC NERVE, ALL AREAS OF THE EYE TO NORMAL SHAPE, FUNCTION, NORMAL BLOOD, OXYGEN, NUTRIENT, LYMPH, ENERGY, NERVE FLOW IN THE EYES, RETINA, LENS... PERFECT EYE HEALTH, CORRECT FOCUS OF LIGHT RAYS ON THE RETINA, CLEAR VISION AT ALL DISTANCES. ASTIGMATISM, CATARACTS, DETACHED RETINA AND OTHER EYE PROBLEMS ARE REVERSED/PREVENTED.

OPHTHALMOLOGIST BATES TAUGHT THAT STRAIN, STRESS IN THE MIND, BODY, NEGATIVE EMOTIONS; WORRY, FEAR, GRIEF, ANGER...CAUSE EYE MUSCLE TENSION, LOWERED BRAIN, RETINA FUNCTION, INCORRECT FOCUS OF LIGHT RAYS IN THE EYE AND UNCLEAR VISION.
RELAXATION OF THE MIND, BODY, POSITIVE EMOTIONS RELAX THE EYE MUSCLES, RETURN THE BRAIN, RETINA TO NORMAL FUNCTION WITH CLEAR VISION.

ABNORMAL EYE SHAPE IS ACCENTUATED FOR EASY VIEWING

UNCLEAR CLOSE VISION IS CAUSED BY TENSE OUTER EYE MUSCLES (RECTI) PULLING THE EYE INTO A SHORTENED SHAPE CAUSING LIGHT RAYS TO FOCUS INCORRECT BEYOND THE RETINA.
EYEGLASSES FOR CLOSE VISION MAINTAIN, CAUSE AND INCREASE EYE MUSCLE TENSION AND SHORTENING OF THE EYE. THIS RESULTS IN STRONGER AND STRONGER EYEGLASS LENSE PRESCRIPTIONS, INCREASED EYE MUSCLE TENSION, SHORTENING OF THE EYE, INCREASED PRESSURE, TENSION, PULLING, STRETCHING ON/IN THE EYE, RETINA, LENS, CORNEA, OPTIC AND OTHER NERVES, BLOOD VESSELS, CAPILLARIES, CELLS, ALL PARTS OF THE EYE RESULTING IN INCREASED BLUR AT ALL DISTANCES, ASTIGMATISM AND DEVELOPMENT OF THE SAME EYE PROBLEMS LISTED ON THE PREVIOUS PAGE FOR A LENGTHENED EYE.
CLOSE VISION EYEGLASSES CAUSE FAST VISION IMPAIRMENT. CATARACTS AND DISTANT BLUR OFTEN OCCUR SOON AFTER WEARING CLOSE VISION EYEGLASSES.

FARSIGHTED - UNCLEAR CLOSE VISION



STRONGER AND STRONGER EYEGLASS LENSES ARE NEEDED TO BRING THE FOCUS OF LIGHT RAYS ONTO THE RETINA.

EYE MUSCLE TENSION, SHORTENING OF THE EYE, UNCLEAR CLOSE VISION MAINTAINED AND INCREASED BY EYEGLASSES.

EYE MUSCLE TENSION, SHORTENING OF THE EYE, UNCLEAR CLOSE VISION MAINTAINED AND INCREASED MORE BY STRONGER EYEGLASS LENSES.

EYE MUSCLE TENSION, SHORTENING OF THE EYE, UNCLEAR CLOSE AND DISTANT VISION MAINTAINED, AND PROGRESSIVELY INCREASED BY STRONGER AND STRONGER EYEGLASS LENSES.
CATARACTS, DETACHED RETINA, GLAUCOMA, MACULA DEGENERATION AND OTHER EYE PROBLEMS DEVELOP.

NATURAL EYESIGHT IMPROVEMENT RELAXES ALL THE EYE MUSCLES; OUTER; OBLIQUE, RECTI, INNER; CILIARY, IRIS, RETURNS THE EYE TO NORMAL HEALTHY SHAPE; WITH CORRECT FOCUS OF LIGHT RAYS ON THE RETINA, HEALTHY EYES, NORMAL BLOOD, NERVE... FLOW AND CLEAR CLOSE AND DISTANT VISION. THE EYE REMAINS ROUND FOR CLEAR DISTANT VISION AND LENGTHENS SLIGHTLY TO PRODUCE ACCOMMODATION FOR CLEAR CLOSE VISION.

TENSE RECTI MUSCLES CAN CAUSE TENSE OBLIQUE MUSCLES. TENSE OBLIQUE CAN CAUSE TENSE RECTI. TENSION IN THE OBLIQUE AND RECTI OUTER EYE MUSCLES CAUSE UNCLEAR CLOSE AND DISTANT VISION. WHEN STRONG EYEGLASS LENSES CAUSE EYE MUSCLE TENSION AND A EXTREMELY LENGTHENED OR SHORTENED EYE SHAPE, LIGHT RAYS FROM CLOSE AND DISTANT OBJECTS CANNOT FOCUS ON THE RETINA. THIS RESULTS IN UNCLEAR CLOSE AND DISTANT VISION.

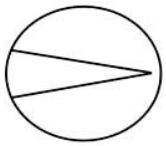
TENSION IN THE OUTER EYE MUSCLES CAUSING ABNORMAL EYE SHAPE, PRESSURE, TENSION ON/IN THE EYE CAN CAUSE TENSION IN THE CILIARY MUSCLE AND IMPAIRED BLOOD, NERVE FLOW IN THE EYE, LENS, RETINA WHICH CAN IMPAIR FUNCTION/ HEALTH OF THE EYES LENS, RETINA...RESULTING IN UNCLEAR VISION, CATARACTS AND OTHER EYE PROBLEMS..

If eyeglasses are necessary for driving and other activities while Natural Vision Improvement is applied; reduced, weaker 20/40 lenses can be used. Weaker lenses cause less eye muscle tension and enable the eye muscles and eye to begin to relax, return to normal shape. No Eyeglasses is best.

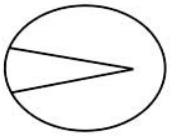
DISTANT VISION IMPAIRMENT

IT IS EMPHASIZED THAT ALL EYEGLASSES, EVEN WEAKER LENSES BLOCK VISION IMPROVEMENT.
REDUCED , WEAKER 20/40 EYEGLASS LENSE PRESCRIPTIONS PRODUCE LESS EYE MUSCLE TENSION, MENTAL AND VISUAL STRAIN THAN 20/20 AND STRONGER LENSES.
REDUCED 20/40 LENSES WILL NOT BLOCK VISION IMPROVEMENT AS MUCH AS 20/20 AND STRONGER LENSES.
IF EYEGLASSES ARE NEEDED FOR SAFETY WHEN DRIVING, OPERATING MACHINERY AND OTHER TASKS THAT REQUIRE SAFETY, THEN 20/40 REDUCED EYEGLASSES CAN BE WORN.
WEAR THEM ONLY WHEN NECESSARY.
DO NOT BECOME DEPENDANT ON THEM.
THEY WILL PREVENT COMPLETE NORMAL FUNCTION OF THE VISUAL SYSTEM, EYE MUSCLES, EYES, VISION IMPROVEMENT BUT NOT AS MUCH AS STRONG LENSES.
AVOID GLASSES COMPLETELY IF SAFETY IS NOT REQUIRED.
IN THE DIAGRAM ON THE RIGHT STRONGER AND STRONGER EYEGLASS LENSES ARE PRESCRIBED TO FOCUS LIGHT RAYS ONTO THE RETINA TO PROVIDE 20/20 AND CLEARER VISION THROUGH THE EYEGLASSES AS THE EYE AND VISION ARE PROGRESSIVELY IMPAIRED BY STRONGER EYEGLASS LENSES.
THE EYEGLASSES CAUSE/INCREASE EYE MUSCLE TENSION CAUSING THE EYE TO BE PROGRESSIVELY LENGTHENED, A ABNORMAL CONDITION THAT CAUSES THE LIGHT RAYS TO FOCUS INCORRECT BEFORE THE RETINA.
STRONGER THAN 20/20 LENSES PRODUCE CLEARER THAN 20/20 VISION THROUGH THE EYEGLASS LENSES AND PRODUCE MORE VISION IMPAIRMENT.
20/20 LENSES ARE ALSO TOO STRONG.
20/20 AND STRONGER LENSES (20/15, 10) CAUSE, MAINTAIN AND INCREASE EYE MUSCLE TENSION, IMPAIRMENT OF THE EYES SHAPE, HEALTH AND CLARITY OF VISION.
PRESSURE, TENSION, PULLING OCCUR ON/IN THE EYE, CORNEA, LENS, RETINA, OPTIC AND OTHER NERVES, BLOOD VESSELS, CAPILLARIES, CELLS IMPAIRING BLOOD, LYMPH, EYE FLUID, NERVE FLOW, SIGNALS, WASTE REMOVAL AND OTHER EYE FUNCTIONS.
BLUR AT ALL DISTANCES, ASTIGMATISM, CATARACTS, DETACHED RETINA, MACULA DEGENERATION, GLAUCOMA AND OTHER EYE PROBLEMS DEVELOP.

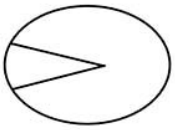
DISTANT VISION IMPAIRMENT CAUSED BY STRONGER EYEGLASS LENSES.
LIGHT RAYS FOCUS INCORRECT, FARTHER AND FARTHER AWAY FROM THE RETINA.



LITTLE EYE MUSCLE TENSION, LITTLE LENGTHENING OF THE EYE , SMALL AMOUNT OF DISTANT BLUR.



INCREASED EYE MUSCLE TENSION AND LENGTHENING OF THE EYE . DISTANT VISION MORE UNCLEAR.



EXTREME EYE MUSCLE TENSION, EYE PROGRESSIVELY LENGTHENED, DISTANT AND CLOSE VISION VERY UNCLEAR, OTHER EYE PROBLEMS.



1ST PAIR OF EYEGLASSES, 20/20 AND STRONGER LENSES



2ND PAIR OF EYEGLASSES, STRONGER LENSES

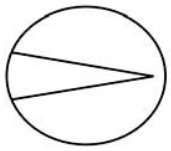


3RD PAIR OF EYEGLASSES, VERY STRONG LENSES

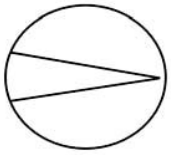
THE BATES METHOD, NATURAL EYESIGHT IMPROVEMENT RELAXES THE EYE MUSCLES, RETURNS THE EYE TO NORMAL HEALTHY SHAPE WITH CORRECT FOCUS OF LIGHT RAYS ONTO THE RETINA PRODUCING CLEAR VISION WITHOUT USE OF EYEGLASSES.
EYE PRESSURE RETURNS TO NORMAL.
TENSION, PULLING, STRETCHING ON/IN THE EYE, CORNEA, LENS, RETINA, NERVES, BLOOD VESSELS, ALL PARTS OF THE EYE IS REMOVED.
CIRCULATION IN THE EYE, NERVE SIGNALS RETURN TO NORMAL.
BLUR, ASTIGMATISM, CATARACTS, DETACHED RETINA, MACULA DEGENERATION, GLAUCOMA AND OTHER EYE PROBLEMS ARE REVERSED, PREVENTED.
WANDERING AND CROSSED EYE CONDITIONS CAN ALSO BE CORRECTED.
IN THE DIAGRAM ON THE RIGHT WEAKER AND WEAKER REDUCED 20/40 EYEGLASS LENSES ARE PRESCRIBED UNTIL EYEGLASSES ARE NOT NEEDED, USUALLY WHEN THE VISION REACHES THE 20/40 LEVEL OF CLARITY WITHOUT EYEGLASSES WHICH IS REQUIRED FOR DRIVING IN MOST STATES.
REDUCED MUCH WEAKER LENSES PROVIDING 20/60, 80... VISION CAN BE USED IF SAFETY IS NOT REQUIRED.
THE WEAKER THE LENSES THE LESS TENSION STRAIN IS PRODUCED AND THE MORE VISION CAN IMPROVE.
IN THIS EXAMPLE OF 20/40 REDUCED LENSES; EACH TIME THE CLARITY OF VISION IMPROVES TO THE LEVEL THAT THE EYEGLASSES BECOME TOO STRONG (PRODUCING 20/25, 20/20 VISION THROUGH THE LENSES) A NEW PAIR OF REDUCED, WEAKER PAIR OF EYEGLASS LENSES PROVIDING 20/40 VISION THROUGH THE LENSES IS PRESCRIBED.

OFTEN EYEGLASSES ARE OMITTED WHEN THE VISION IS AT 20/80, 20/60 BUT THE SOONER THE GLASSES ARE DISCONTINUED, THE FASTER AND EASIER VISION IMPROVES.
EYEGLASSES CAN BE DISCONTINUED AT ANY TIME EVEN IF THE VISION IS SO UNCLEAR (20/300...) THAT THE PERSON NEEDS A GUIDE DOG TO WALK OUT OF THE HOUSE.
CORRECT VISION HABITS; SHIFTING, CENTRAL FIXATION, RELAXED MIND, EYES, BODY, NECK ARE USED WHEN WEARING GLASSES AND WHEN NOT WEARING THE GLASSES.

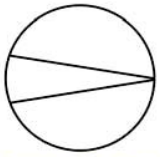
DISTANT VISION IMPROVEMENT WITH APPLICATION OF NATURAL EYESIGHT IMPROVEMENT (AND WEAKER EYEGLASS LENSES IF NEEDED FOR DRIVING, SAFETY).
LIGHT RAYS FOCUS CLOSER AND CLOSER TO AND THEN CORRECT ONTO THE RETINA.



LITTLE EYE MUSCLE TENSION, LITTLE LENGTHENING OF THE EYE, SMALL AMOUNT OF DISTANT BLUR.



LESS EYE MUSCLE TENSION, LESS EYE LENGTHENING, DISTANT VISION CLEARER.



EYE MUSCLES RELAXED, EYE HAS RETURNED TO NORMAL ROUND SHAPE, LIGHT RAYS FOCUS ON THE RETINA.
DISTANT VISION IS CLEAR.
THE EYE LENGTHENS SLIGHTLY TO ACCOMMODATE FOR CLEAR CLOSE VISION.
OTHER EYE PROBLEMS REVERSED, PREVENTED.



20/20 AND STRONGER EYEGLASS LENSES ARE AVOIDED AND REPLACED WITH 20/40 REDUCED, WEAKER LENSES.
NATURAL EYESIGHT IMPROVEMENT IS PRACTICED AND THE EYEGLASSES ARE WORN AS LITTLE AS POSSIBLE.



THE CLARITY OF VISION HAS IMPROVED.
A WEAKER, MORE REDUCED PAIR OF LENSES PROVIDING 20/40 VISION ARE PRESCRIBED.
WEAKER AND WEAKER 20/40 LENSES ARE PRESCRIBED UNTIL VISION IS CLEAR ENOUGH TO GO WITHOUT EYEGLASSES.

EYEGLASSES NOT NEEDED.
VISION IS 20/20 AND CLEARER; 20/15, 10, 5 WITHOUT EYEGLASSES.

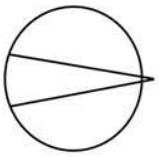
IMPROVING THE CLARITY OF DISTANT VISION AUTOMATICALLY IMPROVES CLARITY OF CLOSE VISION.
LIGHT RAYS IN THESE DIAGRAMS ARE SHOWN IN A SIMPLE FORM AS IN MANY OPTOMETRY TEXTS.

CLOSE VISION IMPAIRMENT

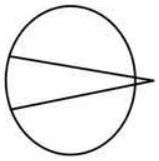
IN THE DIAGRAM ON THE RIGHT STRONGER AND STRONGER CLOSE VISION EYEGLASS LENSES ARE PRESCRIBED TO FOCUS LIGHT RAYS ONTO THE RETINA TO PROVIDE 20/20 AND CLEARER VISION THROUGH THE EYEGLASS LENSES AS THE EYE AND VISION ARE PROGRESSIVELY IMPAIRED BY THE STRONGER EYEGLASS LENSES.
THE EYEGLASSES CAUSE/INCREASE EYE MUSCLE TENSION CAUSING THE EYE TO BE PROGRESSIVELY SHORTENED, A ABNORMAL CONDITION THAT CAUSES THE LIGHT RAYS TO FOCUS INCORRECT BEYOND THE RETINA.
CLOSE VISION LENSES (INCLUDING BIFOCALS) CAUSE, INCREASE FAST VISION IMPAIRMENT, EXTREME EYE MUSCLE TENSION, DYSFUNCTION AND ARE A MAJOR CAUSE OF CATARACTS, ASTIGMATISM, CLOSE AND DISTANT BLUR AND OTHER EYE PROBLEMS.
STRONGER THAN 20/20 LENSES PRODUCE CLEARER THAN 20/20 VISION THROUGH THE EYEGLASS LENSES AND PRODUCE MORE VISION IMPAIRMENT.
20/20 LENSES ARE ALSO TOO STRONG.
20/20 AND STRONGER LENSES (20/15, 10) CAUSE, MAINTAIN AND INCREASE EYE MUSCLE TENSION, IMPAIRMENT OF THE EYES SHAPE, HEALTH AND CLARITY OF VISION.
PRESSURE, TENSION, PULLING OCCUR ON/IN THE EYE, CORNEA, LENS, RETINA, OPTIC AND OTHER NERVES, BLOOD VESSELS, CAPILLARIES, CELLS IMPAIRING BLOOD, LYMPH, EYE FLUID, NERVE FLOW, SIGNALS, WASTE REMOVAL AND OTHER EYE FUNCTIONS.
BLUR AT ALL DISTANCES, ASTIGMATISM, CATARACTS, DETACHED RETINA, MACULA DEGENERATION, GLAUCOMA AND OTHER EYE PROBLEMS DEVELOP.

AVOID WEARING CLOSE AND DISTANT VISION EYEGLASSES AND THESE EYE PROBLEMS WILL REVERSE AND BE PREVENTED.
APPLY NATURAL EYESIGHT IMPROVEMENT.
IF GLASSES ARE NEEDED FOR SAFETY WEAR ONLY REDUCED 20/40 OR WEAKER LENSES AND WEAR THEM AS LITTLE AS POSSIBLE AND DISCONTINUE USE OF EYEGLASSES WHEN VISION IS CLEAR ENOUGH.

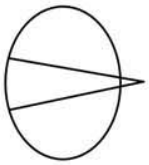
CLOSE VISION IMPAIRMENT CAUSED BY STRONGER EYEGLASS LENSES.
LIGHT RAYS FOCUS INCORRECT, FARTHER AND FARTHER BEYOND THE RETINA.



LITTLE EYE MUSCLE TENSION, LITTLE SHORTENING OF THE EYE, SMALL AMOUNT OF CLOSE BLUR.



INCREASED EYE MUSCLE TENSION AND SHORTENING OF THE EYE.
CLOSE VISION MORE UNCLEAR.



EXTREME EYE MUSCLE TENSION, EYE PROGRESSIVELY SHORTENED, CLOSE AND DISTANT VISION VERY UNCLEAR, OTHER EYE PROBLEMS.



1ST PAIR OF EYEGLASSES, 20/20 AND STRONGER LENSES



2ND PAIR OF EYEGLASSES, STRONGER LENSES



3RD PAIR OF EYEGLASSES, VERY STRONG LENSES

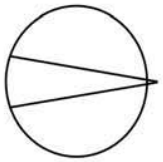
IN THE DIAGRAM ON THE RIGHT WEAKER AND WEAKER REDUCED 20/40 CLOSE VISION EYEGLASS LENSES ARE PRESCRIBED UNTIL EYEGLASSES ARE NOT NEEDED.
THE SAME PROCEDURE USED FOR WEAKER REDUCED DISTANT LENSES IS APPLIED FOR USING REDUCED 20/40 CLOSE VISION GLASSES.
BE SURE THE LENSES ARE PRESCRIBED FOR CLOSE VISION.
20/40 LENSES FOR DISTANT VISION CONTAIN A DIFFERENT PRESCRIPTION AND CANNOT BE USED FOR CLOSE DISTANCES.
USE 20/40 LENSES PRESCRIBED FOR CLOSE VISION ONLY WHEN IMPROVING CLOSE VISION.
LOOKING THROUGH CLOSE LENSES TO SEE DISTANT OBJECTS AND LOOKING THROUGH DISTANT LENSES TO SEE CLOSE OBJECTS CAUSES STRAIN, TENSION IN THE MIND, EYE MUSCLES AND INCREASED BLUR AT ALL DISTANCES.
WHEN DRIVING; DO NOT LOOK TO THE DISTANCE WITH CLOSE LENSES ON AND AVOID LOOKING CLOSE (DASHBOARD..) THROUGH DISTANT LENSES.
KEEP GLASSES ON A STRING AROUND THE NECK SO THEY CAN BE QUICKLY REMOVED AND PUT BACK ON.
IF YOU DROP THEM YOU WONT HAVE TO LOOK AWAY FROM THE ROAD BECAUSE THE STRING WILL CATCH THEM.

THE SOONER ALL GLASSES ARE DISCONTINUED, THE FASTER AND EASIER VISION IMPROVES.

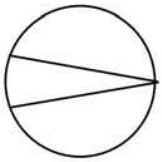
CORRECT VISION HABITS; SHIFTING, CENTRAL FIXATION, RELAXED MIND, EYES, BODY, NECK ARE USED WHEN WEARING GLASSES AND WHEN NOT WEARING THE GLASSES.

THE READING OF FINE PRINT IN THE SUNLIGHT DAILY IS A VERY EFFECTIVE BATES NATURAL EYESIGHT IMPROVEMENT METHOD TO IMPROVE THE CLARITY OF CLOSE VISION.
IT ALSO IMPROVES DISTANT VISION, REMOVES ASTIGMATISM, AND GIVES THE READER A DAILY DOSE OF FULL SPECTRUM SUNLIGHT.
READ THE PRINT WITHOUT WEARING EYEGLASSES.

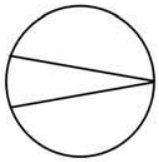
CLOSE VISION IMPROVEMENT WITH APPLICATION OF NATURAL EYESIGHT IMPROVEMENT (AND WEAKER EYEGLASS LENSES IF NEEDED FOR DRIVING, READING MEDICINE BOTTLES, SAFETY).
LIGHT RAYS FOCUS CLOSER AND CLOSER TO AND THEN CORRECT ONTO THE RETINA.



LITTLE EYE MUSCLE TENSION, LITTLE SHORTENING OF THE EYE, SMALL AMOUNT OF CLOSE BLUR.



LESS EYE MUSCLE TENSION, LESS EYE SHORTENING, CLOSE VISION CLEARER.



EYE MUSCLES RELAXED, EYE HAS RETURNED TO NORMAL ROUND SHAPE, LIGHT RAYS FOCUS ON THE RETINA.
DISTANT VISION IS CLEAR.
THE EYE LENGTHENS SLIGHTLY TO ACCOMMODATE FOR CLEAR CLOSE VISION.
OTHER EYE PROBLEMS REVERSED, PREVENTED.



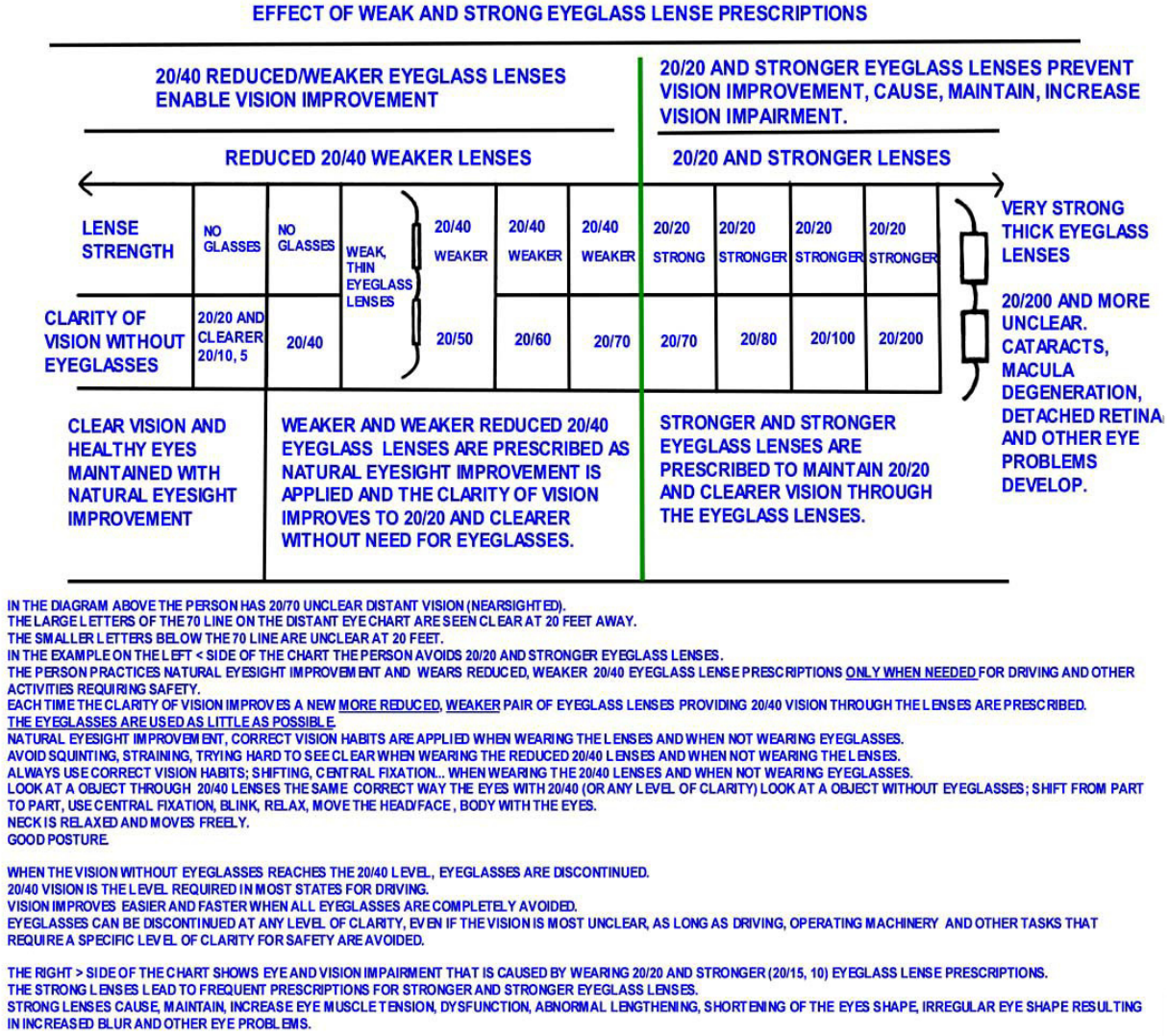
20/20 AND STRONGER EYEGLASS LENSES ARE AVOIDED AND REPLACED WITH 20/40 REDUCED, WEAKER CLOSE VISION LENSES.
NATURAL EYESIGHT IMPROVEMENT IS PRACTICED AND THE EYEGLASSES ARE WORN AS LITTLE AS POSSIBLE.



THE CLARITY OF VISION HAS IMPROVED.
A WEAKER, MORE REDUCED PAIR OF LENSES PROVIDING 20/40 VISION ARE PRESCRIBED.
WEAKER AND WEAKER 20/40 LENSES ARE PRESCRIBED UNTIL VISION IS CLEAR ENOUGH TO GO WITHOUT EYEGLASSES.

EYEGLASSES NOT NEEDED.
VISION IS 20/20 AND CLEARER; 20/15, 10, 5 WITHOUT EYEGLASSES.

IMPROVING THE CLARITY OF CLOSE VISION AUTOMATICALLY IMPROVES CLARITY OF DISTANT VISION.
LIGHT RAYS IN THESE DIAGRAMS ARE SHOWN IN A SIMPLE FORM AS IN MANY OPTOMETRY TEXTS.



IN THE DIAGRAM ABOVE THE PERSON HAS 20/70 UNCLEAR DISTANT VISION (NEARSIGHTED).
THE LARGE LETTERS OF THE 70 LINE ON THE DISTANT EYE CHART ARE SEEN CLEAR AT 20 FEET AWAY.
THE SMALLER LETTERS BELOW THE 70 LINE ARE UNCLEAR AT 20 FEET.
IN THE EXAMPLE ON THE LEFT < SIDE OF THE CHART THE PERSON AVOIDS 20/20 AND STRONGER EYEGLASS LENSES.
THE PERSON PRACTICES NATURAL EYESIGHT IMPROVEMENT AND WEARS REDUCED, WEAKER 20/40 EYEGLASS LENSE PRESCRIPTIONS ONLY WHEN NEEDED FOR DRIVING AND OTHER ACTIVITIES REQUIRING SAFETY.
EACH TIME THE CLARITY OF VISION IMPROVES A NEW MORE REDUCED, WEAKER PAIR OF EYEGLASS LENSES PROVIDING 20/40 VISION THROUGH THE LENSES ARE PRESCRIBED.
THE EYEGLASSES ARE USED AS LITTLE AS POSSIBLE.
NATURAL EYESIGHT IMPROVEMENT, CORRECT VISION HABITS ARE APPLIED WHEN WEARING THE LENSES AND WHEN NOT WEARING EYEGLASSES.
AVOID SQUINTING, STRAINING, TRYING HARD TO SEE CLEAR WHEN WEARING THE REDUCED 20/40 LENSES AND WHEN NOT WEARING THE LENSES.
ALWAYS USE CORRECT VISION HABITS; SHIFTING, CENTRAL FIXATION... WHEN WEARING THE 20/40 LENSES AND WHEN NOT WEARING EYEGLASSES.
LOOK AT A OBJECT THROUGH 20/40 LENSES THE SAME CORRECT WAY THE EYES WITH 20/40 (OR ANY LEVEL OF CLARITY) LOOK AT A OBJECT WITHOUT EYEGLASSES; SHIFT FROM PART TO PART, USE CENTRAL FIXATION, BLINK, RELAX, MOVE THE HEAD/FACE , BODY WITH THE EYES.
NECK IS RELAXED AND MOVES FREELY.
GOOD POSTURE.

WHEN THE VISION WITHOUT EYEGLASSES REACHES THE 20/40 LEVEL, EYEGLASSES ARE DISCONTINUED.
20/40 VISION IS THE LEVEL REQUIRED IN MOST STATES FOR DRIVING.
VISION IMPROVES EASIER AND FASTER WHEN ALL EYEGLASSES ARE COMPLETELY AVOIDED.
EYEGLASSES CAN BE DISCONTINUED AT ANY LEVEL OF CLARITY, EVEN IF THE VISION IS MOST UNCLEAR, AS LONG AS DRIVING, OPERATING MACHINERY AND OTHER TASKS THAT REQUIRE A SPECIFIC LEVEL OF CLARITY FOR SAFETY ARE AVOIDED.

THE RIGHT > SIDE OF THE CHART SHOWS EYE AND VISION IMPAIRMENT THAT IS CAUSED BY WEARING 20/20 AND STRONGER (20/15, 10) EYEGLASS LENSE PRESCRIPTIONS.
THE STRONG LENSES LEAD TO FREQUENT PRESCRIPTIONS FOR STRONGER AND STRONGER EYEGLASS LENSES.
STRONG LENSES CAUSE, MAINTAIN, INCREASE EYE MUSCLE TENSION, DYSFUNCTION, ABNORMAL LENGTHENING, SHORTENING OF THE EYES SHAPE, IRREGULAR EYE SHAPE RESULTING IN INCREASED BLUR AND OTHER EYE PROBLEMS.

If the student cannot find a Optometrist that will prescribe reduced lenses, then try searching for a Bates Method Behavioral Optometrist. Behavioral Optometrists teach Behavioral Optometry, a method close to the Bates Method. Behavioral Optometrists are familiar with the Bates method and often teach it, will monitor the eyes, vision as the method is applied and prescribe reduced, weaker eyeglass lenses if needed. Many do not teach the Bates Method and secretly prefer to sell eyeglasses, contact lenses, eye surgery and other harmful methods.

Students (after a eye exam) have learned how to write their own prescription for reduced, weaker low cost eyeglass lenses and order them through the mail directly from Optical Companies. This is done by students that cannot find a honest eye doctor that will teach Natural Vision Improvement and prescribe reduced eyeglass prescriptions.

The three websites listed below are Optical Companies that sell mail order, low cost, reduced, weaker eyeglass lenses without UV blocking, tinting, coating;

http://www.zennioptical.com/cart/home.php?cat=20 - Fill in your prescription at Zenni-Optical - Reduced lenses by mail.

http://www.eyeglasslensdirect.com/ (customer service at eyeglasslensdirect states they have full spectrum transmitting lenses, no UV blocking, no tinting, coating. Phone; 1-888-885-5367).

See the webpage and e-books for mail-order optical stores, P.D. (spacing, placement of the left, right eyes' eyeglass lens for correct eyeglass frame size), entire directions to lower your prescription strength and obtain permanent freedom from eyeglasses; http://cleareyesight-batesmethod.info/id36.html

http://www.selectspecs.com/ - Customer service at selectspecs says they have plain eyeglass lenses; Order by un-selecting UV blocking, tinting and other unwanted additions on the prescription page and, you can also tell them in the 'Additional info' box to omit UV blocking, tinting, coating and other additions. Specify you want plain lenses. Phone; 1-845 704-7091

When contacting any of these businesses; make sure that the optician understands that you want plain, clear lenses with special plastic that allows full spectrum sunlight to pass through the lenses. If these are not available, then lenses that are plain with no UV blocking, no tinting, coating... is the next best thing to purchase. Unbreakable plastic lenses are best to prevent eye injury if the lenses break.

Bates Method Behavioral Optometrists, Ophthalmologists will prescribe reduced lenses and Natural Vision Improvement training. Choose carefully; Avoid eye doctors selling the plus lens anti-corrective method, auto-stereograms-magic eyes and other unnatural methods. Go to a true Bates Method teacher to be referred to a true Bates Method eye doctor.

Buy/wear plain, clear reduced lenses only! Avoid eyeglasses containing UV light blocking, filters, tinted, dark, transitions lenses, colored lenses, sunglasses, bifocals, mono-vision...
Most optical businesses state that these (harmful) additions are placed in all their eyeglass lenses. The buyer must be sure the eyeglasses do not contain these additions.

Find a optical business that prescribes low cost, reduced eyeglasses that are plain clear lenses, full spectrum transmitting; the lenses allow all waves of the suns light spectrum, full spectrum, including UV light to transmit/pass through the eyeglass lenses and reach the eyes. Full spectrum transmitting lenses are better but not perfect; they are not completely natural, do not provide pure, complete full spectrum sunlight. This is not a true, perfect full spectrum, but is close as possible for light passing through a lense.
There are businesses that sell window glass, plastic that is full spectrum transmitting, but the only true, natural full spectrum sunlight is direct sunlight not passing through glass, plastic, any substance. The eyes need all wave lengths of the suns light spectrum, healthy full spectrum sunlight.
UV blocking lenses, tinted, colored lenses, sunglasses and even plain, clear lenses cause unhealthy, unbalanced light to enter the eyes, brain, body resulting in eye, brain, body health impairment, depression, lowered memory, imagination, unclear vision, sleep disruption, impaired eye health.

Avoid all eyeglasses. Wear a hat with a brim to avoid overexposure to sunlight. Wear only reduced, plain, clear lenses and only when needed for safety while vision is improving.

Incorrect Eyeglass Prescription Example

In Oct. 2009-Nov 2010, a neck, back injury caused by a dishonest Chiropractor in Worcester, MA resulted in this patient (Clark Night, book Author) experiencing health and vision impairments: many neck, back vertebrae out of alignment, twisted on the spine, (this places tension, pulling on the spinal cord, brain stem, eye muscle nerves, optic nerve, muscles, nerves, lymph, blood vessels traveling to the brain, eyes, ears, sinus, arms, legs...) extreme neck muscle tension, sprain, swirling black lines, black dot, moving colors in the visual field, foggy, dark visual field upon awakening, double vision, ghostlike after images of objects (another form of double vision: I will look at a object, then when I look away; a ghostly, in color, image of the object appears for a second), sleep disturbances, nightmares, ringing ears, balance impairment, dizziness, vertigo, all over body muscle, joint tension, severe trouble walking for 12 months, sinus infections, swelling, fluid in sinus placing pressure on the eyes, optic nerve, eye muscle nerves, visual illusions: wavy, moving objects in the central and peripheral field, temporary lowered distant and close vision with astigmatism, other visual disruptions, stiff, 'frozen like' eyes, eye movement 'shifting', convergence, divergence, fusion impairment.
Medical Doctors and an Optometrist's Optician assistant said the neck injury, along with the air pollution in Worcester can cause the sinus pressure and the neck, sinus conditions can cause the eye problems. All are connected. (Incorrect use of a non-Bates Method Artificial 3-D Fusion eye exercise may have started or added to the eye movement, divergence impairment, astigmatism condition experienced in Sept-Nov. 2010 with the sinus pressure. I regretfully went against my Bates Teacher's advice. He states to avoid the Artificial 3-D Fusion eye exercises. I always test, experience vision treatments myself, first, before writing about it, so I can give my readers correct information. This is explained further in this books Fusion Chapter.)

Incorrect computer posture, looking down at the keys, 6-12 hr. days now partly activates, returns the neck injury. Posture did not cause a problem before the injury.

Example of Eyeglass Lens Prescription

Distance	Eyes	Sphere Clarity of Vision & Eyeglass lens strength - = Myopia-Distant Vision += Hyperopia-Close Vision Minus and Plus - + signs also indicate positive and minus eyeglass lens type, strength.	Cylinder Eyeglass lens strength, type for Astigmatism in the eye. Amount of the Astigmatism in the eye.	Axis Placement, angle, type of Astigmatism in the eye, cornea. The direction of the astigmatism in degrees and; placement, orientation of the Eyeglass Cylinder.	PD Distance between the two eyes Pupils. Eyeglass lens, frame size to fit, center the lenses exactly to the eyes pupils.
D.V. Distant Vision	OD Right Eye	-1.00	-0.75	025	33
	OS Left Eye	-1.75	-1.00	175	33
N.V. Near Vision	OD Right Eye	+1.50			
	OS Left Eye	+1.00			

Myopia=Nearsight - Distant Vision Unclear Hyperopia=Farsight - Close Vision Unclear.

Rx		SPHERICAL	CYLINDRICAL	AXIS	PRISM	BASE
D.V.	O.D.					
	O.S.					
N.V.	O.D.					
	O.S.					

REMARKS_____ P.D. ____/____

Axis: Where the uneven area, difference in the eyes curvature that is causing the astigmatism is.
The Eye doctor, lens creator places the area of the eyeglass lens that contains the astigmatism correction at the correct area in front of the eye, cornea to stop the appearance of astigmatism in the visual field. Other areas of the glass that do not contain a astigmatism correction are placed in the correct area in front of the eyes/cornea.
Look at the lines on the astigmatism wheel Chart without glasses: blurry, distorted, double... lines seen are the angle of astigmatism in the eye.

Doctors use the top numbers, ½ chart: 0-180 degrees to determine the astigmatism location. Like a protractor ruler.
The round chart in the Astigmatism Chapter shows all numbers: 0-360 for a exact test of all areas of the eye, cornea.
The Chart can be used to practice shifting, tracing on the lines to remove the astigmatism from the eyes. This also improves clarity.

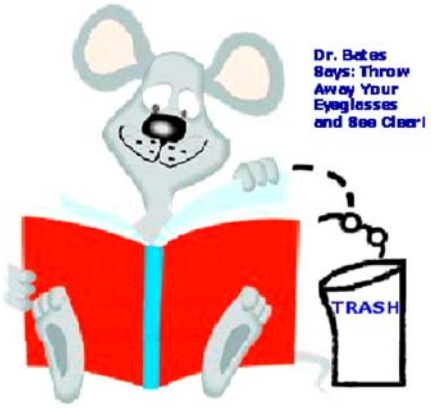
The neck injury was caused by the chiropractor in Oct. 2009 and it took 13 months of visits, treatments from other doctors, many afraid to get involved, refusing to treat me. This is the first time in my life I have experienced these severe health, vision impairments. I am still not completely healed. In Treatment by a Physical Therapist, Osteopath.
The eye doctor that wrote the top distant vision prescription for me in Nov. 2010 is not a Bates Method Behavioral Optometrist. He stated the patient (Clark Night) had fluctuating 20/40 - 20/60 - 20/20 vision in the left, right eyes with astigmatism in both eyes. (Near vision numbers in the prescription are placed here only for an example. Doctor found my near (close) vision clear.
Close vision remains clear at age 54, due to reading fine print, Bates Method. It was blurry after the neck injury. Bates Method returned it to clear, fine print seen at 20-6-3 inches from the eyes.) The Doctor told the patient that the Bates method will never cure myopia, astigmatism. The entire exam was done only with machines. Had extreme neck tension, sinus infection, head, neck immobile while placed in the machine, eye movement restricted, rushed to hurry and see the letters in the machine.

No Eyechart on the wall to test the vision. Could not use the Bates Method with completely natural eye function to read letters in the machine. Advertisement for Cornea Eye Laser Surgery in the forms the patient must fill out when waiting for the appointment.
Questions were discouraged and very limited, evasive answers were given to the cause of the eye condition. Would not state cause of visual illusions, eye movement impairment... Said, "It's ok". (I thought he might be afraid to get involved with stating anything about the neck injury the dishonest chiropractor caused.) Eyeglasses were stated as the only option. He prescribed strong 20/20 lenses with astigmatism corrections. This prescription will maintain, quickly increase the level of blur, astigmatism in the eyes, cause new types of blur, astigmatism, vision impairment to occur at all distances, prevent the eyes, visual systems natural reversal, removal of the blur, (myopia) astigmatism. When I lived here in Worcester 5 years ago the same astigmatism effect caused by sinus pressure, congestion occurred. It was cured by moving to Boston, MA, clean ocean air. It has returned after living here 4 years. I am moving soon. I gave up trying to talk to the doctor about the Bates Method and natural cures for vision, health.
Notice that the left and right eyes eyeglass lenses for myopia and astigmatism prescription are unbalanced: different strengths of eyeglass lenses. This will greatly impair the eyes fusion, binocular vision, 3-D vision, convergence, divergence, accommodation, un-accommodation, eyes ability to work together, will impair left and right brain hemisphere (entire brain) function with the left and right eyes.
Doctor tried to sell bifocal glasses: plain lens on bottom and distant lens on top. This would further impair eye movement, central-fixation, will cause, increase neck muscle tension and will quicken, increase vision impairment. A direct road to cataracts and eye surgery. I refused the bifocals and this made the doctor upset. I was not allowed option for no astigmatism correction and not allowed reduced weaker lenses for use with the Bates Method, Natural Vision Improvement.
After the eye exam, I refused the eyeglasses, placed them in the Doctor's trash can. I used the Bates Method. Natural Vision Improvement has returned my vision to normal. Cured the sinus condition 90%, improving neck vertebrae alignment, relaxing the neck muscles with the Osteopath, Physical Therapy, Massage, improving posture, computer use with frequent breaks, stretching, relaxation, looking to the distance. Astigmatism was removed by also using the Natural Vision Improvement Astigmatism Wheel Charts, Central-fixation, Shifting with both eyes together, one eye at a time, both together again, Astigmatism Swings, Palming...
The blur and astigmatism is now removed after 2 weeks practice of Natural Vision Improvement. Vision fluctuates to 20/40 when neck injury is re-activated by lifting, strain, poor computer posture, but is corrected quickly.
The good part of the eye exam: the doctor checked to be sure that the chiropractic injury did not cause a detached retina, cataract, stroke. Eye doctors can detect these by looking into the eye. I refused eye drops due to the drug companies placing toxins in all their drugs. The doctor was understanding, kind. Knowing my eyes are healthy relaxed my mind, removed worry, stress.
This greatly helped my vision to return to normal. Fear, stress alone can cause blur, astigmatism, impair eye movement and block various brain functions with the eyes.
Sinus pressure, neck tension, vertebrae misalignment, worry does affect the clarity of close, distant vision and eye movement.
All return to normal when the patient uses the Bates Method, correct posture, better computer habits, clean air, warm steam humidifier with pure sea salt, less sugar, no extreme heavy lifting, no Artificial 3-D Fusion eye exercises. None of this was suggested by the Eye Doctor! Absolutely nothing was taught to improve the condition naturally!
People can improve their vision naturally. An injured neck causing many vision problems was repaired 90% and vision returned to clear due to this patient's training by Bates Method Teacher's. Most people do not have injuries, can improve their vision quickly, easily with a little knowledge of Natural Vision Improvement.

Reduce Your Eyeglass Lense Strength to 20/40

Learn how to create a eyeglass lens prescription to lower the strength of a strong 20/20 eyeglass lens prescription (prescribed by most eye doctors that do not teach Natural Vision Improvement) to a weaker, reduced strength of eyeglass lens that provides 20/40 vision on the eyechart to enable, help improve relaxation of the eyes, eye muscles, visual system and practice of the Bates Method. (I have not worn glasses for 35 years so I have no experience with this.) Compare two pair of glasses: one that provides clear 20/20 vision on the eyechart. The other glasses 'weaker', provide 20/40 vision. The difference in these numbers may be the number to reduce future lens to as vision improves if the vision

improves at the same level, but, if it improves more, then this number will be incorrect, the lens will be too strong. The question is: how much strength 'diopters' must the persons 20/20 lens be reduced to create a weaker 20/40 lens each time the vision improves?
Most eye doctors will not do this for the patient because it results in vision improvement, freedom from eyeglasses, can prevent: cataracts, other eye problems, sale of eye surgery.
Eyeglass strength, reduced to 20/40 clarity will be different for each person's level of clarity without the glasses. Example: A person that sees 20/80 without glasses, gets reduced lens providing 20/40 clarity. He will have a specific, different lens strength to produce that 20/40 state than a person with 20/60 vision without glasses being prescribed a reduced 20/40 eyeglass lens clarity. The 20/60 person will have weaker lens than the 20/80 person and still see 20/40 clarity through the glasses.
Some people prefer to get more reduced, weaker lens: 20/50, 60 if they do not need glasses for driving, work, safety... These glasses provide more relaxation of the visual system, more and faster vision improvement before needing to purchase new further reduced eyeglass lens. A Bates Method Behavioral Optometrist or Natural Vision Improvement Teacher specializing in reduced lenses knows how to do this. A person that has kept their old weaker eyeglasses (lenses) may be able to use old, weaker and weaker pairs of glasses if they provide 20/40 or weaker clarity each time a weaker pair is needed as the vision progressively improves. There must be no astigmatism correction in the reduced lens, no bifocal, no tinting... If astigmatism must be kept in the glasses to see, drive: get the astigmatism reduced, weaker each time the glasses are reduced as the vision improves with application of the Bates Method.
Many Optical businesses now sell low cost eyeglasses on-line: Experienced patients can write their own prescription. No eyeglasses is best. Reduced lenses are used only when necessary for driving, safety at work, play... http://www.zennioptical.com



Pinhole Glasses



Pinhole glasses are unnatural, act like dark, tinted lenses, sunglasses; they block healthy full spectrum sunlight and lower the clarity of vision, health and function of the eyes. The pinholes act as sunglasses and widen the pupil unnaturally in the light. This is harmful to the visual system, function of the brain with the eyes, pupil, iris, lens, retina. Dark glasses cause watering eyes, sensitivity to light, impairs light tolerance.

Pinhole glasses do not help the eyes function correct, do not improve function of the eye muscles and brain with the eyes, eye muscles, retina. Pinholes block normal eye, brain, visual system function; prevent the eyes from functioning, focusing, moving perfectly, natural; prevents normal, complete eye movement 'shifting', central-fixation, all Correct Vision Habits, accommodation, convergence, un-accommodation, divergence, binocular vision, fusion, depth, distance perception, 3-D vision. The fovea centralis, eyes 'central field' must avoid the black area of the glasses and move to, look through only the pinholes. This makes it difficult for the central light ray to focus perfectly on the center of the fovea centralis. This blocks full, free eye movement, normal central-fixation. Pinholes prevent the eye muscles (ciliary, iris/pupil/lens, recti, oblique...) from functioning normally. Objects seen through pinholes appear smaller, incorrect size. This impairs memory, imagination, function of the brain with the eyes. All eyeglasses including pinholes disrupt normal blinking, can cause headaches.

Pinholes reduce some of the light rays entering the eye. This reduces some of the blur produced by unfocused light rays in eyes that needs vision improvement. Pinholes act as the eyes pupil does in sunlight; in sunlight the pupil becomes smaller; this reduces light rays in the eye. This is why day vision is clearer than night vision when the eyes need vision improvement. Pinholes do this all the time, in all light and in an unnatural way. This is unhealthy, confuses the brain, eye muscles, iris/pupil muscles, impairs their function... (The iris/pupil muscle is interconnected with the ciliary, lens muscle. Tear gland and other muscles are in the same area and can affect each other when tense, not functioning correct.) Squinting, an Incorrect Vision Habit that causes eye, eye muscle tension and unclear vision is a form of a unnatural pinhole effect.

People with cataracts, other eye, vision impairments may see better through pinholes, but this is temporary and prevents Natural Vision Improvement, a return to natural clear vision, healthy eyes. Pinhole glasses are illegal, not safe for driving, work, play.

Pinholes are used only in emergencies, for a few seconds to read fine print on a medicine bottle, a distant sign... to prevent squinting and use of eyeglasses. It's better to use the pinhole glasses for a couple seconds than to put on eyeglasses and tense up the eye muscles, eyes, visual system and reverse your vision improvement process. If eyeglasses are needed; only reduced weaker lenses are used and as little as possible. Pinhole glasses are better than eyeglasses because they cause less strain than eyeglass lenses, less eye muscle tension so, this can help the vision improve. Pinholes should not be a replacement for natural vision. The more eyeglasses, pinholes are avoided, the faster and easier the vision improves. When the vision improves with use of The Bates Method, then pinhole glasses, eyeglasses are discontinued.

Warning; Avoid Plus Lens Therapy

Some eye doctors sell the use of strong plus convex lenses (close vision eyeglass lenses) to be worn to improve clarity of distant vision. They state that this method forces the eye muscles to stretch and strengthen to improve focus for distant vision. Stronger and stronger lenses are used.
This is not natural, it causes increased strain, tension, confusion, dysfunction of the visual system, outer and inner eye muscles, nerves, brain, body, impairs activation, integration, function of the left and right brain hemispheres, optic chasm, visual cortex, retina, are addictive and result in increased blur, close and distant vision impairment, cataracts, headaches, dizziness, strabismus and other eye problems.
These businesses are sneaking onto Bates Method discussion groups, forums on the internet and promoting this harmful method. Avoid this method!! They are trying to sell to adults and especially children. These lenses will impair growth, function of the child's eyes, brain, learning, memory, concentration... and cause more vision problems.
Never wear strong eyeglass lenses.
Do not wear close vision lenses for distant vision.
Do not wear distant vision lenses for close distances.

A negative, minus eyeglass lens for distant vision causes increased eye muscle tension and abnormal lengthening of the eye = increased distant and close vision impairment and other eye problems; detached retina, macula degeneration, cataracts...
A positive, plus eyeglass lens for close vision causes increased eye muscle tension and abnormal shortening of the eye - increased close and distant vision impairment and other eye problems; detached retina, macula degeneration, cataracts...
Avoid all forms of eyeglass lenses. Use the Bates Method.
See article below; using close vision (Plus Lenses) to attempt to reverse unclear distant vision strains the eye muscles, causes eye muscle imbalance, dysfunction, impairs left and right brain hemisphere activation, integration, all brain functions with the eyes, eye muscles.
People develop fast, increased vision impairment, cataracts, detached retina and other eye problems from using close and distant vision lenses.

When a person wears reduced, weaker eyeglass lenses for close and distant vision, sometimes, as the vision improves due to use of the Bates method, lenses for a specific distance will become too strong and need to be reduced again. In this case the lenses for that distance may now be the correct reduced strength for the other distance. A Bates teacher can describe this better. This is a completely different method than the harmful use of strong or weak plus lenses for distant vision.

I prefer the Bates student that needs to use reduced lenses to use; reduced, weaker & weaker distant vision lenses for distant vision and reduced, weaker & weaker close vision lenses for close vision and to eliminate use of eyeglasses as soon as possible.

There are many new unnatural methods being sold by the optical industry, surgeons, people selling books and other devices that promise vision improvement but result in eye, vision damage.

Stay with the Bates Method. The Bates method relaxes the eye muscles, returns the muscles to correct function for clear vision at all distances close and far without eyeglasses. The Bates method is

MY TECHNIQUE IN MYOPIC CASES
in the "Land of Myopes"

By DR. C. P. RAKUSEN, Shanghai, China

The author, with 15 years of practice and research in the "Land of Myopes," reaches surprising conclusions in regard to pseudo-myopia in youthful cases and results from use of plus repression prescriptions.

I was greatly interested in the article "Simple Myopia; Preventive Treatment" in THE JOURNAL-REVIEW'S issue of March 1, 1936, in which Doctor Haberfeld comments on his "technique for lessening the tendency of myopia in children." He "feels that every optometrist should know of the basic principles involved" in what he calls his "Teleopto lens formula." Doctor Haberfeld submits the article as a synopsis of the principles of his lecture before the A.O.A. convention at Miami in June, 1935.

This subject should be brought to the attention of optometrists everywhere, and I welcomed Doctor Haberfeld's treatise as a means to this end. While editorial reference to the article stated that the newspapers referred to the "Teleopto" as the discovery of a new lens for myopic cases, I regret that the subject should have been handled thus. There is, of course, no new lens-invention involved at all; it is only the technique of handling these cases which is new.

On the technique and much of the subject matter of Doctor Haberfeld's article, I wrote in articles from 1930 onward, culminating in an article in 1933 on "Optical Prisms" and in 1935 an article entitled "Plus Lenses for Myopia." These articles were, to my knowledge, the first published to advocate plus repression lenses and (or) plus Rx, with prisms for youthful myopes.

I have been working on the subject in China ("Land of Myopes") for over 15 years, during which time, in discussions of my technique with oculists in China and with optometrists in other parts of the world, I have often been ridiculed at my "crazy ideas of plus lenses for myopes." One oculist, with whom I was corresponding, wrote to me in 1928, "your next step should be minus lenses to reduce hyperopia."

On account of this ridicule and of the radical technique involved, I hesitated to publish an article on the subject until about 1930 when, while examining several hundred school children among whom were a large percentage of myopes, I selected 10 whose age and history indicated recently acquired myopia. All had a manifest myopic spasm of one to two diopters, and naked vision of 20/200 to 20/100.

At first I had the school physician present to verify the naked vision, and then fitted all the children with plus repression lenses, with prism-base-in, to be worn constantly at all close work and, as much as possible, indoors. One week later, a recheck showed every one of the 10 had improved naked vision; three of them had normal 20/20 vision. A careful record for two years afterward showed further improvement in all cases and no retrogression, where plus lenses continued to be worn for all close work. In one case, where the glasses were later discarded, the myopic spasm returned.

More recently, in the past few years, since publication of my articles on the subject, I have received praise and commendation of my technique from medical practitioners in China, also from many well-known optometrists in America.

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The child returned for periodical rechecks during the period 1930 to 1932 and when last seen, late in 1932, naked vision was O.U. 20/20 readily and was O.U. 20/40 with the plus lenses as worn. I next saw the patient almost three years later, in 1935, when she returned to China, when she was wearing O.U. minus 2.00, minus 0.50 axis 180.

The facts were, that after seeing me late in 1932, the parents returned to America and left the child with relatives to attend school in America. She broke her glasses and went without any for over a year when, eye-discomfort recurring, the relatives took her to an oculist who prescribed weak minus glasses. However, she continued to have headaches and visited one or two other oculists, each of whom changed the prescription, resulting in the final O.U. minus 2.00, minus 0.50 previously reported, which, I found, gave only O.U. 20/30.

I have little doubt that if the patient had continued to wear these glasses for several more years she would now be even more myopic and require stronger minus glasses.

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Patient, a boy then aged 12, was brought in by his grandmother in 1931 complaining of eyestrain. Examination showed entirely negative findings, naked vision being 20/20 readily, amplitude of accommodation, etc., all normal. I advised "no glasses needed." I have not seen the patient since, but a few days ago a Rx was brought in by a local eye surgeon who does some refraction and with whom I am on very friendly terms, as he refers all his difficult cases to me. The Rx bore the patient's name, which I recalled, and reference to my files showed, by the date and age, that it was the same patient.

My oculist friend informed me that the patient, now aged 17, came to him complaining of eyestrain and wearing R. minus 1.25 sph.; L. minus 2.00 sph., fitted about two years ago by a local optician. The oculist's Rx, brought in to me, called for R. minus 2.00; L. minus 2.75.

It is interesting to note that this Rx was arrived at after examination with "drops," proving the fallacy of the theory that paralysis of the accommodation eliminates spasm. I am quite confident that this is another example of myopic spasm, wrongly "corrected" by minus lenses.

Inquiry showed that several years after I examined the boy in 1931, he happened to visit a local optician in company with a school friend who was having his broken glasses repaired. The optician "tested" both the boys' "sight" and prescribed for the one, as the boy was "short-sighted," which information was communicated to the parent who authorized the glasses to be made.

I could quote hundreds of similar cases, all proving beyond any question that this psuedo myopia in youthful cases should be treated with plus repression Rx, to relax the accommodation-convergence spasm. I would go so far as to recommend that weak plus lenses be given to all children, even those with only very slightly lowered vision, and including even those with normal vision who complain of eyestrain or ocular discomfort.

THE BOOKSHELF

By JOSEPH I. PASCAL, O.D., M.D.

Optometric Questionnaire, by H. C. Hughes, O.D., Monroe, La.; single copy, $1.75; in lots of 10, $1.50 each; in lots of 25, $1.25 each.

THIS is a mimeographed folder containing a series of about 2000 questions on practically all phases of optometry. It includes questions on the anatomy and physiology of the eye, on theoretic and practical optometry and on theoretic and practical optics. The questions are based primarily on Laurence's *Visual Optics*, though there are some supplementary questions, the answers to which will have to be sought in other books.

From the standpoint of testing one's knowledge or of prodding one on to find the answers for the questions he cannot answer, the set is quite satisfactory. It should help to set the student thinking more clearly on what he has read, as is always the case when one is asked to show one's knowledge of a subject by answering definite questions instead of merely rambling on. The questions on the whole are brief, definite and to the point.

My Technique in Myopic Cases. - The Optical Journal and Review. August 15, 1937. 16-17. Rakusen, C.P.

safe, healthy, the normal, natural function of the eyes.

This article describes how Plus lenses were prescribed when the persons eyes were normal. 3,4 years later the person still wears glasses.

Plus lense treatment consists of wearing Plus Lenses (close vision eyeglass lenses) for close and distant vision in an attempt to force the eye muscles, eyes to function for close distance when looking at close and far distances - in the attempt to force the eye muscles, eyes to change function, to force the abnormally lengthened eye that causes unclear distant vision to change shape, shorten nearer to the round eye shape that produces clear distant vision. (A round/slightly lengthened eye produces clear close vision).

The Bates Method is against the use of Plus Lense Treatment.

MY TECHNIQUE IN MYOPIC CASES in the "Land of Myopes"

By DR. C. P. RAKUSEN, Shanghai, China

The author, with 15 years of practice and research in the "Land of Myopes," reaches surprising conclusions in regard to pseudo-myopia in youthful cases and results from use of plus repression prescriptions.

I was greatly interested in the article "Simple Myopia; Preventive Treatment" in THE JOURNAL-REVIEW'S issue of March 1, 1936, in which Doctor Haberfeld comments on his "technique for lessening the tendency of myopia in children." He "feels that every optometrist should know of the basic principles involved" in what he calls his "Teleopto lens formula." Doctor Haberfeld submits the article as a synopsis of the principles of his lecture before the A.O.A. convention at Miami in June, 1935.

This subject should be brought to the attention of optometrists everywhere, and I welcomed Doctor Haberfeld's treatise as a means to this end. While editorial reference to the article stated that the newspapers referred to the "Teleopto" as the discovery of a new lens for myopic cases, I regret that the subject should have been handled thus. There is, of course, no new lens-invention involved at all; it is only the technique of handling these cases which is new.

On the technique and much of the subject matter of Doctor Haberfeld's article, I wrote in articles from 1930 onward, culminating in an article in 1933 on "Optical Prisms" and in 1935 an article entitled "Plus Lenses for Myopia." These articles were, to my knowledge, the first published to advocate plus repression lenses and (or) plus Rx, with prisms for youthful myopes.

I have been working on the subject in China ("Land of Myopes") for over 15 years, during which time, in discussions of my technique with oculists in China and with optometrists in other parts of the world, I have often been ridiculed at my "crazy ideas of plus lenses for myopes." One oculist, with whom I was corresponding, wrote to me in 1928, "your next step should be minus lenses to reduce hyperopia."

On account of this ridicule and of the radical technique involved, I hesitated to publish an article on the subject until about 1930 when, while examining several hundred school children among whom were a large percentage of myopes, I selected 10 whose age and history indicated recently acquired myopia. All had a manifest myopic spasm of one to two diopters, and naked vision of 20/200 to 20/100.

At first I had the school physician present to verify the naked vision, and then fitted all the children with plus repression lenses, with prism-base-in, to be worn constantly at all close work and, as much as possible, indoors. One week later, a recheck showed every one of the 10 had improved naked vision; three of them had normal 20/20 vision. A careful record for two years afterward showed further improvement in all cases and no retrogression, where plus lenses continued to be worn for all close work. In one case, where the glasses were later discarded, the myopic spasm returned.

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16 17

This method is unnatural, very harmful to the eye. It causes extreme tension, strain, dysfunction in the brain, eyes, eye muscles, causes increased blur, cataracts and other eye problems. Wearing eyeglass lenses for the incorrect distance causes confusion, dysfunction, chronic tension, strain in the brain, left and right hemispheres, visual cortex, visual system, eye muscles, eyes and increased vision impairment. Headaches, neck tension occur.

The Bates Method of Natural Eyesight Improvement relaxes the brain, eye muscles, eyes, returns all to normal function, returns the eye to correct shape for clear close and distant vision and keeps the eyes healthy. Avoid all eyeglasses, use the Bates method.

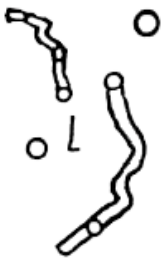
Reading fine print, shifting, central fixation on small details of small objects (stone, jewelry...) changes the eye to the normal round/slightly lengthened shape for clear close vision and coaxes the eye to avoid a abnormally lengthened shape and to change to the normal round shape when looking to the distance for clear distant vision.

This article on the use of Plus lenses to treat unclear distant vision, Myopia is included in this book to show that the method is not effective. Plus lenses are eyeglass lenses that are prescribed for unclear close vision. Close vision eyeglass lenses cause fast, increased vision impairment at close and far distances and are a main cause of cataracts and other eye problems. People that have tried plus Lense treatment have developed cataracts and other vision impairments. Notice that the person in this article never stopped use of eyeglasses.

Floating Specks caused by Eyeglasses, Contacts, Laser Surgery, Sunglasses.

Eyeglasses, Contact lenses, Cornea Laser Surgery, Sunglasses, Staring cause Floating Specks by impairing natural eye movement, shifting, central-fixation, creating strain, tension in the eyes, eye muscles, neck, visual system, brain. Diet also affects the eyes health, function and can cause floaters.

Floating Specks.



Floaters, Floating Specks – Moving spots, lines, bubbles… in the visual field can appear in many forms, colors. They move when the eye moves and move away from the central field of vision. They are usually harmless.

Scientists state that floaters *Muscae Volitantes*, or *Flying Flies* are debris left in the eye from its development, injury or toxins in the body which can be removed by fasting, cleansing diet, improved liver, kidney health, avoiding: sugar, ingestion of chemicals, or chemicals in the air, on the skin, artery clogging food.

Ophthalmologist Bates states that tension in the mind, staring, squinting, limited eye movement, lack of central-fixation, eye muscle tension causes the appearance of floaters. Worrying about them, looking for the floaters, trying to prevent them from appearing and moving causes staring, eye muscle tension: the floaters then appear/stay in the visual field.

Dr Bates states that floating specks disappear when the mind, visual system, eye muscles, eyes relax causing the eyes to move, 'shift' correct – Relaxed mind, eye muscles, eyes produce all sizes, types of eye movements and it's the tiny, small shifts (saccadic eye movements, vibrations) and central-fixation that occur with relaxation, normal eye function that produce very clear vision, causes the floaters to disappear, stop moving around and the brain shuts them off.

Shift point to point on a fine print letter or small part on a distant or close object: left and right, top and bottom, diagonally… and notice the vision improves and floaters disappear. Clear vision removes floaters.

Practice shifting point to point on a fine print letter or tiny period with the eyes open. Then; imagine shifting on the letter or period with the eyes open without looking at it, see it in the mind only. Blink, relax. Then: do this with the eyes closed

using the memory and imagination, then with eyes open again. Notice the eyes do tiny movements even when shifting on the imaginary tiny object with the eyes open or closed. The floaters disappear.
Relaxed eye muscles, neck muscles, exercise, deep breathing improve blood/oxygen, nutrient, lymph flow, circulation to the brain, eyes, allows the eyes to remove waste, return eye fluid, lymph flow to normal. This removes floaters.

All Correct Vision Habits: Shifting, Central-fixation, Blinking, Switching Practice… and other Bates Method Activities; Long Swing, Rock, Sunlight, Deep Abdominal Breathing, good diet, avoiding processed sugar, aspartame, chemical exposure removes floaters. Food that improves the circulation in body, eyes helps cleanse the eyes, improves eye health.

Many floaters, suddenly appearing, flashing lights are a different type of floater and a sign of detached retina or other eye condition. See an Eye Doctor Immediately.
Migraine headaches can cause temporary flashing moving lights, patterns, blind spots in the visual field with or without the headache. Sinus headache, pressure can cause floaters and disrupt eye movement, cause blurry vision.

See Better Eyesight Magazine for a variety of Articles on Floaters

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

October, 1919

FLOATING SPECKS



Girl lying in the grass on a hill looking at the blue sky, white clouds and seeing floaters, imaging they are angels or outer space aliens, secret friends with magic powers that protect her.

A man returning from Europe was looking at some white clouds one day when floating specks appeared before his eyes. He consulted the ship's doctor, who told him that the symptom was very serious, and might be the forerunner of blindness. It might also indicate incipient insanity, as well as other nervous or organic diseases. He advised him to consult his family physician and an eye specialist as soon as he landed, which he did. This was twenty-five years ago, but I shall never forget the terrible state of nervousness and terror into which the patient had worked himself by the time he came to me. It was even worse than that of the clergyman, who was always ready to admit that his fears were unreasonable. I examined his eyes very carefully, and found them absolutely normal. The vision was perfect both for the near-point and the distance. The color perception, the fields and the tension were normal; and under a strong magnifying glass I could find no opacities in the vitreous. In short, there were absolutely no symptoms of any disease. I told the patient there was nothing wrong with his eyes, and I also showed him an advertisement of a quack medicine in a newspaper which gave a great deal of space to describing the dreadful things likely to follow the appearance of floating specks before the eyes, unless you began betimes (in good time, early) to take the medicine in question at one dollar a bottle. I pointed out that the advertisement, which was appearing in all the big newspapers of the city every day, and probably in other cities, must have cost a lot of money, and must, therefore, be bringing in a lot of money. Evidently there must be a great many people suffering from this symptom, and if it were as serious as was generally believed, there would be a great many more blind and insane people in the community than there were. The patient went away somewhat comforted, but at eleven o'clock—his first visit had been at nine—he was back again. He still saw the floating specks, and was still worried about them. I examined his eyes again as carefully as before, and again was able to assure him that there was nothing wrong with them. In the afternoon I was not in my office, but I was told that he was there at three and at five. At seven he came again, bringing with him his family physician, an old friend of mine. I said to the latter:

"Please make this patient stay at home. I have to charge him for his visits, because he is taking up so much of my time; but it is a shame to take his money when there is nothing wrong with him."

What my friend said to him I don't know, but he did not come back again.

I did not know as much about muscae volitantes then as I know now, or I might have saved both of these patients a great deal of uneasiness. I could tell them that their eyes were normal, but I did not know how to relieve them of the symptom, which is simply an illusion resulting from mental strain. The specks are associated to a considerable extent with markedly imperfect eyesight, because persons whose eyesight is imperfect always strain to see; but persons whose eyesight is ordinarily normal may see them at times, because no eye has normal sight all the time. Most people can see muscae volitantes when they look at the sun, or any uniformly bright surface, like a sheet of white paper upon which the sun is shining. This is because most people strain when they look at surfaces of this kind. The specks are never seen, in short, except when the eyes and mind are under a strain, and they always disappear when the strain is relieved. If one can remember a small letter on the Snellen test card by central-fixation, the specks will immediately disappear, or cease to move; but if one tries to remember two or more letters equally well at one time, they will reappear and move. Usually the strain that causes muscae volitantes is very easily relieved. See; April, 1925 and other issues;

FLOATING SPECKS

A very common phenomenon of imperfect sight is the one known to medical science as *muscae volitantes*, or *flying flies*. These floating specks are usually dark, or black; but sometimes appear like white bubbles, and in rare cases may assume all the colors of the rainbow. They move somewhat rapidly, usually in curving lines, before the eyes, and always appear to be just beyond the point of fixation. If one tries to look at them directly, they seem to move a little farther away. Hence their name of *flying flies*.

The literature of the subject is full of speculations as to the origin of these appearances. Some have attributed them to the presence of floating specks—dead cells or the débris of cells—in the vitreous humor, the transparent substance that fills four-fifths of the eyeball behind the crystalline lens. Similar specks on the surface of the cornea have also been held responsible for them. It has even been surmised that they might be caused by the passage of tears over the cornea. They are so common in myopia that they have been supposed

to be one of the symptoms of this condition, although they occur also with other errors of refraction, as well as in eyes otherwise normal. They have been attributed to disturbances of the circulation, the digestion and the kidneys, and because so many insane people have them, have been thought to be an evidence of incipient insanity. The patent-medicine business has thrived upon them, and it would be difficult to estimate the amount of mental torture they have caused, as the following cases illustrate.

A clergyman who was much annoyed by the continual appearance of floating specks before his eyes was told by his eye specialist that they were a symptom of kidney disease, and that in many cases of kidney trouble, disease of the retina might be an early symptom. So at regular intervals he went to the specialist to have his eyes examined, and when at length the latter died, he looked around immediately for some one else to make the periodical examination. His family physician directed him to me. I was by no means so well known as his previous ophthalmological adviser, but it happened that I had taught the family physician how to use the ophthalmoscope after others had failed to do so. He thought, therefore, that I must know a lot about the use of the instrument, and what the clergyman particularly wanted was some one capable of making a thorough examination of the interior of his eyes, and detecting at once any signs of kidney disease that might make their appearance. So he came to me, and at least four times a year for ten years he continued to come.

Each time I made a very careful examination of his eyes, taking as much time over it as possible, so that he would believe that it was careful; and each time he went away happy because I could find nothing wrong. Once when I was out of town he got a cinder in his eye and went to another oculist to get it out. When I

came back late at night I found him sitting on my doorstep, on the chance that I might return. His story was a pitiable one. The strange doctor had examined his eyes with the ophthalmoscope, and had suggested the possibility of glaucoma, describing the disease as a very treacherous one which might cause him to go suddenly blind and would be agonizingly painful. He emphasized what the patient had previously been told about the danger of kidney disease, suggested that the liver and heart might also be involved, and advised him to have all of these organs carefully examined. I made another examination of his eyes in general and their tension in particular; I had him feel his eyeballs and compare them with my own, so that he might see for himself that they were not becoming hard as a stone; and finally I succeeded in reassuring him. I have no doubt, however, that he went at once to his family physician for an examination of his internal organs.

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CORRESPONDENCE TREATMENT

Correspondence treatment is usually regarded as quackery, and it would be manifestly impossible to treat many diseases in this way. Pneumonia and typhoid, for instance, could not possibly be treated by correspondence, even if the physician had a sure cure for these conditions and the mails were not too slow for the purpose. In the case of most diseases, in fact, there are serious objections to correspondence treatment.

But myopia, hypermetropia and astigmatism are functional conditions, not organic, as the text-books teach, and as I believed myself until I learned better. Their treatment by correspondence, therefore, has not

Floating Specks

WHEN a patient stares or strains to see by looking at a light-colored surface he may see, or imagine he sees, floating black specks, strings of black thread or small light-colored globules resembling tears. The floating specks may be apparently a quarter of an inch or more in size and they may be of any shape.

The ability to see or imagine floating specks may occur in children or in adults of any age. Some children have been known to lie on their backs on the ground, look up at light colored clouds and amuse themselves for hours by watching what appeared to be floating specks.

Many nervous people have been made very unhappy, consciously or unconsciously imagining that they see these floating specks.

The cause of floating specks is an imperfect memory of perfect sight. Persons with normal vision who have never been conscious of floating specks can be taught how to imagine them by straining—to imagine letters, colors or other objects imperfectly.

Conversely, patients who are conscious of floating specks are unable to imagine them and perfect sight at the same time.

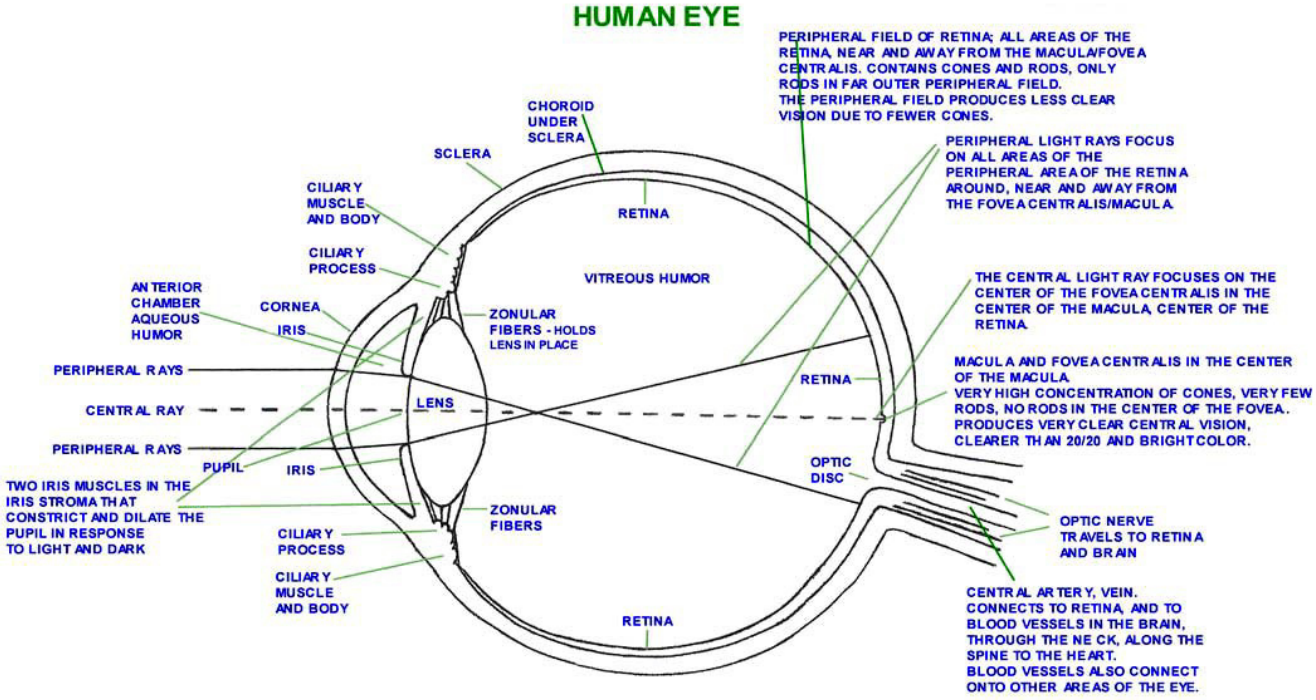
In the treatment of floating specks it is important to convince the patients thoroughly that they are only imagined and not seen. It helps very much to impress on the patient's mind that to see these floating specks requires a sufficient strain to lose a perfect imagination of all objects seen, remembered or imagined at all times and in all places.

Note.—Floating specks, October, 1919, "Better Eyesight."

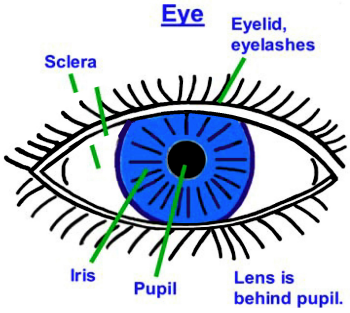
Muscae volitantes (floating specks), pages 176 and 236, "Perfect Sight Without Glasses."

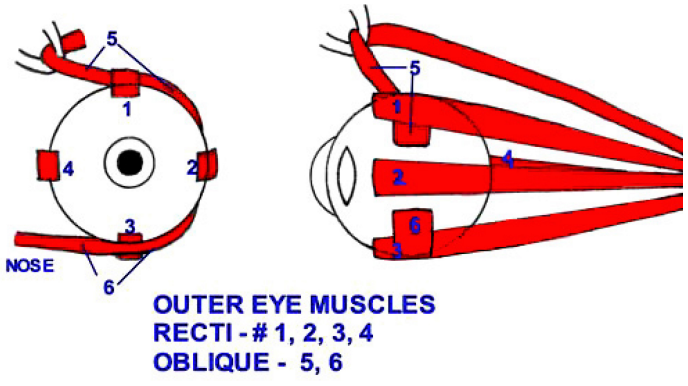
5 - HUMAN EYE

CENTRAL FIXATION - SEE CLEAR WITH THE CENTER OF THE VISUAL FIELD



THE RETINA CONTAINS CONES AND RODS - LIGHT, ENERGY RECEPTORS.
CONES PRODUCE VERY CLEAR VISION - CLEARER THAN 20/20 AND BRIGHT COLOR.
RODS PRODUCE LESS CLEAR VISION (20/400) - RODS PERCEIVE GREY/BLACK/WHITE, LIGHT AND DARK BUT NO OTHER COLORS. RODS DETECT MOVEMENT OF OBJECTS IN THE VISUAL FIELD AND CONTINUE TO FUNCTION IN ALMOST COMPLETE DARKNESS.
THE FOVEA AND MACULA IN THE CENTER OF THE RETINA CONTAIN MANY CONES, (ONLY CONES IN THE CENTER OF THE FOVEA) AND PRODUCE VERY CLEAR VISION IN THE CENTER OF THE VISUAL FIELD.
THE PERIPHERAL FIELD OF THE RETINA AROUND, NEAR AND AWAY FROM THE FOVEA/MACULA CONTAINS LESS CONES AND MORE RODS, AND ONLY RODS (NO CONES) IN THE FAR OUTER PERIPHERAL FIELD.
THIS RESULTS IN LESS CLEAR PERIPHERAL VISION, THE FAR OUTER PERIPHERAL FIELD BEING MOST UNCLEAR.
SEE CLEAR WITH CENTRAL FIXATION - A CORRECT VISION HABIT - PLACE THE OBJECT OF VISUAL ATTENTION IN THE CENTER OF THE VISUAL FIELD.
WHEN THE EYES USE THE CENTER OF THE VISUAL FIELD, THE CENTRAL RAY FOCUS PERFECT ON THE CENTER OF THE FOVEA CENTRALIS, RAYS CLOSEST TO THE CENTRAL RAY FOCUS ON THE MACULA, AND PERIPHERAL RAYS FOCUS PERFECTLY ON THE PERIPHERAL FIELD OF THE RETINA RESULTING IN PERFECT CLEAR CENTRAL VISION, CLEARER THAN 20/20 AND MAXIMUM CLARITY AND FUNCTION OF THE PERIPHERAL FIELD. THE CLARITY OF THE ENTIRE VISUAL FIELD IMPROVES.

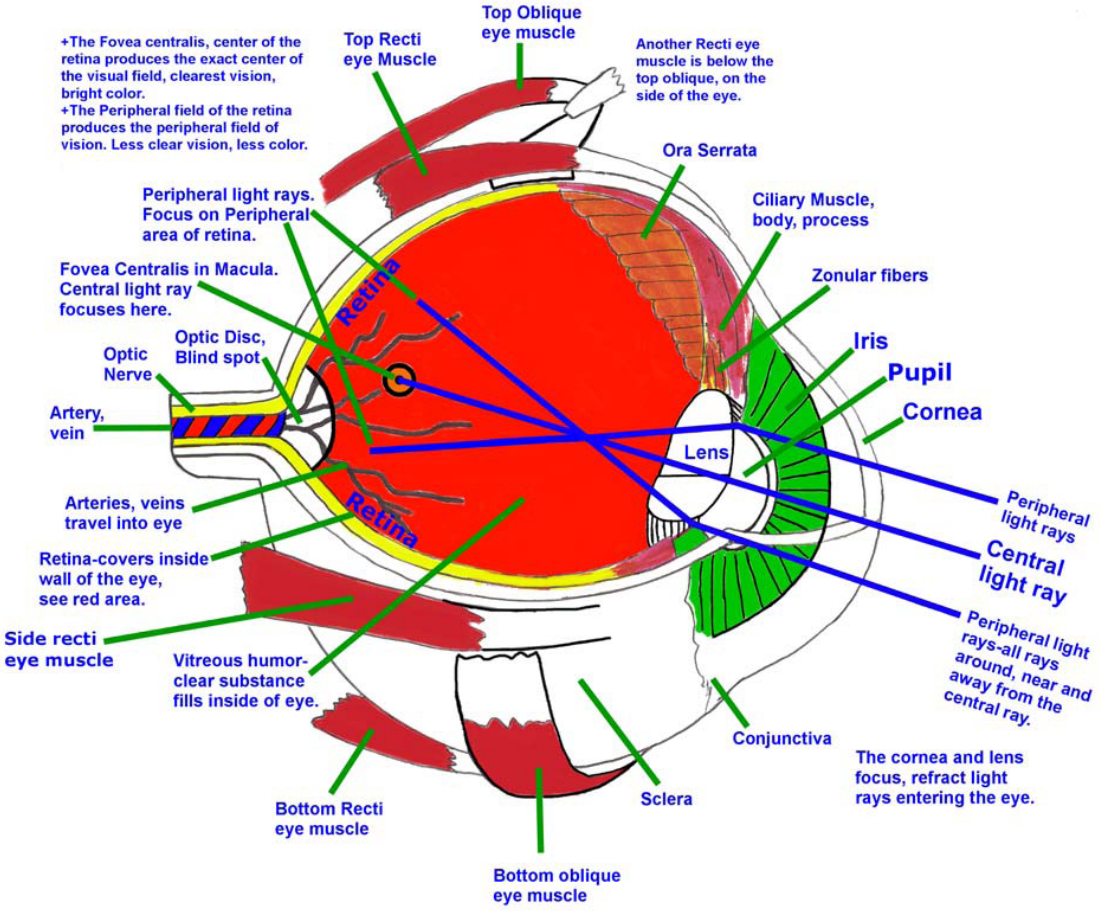


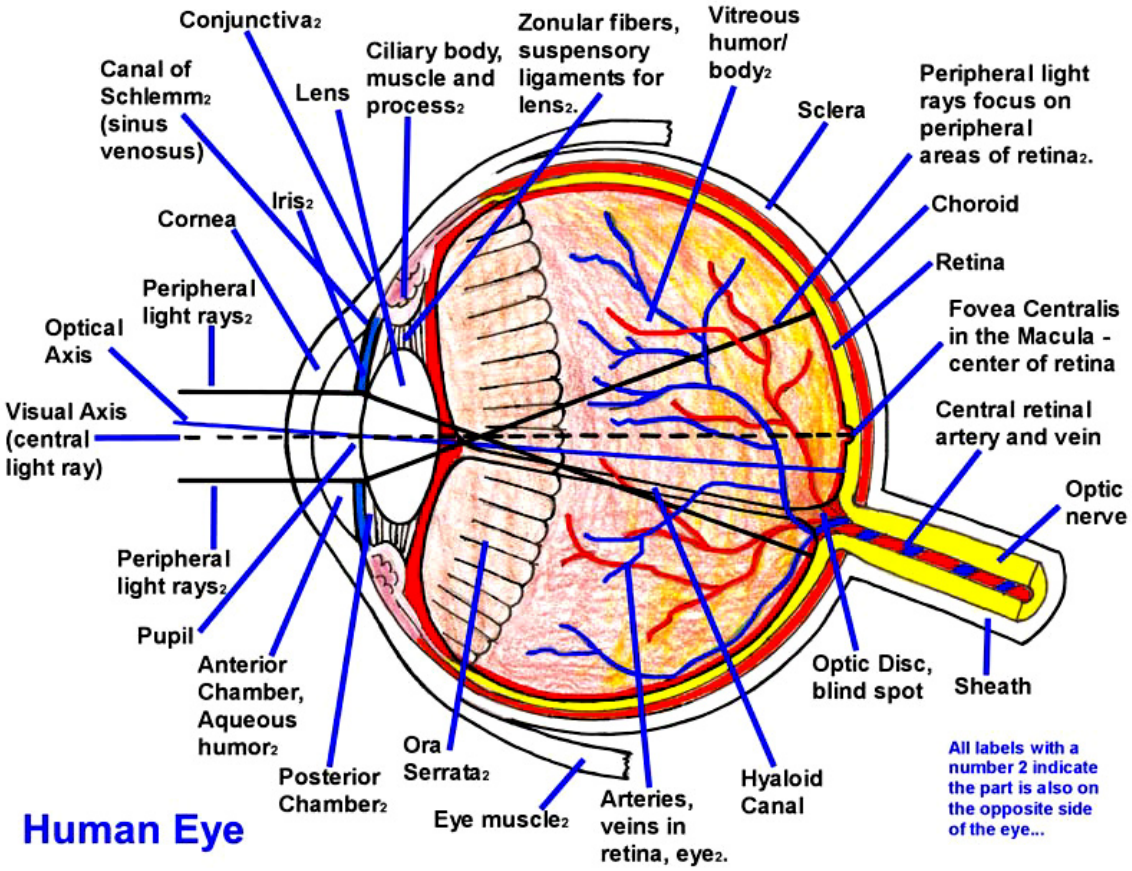


OUTER EYE MUSCLES
RECTI - # 1, 2, 3, 4
OBLIQUE - 5, 6

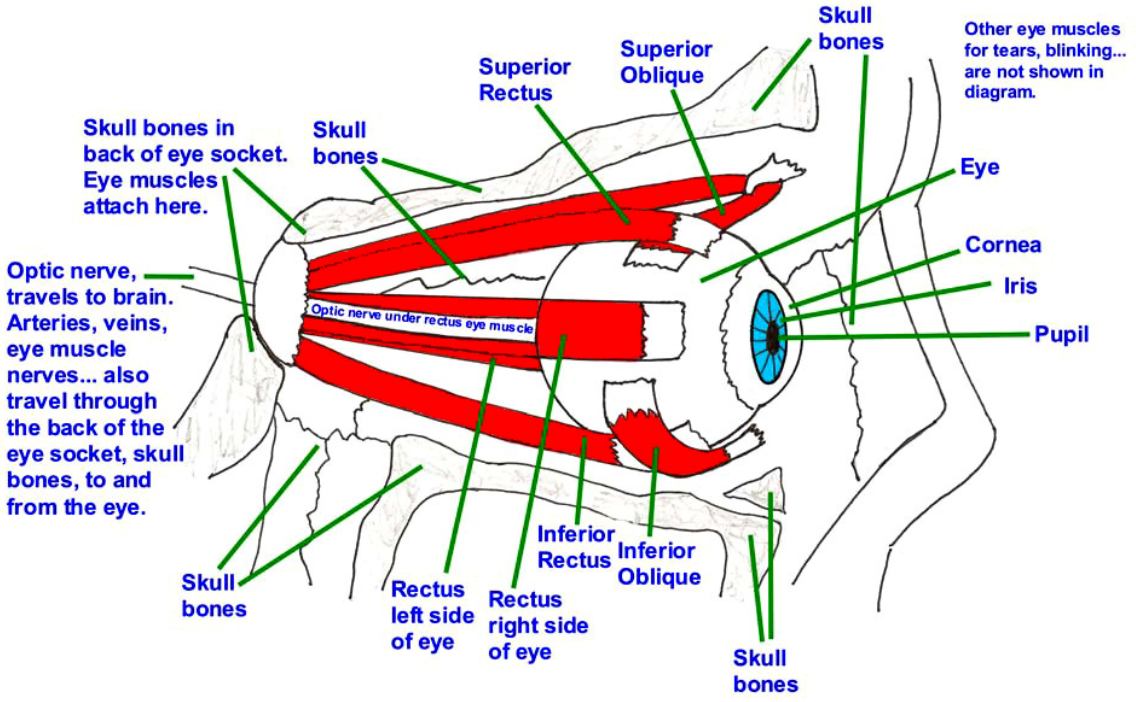
Video - http://www.youtube.com/watch?v=nIrKuQEJ6y4

The retina contains cones and rods, light receptors. Cones=very clear vision, bright color. Activated in light. Stops functioning in almost complete darkness. Rods=Less clear vision, grey, white color. Also senses movement in the visual field and continues to function in very dim light, almost complete darkness. The macula contains many cones, and a few rods. The fovea contains a high concentration of cones and no rods. The peripheral field of the retina contains many rods and some cones with less and no cones into the far outer peripheral. This is why the center of the visual field is clearest. See clear by using the Macula, Fovea Centralis, center of the visual field. See much clearer, fine details, brightest color by using the fovea, exact center of the retina, visual field. The center of the visual field moves with the eyes from object to object, part to part on objects keeping the vision clear.

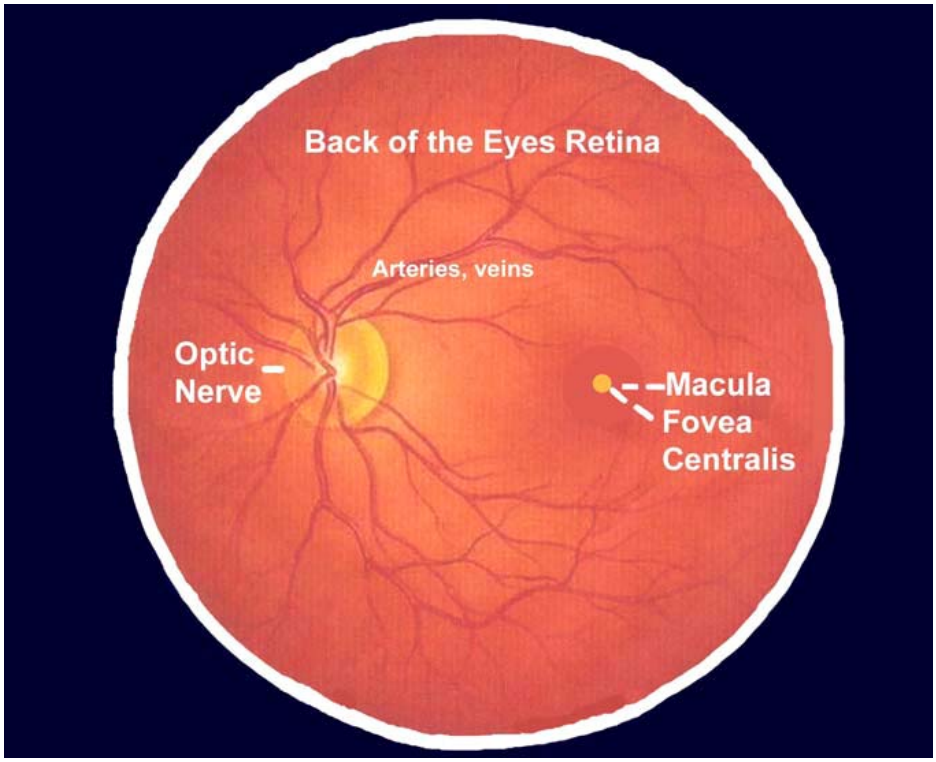




Eye socket, bones, eye, eye muscles, optic nerve.



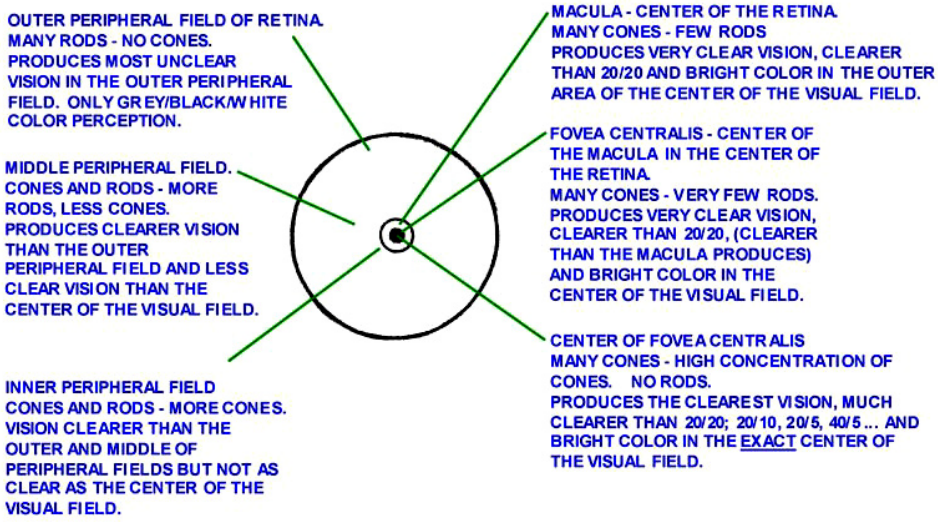
Notice that the eye socket is composed of bone segments, aligned, grown together. These are part of the skull bones. Eye muscles attach to the skull bones in the back of the eye socket. Misalignment of the eye socket or skull bones due to accidents, birth trauma, forcep, suction delivery... can mis-align the bones, place pressure, tension on/in the eye, optic nerve, eye muscles resulting in crossed, wandering eyes, imperfect convergence, divergence, accommodation, un-accommodation, unclear vision, astigmatism and other abnormal eye conditions. Special chiropractors (Cranial, Cranio Sacral Therapy, Osteopathy) can re-align the bones of the skull if needed. Often, use of the Bates method alone can correct eye function and clarity of the vision.



CONES - LIGHT RECEPTORS IN THE RETINA.
PRODUCE VERY CLEAR FINE DETAILED VISION AND BRIGHT COLOR PERCEPTION.

RODS - LIGHT RECEPTORS IN THE RETINA.
PRODUCE LESS CLEAR VISION.
RODS PERCEIVE LIGHT/ DARK, BLACK/GREY AND WHITE COLOR.
RODS DETECT MOTION, OBJECTS MOVING IN THE VISUAL FIELD.
EXAMPLE; A OBJECT (BIRD....) MOVES IN THE PERIPHERAL FIELD, THE RODS DETECT IT AND THE PERSON TURNS AND LOOKS DIRECTLY AT THE BIRD, PLACING IT IN THE CENTER OF THE VISUAL FIELD TO SEE IT CLEAR.
RODS ALSO CONTINUE TO FUNCTION IN VERY DIM LIGHT, ALMOST COMPLETE DARKNESS.

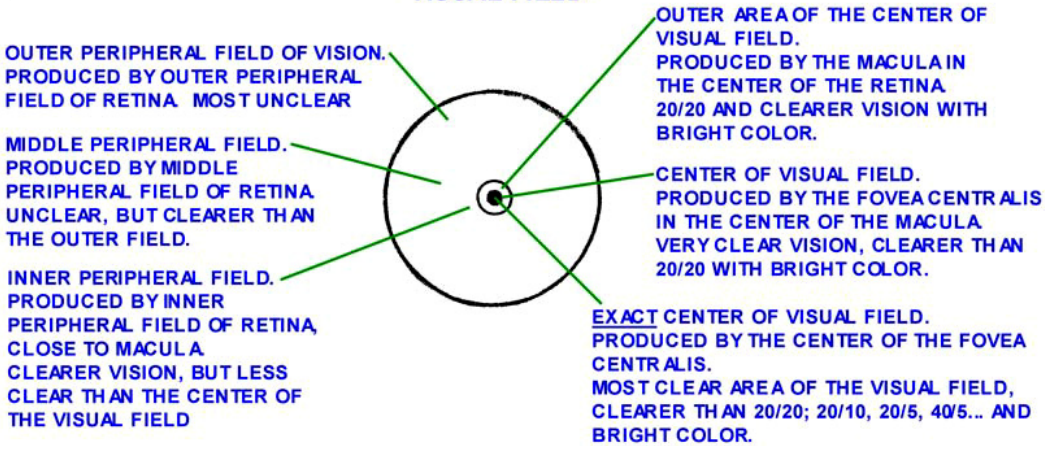
FRONT VIEW OF THE BACK OF THE EYES RETINA, LOOKING IN THROUGH FRONT OF THE EYE.





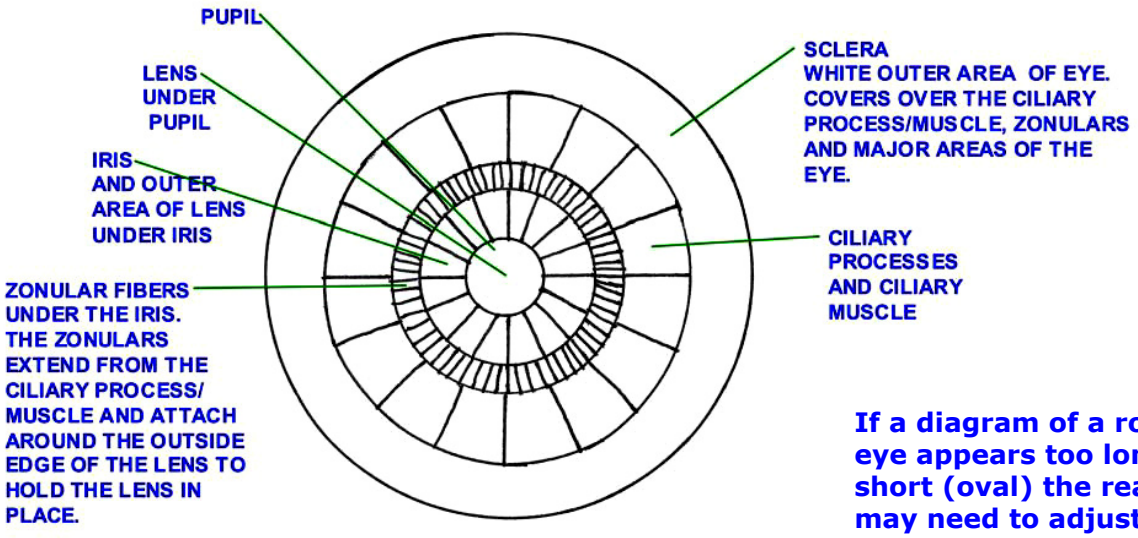
CENTRAL FIXATION - SEE CLEAR WITH THE CENTER OF THE VISUAL FIELD.
PLACE THE PART OF THE OBJECT THE EYES ARE LOOKING AT IN THE CENTER OF THE VISUAL FIELD.

VISUAL FIELD

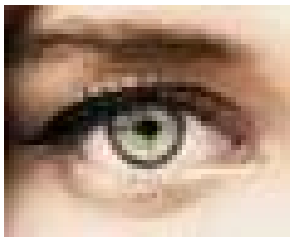


True shape of visual field is wider, longer on the left and right sides.

FRONT VIEW OF EYE UNDER SCLERA



If a diagram of a round eye appears too long, short (oval) the reader may need to adjust their computer monitors horizontal or vertical size until the eye is perfectly round. Some monitors are sold with incorrect adjustments.





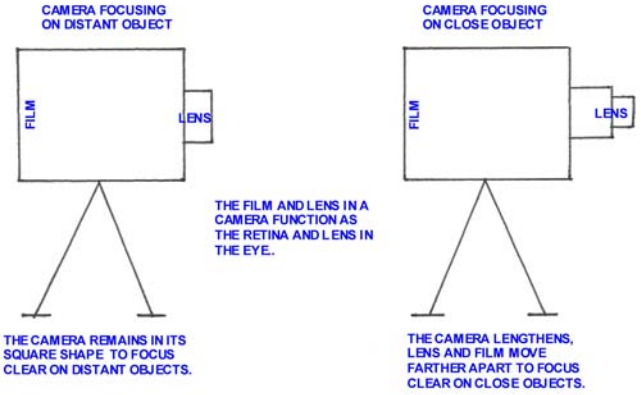
Some Birds have eyes that function as a telescope.
The Bates Method produces a type of telescopic and microscopic visual clarity.

The Eye Changes Length Like a Camera to Focus Close and Far

OPHTHALMOLOGIST BATES EXPERIMENTS ON THE EYE, EYE MUSCLES WITH THE RETINOSCOPE AND OTHER INSTRUMENTS PROVED THAT TENSION AND RELAXATION OF THE OUTER EYE MUSCLES CHANGES THE SHAPE OF THE EYE WHICH AFFECTS THE FOCUS OF LIGHT RAYS IN THE EYE AND CLARITY OF VISION.
+DR. BATES STATES THAT THE OBLIQUE OUTER EYE MUSCLES CONTRACT TO SLIGHTLY LENGTHEN THE EYE TO PRODUCE ACCOMMODATION, CORRECT FOCUS OF LIGHT RAYS ON THE RETINA AND CLEAR VISION WHEN LOOKING AT CLOSE OBJECTS.
+ THE OBLIQUE MUSCLES UNCONTRACT AND RETURN THE EYE TO A ROUND SHAPE FOR CORRECT FOCUS OF LIGHT RAYS ON THE RETINA AND CLEAR VISION WHEN LOOKING AT DISTANT OBJECTS.

THE FUNCTION OF THE EYE IS SIMILAR TO A CAMERA

THE CAMERA CHANGES ITS LENGTH TO FOCUS CLEAR ON OBJECTS AT CLOSE AND FAR DISTANCES.
+ THE WIDTH OF THE CAMERA, THE DISTANCE BETWEEN THE FILM AND LENS IS DECREASED TO FOCUS CLEAR ON DISTANT OBJECTS.
+ THE WIDTH OF THE CAMERA IS LENGTHENED, THE DISTANCE BETWEEN THE FILM AND LENS IS INCREASED TO FOCUS CLEAR ON ON CLOSE OBJECTS. (SOME CAMERAS ALSO LENGTHEN TO MAKE OBJECTS AT ANY DISTANCE, CLOSE OR FAR APPEAR LARGER, CLOSER.)



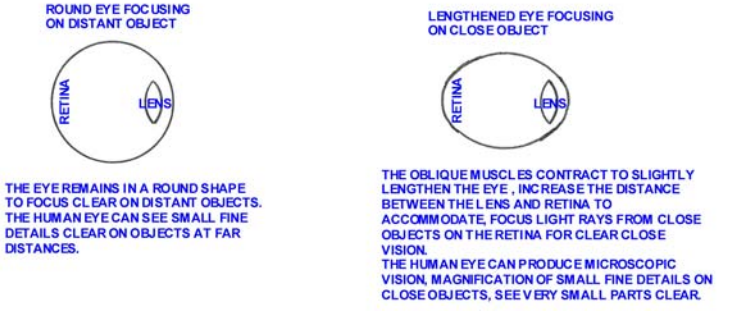
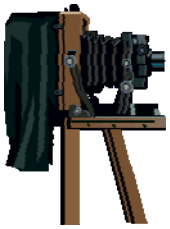
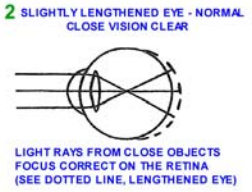


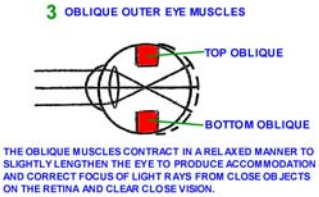
DIAGRAM OF LENGTHENED EYE IS ACCENTUATED FOR EASY VIEWING. TRUE LENGTHENING IS SLIGHT, JUST ENOUGH TO FOCUS DIVERGING LIGHT RAYS FROM CLOSE OBJECTS ONTO THE RETINA.

Eye Doctors state the lens also changes shape.









6 - 'DO IT YOURSELF'-BATES METHOD-NATURAL EYESIGHT IMPROVEMENT; PRACTICE OF SHIFTING AND OTHER RELAXED, NATURAL, 'CORRECT VISION HABITS' (THE NORMAL FUNCTION OF THE EYES, VISUAL SYSTEM). THE NOSEFEATHER.

CORRECT, RELAXED VISION HABITS

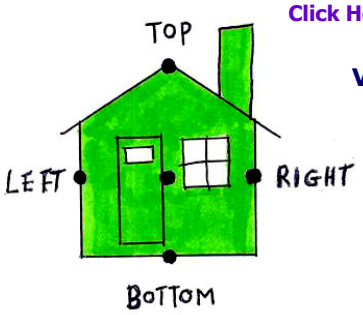
Practice Correct Vision Habits and other Natural Vision Improvement activities without eyeglasses. When wearing glasses-continue to use Correct Vision Habits; Shifting, Central-Fixation...

Videos for this chapter - Shifting, Central Fixation, Nosefeather Click Here

SHIFTING

Shifting is a Natural Eye Function and is practiced as a Correct, 'Relaxed' Vision Habit. Correct Vision (Eyesight) Habits; Shifting, Central-Fixation, Relaxation, Memory & Imagination, Movement, Blinking, Abdominal Breathing, Switching... are 'the normal function of the eyes, brain, body' (visual system).
Practice of Shifting, Central-Fixation.., Correct Vision Habits is 'imitating, activating normal, correct function of the eyes, brain, visual system'. Practice, imitate correct eye function, relaxed vision habits as a easy, effortless 'habit', all the time.

With a little practice, the eyes, eye muscles, brain, body (Visual system) will return to normal function, relaxation and Correct Vision Habits will be activated, occur 'on their own', all the time, as a automatic, subconscious habit, maintaining relaxation and clear vision at all distances. (Just as the heart beats, lungs breathe automatically, without conscious control, direction, without thinking about it.) Then, the student will consciously practice only occasionally if needed to prevent staring, squinting, blur-a tune-up to remind the visual system to stay with correct, relaxed function.



Video



Shifting; eye movement; to move, shift the eyes (visual attention, center of the visual field) from one small part of a object to another small part.
To see a object clear, the eyes 'Shift' - The eyes, visual attention, central field moves continually, easily from point to point (small part to small part) on the object. This is the normal function of the eyes.



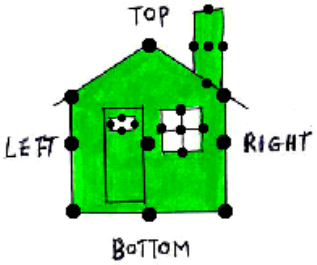
Shifting also occurs when the eyes look from one object to another object at different locations and distances in the visual field.
Central-Fixation (using the center of the visual field) is combined with shifting. Central-Fixation-chapter 8.

Staring; eye immobility, squinting, straining, trying hard, using effort to see clear are Incorrect Vision Habits that cause mental strain, eyestrain, eye muscle tension, neck, shoulder tension and unclear vision. Even a small amount of effort lowers the clarity of vision.

Natural Vision Improvement Teacher, Clara Hackett says; Staring is the main Incorrect Vision Habit that causes tension, strain and unclear vision. Correct Vision Habits are natural and relax the eyes, mind, visual system, produce clear vision.
Shifting 'eye movement' relaxes the mind, body, eye muscles, eyes, and brings clear vision. Shifting prevents staring and unclear vision.

Example;

Look at the picture of the green house.
The dots on the house represent small parts of the house.
Practice shifting from small part to small part on the house by moving the eyes (visual attention/center of the visual field) on the dots;
Shift from dot to dot on the house.
Look at the dot on the left side of the house, then shift to the dot on the



right side, then left, right, left...
Then shift to the dot on the top, then shift to the dot on the bottom. Shift top, bottom, top, bottom...
Shift on the dots (small parts of the house) in any order, direction; left and right, top and bottom, middle, top to right or left, right to bottom...
Avoid staring at a dot; let the eyes move, shifting continually, easy, relaxed from dot to dot.
Even when looking at a dot; the eyes move, shift point to point on the dot. Blink and relax.
Shift to other small parts near the dot and back to the dot in any direction.
(Point to point=central-fixation-using the exact center of the visual field. The exact center is a small point that produces clearer than 20/20, perfect, fine detailed vision. This is produced by the center of the fovea centralis in the center of the eyes macula, retina.)

Shift without the dots; corner to corner, corner to middle, to top, to side and to any part in any order, direction.
Shift on small parts; window; left side of window, right side, top, bottom, corners, middle.., window pane; small part to small part of the window pane, door, chimney, bricks in the chimney...

Shift continually, relaxed, easy from one small part to another.
Shifting keeps the image of the house clear.
This 'shifting' occurs even when the eyes look at a very small object at any distance, close or far.

The eyes do not have to shift in a straight line.
The normal function of the eyes is to move the visual attention, center of the visual field from point to point on objects in a variety of patterns.
Let the eyes move freely in any direction from one small part of the house to another small part. Look for small fine details, without effort. Relax and shift from tiny detail to tiny detail (Point to point - perfect central-fixation.)
(See the eye movement pattern pictures of the house on the right > and on the next page.)



THE DIAGRAM ABOVE SHOWS A EXAMPLE OF THE NATURAL SHIFTING PATTERN OF THE EYES.. NOTICE THE EYES MOVE FREELY ON THE HOUSE IN A VARIETY OF PATTERNS, DIRECTIONS.

Blink soft, easy, and relax.
Blinking causes the eyes to shift automatically.
Blinking coats the eyes with healthy tears and increases normal tear production. Tears improve the clarity of vision by nourishing, moisturizing the cornea, eyes and acting as a natural contact lens.
See Blinking in chapter 12.

Relax, breathe slow, abdominally.
The head/face and body move with the eyes, in synchronization, at the same time, in the same direction the eyes shift to. Face directly at the object the eyes are looking at.
The eyes, head/face, neck, shoulders and body are loose, relaxed and move freely.

Shift dot to dot (part to part) on the E.



Shift dot to dot on the Tree.



Blink, Relax

The correct way to practice shifting is; to shift (move) the eyes (and head/face with the eyes) from one small part to another small part on the object, shifting from point to point, relaxed, slowly, easy, continually.
Shift from object to object in the scenery. Read Dr. Bates Shifting article on the next pages.
Do this when looking at any size object, large or small, at any distance close, middle and far. Avoid trying hard to do this. Let the eyes do it naturally.
As slow relaxed shifting is practiced, the brain, eyes begin to return to normal function and the faster 'Saccadic', high frequency, tiny, microscopic, and other natural shifts/eye movements also improve and occur automatically, a subconscious function producing very clear vision, clearer than 20/20.
Avoid trying to shift fast. Practice shifting slow and easy and the eyes will automatically move quickly, easy, point to point, part to part, object to

Shift dot to dot on the Dog.



object. Let faster shifts occur 'on their own', a automatic, subconscious eye, brain (visual system) function. Then, when shifting improves, it's easy, vision clearer; practice faster shifts, but always let the eyes control the movement-avoid effort, force. Stay relaxed. The eyes can read an entire eyechart clear in a couple seconds, sometimes less when the eyes, mind are relaxed, vision clear.

Shift in a carefree manner, without effort. Don't try to see clear. Clear vision will occur on its own. Constantly thinking about how the eyes should function and worrying about the clarity of vision, forcing the eyes to move a certain way causes strain in the mind, eye muscle tension, interferes with the eyes natural, normal function and prevents clear vision from occurring.

Relax, Forget About The Eyes. Vision becomes clear when the mind is not worrying, not thinking about the eyes, clarity of vision, not forcing the sight to be clear.

Practice shifting, then, don't practice; let the eyes shift on their own, completely natural, a automatic function, habit.

If the eyes stare, move infrequently; practice shifting, central-fixation again. Relax and shift to prevent blur. With practice, shifting occurs on its own, all the time, the normal function of the eyes, a automatic, subconscious habit, function maintaining clear vision.

Flashes of clear vision will occur lasting a few seconds or longer. Avoid trying to hold onto the flash by staring, freezing up with the eyes, body immobile. Relax, keep shifting, moving, blink, breathe and flashes of clear vision will return, last longer, become permanent.

Remember, It Is Normal For The Clarity Of Vision To Fluctuate - clear, less clear and back to clear. Avoid eyeglasses. Shift to see a object clear and the clarity returns to 20/20. Natural Vision Improvement keeps the vision clearer than 20/20 and fluctuations are not usually noticed.

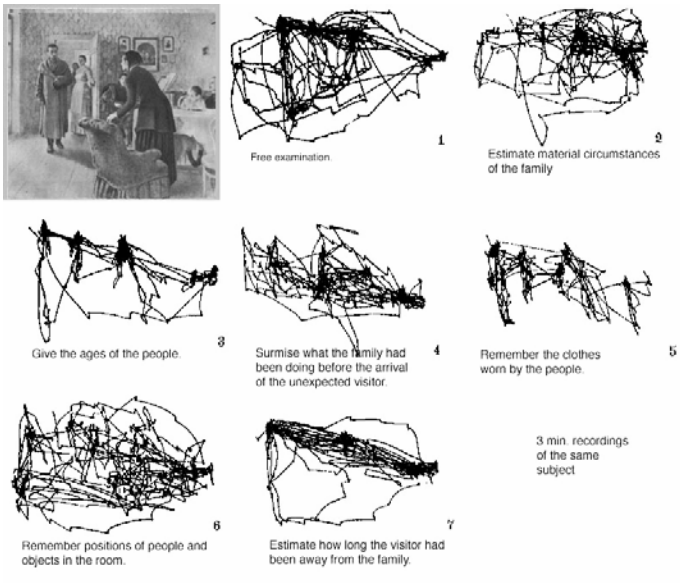
Practicing Shifting is not a Eye Exercise. The Natural Vision Improvement Student practices shifting to gently nudge, direct, coax the eyes, visual system back to correct function.
Staring, eye immobility, squinting, trying hard to see clear causes strain, tension and unclear vision.
Shifting, eye movement relaxes the mind, eyes and produces clear vision.

Now; try shifting on the smaller house, smaller parts of the house, pictures.

Then, practice shifting on any size objects in your environment at any distances, close, middle and far. Shift as a fun habit throughout the day, night.
+Practice shifting on small parts of far objects for clear distant vision.
+Practice shifting on small parts of close objects for clear close vision. (Read Fine Print.)
+Shift from object to object in the visual field, the eyes moving continually, easy, relaxed.

Blink. Blinking activates automatic eye shifting. Relax, Enjoy the scenery!

Click the video links for shifting practice and other Natural Vision Improvement videos;
Shifting, Central-Fixation Videos:
http://www.youtube.com/watch?v=IkQ9KEpA8zE http://cleareyesight.info/id93.html - http://www.youtube.com/watch?v=WO9AS4A8f_c
See the Videos Chapter & audio lessons in each chapter of the E-Book.

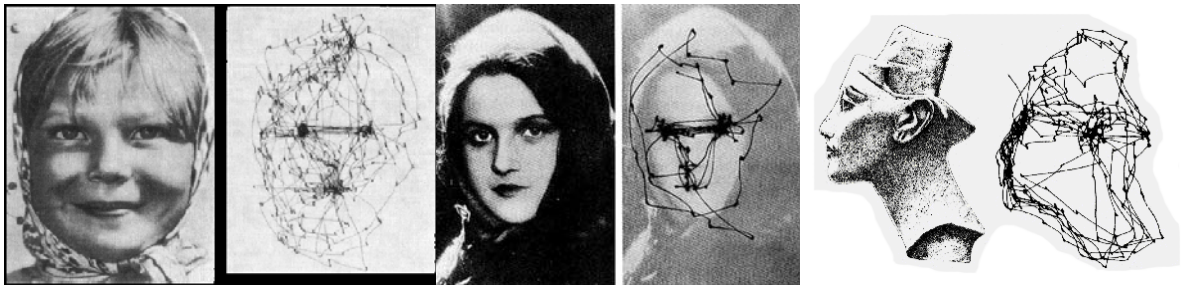


Eye Movements - Shifting, Saccades, with Central Fixation as the person looks at objects, people in the scene, thinks about them...

Thoughts in a person's mind, what the mind is thinking about the objects the eyes are looking at, other thoughts, images in the mind, shape, movement. of the objects also affects eye movements.
Notice how the eyes, visual attention, (exact

center of the visual field) move freely as the person looks at objects, thinks various thoughts. See the central field, visual attention move point to point on parts of objects and from object to object.
A persons thoughts produce eye movements when the eyes are open looking at objects and when closed thinking about subjects, objects using the memory, imagination.
+Relaxation improves the memory, imagination and vision.
+Improving the memory, imagination and relaxation improves the clarity of vision.

More Eye Movements with Central-Fixation, Fixations



Shift part to part on a picture. Then, close the eyes, remember the picture clear and shift part to part on the picture in the mind. Feel the eyes move. Notice that the shifting, (eye movement) keeps the picture clear, visible when the eyes are open and in the mind, memory, imagination when closed.

Saccades

Natural Eye Movement Patterns

Click Here - Eye Movement Pattern Pictures

Read the book-Eye Movements and Vision by Alfred L. Yarbus.





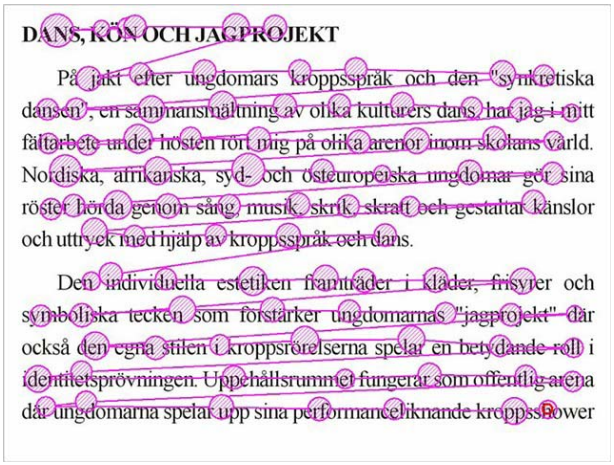
The eyes, visual attention, 'center of the visual field' moves from object to object, part to part (point to point) on objects for clear vision. Thoughts in the mind, movement, shape... of objects affect the eyes movement pattern. See the picture of the eyes movement when looking at people, objects in the room.

When the vision is clear, eyes normal, relaxed - eye movement is frequent, easy and a variety of movement occurs and tiny saccadic shifts occur often. The eyes look at, shift point to point on small parts of objects, see tiny details clear = 'Central-Fixation'.

When the vision is unclear, eyes tense, the movement is less, movements are stiff, mainly longer. Small and tiny, detailed saccadic eye movements, shifting is reduced. Eye muscle tension and blur increases.

Relax and shift for clear vision. Blink.

Reading, Eye Movements - Shifting, Saccades with Central Fixation



DANS, KÖN OCH JAGPROJEKT

På jakt efter ungdomars kroppsspråk och den "synkretiska dansen", en sammansmältning av olika kulturers dans, har jag i mitt fältarbete under hösten rört mig på olika arenor inom skolans värld. Nordiska, afrikanska, syd- och östeuropeiska ungdomar gör sina röster hörda genom sång, musik, skrik, skratt och gestaltar känslor och uttryck med hjälp av kroppsspråk och dans.

Den individuella estetiken framträder i kläder, frisyrer och symboliska tecken som förstärker ungdomarnas "jagprojekt" där också den egna stilen i kroppsrörelserna spelar en betydande roll i identitetsprövningen. Uppehållsrummet fungerar som offentlig arena där ungdomarna spelar upp sina performanceliknande kroppsshower

Eyeglasses block, reduce natural eye shifting movements, Saccadic shifts.
Avoiding eyeglasses, practicing relaxation and shifting relaxes the mind, eye muscles, eyes. All eye movements return to normal, saccadic shifts are frequent, convergence, divergence, accommodation, un-accommodation eye movements also return to normal, perfect movement for clear vision at all distances.

SHIFTING AND SWINGING

By Ophthalmologist William H. Bates

From Dr. Bates Book; 'The Cure of Imperfect Sight By Treatment Without Glasses' & 'Better Eyesight Magazine'.

WHEN the eye with normal vision regards a letter either at the near-point or at the distance, the letter may appear to pulsate, or to move in various directions, from side to side, up and down, or obliquely. When it looks from one letter to another on the Snellen test card, or from one side of a letter to another, not only the letter, but the whole line of letters and the whole card, may appear to move from side to side. This apparent movement is due to the shifting of the eye, and is always in a direction contrary to its movement. If one looks at the top of a letter, the letter is below the line of vision, and, therefore, appears to move downward. If one looks at the bottom, the letter is above the line of vision and appears to move upward. If one looks to the left of the letter, it is to the right of the line of vision and appears to move to the right. If one looks to the right, it is to the left of the line of vision and appears to move to the left.

Persons with normal vision are rarely conscious of this illusion, and may have difficulty in demonstrating it; but in every case that has come under my observation they have always become able, in a longer or shorter time, to do so. When the sight is imperfect the letters may remain stationary, or even move in the same direction as the eye.

It is impossible for the eye to fix a point longer than a fraction of a second. If it tries to do so, it begins to strain and the vision is lowered. This can readily be demonstrated by trying to hold one part of a letter for an appreciable length of time. No matter how good the sight, it will begin to blur, or even disappear, very quickly, and sometimes the effort to hold it will produce pain. In the case of a few exceptional people a point may appear to be held for a considerable length of time; the subjects themselves may think that they are holding it ; but this is only because the eye shifts unconsciously, the movements being so rapid that objects seem to be seen all alike simultaneously.

The shifting of the eye with normal vision is usually not conspicuous, but by direct examination with the ophthalmoscope it can always be demonstrated. If one eye is examined with this instrument while the other is regarding a small area straight ahead, the

eye being examined, which follows the movements of the other, is seen to move in various directions, from side to side, up and down in an orbit which is usually variable. If the vision is normal these movements are extremely rapid and unaccompanied by any appearance of effort. The shifting of the eye with imperfect sight, on the contrary, is slower, its excursions are wider, and the movements are jerky and made with apparent effort.

It can also be demonstrated that the eye is capable of shifting with a rapidity which the ophthalmoscope cannot measure. The normal eye can read fourteen letters on the bottom line of a Snellen test card, at a distance of ten or fifteen feet, in a dim light, so rapidly that they seem to be seen all at once. Yet it can be demonstrated that in order to recognize the letters under these conditions it is necessary to make about four shifts to each letter. At the near-point, even though one part of the

Rapidity of Eye's Motion

letter is seen best, the rest may be seen well enough to be recognized; but at the distance it is impossible to recognize the letters unless one shifts from the top to the bottom and from side to side. One must also shift from one letter to another, making about seventy shifts in a fraction of a second.

A line of small letters on the Snellen test card may be less than a foot long by a quarter of an inch in height; and if it requires seventy shifts to a fraction of a second to see it apparently all at once, it must require many thousands to see an area of the size of the screen of a moving picture, with all its detail of people, animals, houses, or trees, while to see sixteen such areas to a second, as is done in viewing moving pictures, must require a rapidity of shifting that can scarcely be realized. Yet it is admitted that the present rate of taking and projecting moving pictures is too slow. The results would be more satisfactory, authorities say, if the rate were raised to twenty, twenty-two, or twenty-four a second.

The human eye and mind are not only capable of this rapidity of action, and that without effort or strain, but it is only when the eye is able to shift thus rapidly that eye and mind are at rest, and the efficiency of both at their maximum. It is true that every motion of the eye produces an error of refraction ; but when the movement is short, this is very slight, and usually the shifts are so rapid that the error does not last long enough to be detected by the retinoscope, its existence being demonstrable only by reducing the rapidity of the movements to less than four or five a second. The period during which the eye is at rest is much longer than that during which an error of refraction is produced. Hence, when the eye shifts normally no error of refraction is manifest. The more rapid the unconscious shifting of the eye, the better the vision; but if one tries to be conscious of a too rapid shift, a strain will be produced.

Perfect sight is impossible without continual shifting, and such shifting is a striking illustration of the mental control necessary for normal vision. It requires perfect mental control to think of thousands of things in a fraction of a second; and each point of fixation has to be thought of separately, because it is impossible to think of two things, or of two parts of one thing, perfectly at the same time. The eye with imperfect sight tries to accomplish the impossible by looking fixedly at one point for an appreciable length of time; that is, by staring. When it looks at a strange letter and does not see it, it keeps on looking at it in an effort to see it better. Such efforts always fail, and are an important factor in the production of imperfect sight.

One of the best methods of improving the sight, therefore, is to imitate consciously the unconscious shifting of normal vision and to realize the apparent motion produced by such shifting. Whether one has imperfect or normal sight, conscious shifting and swinging are a great help and advantage to the eye; for not only may imperfect sight be improved in this way, but normal sight may be improved also. When the sight is imperfect, shifting, if done properly, rests the eye as much as palming, and always lessens or corrects the error of refraction

The Shift That Rests

The eye with normal sight never attempts to hold a point more than a fraction of a second, and when it shifts, as explained in the chapter on 'Central Fixation,' it always sees the previous point of fixation worse. When it ceases to shift rapidly and to see the point shifted from worse, the sight ceases to be normal, the swing being either prevented or lengthened, or (occasionally) reversed. These facts are the keynote of the treatment by shifting.

In order to see the previous point of fixation worse, the eye with imperfect sight has to look farther away from it than does the eye with normal sight. If it shifts only a quarter of an inch, for instance, it may see the previous point of fixation as well as or better than before; and instead of being rested by such a shift, its strain will be increased, there will be no swing, and the vision will be lowered. At a couple of inches it may be able to let go of the first point; and if neither point is held more than a fraction of a second, it will be rested by such a shift and the illusion of swinging may be produced.

The shorter the shift the greater the benefit; but even a very long shift - as much as three feet or more - is a help to those who cannot accomplish a shorter one. When the patient is capable of a short shift, on the contrary, the long shift lowers the vision. The swing is an evidence that the shifting is being done properly, and when it occurs the vision is always improved. It is possible to shift without improvement; but it is impossible to produce the illusion of a swing without improvement, and when this can be done with a long shift, the movement can gradually be shortened until the patient can shift from the top to the bottom of the smallest letter, on the Snellen test card or elsewhere, and maintain the swing. Later he may become able to be conscious of the swinging of the letters without conscious shifting. (The Swing: Natural illusion of movement of the object, in the opposite direction the eyes, visual attention shift, move to, upon the object; Oppositional Movement.)

No matter how imperfect the sight, it is always possible to shift and produce a swing, so long as the previous point of fixation is seen worse. Even diplopia and polyopia 1 do not prevent swinging with some improvement of vision. Usually the eye with imperfect vision is able to shift from one side of the card to the other, or from a point above the card to a point below it, and observe that in the first case the card appears to move from side to side, while in the second it appears to move up and down.

When patients are suffering from high degrees of eccentric fixation, it may be necessary, in order to help them to see worse when they shift, to use some of the methods described in the chapter on "Central Fixation." Usually, however, patients who cannot see worse when they shift at the distance can do it readily at the near-point, as the sight is best at that point, not only in myopia, but often in hypermetropia as well. When the swing can be produced at the near point, the distance can be gradually increased

until the same thing can be done at twenty feet. After resting the eyes by closing or palming, shifting and swinging are often more successful. By this method of alternately resting the eyes and then shifting, persons with very imperfect sight have sometimes obtained a temporary or permanent cure in a few weeks.

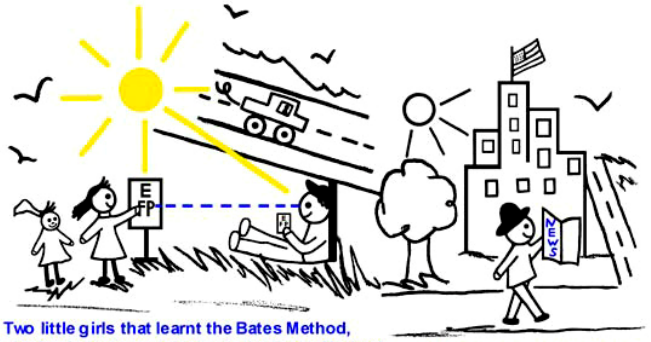
Shifting may be done slowly or rapidly, according to the state of the vision. At the beginning the patient will be likely to strain if he shifts too rapidly ; and then the point shifted from will not be seen worse, and there will be no swing. As improvement is made, the speed can be increased. It is usually impossible, however, to realize the swing if the shifting is more rapid than two or three times a second.

Seeing the previous point worse=the new point shifted to is in the central field and is clearest. The previous point is now in the peripheral field and is less clear, seen worse. The central field is clearest. The peripheral field is less clear. This is normal vision.

THE BLIND MAN

From Better Eyesight Magazine

Little Girls Cure Homeless Man of Blindness



Two little girls that learnt the Bates Method, obtained clear eyesight teach the Bates Method to a blind homeless man they found living outside under a bridge.
They cure the blindness, his eyesight and health are restored.
Treatment: Sunning, sunlight, palming, shifting and switching on letters on identical close and distant eyecharts, swinging, central fixation...
Children are often the best Natural Vision Improvement teachers.

His blindness cured, he now reads the newspaper, walks the city on his own, looks for a job and continues to practice the Bates Method.

Editor's Note. - This letter from a school teacher was just received, and seemed so worthwhile that we decided to make room for it in this issue. It substantiates Ms. Lierman's reports that those who know the method can improve the sight of others. We regret that we did not have time to obtain the permission of the writer to publish this article, and are therefore withholding her name.

Dear Dr. Bates:

I cannot resist telling you what my little Edith Collins, aged twelve years, has done for a blind man that she picked up on the street.

His eyes were very much sunken. She taught him to palm and sun-gaze. She and a little girl friend visited him in his hovel once or twice a week. Much of the time he was so ill that he kept t o his bed, but had this so placed that the sun shone on his eyes.

Little by little his eyes came forward. He palmed faithfully and swung a chart that was given to him. A visiting nurse was telling him it was all "bunk" one day, as Edith entered. She spoke t o the nurse and informed her it was not bunk, and that if she (the nurse) would come back in two or three months she would find out for herself. Well, up to July the reports were that he was gradually looking better, and his eyes seemed fuller. When school opened, Edith came into my room and said, "He sees!" I had forgotten about the man, and for a minute I wondered what she meant. She told me that she had met this man on the street a week or two ago - he was very happy - sees to get around, can read headlines in the papers, and can pick out the smaller words in spots. He has promised her that he will not stop exercising till he obtains perfect sight. He also told Edith that if he had not met her, he would still be a blind man begging for food. Now he intends to find work in some other city. Isn't this a **wonderful thing for a little girl to do**? Of course, if it were not for Edith, the man would still have been blind. Children do not discriminate as to whether a man is a beggar, a worker or worthy. To them there are no differences. They scatter the good into every nook and cranny, and what is more, if it had not been for the revolutionary discovery of this very, very natural way to see and think, I would not have been able to have carried it on to the children, who so unquestionably take to the truth when presented to them. I have been so excited about this that I had to write you at once!

CENTRAL FIXATION

By W. H. Bates, M.D.

When the eye sees best where it is looking it is called Central Fixation. Of course when one sees one point best it must see all other parts worse. It is a great help in accomplishing Central Fixation to ignore or dodge all other objects or letters (objects/letters the eyes are not looking directly at, that are in the peripheral field). To see worse may require in a way greater rest of the mind because in Central Fixation a great many more things are seen worse and only one thing is seen best.

It must be borne in mind that dodging may be done right or it may be done wrong like many other methods of improving the sight. Dodging is done properly when things are ignored. We do not think so much of the objects seen worse (in peripheral field) as we do of the one object which is seen best (in the central field). It is impossible to have perfect sight without Central Fixation. Central Fixation is demonstrated to be a passive condition of the mind and is always accomplished without effort. It is necessary then to dodge the objects not regarded.

CENTRAL FIXATION

Central Fixation: The letter or part of the letter regarded is always seen best. With normal vision, a letter or an object cannot be seen clearly or perfectly unless one sees a part of the letter or object best, or better than all other parts.
Central fixation is passive. We do not see by any effort. Things are seen, one part best. Furthermore, it is a condition of relaxation of the eye or mind obtained without any effort.
The normal eye with normal sight is always at rest. Nothing is done. No effort is made. **Many cases of imperfect sight have been cured when no efforts were made to see.** One cannot relax by working hard, straining, nor obtain rest of the eyes or mind by the help of a strain. When the eyes are normal, they are at rest. When they are imperfect, they are always under a strain.
+**Central fixation should not be confused with concentration, which is defined by the dictionary to mean an effort to keep the eyes or mind continuously on one point only, and to ignore all other points.** Try it. Look directly, for example, at the point of the notch on the upper right corner of the large letter C on the Snellen test card. Keep the eyes open without blinking. In a few seconds, or part of a minute, the mind begins to tire from the monotony. An effort is made to hold the concentration. The effort increases with discomfort or Pain. The vision becomes less, the white of the notch looks gray, the black appears less black, less clear and less distinct. The notch regarded is not seen as well as other parts of the large letter not regarded, and Central Fixation is lost. Not only does the notch appear less clear, but by continuing the effort the large letter C, as well as all the letters on the card, are seen less and less perfectly. The white of the whole card is also modified and becomes less white. Other objects in the neighborhood of the Snellen card soon begin to blur and are seen imperfectly. The stare or strain has very much the same effect as if the sun were covered with a cloud or as if the light in the room, or the general illumination, were lessened. When central fixation is practiced, all the objects in the room, including the Snellen card, look brighter, clearer, just as though the light had increased.
Experience the cause of unclear vision; staring, not blinking, not shifting, eccentric fixation, trying hard, using effort to see clear. Learn to avoid this. Learn to use the eyes correct; relaxation, no effort, shifting, blinking, central fixation and the vision is clear.
+Concentration is trying to see one thing only. It always fails.
+Central fixation is seeing one thing best, and all other objects not so well.
Central fixation is combined with shifting; the eyes, center of the visual field, shifts, moves continually from point to point; part to part, object to object.
When the vision, memory, or imagination are imperfect, concentration can always be demonstrated.
When the vision, memory, or imagination are perfect, Central Fixation can always be demonstrated.
Central fixation is an illusion. All parts of small letters as well as large ones are printed with the same amount of blackness. We do not see illusions. They are only imagined. When we see best one part of a letter, or other object regarded, we think we see it best, or more accurately, we imagine it best. One can imagine anything desired, and much more easily than to make an effort to see it. This fact should be demonstrated repeatedly, and consciously, until it becomes an unconscious habit.
With the **eyes closed the imagination of Central Fixation may be much better than with the eyes open. By alternating the imagination of Central Fixation with the eyes open and closed, both may improve.**
Many persons have no mental pictures with their eyes closed. For example: A patient consulted me about his eyes. He was asked to look at a white pillow.
"Can you see it?" he was asked. "Yes," he answered.
"Now, close your eyes. Can you remember it?" "No," he replied; "I remember a black pillow."
"With your eyes open, can you see one corner of the pillow best, and the other corners not regarded worse?"
He was able to demonstrate this fact, and that he could in turn see, or imagine, each corner regarded best and the other corners worse. With his eyes closed he was able to remember one corner at a time best, and when he remembers the pillow by Central Fixation, he obtained a mental picture of a white pillow almost as well as he could see it with his eyes open.
He was then asked to remember two corners simultaneously, both perfectly clear. At once he lost his mental picture of the pillow. He demonstrated with other objects as well that he could only remember or imagine mental pictures of them by Central fixation.
Another patient had suffered for many years with almost constant pain and fatigue. With his eyes open his vision was 20/20. He read diamond type as close as six inches, and as far off as twenty inches. He could imagine the white part of large or small letters whiter than the rest of the Snellen test card, but only with his eyes open when regarding the letters. With his eyes closed he could not remember mental pictures of any objects.
He was asked: "Which is whiter, the white center of a large letter of the Snellen card or the white snow on the top of a mountain?"
He answered, "The white snow on the top of a mountain."
"Can you shift from one mountain top to another, remembering each one best and the others not so well, or worse?"
This also he was able to do. But when he tried to imagine two or more snow-capped mountains simultaneously, he at once was conscious of an effort and lost his imagination of his mental pictures of the snow.
The memory of the snow-capped mountains by Central Fixation helped him to imagine Central Fixation with his eyes open as well as closed.

A girl, age eight, had imperfect sight not corrected by glasses. The right eye turned in continuously. The vision of this eye was 3/200 with glasses. The left vision was one-half of the normal. She was taught Central Fixation and became able, in a few days, to imagine one part best of the larger letters. The vision of both eyes improved very much. She demonstrated the value of Central Fixation, and that she could not distinguish clearly even the large letters with each eye unless she imagined one part best. By repeated demonstrations this young patient **acquired speed in the practice of Central Fixation**. She became able to read a newspaper more than five feet from her eyes by artificial light. Fine print, or diamond type, was read rapidly, easily, at one inch from each eye.
She enjoyed the practice of conscious Central Fixation. It was to me very wonderful to observe her imagine very small letters by Central Fixation and read them at ten feet or further.
The squint disappeared permanently.

A girl, aged twelve, was treated for progressive myopia. The vision of each eye was 3/200. With concave 16D.S. the sight of each eye was improved to 20/70.
The patient was very nervous. Her memory was poor, and she was behind in her schoolwork. Treatment with the aid of **Palming** and **Central Fixation** improved her vision slowly. After about six months there came a sudden change for the better. In one day, **her vision improved from 10/200 to 10/10 plus**. The next day she read the bottom line of each of three strange cards at twenty feet. It was remarkable, also, because she read all the letters as rapidly as she could pronounce them. The mother was worried because her **daughter had suddenly acquired a habit of running down stairs three steps at a time**. She had never stumbled or fallen once. The mother also reported that the patient had acquired much pleasure in coasting and was the most daring of all the children. Her scholarship had improved. The teacher said the patient would read a page of history in a few seconds, and recite it with a **perfect memory** after a few days, a month, or longer. Her memory for other subjects was equally as good.
Immediately after she read the strange cards with normal vision, I asked her: "What helped you?"
"Starch," she answered.
Then she explained that she had become able to imagine a small piece of white starch perfectly white by Central Fixation. **When her imagination was perfect her myopia disappeared,** her eyes were normal, which made it possible to obtain normal vision. The retinoscope used at the same time demonstrated that her myopia disappeared when she had a perfect imagination of Central Fixation.
Patients whose sight is very imperfect usually require a much longer time to acquire Central Fixation than do some others. One should not be discouraged when, after some weeks or many months, their vision remains imperfect. Too many are disappointed because they fail to obtain Central Fixation after long periods of time, practicing without the help of a competent teacher. One very determined patient devoted many hours daily for over a year without any apparel benefit whatever. She told me that she knew she was curable and was resolved to keep at it the rest of her life if necessary. I wrote her a few suggestions. She followed my advice and was cured in a week.

SACCADIC EYE MOVEMENT

Practicing shifting activates Saccadic Eye Movements - very fast, tiny, automatic shifts, movements, of the eyes. There are many different eye movements; microscopic, high frequency movements, vibrations, optical drift and other tiny, subconscious, automatic movements, and the larger, medium and small movements that occur when the eyes shift across the visual field from object to object, and from part to part, small point to small point upon a object and when the eyes converge, accommodate for clear close vision and un-converge, un-accommodate for clear distant vision. Very tiny, microscopic, high frequency... movements cannot be seen by the human eyes.
A special instrument is used to detect them.
All these movements are necessary to produce clear vision. They keep the eyes shifting, the eye muscles relaxed, functioning correct and vision clear. All eye movements are automatic, a normal function of the visual system.
Saccadic eye movements keep the vision perfectly clear; clearer than 20/20.
Saccadic shifts/movements pull light into the eyes which greatly improves the eyes use of light, color perception and clarity of vision. Saccadic movements are most easily seen when looking at the eyes of a person that has clear vision, does not wear eyeglasses. The saccadic movement is very fast, rapid, movement is small and tiny when looking at, inspecting parts of a object. Shifts are easy, effortless, relaxed, the eyes in continual motion moving from point to point on objects, small parts of objects. The eyes move freely in a variety of directions and can move over many small parts, details of a object in a fraction of a second. Saccadic eye movements produce a sparkling reflection, flickering of light, like a little moving star on the eyes surface-The 'Twinkle in the Eye'.
The normal eye activates hundreds, thousands of saccadic and other eye movements every minute, second. The eye shifts to a new point every fraction of a second. This fast, tiny automatic shift of the eyes produces very clear vision.
A object consists of many small parts. Each small part consists of more small parts, tiny details which contain even more small parts all the way to microscopic level and even smaller parts.
Example; look at a picture in a newspaper. The picture is made up of small parts, tiny dots of ink. Each dot contains smaller parts. The paper is made of small parts of wood fibers. The wood fibers contain even smaller and smaller parts, to the microscopic level. The eyes can shift on, see all these tiny parts.
Use central-fixation; shift from small point to small point, (tiny part to tiny part).
See one tiny part (point) clearest at a time in the center of the visual field. As the eyes shift from point to point, the central field moves with the eyes from point to point, part to part. Each new point the eyes, center of the visual field shift to, move upon is the clearest point (small part) while the eyes, visual attention, central field is on that point.
Practice shifting on the fibers of thread in a piece of cloth.

If shifting, saccadic eye movements occur slower, less often, the vision becomes unclear.
If the movement is very slow, infrequent or stops, the vision is most unclear and other eye problems develop. Blindness has occurred from extreme mental, emotional shock, stress, mental strain, causing the eyes to freeze immobile, frozen in fright, an extreme stare. EFT, Palming, the Color Chart and other methods for releasing negative thoughts, emotions, stress relaxes the eye muscles, returns the eyes to movement, restores the vision. Staring, squinting blocks eye movement, causes stiff, tense, incomplete eye movement and eye muscle tension.
Eye muscle tension produces rigid, infrequent eye movement.
When the vision is unclear, especially if eyeglasses are worn, the eyes shift slower, infrequently, rigid, with effort and the saccadic and other tiny, fast, microscopic... eye movements are also reduced, slow resulting in unclear vision. Eyeglasses cause and increase mental strain, eye muscle tension, impairs, blocks eye movement; shifting and impairs convergence, un-convergence, accommodation, un-accommodation and causes a stiff neck, incorrect posture and other abnormal conditions that impair, slows, blocks all types of eye movements resulting in increased vision impairment, blur.

Avoid eyeglasses.
Eye movement is necessary for clear vision and healthy eyes. Practice shifting. Shifting and relaxation restores saccadic and all eye movements to normal function with clear vision. Shifting is practiced slow, easy. Not too slow, at a comfortable speed. With practice of slow, continual shifting, the fast shifting (saccadic, microscopic... shifts) occur <u>on their own</u>, an automatic function of the eyes producing very clear vision.
Practice shifting, then, don't practice; forget about the eyes, let them move 'on their own', completely natural for perfect clear vision.

The long swing, rock, figure eight activates relaxation and all eye movements. See chapter 16.
Relax the neck, shoulders. A relaxed neck, moving freely relaxes the eyes muscles and improves eye movement.

Children are the best Natural Vision Improvement Teachers. Children's eyes shift, move perfectly. Watch a child that has clear vision, watch the child's eyes, the eyes movements. Notice how easy, continually they move, 'shift' and see the sparkle caused by the eyes movements, tiny saccadic eye shifts. This is a way to learn Free Natural Vision Improvement.
Do not let the child know you are watching their eyes because it can interfere with the eyes completely natural movement-the child might begin to think about the eyes, control the eyes movement.
When anyone thinks too much about the eyes function, tries hard to control the eyes movement, it blocks completely natural eye movement and lowers the clarity of vision.
This is why Natural Vision Improvement; shifting, central-fixation, blinking.., are practiced, then; don't practice – let the eyes alone, think of something else, positive thoughts and the eyes will work <u>completely natural</u>, '<u>on their own</u>' automatically producing, maintaining maximum visual clarity.
Vision is clearest when there is no thought about the clarity of vision, no effort to see.



THE MAN IS TRACING AROUND THE EDGE OF THE TREE WITH THE IMAGINARY NOSEFEATHER.
THE END OF THE FEATHER EXTENDS OUT FROM THE END/CENTER OF THE NOSE AND BENDS UP TO EYE LEVEL TO TOUCH THE PART OF THE OBJECT THE EYES ARE LOOKING AT IN THE CENTER OF THE VISUAL FIELD.
THE FEATHER IS VERY THIN AND THE END FORMS A VERY SMALL POINT WHICH IS THE SIZE OF THE EXACT CENTER OF THE VISUAL FIELD PRODUCED BY THE FOVEA CENTRALIS IN THE MACULA, CENTER OF THE EYES RETINA.
MOVE THE POINTED END OF THE NOSEFEATHER AROUND THE EDGE OF OBJECTS AND PARTS OF OBJECTS.
THE EYES, END OF THE NOSEFEATHER, HEAD/FACE AND BODY MOVE TOGETHER, IN SYNCHRONIZATION; SAME TIME, SAME DIRECTION.
THE NECK IS RELAXED AND MOBILE.
BLINK, BREATHE ABDOMINALLY, RELAX.
THE NOSEFEATHER IS ALSO USED TO SHIFT FROM POINT TO POINT (SMALL PART TO SMALL PART) ON A OBJECT.
THE NOSEFEATHER IS USED TO SWITCH FROM CLOSE OBJECTS TO DISTANT OBJECTS AND DISTANT TO CLOSE, MIDDLE...
THE FEATHER BECOMES LONGER WHEN LOOKING TO THE DISTANCE AND SHORTER WHEN LOOKING AT CLOSE OBJECTS.
THE NOSEFEATHER ACTIVATES EASY USE OF CORRECT VISION HABITS; SHIFTING (EYE MOVEMENT), CENTRAL FIXATION, MOVEMENT OF THE HEAD/FACE, BODY WITH THE EYES, RELAXATION AND MOVEMENT OF THE NECK.
THE FEATHER CAN BE IMAGINED AS BEING INVISIBLE.
THIS ALLOWS THE BRAIN TO IMAGINE, REMEMBER THE OBJECT THE EYES ARE LOOKING AT CLEAR WITHOUT BEING DISTRACTED BY THE IMAGE OF THE FEATHER.

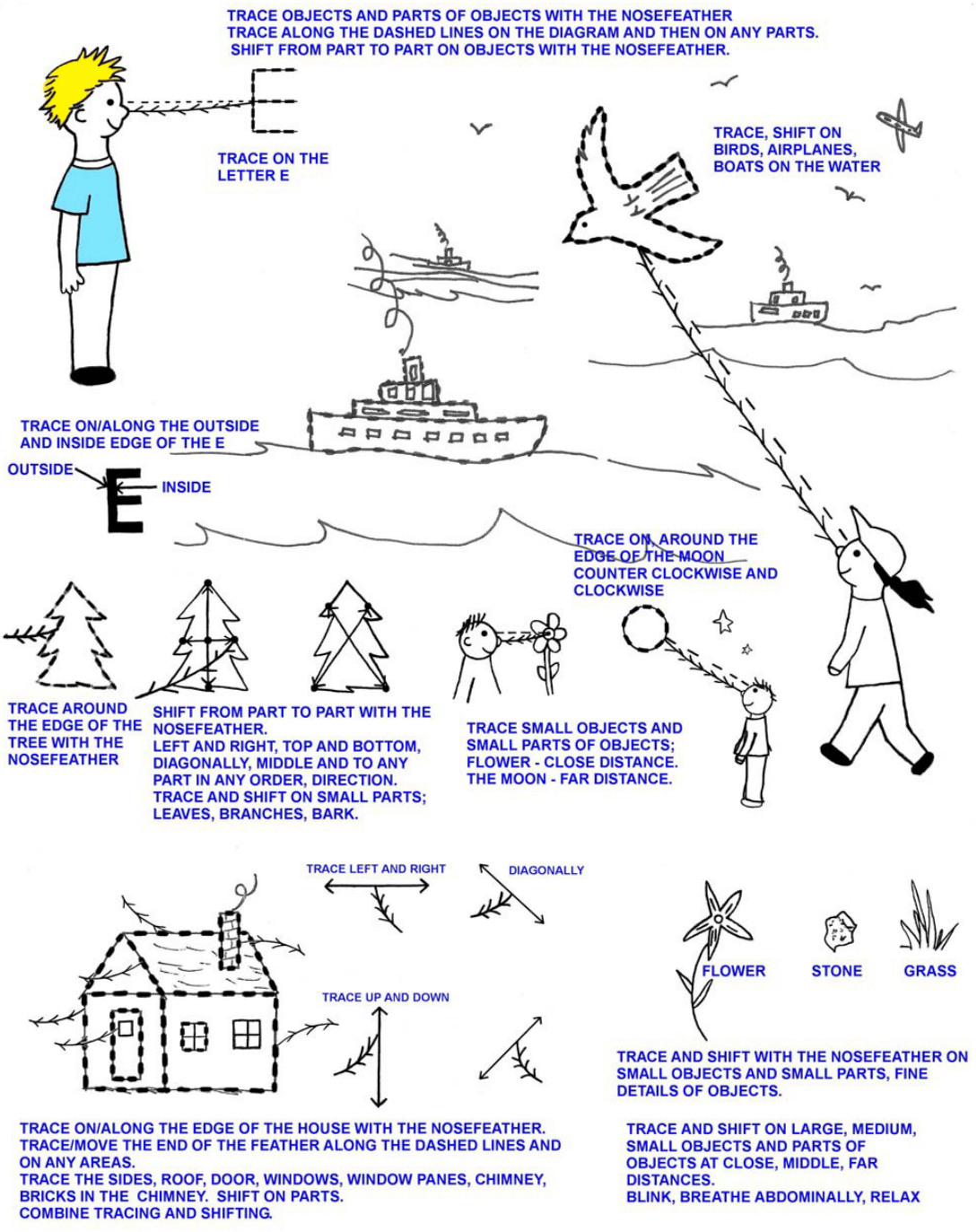


The Big Fluffy Nosefeather sweeps over objects. The person just relaxes and sweeps the feather over trees, houses, scenery... to bring movement to the eyes, head, neck. Induces great relaxation of the mind, eyes, neck and body. Option to use a tiny pointed end of one 'central piece' of the feather to touch, shift, trace on objects with Central-Fixation or let the eyes do central fixation on their own.



Middle size Nosefeather with Central-Fixation point on the end.

Trace, Shift, Central-Fixation with the Nosefeather



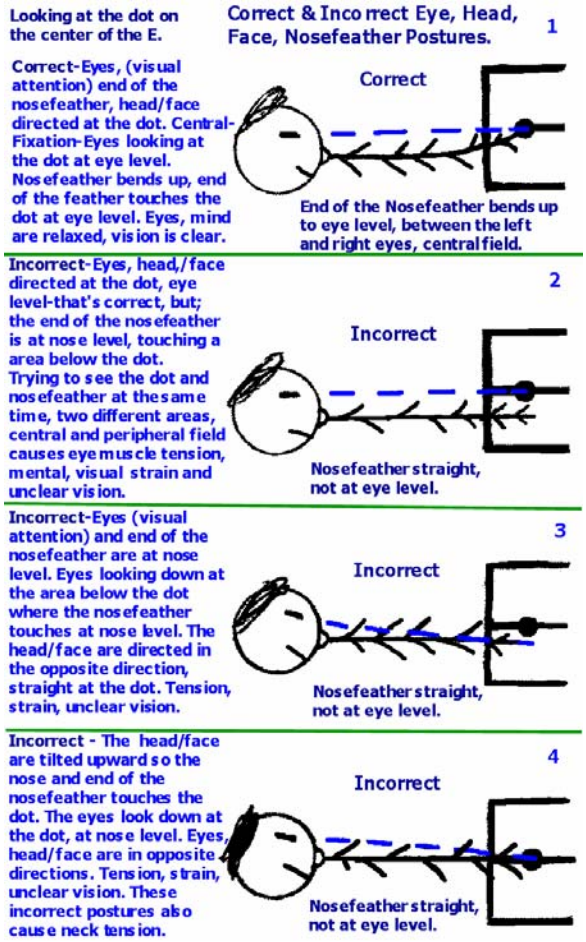
Practicing shifting, central-fixation and all Correct Vision Habits is the act of *imitating normal eye function*. With a little practice the eyes do this 'on their own', automatically and vision is clear. Practice, then don't practice, let the eyes work *Completely Natural, On Their Own* for clearest vision.

NOSEFEATHER DIRECTIONS

Natural Vision Improvement Teachers get their students to shift the eyes and relax by imagining there is a thin, lightweight, flexible, soft feather attached to the end of the nose. The Nosefeather. (See pictures).

The main feather used is thin. The (feathered) end of the Nosefeather forms into a small point.
The end of the feather extends outward from the center of the nose and bends up and touches the part of the object the eyes are looking at, in the center of the visual field, between the left and right eyes, at eye level. The eyes, visual attention and end of the Nosefeather are always on the same point.

(Do not place the pointed end of the feather on the object at nose level and do not look down at the object at nose level.) Looking down to nose level is imperfect central-fixation, eye/head posture.
Use correct central-fixation; keep the eyes, visual attention and end of the feather on the object at eye level. See pictures.



In the picture of the house; the man is moving the eyes (visual attention, center of the visual field) and end of the Nosefeather on/along the edge of the doors window. He traces with the eyes and Nosefeather around the edge of the window.

The feather becomes long, the end, point extending out to touch far objects and becomes shorter when touching close objects.

+Trace the edges of objects and parts of objects with the pointed end of the feather, and shift with the point from small part to small part, point to point on objects. (Shifting and Central-fixation.)
Use it like a soft brush-moving easy, relaxing as the feather sweeps, brushes upon objects, parts of objects, from object to object.

+Move the head/face, nose/end of the feather and body with the eyes as the eyes shift and trace on a object and shift from object to object in the visual field. The eyes, head, face, Nosefeather and body move together, in synchronization, at the same time, in the same direction.
Moving the end of the feather from part to part on objects and from object to object keeps the eyes moving, 'shifting' and vision clear.
The soft, easy movement of the feather is soothing, relaxing to the eyes, mind and body.
Feel relaxation resonate in to the eyes, head, brain/mind, neck, body. Shifting, central-fixation occur automatically, without trying when using the feather.

The movement of the feather keeps the eyes, head/face and body moving together in synchronization, at the same time, in the same direction. (Movement, a Correct Vision Habit).
This movement keeps the neck and eyes relaxed and mobile.
Neck muscle tension is a main cause of headaches and unclear vision.
When the neck relaxes and moves, the eye muscles and eyes relax enabling the eyes to move, shift easy, perfect resulting in clear vision. Relaxation resonates, travels into the head, eyes.
Relaxation of the neck muscles improves blood, oxygen, lymph and energy flow to the brain, ears, eyes and improves balance, coordination. These conditions also improve vision.

The end of the feather touches objects, parts of objects in the center of the visual field.
This activates a Correct Vision Habit, natural eye function; Central-Fixation = using and seeing very clear with the center of the visual field. The tiny pointed end of the feather touches the exact center of

the visual field produced by the center of the fovea centralis, in the macula, center of the eye retina. The most perfect, clearest area of the visual field-fine detailed clearer than 20/20 vision and bright color.

Trace the house with the Nosefeather; move the eyes/visual attention and the fine pointed end of the feather around, directly on/along the edge of the house, directly on/along the edges, counter-clockwise and clockwise. (see dashed lines.)
Then; trace up, down, left, right, diagonally... directly on/along the edges of the house.
Then; trace smaller parts; trace around the door, trace the window and window panes, chimney, bricks in the chimney... Trace directly on the edge of the parts.

Shift from dot to dot on the green house and other pictures with the end of the feather; the end of the feather touches the dot (part) the eyes are looking at in the center of the visual field.
The end of the feather moves with the eyes, central field from dot to dot.

Move the head/face and body with the eyes and Nosefeather as the eyes, feather traces objects, parts of objects and shifts from small point to small point on objects and moves from object to object.
The eyes, head/face, neck, shoulders and body are relaxed and move freely.
Blink, breathe and relax. Breathe abdominally; take a nice deep, slow, comfortable breath and relax, think a positive thought. Yawn, hum, sing... When the mind is relaxed, drifting from one pleasant thought to another, the eye muscles and eyes relax, shift freely and vision becomes clear.

<u>Use Central-Fixation when Tracing on Objects</u>;
Avoid tracing with the eyes/visual attention and Nosefeather near but away from the edge of the object or part of the object.
Tracing in the air, or on a different object away from the edge of the object you want to see is incorrect eye function, prevents central-fixation and causes diffusion, strain and unclear vision.
Use <u>central-fixation</u>=Look at, trace <u>directly on/along</u> the edge of the object and on/along the edge of parts of the object. Always look at, trace directly on the object; look at, trace <u>directly on</u> the edge of the object or parts of the object for perfect, exact central fixation with eye movement and fine detailed clear vision.
Do this relaxed, no effort. See the dashed lines on the pictures.

A nose-pencil, paintbrush, light ray or other object can be used. It is imagined as light-weight, relaxing, moving easy. The end has a point to touch objects, parts of objects with central fixation, in the center of the visual field.

The eyes, head/face and body move with the Nosefeather; at the same time, in the same direction=Central-Fixation and good posture.

1- Eyes, (visual attention) end of the feather, head/face, body directed at the center of the tree, central field. Nosefeather, visual attention at eye level. Vision is clear.



2 - Eyes, end of the feather, head/face, body directed down at the bottom of the tree. The central field moves down with the eyes, nosefeather, head/face, body. Vision is clear.



3 - Eyes, end of the feather, head/face, body directed up at the top of the tree. The central field moves up with the eyes, nosefeather, head/face, body. Vision is clear.

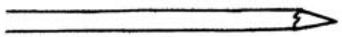


The end of the Nosefeather bends up to eye level, between the left and right eyes, touching, moving on the object in the center of the visual field. Shifting & Central-Fixation=Relaxation, Clear vision.

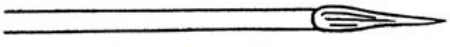
Nosefeathers for Practice of Shifting, Central-Fixation, Movement



Nosefeather



Nose pencil



Nose Paintbrush

Nose Light Ray

Alternate with the Thin Feather and a Big Fluffy Feather



The thin feather activates eye, head/face, neck, body movement, relaxation and helps the eyes use central fixation; move, trace directly on/along the edges of objects, parts of objects and shift point to point on objects, parts, tiny details of objects. The thin feather is shown in the picture of the boy, girl tracing objects. The big fluffy feather is shown here.

The big fluffy feather can be used to sweep over objects as long as the eyes continue to use central fixation. The big fluffy feather lets the eyes do central fixation on their own. The fluffy feather is mainly for eye, head/face, neck, body movement and relaxation. Students state the big fluffy feather induces a looser, completely released from tension, deeper relaxation of the eyes, head, neck, body. The thin feather also does this if thought of as light, soft, flexible, without resistance. Imagine all feathers, pencils… as light, soft, moving easy, soothing and relaxed. All nose-feathers, pencils… relax and move the neck. A main Natural Vision Improvement Treatment.

Some teachers say the feather is to be imagined invisible to prevent the brain, imagination from diffusing, being on two different things; the feather and object the eyes are looking at. Other teachers say it's ok to imagine seeing the feather (& the feather any color; white, blue…) as it sweeps upon objects; it is normal for the brain to use the imagination this way and it improves the memory, imagination, relaxation and clarity of vision. I find that every feather is relaxing, improves my vision. Practice with the feather that is most relaxing for you, brings clear vision.

Sweep the feather on objects, from object to object - the eyes, head, neck, body moving, relaxed. The feathers, pencils… can be used for shifting, tracing on any objects, eyecharts at any distance close or far when practicing Natural Vision Improvement.

Tracing, Shifting Example - 'Yellow Kitty'

Trace and Shift on Yellow Kitty and the Angle;

Move the central field, end of the Nosefeather along the edge of the cat; See the dots; move on/along the dots tracing on the cat and parts of the cat.
Shift dot to dot in any direction.
Trace and shift on any part without the dots.
Do the same on the Angel.

When a object appears unclear; shift on it part to part. Blink and relax. It will be seen clear.
This simple action is the main treatment for keeping the vision clear. Most Eye doctors have hidden this 'Secret For Clear Vision' from their patients for over 100 years!
They prefer to sell addictive eyeglasses, harmful eye surgery and drugs. Eyeglasses impair, block the eyes movement, all normal, natural eye functions; shifting, central fixation, convergence, divergence, accommodation, un-accommodation, posture... and impair the eye's health.

Color Yellow Kitty and the Angel; coloring improves central-fixation; coloring within the lines, details, eye movement as the eyes move with the crayon. Left and right brain hemisphere activation, integration occurs by working with colors. Coloring is a relaxing hobby.

Shift, Trace on Yellow Kitty

Shift from dot to dot in any direction: top and bottom, side to side. diagonally... on his face, eyes, nose, mouth, head, any part. Then shift without the dots part to part, any part, any direction.
Trace the kitty: Follow the dots: Trace on/along the dots: on the black ink/dots around his head, fur, whiskers, ears, eyes, nose, month...
Move the head/face with the eyes as the eyes, 'center of the visual field' shift and trace on the cat. Use the Nosefeather. Blink, Breathe, Relax.



Yellow Kitty

Kids - Color the cat. Coloring activates eye movement, shifting as the eyes move with the crayon and central fixation as the eyes move with the crayon on fine details, staying inside the lines.
Colors activate and integrate the left and right brain hemispheres.
Coloring is fun, relaxing, brings a positive state of mind.
All these bring clear vision.



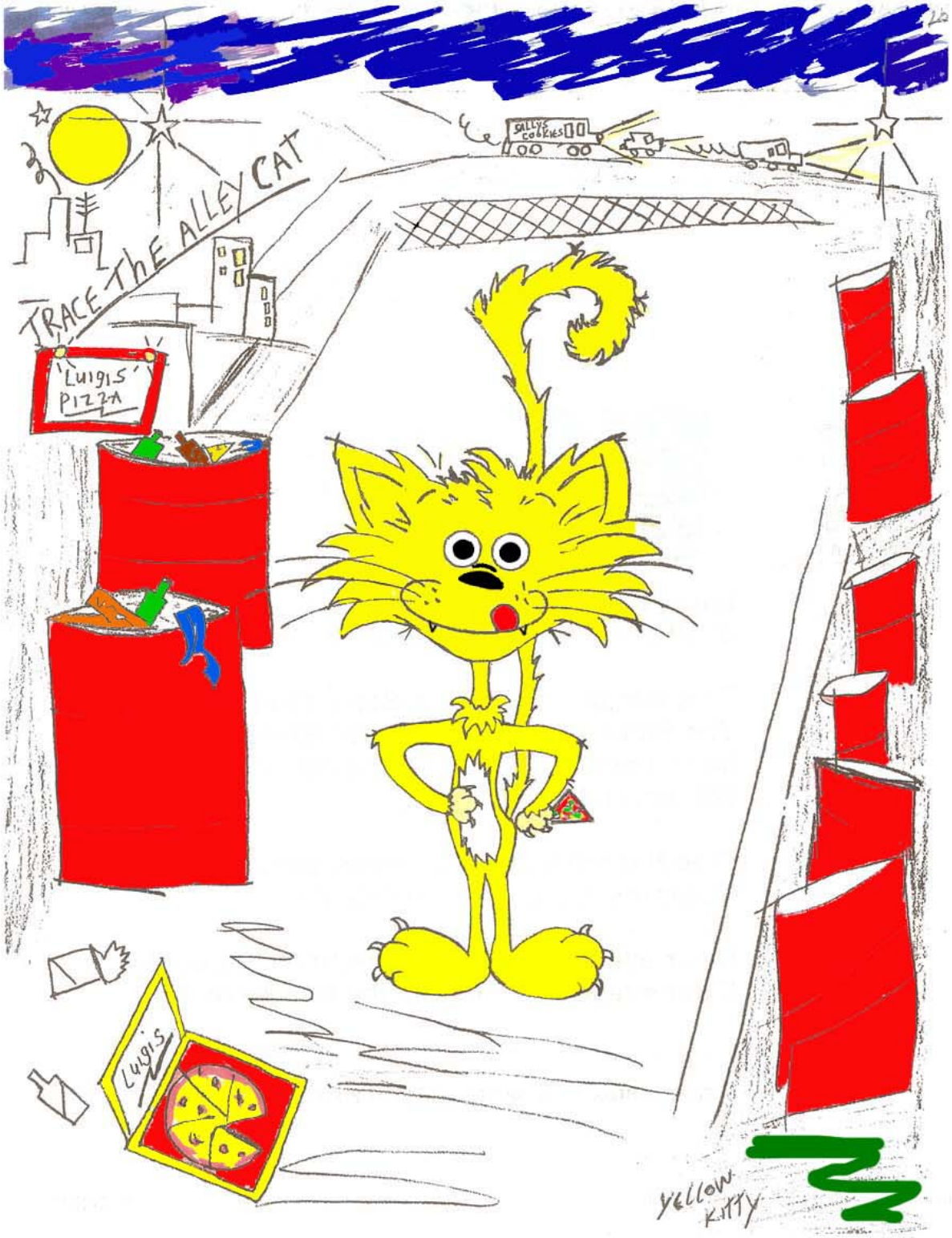
Practice Shifting, Tracing, Central Fixation on Yellow Kitty.



Tracing with the eyes/nosefeather near but away from the edge of the object or part of a object is incorrect, causes diffusion, strain, prevents central fixation. Use central fixation = look at, trace directly on, along the edge of the object or parts of the object. (See dots in picture.)

Trace Yellow Kitty.
Trace with the eyes and end of the nosefeather.
Trace exactly on the edge of the cat and parts of the cat for perfect central fixation and shifting/eye movement. Trace the head, body, tail, eyes, nose... Follow the dots in any direction. Blink, relax. Shift part to part, point to point.

Relax. Let the mind, 'mental attention' move from part to part, dot to dot (true eyes function is moving point to point). Then the eyes, 'center of the visual field, visual attention' will move automatically with the mind. This is a way to 'forget about the eyes', don't try to shift/move the eyes. Let the mind/brain, eyes, visual system work completely natural, on their own. Vision becomes clear without trying. No effort, no strain=no blur.



Yellow Kitty gets a free meal every night in the alley behind Luigi's Pizza!
Coloring is fun, relaxing, activates eye movement/shifting, central fixation on fine details, and natural color treatment to activate and integrate the left and right brain hemispheres.

USE THE MEMORY AND IMAGINATION

Trace and shift on a object, parts of the object with the Nosefeather and remember, imagine and see the object clear with the eyes; open, closed, open. See chapter 9.

Practice shifting, then; forget about the eyes and let the eyes shift on their own.
Notice flashes of clear vision and how the mind, body, eyes feel when functioning correct, with clear vision. It will be a clear, positive state of mind, body with deep or dynamic active relaxation, energy. Shifting is practiced to activate natural perfect eye movement. With practice shifting will occur on its own, automatically and flashes of clear vision will occur more often, last longer and be permanent.

Practice shifting on a dog, cat, favorite pet and remember, imagine it clear with the eyes; open, closed in the imagination, then open again. Continue to shift on the imaginary object when eyes are closed and notice that the physical eyes move; The brain and eyes work together.








(All photos are from Microsoft Free Clipart.)

If the student needs eyeglasses for driving, other activities as vision is improving; continue to practice Correct Vision Habits when wearing the glasses and wear reduced, weaker lenses.

THUMB ON FINGERTIP MOVEMENT

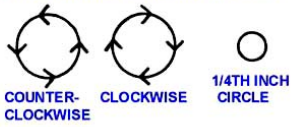
From Dr. Bate's Better Eyesight Magazine

A 'Swing' for Relaxation, Movement, Central-Fixation of the Mind & Eyes

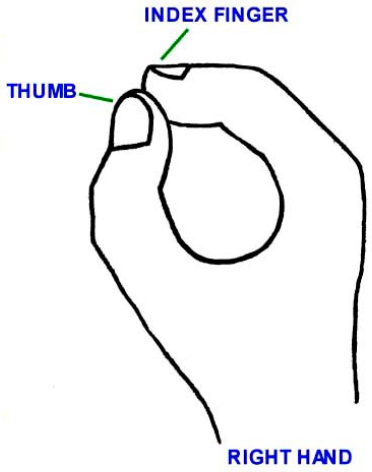
DR. BATES USED MANY DIFFERENT METHODS TO RELAX THE MIND AND EYES FOR CLEAR VISION. THE DIAGRAM BELOW SHOWS THE "THUMB ON FINGER MOVEMENT" TO RELAX THE MIND, BODY, EYES, ACTIVATE SHIFTING/ CORRECT VISION HABITS AND CLEAR VISION.

DIRECTIONS

START WITH THE RIGHT HAND.
LIGHTLY TOUCH THE TOP END OF THE THUMB TO THE TIP OF THE INDEX (POINTER) FINGER.
THE HAND, THUMB, FINGER ARE RELAXED.
THE THUMB MOVES, THE FINGER REMAINS STATIONARY;
1 - MOVE THE TOP OF THE THUMB ON THE TIP OF THE FINGER IN A SMALL CIRCLE LESS THAN 1/4TH INCH IN DIAMETER.
MOVE THE THUMB LIGHTLY, EASY
COUNTERCLOCKWISE, CLOCKWISE,
COUNTERCLOCKWISE, CLOCKWISE...



2 - THEN; MOVE THE THUMB ON THE FINGER, A SMALL MOVEMENT; LEFT AND RIGHT, UP AND DOWN.
3 - THEN MOVE THE THUMB IN A CIRCLE AGAIN.
4 - PRACTICE STEP # 1, 2, 3 WITH THE RIGHT HAND, THEN THE LEFT, THEN RIGHT, THEN LEFT.
THE MOVEMENT OF THE THUMB IS LIGHT, SLOW, SHORT, EASY, CONTINUOUS.



+THE THUMB ON FINGER MOVEMENT RELAXES THE MIND, BODY, EYE MUSCLES, EYES, ACTIVATES EYE MOVEMENT; SHIFTING, SACCADIC SHIFTS AND CLEAR VISION.

THE MOVEMENT OF THE THUMB IS A FORM OF SHIFTING, A TINY SWING, LIKE THE LONG SWING OR ROCK IN CHAPTER- THE MOVEMENT PREVENTS INCORRECT VISION HABITS; STARING, SQUINTING, DIFFUSION, EYESTRAIN AND BLUR.

+THE TINY CIRCULAR AND OTHER SMALL MOVEMENTS OF THE THUMB ON THE FINGER CALMS, RESTS, CLEARS, CENTERS THE MIND AND ACTIVATES CENTRAL FIXATION; SEEING CLEAREST WITH THE CENTER OF THE VISUAL FIELD, SEEING SMALL FINE DETAILS CLEAR WITHOUT EFFORT.

+THE MOVEMENT OF THE THUMB ON THE STATIONARY FINGER ACTIVATES AWARENESS OF OPPOSITIONAL MOVEMENT WHICH ALSO ACTIVATES SHIFTING AND CLEAR VISION. SEE CHAPTER –
EXAMPLE; WHEN THE THUMB MOVES LEFT, THE STATIONARY FINGER APPEARS TO THE RIGHT OF THE THUMB.
WHEN THE THUMB MOVES RIGHT, THE FINGER APPEARS TO THE LEFT.
SEE, FEEL THIS OPPOSITIONAL MOVEMENT WHEN MOVING THE THUMB LEFT, RIGHT, UP, DOWN.
THIS IS SIMILAR TO THE SHIFT OF THE EYES; WHEN THE EYES SHIFT LEFT, A STATIONARY OBJECT IN FRONT OF THE EYES APPEARS TO THE RIGHT OF THE EYES.
WHEN THE EYES SHIFT RIGHT, THE STATIONARY OBJECT APPEARS TO THE LEFT.

+ MOVING THE THUMB ON THE FINGER COUNTERCLOCKWISE, CLOCKWISE, COUNTERCLOCKWISE... AND LEFT, RIGHT, UP, DOWN, DIAGONALLY AND PRACTICING STEPS 1, 2, 3 WITH THE RIGHT HAND, THEN LEFT, THEN RIGHT, THEN LEFT... ACTIVATES AND INTEGRATES THE LEFT AND RIGHT BRAIN HEMISPHERES WHICH IMPROVES THE CLARITY OF VISION IN THE LEFT AND RIGHT EYES AT ALL DISTANCES CLOSE, MIDDLE, FAR.

MOVE THE THUMB ON THE FINGER AND BLINK, BREATHE ABDOMINALLY, RELAX, LET THE MIND DAYDREAM SOMETHING HAPPY. THE EYES DO NOT NEED TO LOOK AT THE THUMB, FINGER.
THE BODY, SHOULDERS, NECK, HEAD/FACE, EYES ARE LOOSE, RELAXED AND MOVE FREELY.
PRACTICE SHIFTING ON DISTANT AND CLOSE OBJECTS AND REMEMBER, IMAGINE AND SEE OBJECTS CLEAR.

As the movement of the thumb on the stationary finger relaxes the mind, the mind is brought to a positive state. The mind drifts away from negative stressful thoughts and moves into positive happy thoughts, emotions. Do this lightly, relaxed-no muscle tension in the fingers, arm.

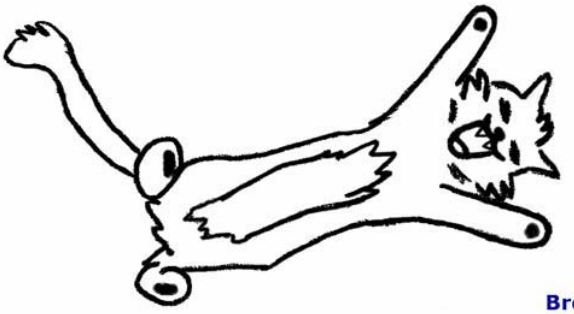
Counting odd numbers when the thumb moves in one direction, then even numbers for the opposite direction relaxes the mind, eyes. It can immediately take the mind off any worry, anxiety, fear, negative thoughts. It relaxes muscles in the body, neck, eyes and centers, clears the mind, improves brain function. The movement of the thumb activates automatic, natural eye movement, 'shifting' and the small movement of the thumb activates central-fixation. 'The Swing' of oppositional movement is felt. A famous Hollywood Movie Director used a similar method; moving a diamond around in his hand, hand in his pocket when working. See; Better Eyesight Magazine.

7 - Abdominal/Diaphragm Breathing

Deep Breathing Improves the Clarity of Vision.

Abdominal Deep Breathing relaxes the mind, body, eyes and improves oxygen, blood, nutrient, lymph and energy flow in the body, brain, eyes resulting in clear vision, healthy eyes.
Deep breathing stretches, relaxes the neck, shoulder, head, face, chest muscles. Relaxation travels into the eye muscles improving the clarity of vision.
Abdominal breathing is also called Diaphragmatic or Diaphragm Breathing because the diaphragm muscle, located below the lungs helps to expand the rib cage during inhalation to increase the amount of air entering the lower and upper lungs. The diaphragm helps to contract the rib cage during exhalation to completely empty air from the lungs.

Practicing relaxation of the mind, body, good posture and Natural Vision Improvement activities, deep breathing will relax the diaphragm muscle, lungs, muscles in the chest, rib cage area, upper back, neck, head, eyes resulting in easy, full, relaxed breathing and clear vision.
Practice slow, comfortably deep abdominal breathing as shown in the pictures in this chapter.
Practice relaxed deep breathing with shifting and see the clarity of vision improve.



Yawn, Stretch, Breathe Deep and Relax.
Copy your cat, dog or children for a perfect example.

Basic Yoga Breathing Exercise

	Inhale	Hold	Exhale
Level 1 Beginner	4	4	4
level 2	4	8	8
Level 3	4	12	8
Level 4 Expert	4	16	8

Abdominal, Diaphragm Deep Breathing

Breathe in: Abdomen and diaphragm rise (expand) first, before the chest rises; Abdomen rises first, then the diaphragm rises. Next: The chest rises, expands; lower chest/lungs inhale, rise, then upper chest/lungs inhale, rise last.

Breathe out: Chest lowers first; upper chest/lungs exhale, lower, then lower chest/ lungs exhale, lower. Next: Abdomen and diaphragm lower last after the chest: Diaphragm lowers, then abdomen lowers.

Yoga Breathing - Start at Level 1 Beginner.
Do not advance to higher levels until lower levels are practiced, become easy.

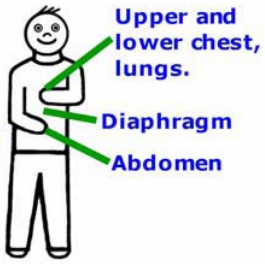
Example: Level 1
+Inhale while counting 1,2,3,4.
(About one number per second.)
+Then, hold the breath to the count of 4.
+Then, exhale to the count of 4. +Repeat.

Advanced Yoga breathing is done a specific way with the heartbeat, energy control and other variations.

Yoga breathing activates Chi, Prana, Kundalini and other energies. Before trying advanced methods always learn natural, safe ways to first open the body's energy centers/ Chakras so energy flows correct, easy. Never force the energy to flow. Let the energy flow on its own when the body, mind, sprit are ready, experienced, evolved.

See the book: 'Super Power Breathing' by Paul Bragg for safe natural breathing exercises.

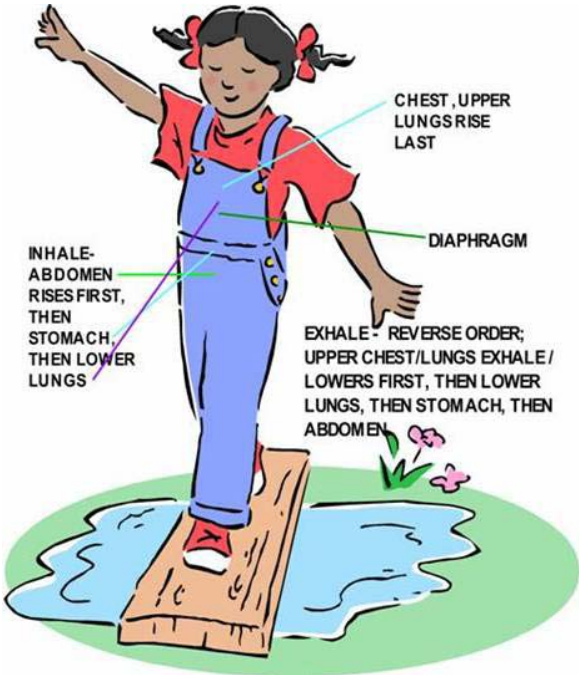
Shoulders down, relaxed. Knees bent, back relaxes. Breathe and rock left and right.

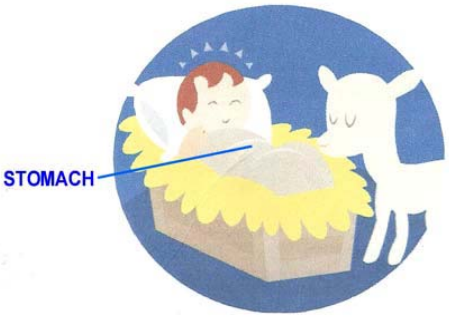


Abdominal Breathing
Teachers state to breath in and out through the nose only when practicing breathing and most of the time when not exercising at a faster pace... Its ok to breath through the mouth as needed.
Some Yoga exercises involve breathing with nose, mouth a specific way, order.

+Breathe in - abdomen rises first, then stomach, then lower lungs inflate with air, chest begins to rise, then upper lungs/chest inflate with air, rise last.
+Breathe out - reverse order; upper lungs/chest exhale and lower first, then lower lungs exhale, stomach lowers, then abdomen lowers.

Breathe in a relaxed easy manner.
Breathe slow, deep (comfortably deep), just enough to receive a good amount of oxygen; do not force the air into the lungs. Avoid tensing and pulling the shoulders up and forcing the chest to rise. Let the shoulders drop down and relax and allow the chest to expand naturally, on its own when breathing in and lower by itself when breathing out.
Practice relaxation; let the mind and body relax deeper, more on each breath.
When you exhale, relax more, completely let go, think a happy thought or think nothing, just relax.
Let all the muscles relax. head, neck and body. Practice while sitting or lying down. Practice abdominal breathing and deep relaxation while standing and walk around in perfect relaxation of mind, body, eyes. Practice shifting on objects and notice clear vision as oxygen travels to the brain and eyes.
Abdominal breathing is a main skill taught in stress prevention classes.





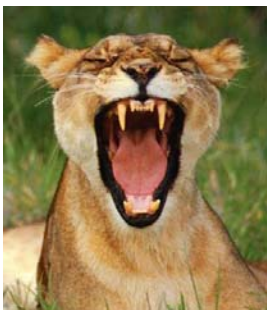
A BABY BREATHES CORRECT; NATURAL, RELAXED ABDOMINAL BREATHING.
NOTICE THAT THE BABIES STOMACH MOVES UP AND DOWN; BREATHE IN - STOMACH RISES
BREATHE OUT - STOMACH LOWERS.

Watch a Baby Breathe

A baby breathes abdominally, natural; watch a baby sleeping or resting;

+When the baby breathes in - the stomach rises.
+When the baby breathes out - the stomach lowers.
The baby's chest rises last and not as much as the stomach. Watch healthy children for a free Breathing lesson.

YAWN - Yawning is a Type of Breathing



Yawning stretches and relaxes the muscles in the neck, shoulders, head/face, jaw, eyes, chest, upper body, collarbones, back, ribs, all body muscles. Relaxation resonates into the eye muscles, eyes-the outer and inner eye muscles relax. This improves the clarity of vision.
Yawn a few times. Stretch a couple times when yawning to also stretch and relax the back and all body muscles. Copy your kids, pets; dog, cat-notice how they stretch the entire body when yawning. This stretches, relaxes all the muscles, improves blood, oxygen, lymph, and energy flow in the muscles, all areas of the body.
Make a loud sound or sing, hum when yawning, stretching. Like a lion roars, dog makes a sound... when yawning, stretching. It massages, relaxes the bones, muscles in the head/skull, eye-socket, eyes, neck.

Deep breathing, yawning, stretching improves blood, oxygen, lymph, energy flow in the body, brain, head, eyes, all organs, improves/balances the body's PH level/acid/alkaline balance and chemistry. Yawning, deep breathing prevents headaches, improves health of the liver.
Yawning relaxes the mind, body, eyes and clears, energizes the mind, brings the mind/mood to a positive state, positive thoughts, feelings. All these conditions improve the clarity of vision.
Most people can yawn just by thinking about it. Touching the end of the tongue to the top, back of the mouth helps to activate a yawn.

Yawning, Shifting & Blinking work together to produce tears, evenly coat the tears over the eyes, corneas, improve the tear glands production of tears. Tears cleanse, moisturize, nourish, protect the eyes and act as a natural contact lens increasing the clarity of vision. Yawn, blink and shift to activate natural tears.
The flow of tears improves eye health, function. I know a homeless lady that had cataracts. She was 80% blind. She said; "When she cried, eyes full of tears, her vision would return, was clear."
She began using the Bates Method, practicing on an eyechart outside at the train station. Shifting, central-fixation brought flashes of clear vision. One day she was sitting on the bus and heard a clicking sound next to her. She could not see through the cataracts. She then practiced shifting while looking in the direction of the sound, using her central field of vision. The vision cleared and she saw that it was a lady knitting yarn in the seat next to her. The clicking sound was the knitting needles. Her central and peripheral vision cleared.

Blinking causes the eyes to move, shift automatically.
Blinking, shifting, deep breathing, yawning prevents staring, eyestrain and blur.

Blink, Breathe, Yawn, Shift and Relax - Practice Relaxation, Deep Breathing with Shifting and See the Clarity of Vision Improve! Relaxed eye muscles move, shift the eyes perfectly, easy; shifting, central-fixation, blinking, convergence, divergence, accommodation, un-accommodation... all eye movements are relaxed, perfect, vision is clear at all distances. Practice breathing, yawning as the eyes shift on objects at various distances.
Normal breathing is usually in and out through the nose. Some breathing exercises teach breathing in through the nose and out through the mouth and nose and other variations to also control energy, various body functions....

Other relatives of healthy breathing are; Singing, Humming, Whistling.
Singing is also a form of dynamic, active, positive relaxation.
Singing, humming, making sound improves breathing, vibrates, aligns, massages the bones of the skull, massages the eyes, eye muscles, improves alignment of neck vertebrae, and relaxes muscles in the body, chest, shoulders, neck, head, face and eyes.
Eye muscles are attached to the skull bones and nerves, blood vessels... travel through, around the bones in the head, face, skull. Bones surround the eyes; the eye socket. When the bones are aligned the muscles, nerves, blood flow, function is improved. Aligned skull bones relax the eye muscles, return the muscles to normal function, coordination, corrects crossed, wandering eyes, astigmatism, blur and other conditions.

Singing improves the memory, imagination, creativity, activates and integrates the left and right brain hemispheres; Three things that work with the visual system for clear vision.
While singing the brain remembers, imagines, creates clear mental pictures of the story, things the person is singing about. Positive emotions are created or, if the song is sad, expression, release of negative emotions occurs.
Singing, making noise, creating sounds, (as children do naturally) produces all the positive effects listed above and energizes, balances energy in the body, brain, ears, eyes, improves function of the muscles, nerves, entire body.
Allow children (and adults) to make noise, sing, yell, play. It's healthy! It improves the mind, body and vision.

People with unclear vision, especially people that wear eyeglasses and squint, stare, strain, try hard to see clear often develop muscle tension and reduced movement in the neck, shoulders, head/face, eyes, arms, chest, collarbones, upper and lower back, body.

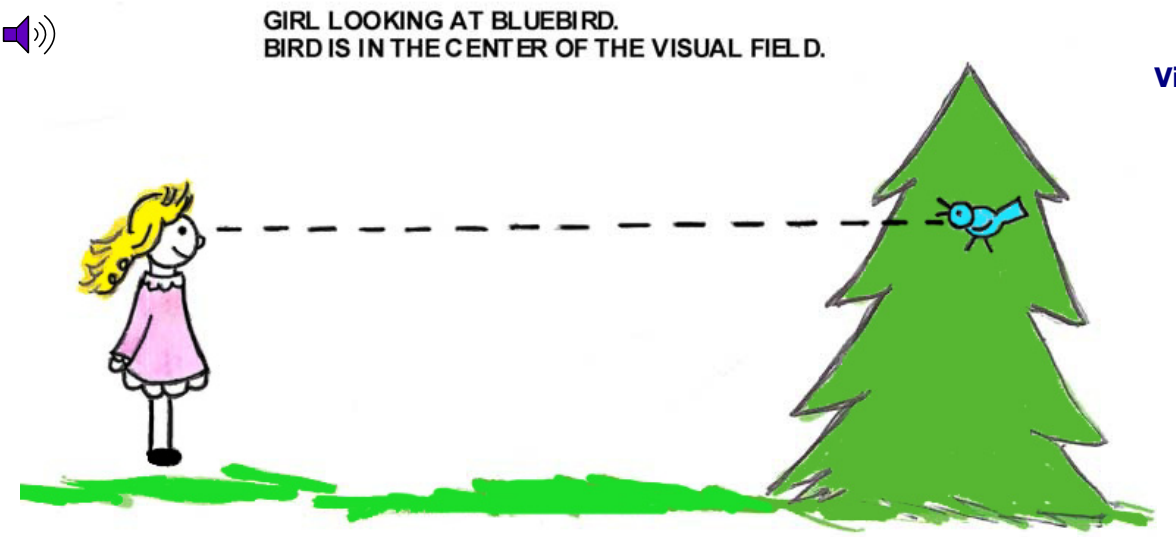
This causes muscle tension and constriction around the chest, rib cage and lungs causing short, shallow, tense breathing. More muscle tension occurs. Muscle tension in the body, especially the shoulders, chest/collarbones, neck can travel into the head and eye muscles lowering the eyes movement and clarity of vision.
The person may feel short of breath. Short, shallow breathing is an Incorrect Vision Habit that increases muscle tension, incorrect breathing and unclear vision.

Typing, writing all day without a break and using incorrect posture; bending, tilting the upper body, neck, head/face down, up, pushing, stretching the neck, head forward, up, twisted sideways, holding the arms, hands up high or too low for a long time when writing, typing, using the computer mouse... causes upper body, chest, collarbone, neck, shoulder.., eye muscle tension, immobility, causes short, tense breathing (breathing with only the upper lungs) and unclear vision.
Looking at the computer screen, one close distance all day long causes eye, head, neck, shoulder, body muscle tension, freezes the eyes, locks up the eye muscles, can slow divergence, convergence, eye movements resulting in unclear vision.
Muscle tension in the shoulders, neck and short tense breathing lowers oxygen, blood, lymph, nutrient, energy flow to the head, brain, eyes resulting in lowered vision, eye health.

Relaxation, deep, relaxed breathing, relaxed shoulders, neck, good posture improves blood, oxygen, lymph, nutrient, energy flow to the head, brain, eyes and increases the clarity of vision, improves eye health. Natural Vision Improvement Teachers combine deep breathing with shifting and other activities. This greatly improves visual clarity. When the eyes receive oxygen, nutrients; the retina, lens, all parts of the eyes, eye muscles are at maximum function. The brain works with the eyes. Bringing healthy oxygen to the brain improves function of the entire visual system.
Practice relaxation, abdominal breathing, correct posture. Get up and move, look to the distance. Blink, breathe abdominally, yawn, relax, look at a pleasant, interesting object, scenery and shift the eyes/visual attention on the objects.
When breathing is correct; the mind, body, eye muscles, eyes relax, the eyes move easy, with; shifting, central-fixation, all Correct Vision Habits and clear vision.

Do the Rock or Figure Eight with Abdominal Breathing.
Abdominal breathing can be practiced with the Color Breathing, Relaxation Chart.
Chapter 19.

8 - CENTRAL- FIXATION – Seeing Clearest with the Center of the Visual Field



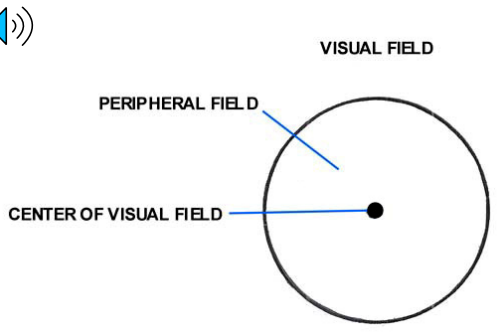
Video

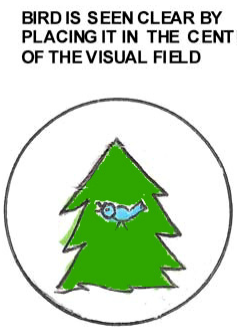
Central-fixation is a Correct, Natural Vision Habit, (the normal, relaxed function of the eyes) that produces very clear fine detailed vision.
Central-fixation = to see clear by using the center of the visual field.
To place the object the eyes are looking at in the center of the visual field.
The center of the visual field is between the left and right eyes, at eye level.
The center is the clearest area of the visual field, clearer than 20/20.
The center of the visual field is produced by the fovea centralis, macula in the center of the eyes retina.
The fovea and macula produce the clearest vision, clearer than 20/20.
The center of the visual field, (central Field) moves with the eyes, visual attention; from object to object and part to part on objects. See one small part of a object clearest at a time, in the center of the visual field. Move the central field from part to part. Each new part the eyes shift to, look at is in the center of the visual field and is seen clearest. The new part is clearest while the central field is on that part. Then, when the eyes (central field) move to a new part, that part will be seen clearest. The eyes move continually from part to part, seeing one part at a time clearest, in the central field.

In the picture above the girl is looking at the bluebird in the tree.
The bird is in the center of the visual field and is seen clear.
Relaxation, shifting and central-fixation are the 3 main Correct Vision Habits that keep the vision clear.
Practice them in a relaxed, easy, effortless manner.
Avoid staring, eye immobility, becoming stiff, immobile when placing a object in the center of the visual field. Relax, blink and move.

Central-fixation is combined with shifting = shift, move the eyes (visual attention, center of the visual field) from part to part on the object.
The eyes, head/face, neck and body are relaxed and move freely.
Blink, relax and move.







Example; When looking from one object to another object in the visual field or from part to part upon a object; turn, move and face the object the eyes are looking at. When the eyes, head, face, body are directed at the object of visual attention; the body, neck, eye muscles relax, central fixation is perfect and easy.

Experience Central-Fixation and Clear vision, and lack of Central-Fixation, unclear Vision;

Example #1 - Look at the tree (on the bottom of the previous page) - Eyes, center of the visual field, head/face and body all move together, in synchronization, at the same time, in the same direction and face directly at the tree. The tree is in the center of the visual field. The eyes, head/face and body continue to move together, same direction when shifting part to part, moving the central field on the tree. Notice relaxation and clear vision occur.

Example #2 - Now, experience incorrect movement, lack of Central-Fixation to experience strain, blur and know how to avoid it; Turn the eyes, head/face, body to the right > facing toward the apple and try to see the tree on the left clear out of the side of the face, side of the eyes retina, (peripheral area of the retina, visual field). Keep the eyes, head, face and body still, immobile, staring at the apple. This is eccentric fixation, diffusion, the opposite of central fixation.
Notice that strain and lowered vision occurs.
Stain, eccentric fixation also occurs when the head/face, body is directed right > at the apple while the eyes move, look left < at the tree. Feel pulling of the eyes, muscles, strain.

Example # 3 - Repeat Example #1 - Move, turn the eyes (center of the visual field), head/face, body together, at the same time, in the same direction and face, look directly at the tree. Shift, move the eyes, (visual attention, center of the visual field) part to part on the tree with the eyes, head, face and body moving together, relaxed. Notice relaxation and clear vision return.

Even a small synchronized movement of the eyes, head/face, neck and body when shifting part to part on a small object, small part of a object keeps the eyes, head, neck, body relaxed and vision clear. Headaches are prevented by using Central-fixation with correct movement.

The small part of the object the eyes are looking directly at is in the exact center of the visual field. (See the dot and bird in the center of the circles in the picture)
Example; practice shifting from part to part (dot to dot) on the blue bird. Shift top and bottom, left and right, middle, from small part to small part on any area of the bird. Blink and relax. Breathe.





(Practice Central-fixation on small stones; break open a rock and see the small colorful, shiny details. Shift, move the exact center of the visual field from tiny part to tiny part. Move the central field from point to point. Improves close vision and reading vision. Practice in the sunlight daily, 1-5+ minutes.)

As the eyes shift from one small part to another small part on the bird, the exact center of the visual field moves with the eyes from part to part keeping each part the eyes look at perfectly clear.
Move the head/face with the eyes even when shifting on a very small object. Relax and move the neck. (Head, face movement when shifting on very small objects, parts may be tiny, almost imperceptible but it is there. Body movement may or may not occur. Just let the head, neck, body relax.)

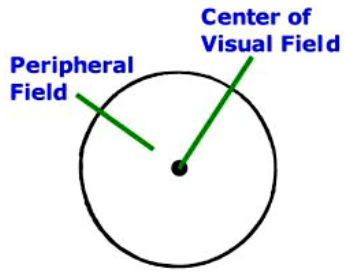
The exact center of the visual field is very small, about the size of the pointed end of a pin.
This small area is the most perfect, clearest area of the visual field and is produced by the exact center of the fovea centralis and its many cones (light receptors) in the macula, in the center of the eyes retina. The fovea produces very clear, fine detailed vision, much clearer than 20/20; 20/10, 15, 5 and clearer with bright color perception.

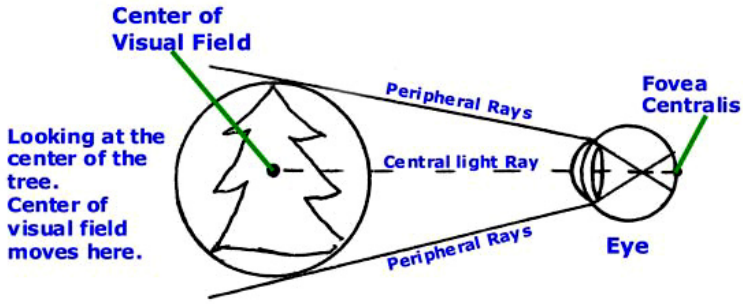
(The left and right eyes, fovea centralis' combine their central fields into one central field with the exact center being the size of the pointed end of a pin and producing very clear vision, better than 20/20 with bright color.)

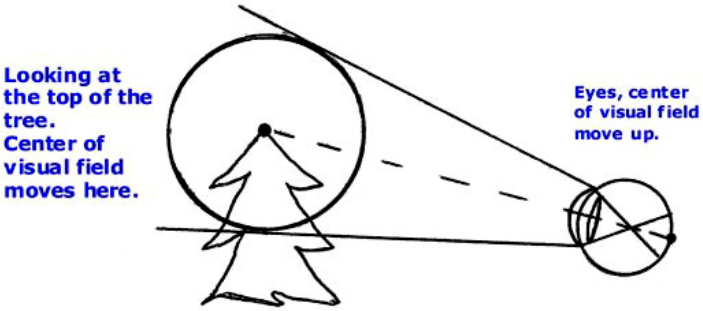
This is why Dr. Bates teaches his students to shift from small point to small point on a object; to see clear with the center of the visual field, central-fixation; to move the small exact center of the visual field from small part to small part (point to point) on a object for very clear, fine detailed vision.
The normal eye does this by being interested in, investigating, noticing small parts, tiny details of a object, letting the eyes move automatically, relaxed from detail to detail (point to point). This activates, occurs with tiny and microscopic, relaxed, continual movements, shifts of the eyes. The shifts can be very fast, every fraction of a second and faster; Saccadic shifts. Saccades.
This normal, natural eye function=Shifting with Central-Fixation brings perfect, clear vision. Relaxation of the mind, eyes, visual system activates this correct function, perfect clarity.

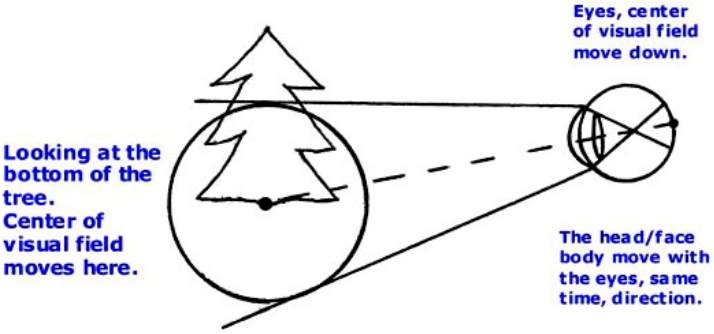
Seeing with the center of the visual field relaxes, clears and centers the mind and eyes. When the mind relaxes the eyes relax and vision is clear.

Central Fixation and Shifting.
The center of the visual field moves, shifts with the eyes, point of visual attention.









The eyes face directly at the object of visual attention, placing the center of the fovea centralis/visual field directly on the part of the object the eyes are looking at.
The eyes, head/face, center of visual field are directed at the part of the object the eyes are looking at.
The center of the visual field moves with the eyes (& head, face) as the eyes move 'shift' from part to part on the object and from object to object.

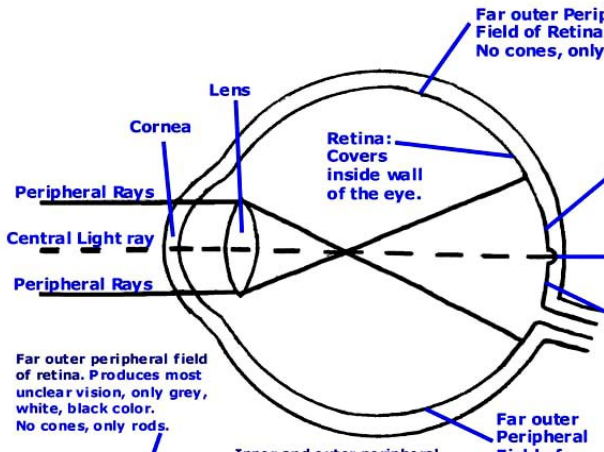
The Central light ray from the part of the object the eyes are looking directly at/center of visual field focuses on the exact center of the fovea centralis in the center of the macula, eyes retina.
Peripheral rays focus on the peripheral areas of the retina.
Vision is perfectly clear.

The outer areas of the fovea, macula surrounding the fovea and areas of the retina close to the macula in the center of the retina also contain many cones and produce very clear vision in the center of the visual field. The center of the fovea in the exact center of the retina produces the tiny exact center of the visual field and clearest vision.

Using the exact center of the visual field activates perfect central-fixation, clearer than 20/20 central vision and maximum clarity of the peripheral vision. Clarity of the entire visual field improves.

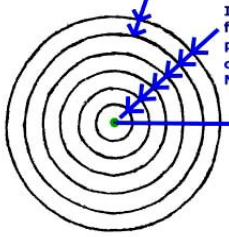
When the eyes see clear with the center of the visual field, the central light ray focuses exactly on the center of the fovea centralis in the center of the macula, retina.
The peripheral rays focus perfect onto the peripheral area of the retina. Vision is perfectly clear; Central vision is clearer than 20/20 and peripheral vision, which is naturally less clear than central vision, is at its maximum clarity.

Central Fixation-Center of the Retina produces the Center of the Visual Field.
The center of the visual field is clearest.



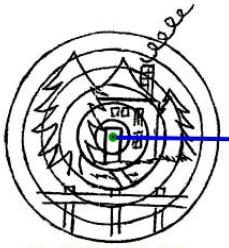
Central Fixation:
See a object clear by placing it in the center of the visual field. The central field moves with the eyes as the eyes move 'shift' on a object and from object to object. The brain, eyes continue to be aware of the peripheral field, but the object of mental/visual attention is placed in the clear central field.
The peripheral field keeps the brain aware of other objects, moving objects... in the peripheral field.
People that have unclear vision, cataracts, astigmatism, macula degeneration... tend to try to see objects clear with the peripheral field by turning, tilting the head, eyes to place the object away from the central field and into the peripheral. This increases the blur, vision impairment.
Central Fixation activates clear vision and healthy eyes.
Even when looking at a tiny part of a object: place it in the center of the visual field.

Far outer peripheral field of retina. Produces most unclear vision, only grey, white, black color. No cones, only rods.



Inner and outer peripheral field of retina - Produces peripheral field of vision, less clear vision. Cones and rods. No cones in far outer field.

Center of retina, Macula and Fovea Centralis - Produces center of visual field, clearest vision. Cones and rods, mainly cones. Only cones in center of fovea.
Green dot is the macula.
Fovea= blue dot in center of the macula.
Fovea produces the clearest vision, clearer than 20/20 with fine detail, bright color.



Center of visual field produced by Macula and Fovea.
Green dot=outer central field produced by the macula.
Blue dot =inner central field, exact center of visual field produced by center of the fovea centralis- Very clear vision, clearer than 20/20.
Central Fixation: Place the exact center of the visual field on the object and move it part to part with the eyes as the eyes shift from part to part (point to point) on the object. The exact center of the visual field is the size of the pointed end of a pin, can see tiny, fine details clear at close and far distances.

Eyes looking at the top, center of the house door. The exact center of the visual field moves point to point on this area.

+Central Field of retina and visual field: located in the center of the retina and center of the visual field - Clearest vision.
+Peripheral Field of retina and visual field: all areas around, near (but not within) and away from the macula/fovea, away from the central field of vision - Less clear vision.

The retina contains light/photo sensitive, receptor cells; 'Cones and Rods' that convert light energy by electro-chemical action into signals that are carried by the optic nerve to the brain, then travel down the spinal cord to the body.
Cones produce very clear, fine detailed vision and bright color.
Rods produce less clear vision, only grey, black, white color.
The central field of vision is clearest, due to the macula, fovea containing many cones.
See clear by using the center of the visual field.
Cones exist in the central and peripheral areas of the retina and increase in number closest to and in the center of the retina, macula. Cones decrease in the peripheral field.
Many cones exist in the macula and fovea. Few rods. An increased, maximum amount of cones (no rods) are in the exact center of the fovea. This produces very clear vision in the exact center of the visual field.
The outer central field produced by the macula is less clear than the inner, exact central field produced by the center of the fovea centralis.
Cones stop functioning in very dim light.

Rods in the Peripheral field sense objects, movement and continue to function in very dim light, almost complete darkness. Only rods (no cones) exist in the far outer peripheral field of the retina. This causes vision to be most unclear in the far outer peripheral field.
All areas of the peripheral are less clear due to less cones and more rods in the peripheral field of the retina.
The inner peripheral field closest to the center is clearer than the outer peripheral areas but is less clear than the central field.
In very dim light when the cones stop functioning causing the exact center of the visual field to stop functioning: the rods, peripheral field continue to produce vision.

Shifting on small objects, small parts of objects at close and far distances with the exact center of the visual field results in very clear vision. Small details of objects are seen clear at all distances.

Practice shifting on the small parts of the crater's on the moon for clear distant vision and on small, tiny parts on a piece of jewelry, in a stone for clear close vision. Blink and relax.

When the eyes shift to a different object, the center of the visual field moves with the eyes to the new object. The head/face and body move with the eyes at the same time, in the same direction. This keeps the object the eyes are looking at in the center of the visual field.

When the vision is very unclear, people often develop the Incorrect Vision Habit of trying to see with the peripheral field of vision, the peripheral area of the eyes retina. Persons with cataracts, macula degeneration, extreme nearsight, farsight acquire this incorrect habit.

Trying to see a object clear by placing it in the peripheral field strains, tenses the eyes, eye muscles, retina and causes, increases the blur, astigmatism, cataracts, macula degeneration and leads to other eye problems.

The central light ray must focus on the center of the fovea centralis in the macula, center of the retina (not the peripheral area) to produce clear vision.
Central-fixation; placing the part of the object the eyes are looking at in the exact center of the visual field, keeps the central light ray on the fovea centralis resulting in clear central vision and perfect focus of peripheral light rays on the peripheral area of the retina for maximum clarity of central and peripheral vision.
As the eyes, 'center of the visual field' moves from object to object, part to part, (point to point); the central light ray from each part of a object the eyes look at, one small part (point) at a time, focuses on the center of the fovea centralis.
Seeing with central-fixation, the center of the visual field reverses and prevents unclear vision, astigmatism, cataracts, macula degeneration, crossed, wandering eyes and other eye problems resulting in healthy eyes and clear vision.

Ophthalmologist Bates taught, that when looking at a object; one small part is seen clearest at a time. The center of the visual field is clearest and the peripheral is less clear.
This is normal. This is central-fixation.
Example; look at the apple.
Trying to see the entire apple (parts in the central and peripheral field) perfectly clear at the same time, without shifting the eyes, visual attention part to part causes strain and blur.
The eyes relax and the apple is seen clear by seeing one small part of the apple clearest at a time in the center of the visual field and shifting continually, easy from part to part. Each part the eyes shift to, look at is seen clearest, perfectly clear in the center of the visual field, one part a time.
Example; look at/see the dot on the left clearest, then look at/see the dot on the right clearest, then the dot on the top, then bottom, then middle.
The center of the visual field moves with the eyes from dot to dot, keeping each dot (part) the eyes look at clear. The apple is seen clear.

Staring; eye immobility causes unclear vision;
+Example; stare at one small part of the apple (one dot) without moving the eyes to another part. Keep the eyes immobile, looking at only one part.
In a second or two, eyestrain is felt and the clarity of vision lowers.
+Trying to see the entire object, all parts, central and peripheral field clear without moving the eyes from part to part also causes strain and blur.
+Trying hard to see clear, squinting, staring causes strain and blur.
+Relaxation and eye movement (no effort to see) brings clear vision.
The eyes relax and vision is clear when the eyes apply shifting with central-fixation; see one small part clearest at a time in the center of the visual field and move the eyes by shifting continually, slowly, relaxed, easy from one small part to another.
This is the normal function of the eyes.
As slow, continual shifting is practiced, faster shifting occurs subconsciously, a automatic eye function. Saccadic, microscopic and other eye movements. The eyes can shift so fast with the center of the visual field moving quickly from small part to small part that the entire object appears clear. In reality, only one small part is seen clear at a time as the center of the visual field passes over that part. The center of the visual field may be on a part for only a fraction of a second. During that fraction of a second, the part is in the center of the visual field and is seen clearest.

Practice shifting and central-fixation and the eyes, brain will activate these Natural Correct Vision Habits/functions and clear vision automatically, all the time, 'on their own'.
Practicing, imitating normal eye function to return the eyes, visual system back to normal function.

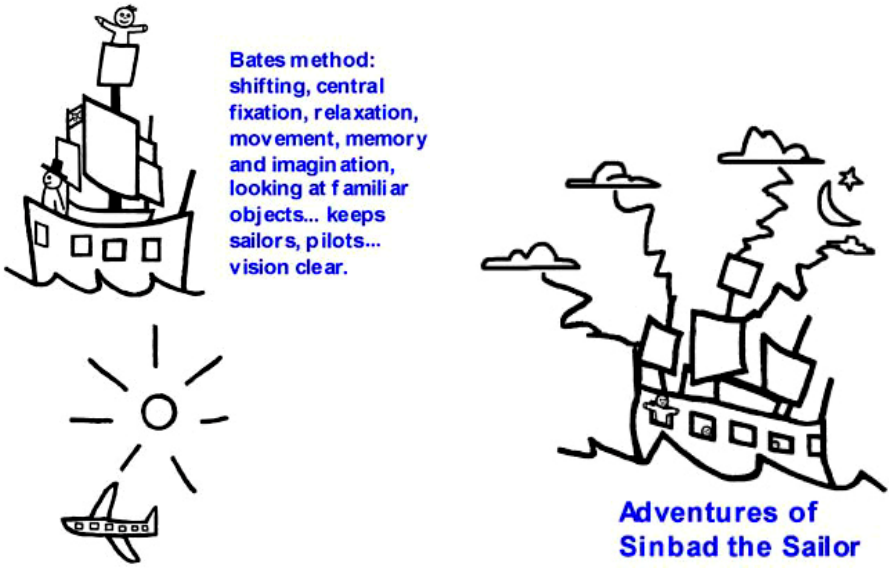
The eyes, brain produces many different types of eye movements; larger/longer movements as the eyes shift from object to object and part to part on a object, smaller movements when shifting on smaller objects, small and tiny parts of objects, saccadic shifts, high frequency vibrations, optical drift, natural tremors, small, tiny, microscopic and other movements. These movements combine, integrate together and produce hundreds, thousands of eye movements in a few seconds! The movements keep

the eye muscles relaxed, pull light into the eyes, keeps the vision very clear, clearer than 20/20.
This is the natural, optimum function of the eye.
All eye movements are subconscious, automatic. Eye movement occurs like a automatic habit; shifting, a Correct, Natural, Relaxed Vision Habit. Relaxation brings clear vision.

When vision is unclear and the eye muscles are tense, all eye movements are reduced, imperfect, rigid, too slow. This causes unclear vision.
When the eyes move continually, frequently, easy, vision is clear.
Watch a person that has clear vision. Notice their correct eye movement; when looking at distant or close objects; the eyes move, shift continually from object to object, part to part, small point to small point on objects. Most tiny movements are seen only with a special Ophthalmologist's instrument.
Practicing shifting, relaxation, central-fixation and all Correct Vision Habits returns all eye movements to normal, resulting in eye muscle relaxation and clear vision.
The brain activates all eye movements. Relaxation of the mind/brain improves function of the brain, activates normal eye movements and clear vision.

Dr. Bates teaches that tension, strain in the mind tenses the eye muscles, eyes and causes unclear vision. When the mind relaxes, the eyes, eye muscles relax, the eyes move, shift easy, effortless, perfect and relaxed. Vision is clear.
Practice shifting easy, without effort - a relaxed, natural, correct vision habit.
When the eye moves, shifts with ease - it relaxes and this relaxes the mind/brain, visual system and body. This relaxation further improves the eyes movement and relaxation.

Central-Fixation Videos - http://www.youtube.com/watch?v=-HcAMLGptHo
http://www.youtube.com/watch?v=-HcAMLGptHo&feature=mfu_in_order&list=UL



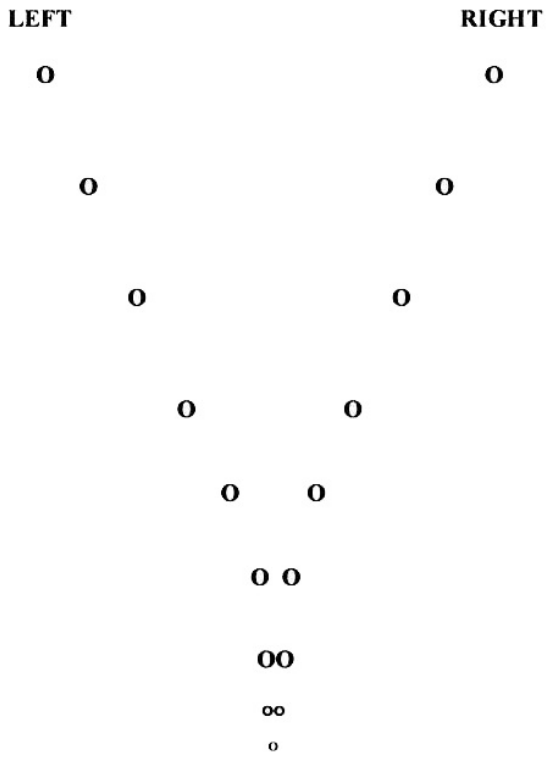
Practice shifting and central-fixation on any size objects; small, medium, large at any distance; close, middle, far.
+The object the eyes are looking at is in the center of the visual field and is seen clearest.
+The part of the object the eyes are looking at is in the center (exact center) of the visual field and is clearest, clearer than other parts the eyes are not looking directly at.
Avoid staring at a object, part of a object. Shift from object to object, part to part.

Central fixation = see one object clearest at a time in the center of the visual field.
Example; look at one letter o at a time on the diagram below.
Place the o the eyes are looking at in the center of the visual field; between the eyes, at eye level.
Notice that the o the eyes are looking directly at, in the center of the visual field, is clearest.
The other o is in the peripheral field and is less clear. This is normal vision. The central field is clearest. The peripheral is less clear.
Blink, breath, relax.
Practice on the o's from top to bottom; o's that are far apart and then on the o's that are closer together, then on the smaller o's. See one o clearest at a time in the center of the visual field. When looking at a o – shift on it; shift the eyes, visual attention from part to part.
Shifting prevents staring, eye immobility, strain and blur.
When looking at two o's that are close together, the o in the peripheral field will appear almost as clear as the o in the center of the visual field. The o in the center of the visual field will still be clearest. This occurs because there are more, many cones (cones produce very clear vision and bright color) close to and in the center of the eyes retina, macula, fovea, so the area of the visual field closest to the center is clearer than the peripheral field.
The macula, fovea centralis in the center of the retina produces the clearest vision in the center of the visual field.

Shift on the o on the left.
When looking at the o on the left it is in the center of the visual field and is seen clearest.

The o on the right is in the peripheral field and is less clear.
This is normal vision.

When you reach the bottom small single o;
Shift on the one o.
Shift part to part; left and right, top and bottom and in any direction.
Try shifting on the inner edge of the o; inner left to inner right, left, right...
See one small part of the o clearest at a time in the center of the visual field.
The exact center of the visual field is very small and produces very clear vision.
Seeing clear with the center of the visual field produces clearer than 20/20 vision.
Very small fine details are seen clear.
Microscopic vision is experienced.
Practice at close, middle and far distances.

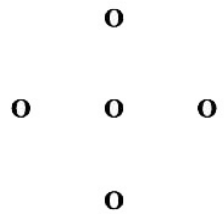


Shift on the o on the right.
When looking at the o on the right it is in the center of the visual field and is seen clearest.

The o on the left is in the peripheral field and is less clear.
This is normal vision.

The normal eye shifts/moves continually, very fast from small point to small point, (saccadic and other shifts) moving the tiny perfectly clear center of the visual field from point to point, part to part on a object and from object to object in the visual field.
This causes the entire visual field to appear very clear, though, in reality, the center of the visual field is always clearest.
Using the center of the visual field improves clarity of the central and peripheral fields of vision.
Shift back and forth on the two o's; left, right, left, right and see one o clearest at a time in the center of the visual field.
Move the head/face with the eyes when shifting left and right.

The center of the visual field is produced by the fovea centralis and its many cones in the macula, center of the eyes retina.
The fovea centralis produces a very small area (about the size of the end of a pin) of most clear vision, much clearer than 20/20 in the exact center of the visual field enabling the eyes to see small details clear.
Practice shifting and central fixation on the 5 o's on the right; look at, see one o clearest at a time in the center of the visual field.
Example; look at the o in the middle of the 5 o's.
When looking at the o, it is in the center of the visual field and is clearest.
The other 4 o's are in the peripheral field and are less clear.



Next; look at the o on the left side.
This o is now in the center of the visual field and is seen clearest.
The other 4 o's are in the peripheral field and are less clear.
Shift from one o to another (left, right, top, bottom, middle... and see one o clearest at a time in the center of the visual field.
Shifting can occur very fast, the eyes, center of the visual field moving continually from point to point. For the fraction of a second that a o is in the center of the visual field it is seen clearest.

Diffusion is the opposite of central fixation.
Diffusion = trying to see more than one object, more than one part of a object equally clear at the same moment. Trying to see objects in the central and peripheral fields equally clear. Staring, eye immobility, squinting, not shifting.
Avoid trying to see two or more o's equally clear at the same time. Avoid trying to see the o's in the peripheral field as clear as the o in the center of the visual field.
See one o clearest at a time in the center of the visual field.
If you want to see a o in the peripheral field clear; shift to it, look directly at it and place it in the center of the visual field.
Shift from object to object, part to part on objects for clear eyesight.

Practice the fine detail shifting point to point eye movement and see the clarity of vision improve. Shifting moves the clear center of the visual field from part to part on objects and from object to object throughout the visual field keeping the vision clear.

Central-fixation - To see one small part of a object clearest at a time in the center, clearest area of the visual field.

Shifting is combined with central-fixation.
Staring, eye immobility, eyestrain, eye muscle tension and blur occur when the eyes look at one point (part) of a object for longer than a second without shifting to a new point and, when the eyes try to see all points (all parts) of a object clear at the same time without shifting from point to point, from one part to another.
The eyes must shift (move) to maintain relaxation and clear vision.
People that have unclear vision stare, squint, avoid central-fixation and shifting.
The normal eye, functioning with clear vision shifts to a new point every fraction of a second.
The shift may be long from one object to another object or shorter, from one part of a object to another part or the shift may be a very small, tiny shift from one tiny point to another point.
Example; only 1/64 inch. or less from one side of a small dot to the other side then back to the original point. As long as the eyes move/shift, relaxation and clear vision remain.
The center, clearest area of the visual field moves with the eyes from object to object, part to part (small point to small point) on objects keeping each part of a object the eyes look at in the center of the visual field and perfectly clear.
The center of the visual field is clearest.
The peripheral field is less clear.
See clearest with the center of the visual field. (Practice on the letter o's in the picture above.)

Here is another Example; In pictures # 1 to 5 below the circle represents the visual field.
The green dot is the center of the visual field. The green dot/center of the visual field is clearest.
(The exact center of the visual field is smaller than the dot and is most clear but, for this example the green dot is made larger for easy viewing).
The peripheral area of the visual field consists of all areas of the circle around, near and away from the green dot/central field.
The center of the visual field and peripheral field move with the eyes as the eyes move/shift from object to object, part to part on objects.

The head/face and body move with the eyes at the same time, in the same direction the eyes move to keeping each part of the object the eyes look a; between the eyes, at eye level, in the center of the visual field. This also keeps the eyes, head, face, neck and body muscles relaxed, moving easy.

In pictures # 1 to # 6 the center of the visual field (green dot) moves with the eyes from object to object placing the part of the object the eyes are looking directly at in the center, clearest area of the visual field.
Move the head/face with the eyes when shifting from dot to dot.
When looking at a dot, continue to shift on the dot - shift point to point on even smaller parts of the dot for perfect central-fixation and shifting. Blink.

Shift to other smaller parts of the part of a object.
Example; shift around on the house door, then on the tree - branch to branch.., the chimney, along the fence... Blink and relax. Breathe deep, abdominal. Yawn, stretch.

PLACE THE CENTER OF THE VISUAL FIELD ON THE PART OF THE OBJECT THE EYES ARE LOOKING AT. SHIFT, MOVE THE EYES (VISUAL ATTENTION/CENTER OF THE VISUAL FIELD) FROM OBJECT TO OBJECT, PART TO PART.

#1 - Looking at the middle of the house door.
The part (middle of the door) is in the center of the visual field and is seen clearest.
(See green dot/center of the visual field).
Other parts of the door, house, and other objects are in the peripheral field and are less clear.

#2 - Looking at the middle of the tree on the left.
(Notice the entire visual field, central and peripheral has moved left with the eyes, head/face, body).
The middle of the tree is in the center of the visual field and is seen clearest.
(See green dot/center of the visual field).
Other parts of the tree and other objects are in the peripheral field and are less clear.

#3 - looking at the middle of the tree on the right.
The middle of the tree is in the center of the visual field and is seen clearest.
(See green dot/center of the visual field).
Other parts of the tree and other objects are in the peripheral field and are less clear.

#4 - Looking at the middle rung of the fence.
The middle rung is in the center of the visual field and is seen clearest.
(See green dot/center of the visual field).
Other parts of the fence and other objects are in the peripheral field and are less clear.

#5 - looking at the top of the house.
The top is in the center of the visual field and is seen clearest.
(See green dot/center of the visual field).
Other parts of the house and other objects are in the peripheral field and are less clear.

1 to 5 is the normal, correct function of the eyes; central fixation and shifting.

Dr. Bates taught his students how to experience incorrect use of the eyes, eyestrain and blur in order to know how to avoid these conditions and use the eyes correct for clear vision.
Try this experiment; Look at diagram # 6. Stare at one dot.
Don't shift to another dot - do not move the eyes.
In about one second eyestrain and unclear vision occurs.
Now, try to see all the dots equally clear at the same moment without shifting, not moving the eyes. Again eyestrain and unclear vision occurs.
This is staring, a main incorrect vision habit that causes eyestrain, eye muscle tension and unclear vision. Squinting, a form of staring also causes eyestrain and blur.
Next; shift from dot to dot .
Notice that shifting prevents eyestrain, tension, blur.
Shifting relaxes the mind, body, eyes and brings effortless clear vision.
Relax, blink and shift.

#6 - Central fixation and shifting relaxes the mind, body, eyes and maintains clear vision.
Central fixation; see one small part of a object clearest at a time in the center of the visual field and
shift; shift continually from one small part to another small part;
Shift from dot to dot on the objects in diagram # 6.
Shift continually, relaxed, easy from part to part, (small point to small point - dot to dot) on the objects; trees, house, fence, lawn.
Blink, breathe slow, easy and relax.
See each point (small green dot) clearest in the center of the visual field, one small point (dot) at a time.
Then practice this shifting and central fixation without the dots on any objects at any distance; close, middle, far.
Avoid trying to see clear. Just relax and shift.
Central fixation and shifting causes the center of the visual field to be much clearer than 20/20 with areas around, near the central field to be at 20/20 and clearer and the peripheral field at maximum clarity and function.
Central fixation improves the clarity of the entire visual field.

6



Shift from part to part (dot to dot).

Looking at the middle area of the door

1



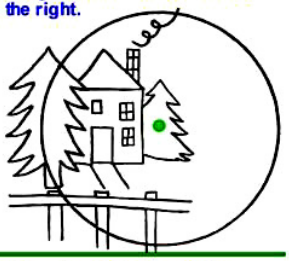
Looking at the middle of the tree on the left.

2



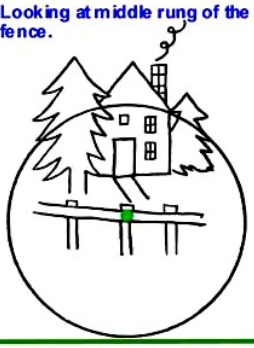
Looking at the middle of the tree on the right.

3



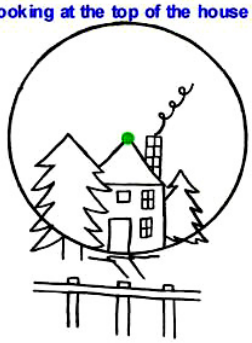
Looking at middle rung of the fence.

4



Looking at the top of the house roof

5



Central fixation, shifting and movement

The head/face and body move with the eyes, at the same time, in the same direction the eyes move/shift to as the eyes shift from object to object and part to part on a object.
This keeps each part of the object the eyes shift to/look at between the eyes, at eye level, in the center of the visual field and perfectly clear.
Face the object the eyes are looking at - eyes, head, face, body directed toward the part of the object the eyes are looking at.
To see a object clear; look at, see clearest, one small part of the object at a time in the center of the visual field and shift continually from one small part to another small part.
The part of the object the eyes are looking at is placed in the center of the visual field and is seen clearest.
The center of the visual field moves with the eyes keeping each object, part of the object the eyes look at in the center of the visual field and perfectly clear.
Moving the head/face, body with the eyes, facing the object, part of the object the eyes are looking at improves central fixation, shifting, relaxation and movement of the eyes, head/face, neck, body, convergence, accommodation, divergence, unaccommodation and clarity of vision.

Example; Shift on a tree.
The black dot on the diagrams of the tree on the right shows the center of the visual field, the part of the tree the man is looking at.
The man faces the part of the tree the eyes are looking at for perfect central fixation.

#1 - The man is looking at, shifting on a small part in the middle of the tree. (See dot)
The eyes, head/face and body are directed toward the part in the middle of the tree.
The part (dot) is between the eyes, at eye level, in the center of the visual field and is seen clearest.
Other areas of the tree are in the peripheral field and are less clear.

#2 - The man is looking at, shifting on a small part on the left side of the tree.
The eyes, head/face and body shift/move left and are directed toward the part on the left side of the tree.
This new part is now in the center of the visual field and is seen clearest.
Other areas of the tree are in the peripheral field and are less clear.

#3 - Looking at, shifting on a small part on the right side of the tree.
The eyes, head/face and body shift/move right and are directed toward the part on the right.
The part is in the center of the visual field and is seen clearest.

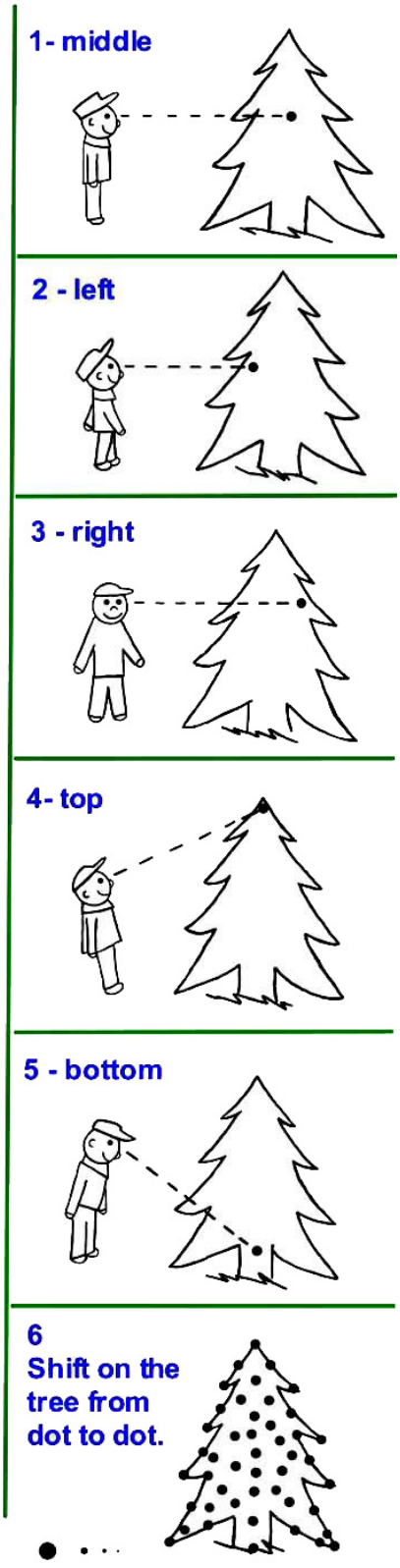
#4 - Looking at, shifting on a small part on the top of the tree.
The eyes, head/face and body shift/move up and are directed toward the part on the top of the tree.
The part is in the center of the visual field and is seen clearest.

#5 - Looking at a small part on the bottom of the tree.
The eyes, head/face and body shift/move down and are directed toward the part on the bottom of the tree.
The part is in the center of the visual field and is clearest.

Blink and relax.
When looking at a small part (dot) continue to shift on the small part and it will be seen clear.
Avoid becoming stiff, immobile when placing a part in the center of the visual field.
You don't have to try to place it perfectly.,
The eyes will do this automatically.
Let the eyes, head/face and body relax and move.

#6 - Shift from part to part (dot to dot) on the tree in diagram # 6.
Shift continually, easy, relaxed, moving the eyes, head/face, center of the visual field from dot to dot.
When the center of the visual field is on a dot it is seen clearest, clearer than the other dots that are in the peripheral field.
The eyes, center of the visual field may be on a dot for only a fraction of a second as the eyes move about the tree but during that fraction of a second, that dot is clearest.
Practice shifting from small part to small part on any objects at close and far distances.

Seeing one small part of a object clearest at a time and shifting from small part to small part is relaxing to the eyes, mind, body and produces clear vision.
Ophthalmologist Bates taught his patients to remember, imagine, see and shift on a small black dot - a period at the end of a sentence.
This relaxes the mind, body, eyes, activates central fixation, shifting and clear vision.
Look at a small dot below the tree on the right.
Practice on the smallest dot possible.
Shift on the black dot and remember, imagine and see the dot dark black and perfectly clear.
Do this with the eyes open, then in the imagination with the eyes closed, then with the eyes open again.
Shifting on the dot when the eyes are open, and shifting on the dot in the imagination when the eyes are closed relaxes the eyes, mind, keeps the memory and imagination strong and keeps the image of the dot in the mind clear and the dot seen with the eyes open clear.
Shift relaxed and easy - left and right, top and bottom, diagonally, middle and in any direction on the dot.
Blink, breathe abdominally, relax.
Shift on the dot with eyes open, closed, open and see oppositional movement; the swing;
The dot appears to move in the opposite direction the eyes shift to on the dot.
Shift left, the dot moves right.
Shift right, the dot moves left, shift up, dot moves down, shift down, dot moves up.
This also relaxes the mind, eyes, and keeps the dot dark black and clear with the eyes open, closed, open.

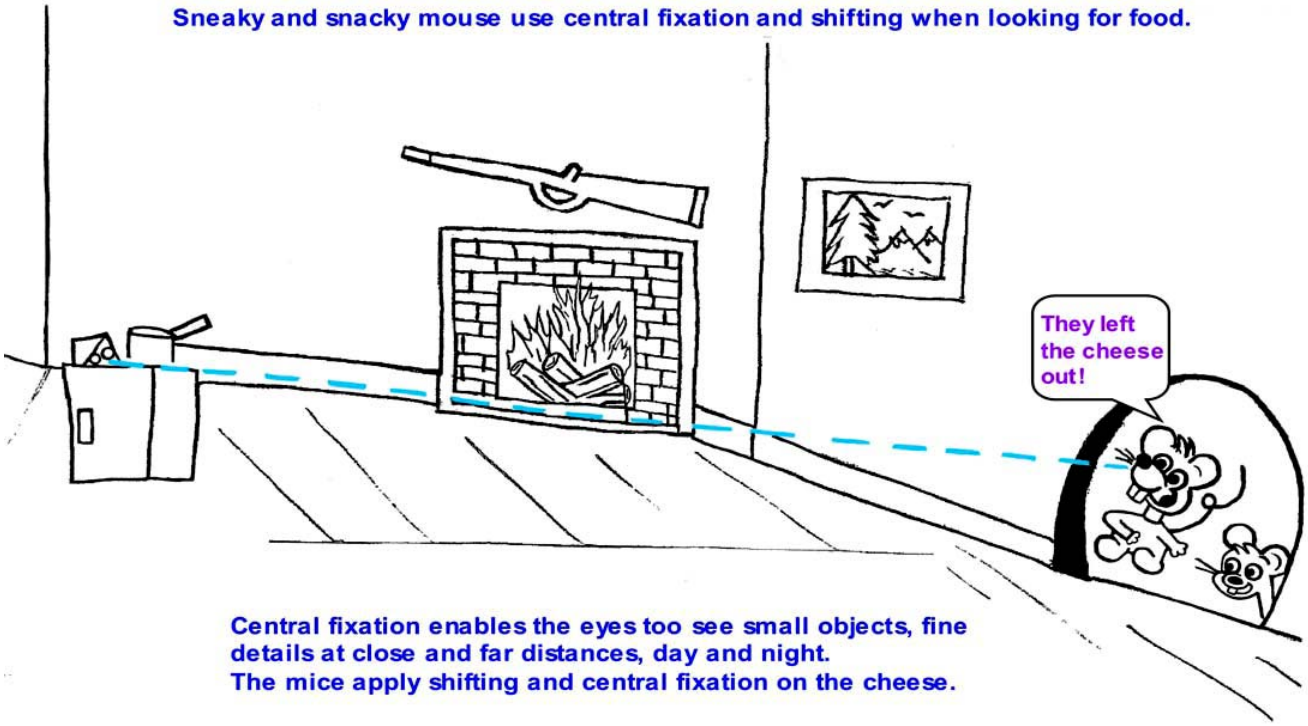


It is normal to turn the head, face eyes to the left, right... without moving the entire body to glance at a object but if the position is maintained; the entire body, head/face must face the direction the eyes are facing in order to keep eye, head, neck, body muscle relaxation, easy movement.

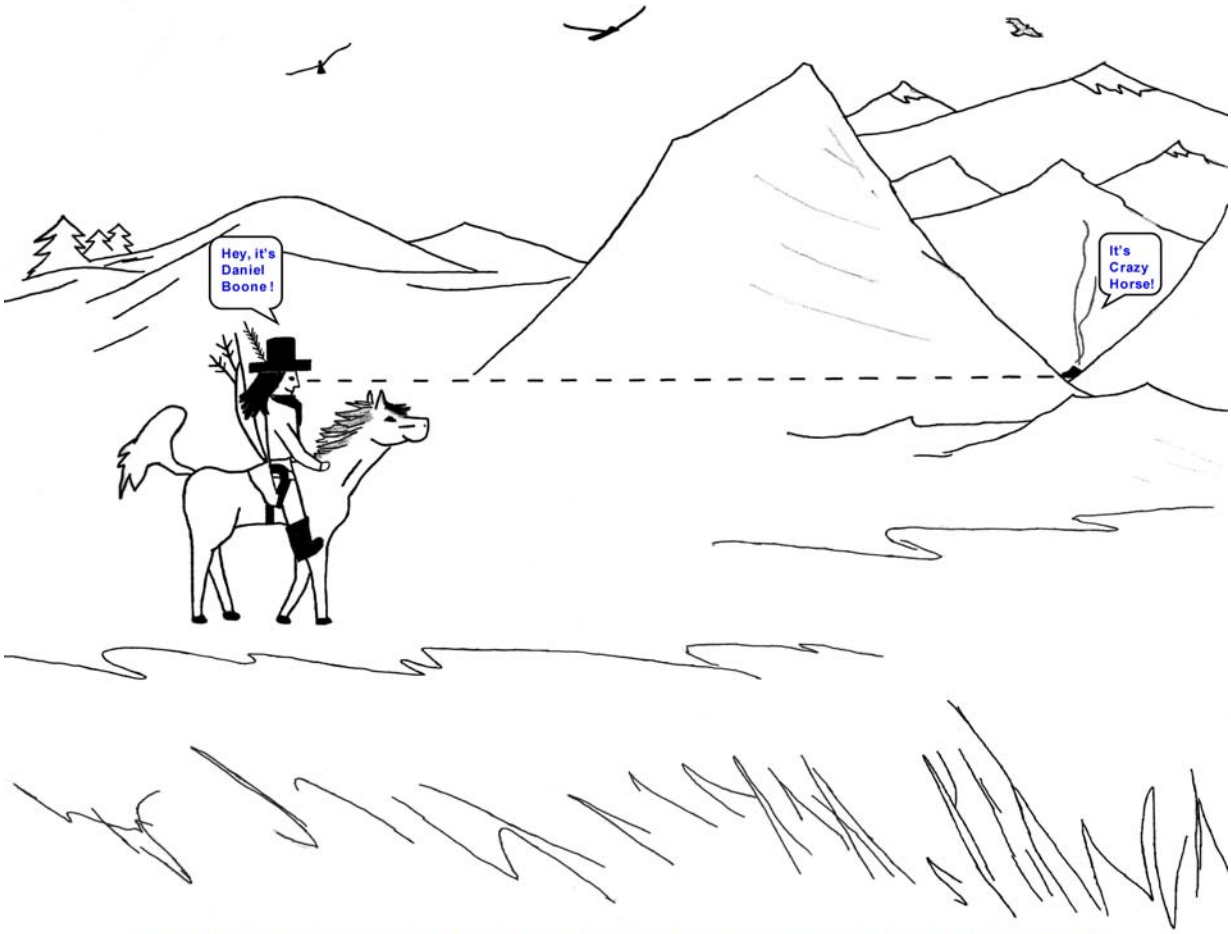
Avoid incorrect posture, Incorrect Vision Habits;
+Avoid looking to the left, eyes directed left <, with the head/face, body facing in the opposite direction to the right >.
+Avoid looking to the right > with the head, face, body directed to the left <.
+Avoid looking up with the head, face, body directed down.
+Avoid looking down with the head, face, body directed up.

+Example; Eyes looking left < at a page on the left side of the computer monitor while the head, face, body are directed straight ahead to the computer screen or to the right > of the screen.
Try this incorrect posture, only once, to experience the tension, pulling, strain it causes in the eyes, head, neck and body. Then you know to avoid this incorrect posture.
Keep good eye, head/face, body posture; The eyes, head/face, body turn, face in the same direction; Eyes, head/face directed at the page or the computer screen. One object at a time.

+Example-Incorrect eye/head/face posture;
Eyes looking up over the top of eyeglasses with the head, face directed down.
Eyes looking down through the bottom of eyeglasses with the head, face directed up.
Bifocals also cause these Incorrect Vision Habits.
All these incorrect postures, vision habits cause eye muscle tension, dysfunction, eyestrain, neck, head/face, body muscle tension, immobility, unclear vision, astigmatism.



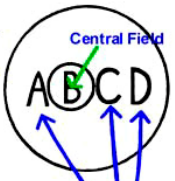
CENTRAL FIXATION



Central fixation and shifting enables the eyes to see small objects, small parts, fine details of objects clear at close and far distances. Blink, breathe abdominally, relax and shift from point to point.

CENTRAL FIXATION.—When the sight is normal one is always able to demonstrate that things regarded are seen best while those not regarded are always seen worse. With Central Fixation if one recognizes or sees a letter correctly, all other letters are seen worse. With the best vision that can be obtained it can be demonstrated that one cannot see a letter or any other object perfectly without seeing one part best. No matter how large or how small the letter or object may be, it is impossible to see it perfectly without Central Fixation. Many people believe that when they look at a small letter or a small period that they see it all at once; but, when you notice the facts, one finds that to see or to try to see a letter, a number of letters all perfectly, the vision becomes modified or imperfect. Some persons with unusually good vision can read the Snellen Test Card so rapidly that they have the impression that they see all the letters perfectly at the same time. It requires, in some cases, considerable trouble to demonstrate that this is impossible. In some obstinate cases it has required not only some hours but some days to prove that this is a fact. The letters of the Snellen Test Card are equally black. To see one blacker than the others, or a part of a letter blacker than the rest of it, is seeing something which is not so. The large letters and the small letters are printed in the same ink and all are equally black and although one cannot read the letters unless they see them by Central Fixation it is still, nevertheless, an illusion. One should emphasize the fact that it is possible to have illusions or that one cannot see perfectly unless the illusion of Central Fixation can be demonstrated. **Dr. Bates, Better Eyesight Magazine.**

Person is looking at, shifting on the middle part of the B. The middle of the B is in the center of the visual field, is seen darkest black, clearest. The center of the visual field is seen best, clearest.



All parts of the B that are away from the middle part that the eyes are looking directly at and other letters around the B are in the peripheral field and are seen less clear. They are seen clearest only if the eyes, central field moves onto them.

Shift left and right, top and bottom, middle, diagonally and in any direction on the E and see it move in the opposite direction. Practice on the dots: shift dot to dot and see the E move.



Shift, Central-Fixation on Close and Far Objects. See tiny parts Clear. Blink, Breathe, Relax. Practice, then don't practice; let the eyes move `on their own'; object to object, part to part, distance to distance. Shift `tiny part to tiny part'. Example on small details-`point to point' on a flower, stone at a close distance or on a far object.

Be interested in, enjoy, investigate the objects the eyes look at. Let the memory, imagination run free. The eyes move automatically, easy with the attention of the mind. The eyes move easy, without effort, on their own producing saccades, optical drift, oscillations, high frequency, microscopic movements keeping the eyes in movement, pulling light into the eyes, keeping the eyes, eye muscles, visual system relaxed, in a positive state. Eyesight is clear. Relaxation can be deep or active `Dynamic' as explained in Aldous Huxley's book `The Art of Seeing'. The mind, (brain) activates, controls eye movements; relax the mind and the eye muscles, nerves, body relax, the eyes move perfect, eyesight is clear.

From the dictionary; Saccade, Saccadic; Eye movement; a rapid irregular, relaxed movement of the eyes as they change focus moving from one point to another, example; while reading or looking at large, small and tiny parts of objects...



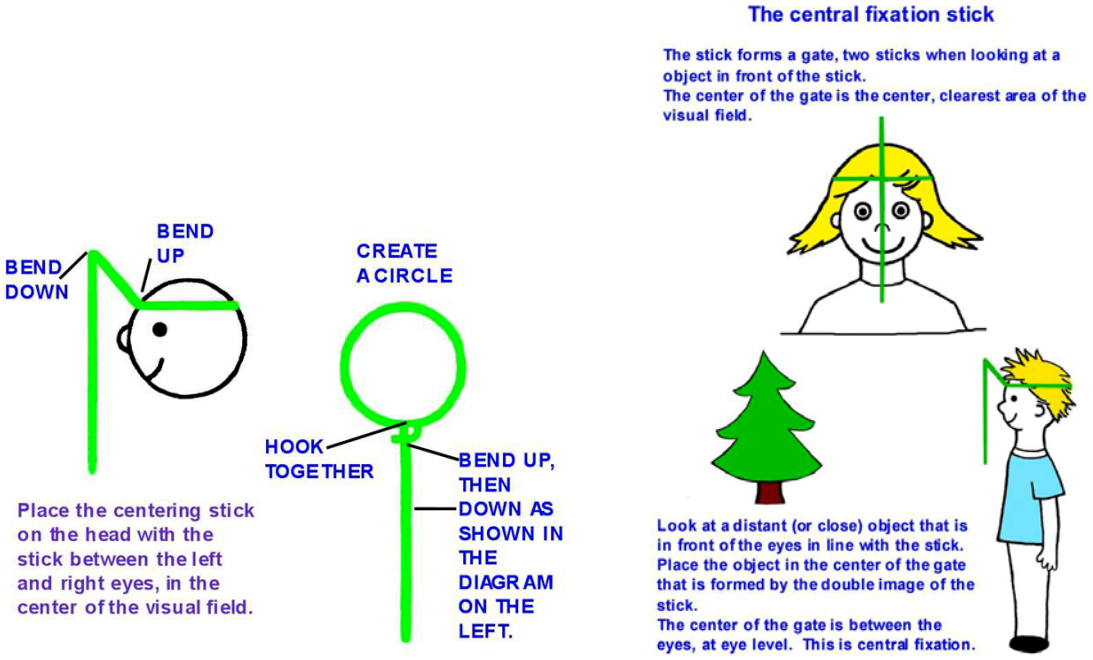




CENTRAL-FIXATION TOOLS - The Central-Fixation Stick

The Central-Fixation Stick Improves Central-Fixation - Seeing Clearest with the Center of the Visual Field.

When vision is very unclear, objects, parts of objects in the visual field appear to blur together. The central and peripheral fields appear to blur together.
This interferes with central-fixation.
Central-fixation = to place one object, one small part of the object at a time in the center of the visual field, seeing one small part of the object clearest at a time in the center of the visual field. The center of the visual field moves with the eyes as the eyes shift from object to object, part to part.
The central-fixation stick is placed in front of the face to form a gate to look through. (See pictures.)
The central-fixation stick improves central-fixation by bringing the visual attention to the center of the visual field even when the vision is very unclear. This improves the clarity of vision.
The central-fixation stick also improves shifting, movement and other correct eye/vision functions.



When the vision is very unclear or cataracts, macula degeneration, astigmatism exist; the person might develop the habit of seeing only with the peripheral field of the eyes retina, peripheral field of vision. This increases vision impairment. Central fixation; seeing clear with the center of the visual field, center of the eyes retina; placing the object of visual attention in the central field relaxes the mind, eyes and produces clear vision.

The pictures on the next page show correct images seen when wearing the central-fixation stick.
When looking at the stick (close object) it should appear clear, solid, one stick in the center of the visual field and;
The tree in the distance should appear double; two trees.
The trees are spaced equally, evenly in the peripheral field on the left and right sides of the stick.
The two images of the tree are equally solid (no light, dull, ghostly images).
The two trees are at a even height.

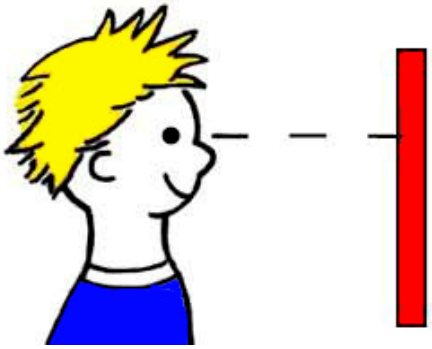
When looking at the tree (distant object) it should appear clear, solid, one tree in the center of the visual field, in the center of the gate formed by the stick which now appears double.
The stick appears as two sticks spaced equally, evenly, in the peripheral field on the left and right sides of the distant tree.

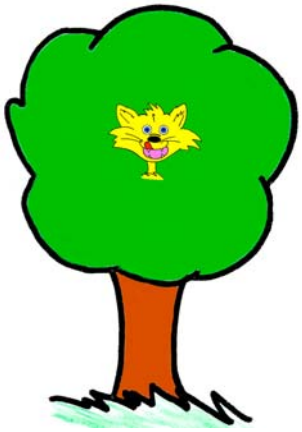
The two images of the stick are equally solid (no light, dull, ghostly images).
The two sticks are at a even height.
The sticks are straight, vertical.

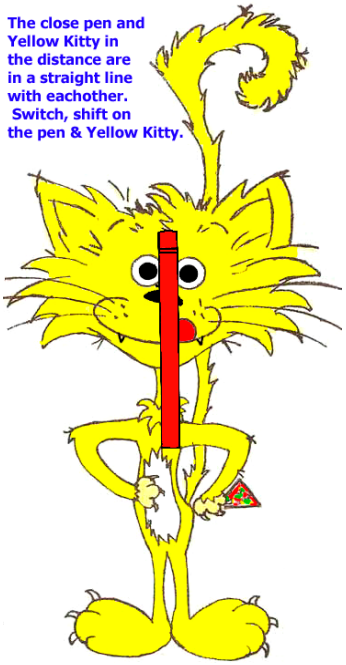
The pictures show different images that might be seen when using the central-fixation stick. Correct images should be seen. Incorrect images indicate that vision needs improvement in the left and/or right eye/eyes at close and/or far distances.

All Natural Vision Improvement Correct Vision Habits, Shifting, Central-Fixation, Relaxation, Long Swing and activities in this book, including; Switching, Shifting on objects at Close and Far distances, practicing with the Bead String, Pens in a Row, Correct Vision Habits Card with; both eyes together, then one eye at a time, then both eyes together again and Left and Right Brain Hemisphere Exercises returns normal eye function and clear vision.
If a Incorrect image is seen when using the Central-Fixation Stick; Practice these Natural Vision Improvement Activities to correct the image, eye function.

The Central-Fixation Stick is similar to the 'Pens in a Row' practice in the Switching chapter except that; the person can walk around, the stick (pen) moves with the eyes, head, face, body.



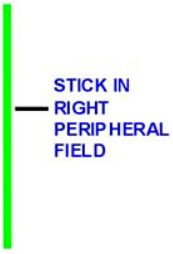




CENTRAL FIXATION STICK

THE DIAGRAMS BELOW SHOW HOW THE STICK APPEARS WHEN LOOKING AT CLOSE AND FAR OBJECTS IN FRONT OF THE STICK AND WHEN LOOKING AT THE STICK.
THE STICK FORMS TWO STICKS, A "GATE" TO LOOK THROUGH WHEN LOOKING AT CLOSE OR DISTANT OBJECTS IN FRONT OF THE STICK. THIS BRINGS THE VISUAL ATTENTION TO THE CENTER OF THE VISUAL FIELD, IMPROVES CENTRAL FIXATION AND CLARITY OF VISION.

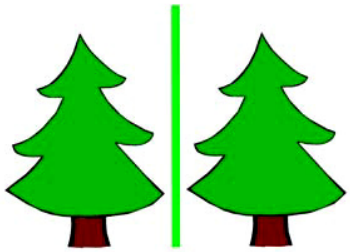




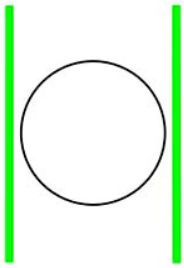
THE STICK APPEARS AS TWO STICKS FORMING A "GATE" TO LOOK THROUGH WHEN LOOKING AT CLOSE OR DISTANT OBJECTS IN FRONT OF THE STICK.



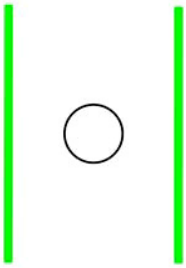
LOOKING AT TREE - DISTANT OBJECT.
TWO STICKS APPEAR.



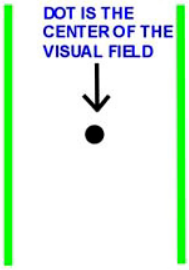
LOOKING AT STICK - CLOSE OBJECT.
ONE STICK APPEARS, DISTANT TREE APPEARS DOUBLE.



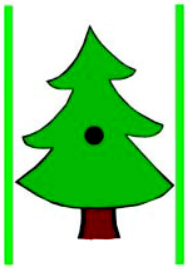
THE GATE FORMS A SMALL, MORE CENTRAL AREA OF THE VISUAL FIELD.
LOOKING THROUGH THE GATE IMPROVES CENTRAL FIXATION AND THE CLARITY OF VISION.



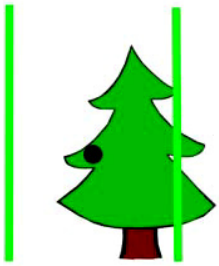
LOOKING AT A SMALLER AREA IN THE GATE, CLOSER TO THE EXACT CENTER OF THE VISUAL FIELD.
BETTER CENTRAL FIXATION WITH INCREASED CLARITY OF VISION.



THE DOT SHOWS THE EXACT CENTER OF THE VISUAL FIELD.
LOOKING AT/PLACING THE VISUAL ATTENTION IN THIS AREA, IN THE CENTER OF THE GATE PRODUCES PERFECT CENTRAL FIXATION, PERFECT CLEAR VISION.



THE EYES ARE LOOKING AT THE MIDDLE OF THE TREE.
THE MIDDLE OF THE TREE IS PLACED IN THE CENTER OF THE GATE , CENTER OF THE VISUAL FIELD IS SEEN PERFECTLY CLEAR.



LOOKING AT A PART ON THE LEFT < SIDE OF THE TREE.
THE EYES, HEAD/FACE, BODY, GATE, CENTER OF THE VISUAL FIELD MOVE LEFT.



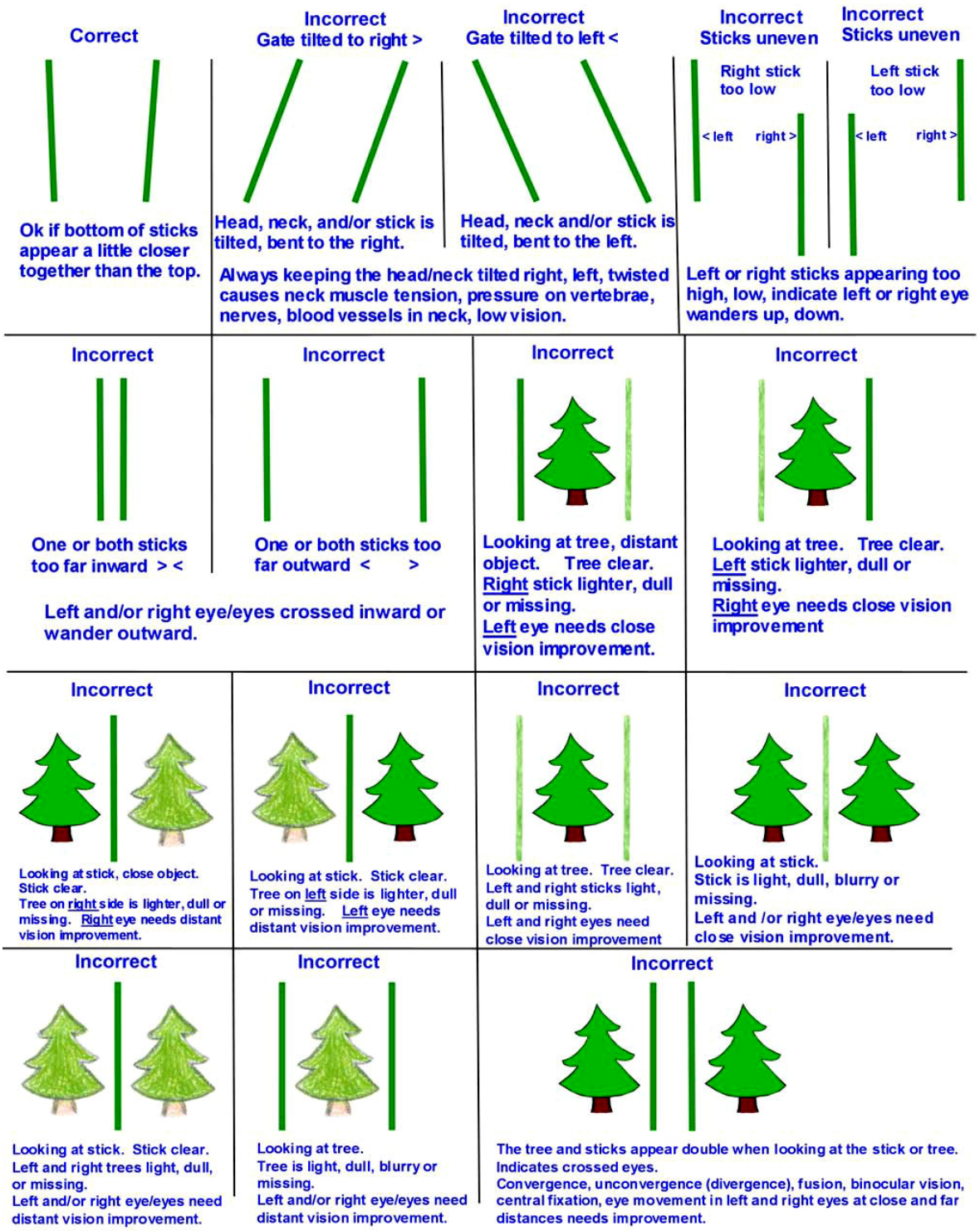
LOOKING AT A PART ON THE RIGHT > SIDE OF THE TREE.
THE EYES, HEAD/FACE, BODY, GATE, CENTER OF THE VISUAL FIELD MOVE RIGHT.



THE GATE, CENTER OF THE VISUAL FIELD MOVES WITH THE EYES, HEAD/FACE, AS THE EYES SHIFT, MOVE FROM PART TO PART ON A OBJECT AND FROM OBJECT TO OBJECT IN THE VISUAL FIELD.
SHIFT FROM DOT TO DOT ON THE TREE PLACING ONE DOT AT A TIME IN THE CENTER OF THE GATE/VISUAL FIELD.
SHIFT FROM PART TO PART ON ANY OBJECTS.



THE GATE BECOMES SMALLER WHEN LOOKING AT CLOSE OBJECTS FOR CENTRAL FIXATION, CLEAR VISION AT CLOSE DISTANCES.



In the picture above, last two boxes on top right side; to determine if one stick is higher or lower than the other stick; tape a small piece of white paper to the stick at eye level.
Then look to the distance, and see the stick appear as two sticks.
The white paper will also appear double.
If one paper is higher or lower than the other paper (and the head, neck, stick are straight, not tilted), then, this image may indicate that one eye wanders up, down, has incorrect, unbalanced convergence, divergence.

**A good method to correct this condition is to imagine the sticks/papers are at a even height.
Practice this with the eyes open, then with the eyes closed in the imagination, then eyes open again.
Open; Shift on the distant object and imagine the papers in the peripheral field are equal height.
Repeat in the imagination with the eyes closed. Then eyes open again.
Then relax, look at the stick, shift on the paper a second, then shift on a distant object, then the paper...
Then, remember, imagine the papers at a even height again. Eyes open, closed, open.
This gets the brain, eyes working together, correct.**

**Use the stick to test the vision, test for correct and incorrect images for a short time. Avoid using it as a repetitive eye exercise.
The main function of the stick is to improve Central-Fixation and other Correct Vision Habits by looking through the center of the gate, shifting on objects in the visual field through the gate, moving the gate with the eyes to improve shifting and movement of the head/face, body with the eyes.**

**Check to see if the central and peripheral images appear correct and if not; check which eye (one or both) is causing a incorrect image.
Cover one eye at a time.
When the incorrect image disappears, the covered eye is the eye that is causing the incorrect image and needs vision improvement.
Once this is determined you can practice Correct Vision Habits and other activities in this book to improve the vision. Shifting, Central-Fixation, Switching...
Return to the test occasionally to check for vision improvement.**

When using the gate to test the vision, checking for incorrect and correct images; avoid trying to make the double images of objects in the peripheral field as clear as the single object the eyes are looking directly at in the center of the visual field. The central field is clearest.-This is normal vision.

**The central-fixation stick is made of flexible metal wire; coat hanger, copper wire, wood...
The width of the stick is 1/8 inch, about the width of a old metal coat hanger.
The wire (including ends of the wire) is coated with soft plastic.
Plain plastic contains a variety of toxic chemicals that can enter the body through the skin when worn against the skin.
The stick is coated with organic, chemical free plastic or other non-toxic substances.
New material that is similar to plastic is chemical free, non toxic, made from corn, vegetables and other edible ingredients.**

**Metal disrupts, blocks the flow of the bodies chi and other energies.
Wearing metal on the head and around/near the eyes impairs energy flow in the eyes, brain and body.
It is best to make the central-fixation stick without metal.
A wooden stick, sanded smooth, no splinters, can be covered with colored cloth.
Use organic, chemical free dye in the cloth.
Ask a karate, tai chi, acupuncture, yoga instructor for information on the body's energies.**

**Metal frame glasses also impair energy flow in the eyes, brain, body.
Plastic, rubber and other substances in the frames and lenses exposes the skin to toxic chemicals.
The chemicals soak directly into the circulation near and into the head, eyes, brain and then travel into the entire body.**

ASSEMBLY

**Form a circle out of one end of the wire and hook the remaining part of the wire onto the front of the circle. The circle fits onto the top of the head. (See pictures.)
The wire that extends out from the front center of the circle/center of the forehead is bent upward and angled forward. Then; move about 4 inches upward on the wire and bend that area of the wire down so the wire is in front of the face. This is the central-fixation stick.**

The stick is straight, vertical. 

The round part of the stick is placed on the head with the stick upright/vertical in front of the face,

between the eyes, in the center of the visual field. It can be aligned with the nose, if the nose is straight, perfectly set between the left and right eyes.
The stick and head are straight, not tilted left or right.

The stick is placed 'centered' between the left and right eyes in the center of the visual field.
If the nose is straight, then the stick can be placed in front of the end of the nose to align it perfectly between the left and right eyes.
The stick is placed about 3 inches from the end of the nose, (4 inches from the eyes).
The stick is colored; green, blue, orange, any color that is easy to see.
The stick is long, the end extending below the bottom of the neck so it does not press into the neck if the person looks down.

The stick produces the same effect as is seen when placing a pencil upright in front of the eyes, between the left and right eyes and then, switching the visual attention close and far on the pencil and a distant object. (See pens in a row, Switching Chapter 11.) The stick does not have to be held up with the hand. Keeping the hands free prevents muscle tension, fatigue in the hand, arm, shoulders, neck, head, eyes and allows for complete freedom of movement. The distance of the stick from the eyes is limited when using it for central-fixation. The pens can be placed at a variety of distances so, it is good to work with the pens after improving central fixation, movement, testing the vision with the stick. Each method has its benefits. (A stick with adjustable length, distance from the eyes can be used for switching practice as with the pens. The stick will allow more body, eye movement-switching from the stick to distant objects at a variety of locations as the person walks, looks about freely.)
Do not run around, play, work when wearing the stick.
Children must be supervised by parents when wearing the stick.
Keep the ends of the stick away from the face, eyes, neck, stomach.

PRACTICE CENTRAL-FIXATION WITH THE STICK

Wear the stick.
Look at a object in the distance in front of and in line with the stick.
Place the object in the center of the visual field.
Example; see the distant tree inside the gate in the picture.

When looking at the distant tree, notice that the stick appears double, two sticks appear;



One stick in the left peripheral field,
One stick in the right peripheral field.
The sticks are equally/evenly spaced on the left and right sides of the distant tree.
The tree is inside the gate.
The two sticks form a space, a 'Gate.'
The eyes look through this gate.
Looking through the gate activates, improves central-fixation and the clarity of vision.

See the circle in the gate in the picture.
The center of the visual field is in the center of the circle, inside the gate, in the center of the gate and is the clearest area of the visual field. The center of the gate is the exact center, most clearest area of the visual field, clearer than 20/20; 20/10, 15 and clearer.
In the picture, the dot is in the center of the gate, center of the visual field.
The dot is between the left and right eyes, at eye level.
The true exact center of the visual field is smaller than the dot (about the size of the pointed end of a pin) and produces very clear, fine tuned vision, ability to see very small parts, fine details of objects clear. This very clear point is produced by the center of the fovea centralis in the center of the macula, center of the eyes retina.
The exact center of the visual field is clearer than 20/20; 20/10, 15, 5, 40/10 and clearer with bright color. 40/10=40 Ft. away, see the 10 line clear.
Central-Fixation = Seeing clearest with the center of the visual field improves the clarity of the entire visual field, central and peripheral field.

Placing the part of the object the eyes are looking at in the center of the gate, exact center of the visual field is perfect central-fixation.
+The center of the gate/center of the visual field is clearest.
+The other areas inside the gate; around, near and away from the center (dot) are the outer central field and inner peripheral field and are clear but not as perfectly clear as the center of the gate, exact center of the visual field.
+Areas of the visual field outside the gate, near and away from the gate are in the outer peripheral field and are less clear than areas inside the gate.
The area farthest away from the gate is the far outer peripheral field and is most unclear. Color perception is lower in the peripheral field, with only grey, black, light perception in the far outer peripheral field. This is normal vision.
The center of the visual field is clearest.
The peripheral field is less clear.
The center of the gate is clearest. See objects, parts of objects clear with the center of the gate, center of the visual field.
(The left and right eyes combine their central and peripheral field into one visual field - one central, one peripheral.

+The fovea centralis, macula and many cones in the center of the eyes retina produce perfect clear vision and brightest color in the center of the visual field.
+The rods with a low amount of cones in the peripheral area of the eyes retina (away from the fovea, macula, center the retina) produce the less clear peripheral field of vision. (Cones diminish and rods increase farther out into the peripheral field.)
The rods also detect movement in the visual field and continue to function in very dim light, almost complete darkness.

Shifting is Combined with Central-Fixation

See one small part of a object clearest at a time in the center of the visual field.
Example;
Look through the gate at a tree in the distance. Look at a part on the middle of the tree.
Place the center of the gate (dot), center of the visual field on the part, middle of the tree. Let the eyes move, shift on the part. Blink, relax.
The part, middle of the tree is in the center of the visual field and is seen clearest.
The two sticks are evenly spaced on the left and right sides of the tree in the peripheral field.
Areas of the tree inside the gate, away from the dot are in the inner peripheral field and are clear but not as perfectly clear as the central area (center of the visual field) the eyes are looking at represented by the dot.
Areas of the visual field outside the gate away from the tree are most unclear.

Shifting and central-fixation occur together:
The gate/center of the visual field moves with the eyes (gate, head/face and body moving with the eyes, together, at the same time, in the same direction) as the eyes shift from object to object and part to part on objects.
The moving gate keeps each object, each part of a object the eyes look at in the center of the visual field and perfectly clear.

Example;
Look at a part on the left side of the tree.
The eyes, visual attention shift to and look at the part on the left side.
The eyes, head/face, gate, center of the visual field and body shift/move left.
(See dot on the left side of the tree in the picture.)
The center of the gate/center of the visual field (dot) is placed on the part on the left side of the tree.
This part is now in the center of the visual field and is seen clearest.
Avoid staring. Let the eyes move, shift on the dot, point to point Blink, relax.

Next;
Look at a part on the right side of the tree.
The eyes shift to and look at the part on the right side.
The eyes, head/face, gate, center of the visual field and body shift/move right.

(See dot on the right side of the tree in the picture.)
The center of the gate/center of the visual field (dot) is placed on the part on the right side of the tree. This part is now in the center of the visual field and is seen clearest. Shift, blink, relax.

Next;
Look at the picture of the tree that has many dots on it.
Shift from dot to dot, (part to part) on the tree.
Now do this on a real tree in the distance.
Shift the eyes (visual attention) continually, easy, relaxed, from part to part on the tree;
Left and right, top and bottom, corner to corner, middle and in any direction.
Move the head/face, center of the gate, center of the visual field and the body with the eyes as the eyes shift from part to part, placing one small part at a time in the center of the gate/visual field, seeing one small part clearest at a time in the center of the visual field. Blink and relax. Take a deep breath, yawn, stretch and relax.

Next;
Look at objects in your environment; in the room, out the window, go outside in the sunlight and walk around wearing the stick.
Shift the eyes, (visual attention) from object to object at any distance; close, middle, far and left, right, up, down.., and move the head/face, gate, center of the visual field, body with the eyes seeing each object/part of a object the eyes look at perfectly clear in the center of the gate/visual field.
Blink, relax.
Try shifting on tiny parts, small details. No effort. Avoid trying to see. Relax, blink, shift. Let the eyes shift, moving freely 'on their own'
Move the head/face and body with the eyes at the same time, in the same direction. Moving the head/face, body with the eyes keeps the gate moving with the eyes, keeping objects, parts of objects in the center of the gate/visual field.
Facing the object of visual attention by moving the head/face, body with the eyes, in the same direction, perfects central fixation, coordination of the left and right eyes, eye muscles and keeps the neck , body, eye muscles relaxed.

USE THE IMAGINARY NOSEFEATHER WITH THE GATE

The Nosefeather activates central-fixation, shifting, synchronized movement of the head/face, body with the eyes and eye, head/face, neck, body relaxation.

The end of the feather touches the center of the gate, touches the part of the object the eyes are looking at, between the eyes, at eye level, in the center of the visual field.
Move, 'shift' the eyes, end of the feather, center of the gate/visual field from object to object and part to part on objects. Trace objects, parts of objects with the eyes and end of the Nosefeather.
Use the thin pointed feather to practice exact, perfect central-fixation.
Then use a big fluffy feather, deep relaxation and let perfect central fixation occur on its own.

Test and improve the clarity of vision in the left and right eyes at close and far distances with the central-fixation stick. (See pictures page- 92-93 for correct and incorrect images.)

1 - Look at the tree, distant object.
Shift on the tree.
One tree is seen.
The stick, close object appears double, two sticks.
One stick on the left side of the tree in the left peripheral field.
One stick on the right side of the tree in the right peripheral field.
The two sticks are evenly spaced on the left and right sides of the tree.
The two sticks are at the same height.
The tree is in the middle of the two sticks.
This is a correct image.

(When looking at a object beyond the stick at any distance; use Correct Vision Habits; shift on the object, small part to small part, blink, central-fixation, relax.)

2 - Look at the stick, close object.
Shift on the stick.
One stick is seen.
The tree in the distance appears double, two trees.
One tree on the left side of the stick in the left peripheral field.
One tree on the right side of the stick in the right peripheral field.
The two trees are evenly spaced on the left and right sides of the stick.
The two trees are at the same height.
The stick is in the middle of the two trees.
This is a correct image.

3 - Look at the tree.
The two sticks in the left and right peripheral field should appear equally visible.
The two sticks are the images produced by the left and right eyes.
If one stick is lighter, dull, ghostly; this is a incorrect image and indicates that the eye producing that incorrect image needs vision improvement.
Cover one eye at a time to determine which eye is producing the incorrect image.
When the incorrect image of the stick (lighter... stick) disappears, the eye that is covered is the eye that is producing the incorrect image and needs vision improvement.
Example; if the stick in the right peripheral field is light, ghostly and then, the left eye is covered and that image of the stick on the right disappears, this indicates that the left eye is causing the lighter image on the right side.
The left eye needs close vision improvement.
If both left and right images of the stick are light, ghostly; both eyes need close vision improvement.
See pictures.

Notice that when looking at the tree, far distance;
The left eye sees the right image of the stick, and
The right eye sees the left image of the stick.

Repeat the previous test on the images of the tree;
Look at the stick.
Notice the distant tree appears as two trees in the peripheral field on the left and right sides of the stick.
If one tree is lighter, dull, ghostly; cover one eye at a time to determine which eye is causing the incorrect image.
When the lighter, incorrect image of the tree disappears, the covered eye is the eye causing the incorrect image and that eye needs distant vision improvement.
If both left and right images of the tree are light, ghostly; both eyes need distant vision improvement.

Notice that when looking at the stick, close distance;
The left eye sees the left image of the tree, and
The right eye sees the right image of the tree.

+When looking at the distant tree, if the bottom of the sticks appear a little closer together than the top, this is a normal visual effect.

+If the sticks, gate appear extremely angled, tilted to the left or right, uneven heights; this indicates that the head/face, neck is tilted, bent to the left or right side - (incorrect posture).
The head, neck, body should be straight, aligned and relaxed.
If the sticks, gate appear tilted, uneven heights, it may mean that the stick itself is tilted left or right.
Place the stick straight, upright.

If the stick, head, neck are straight but one or both sticks are tilted, curved, distorted, this can indicate; astigmatism, crossed, wandering eye/eyes. Convergence, divergence, accommodation, un-accommodation, eye movement, central-fixation in one or both eyes needs improvement. Function of the brain, left and right brain hemispheres with the eyes may also need improvement. Natural Vision Improvement corrects these conditions in this contributes to

improved visual clarity.

+If the two images of the stick are too close together, too far apart, or are uneven; one stick higher, lower than the other, this can indicate crossed, wandering eye/eyes, imperfect convergence, un-convergence (divergence), accommodation, un-accommodation.
Tape a small piece of white paper on the stick at eye level, then look to the distance to see if one stick/paper is higher, lower.

Remembering, imagining the sticks (white paper) at a even height and all images correct with the eyes open, closed in the imagination, then open again helps to correct these images and bring clear vision.
Practice shifting, switching, central-fixation, left and right brain hemisphere exercises.
See pictures for more incorrect images, their causes and cures.
More directions on how to correct the incorrect images, activate normal eye function and clear vision are listed at the end of this chapter and in chapter 10-11 - Switching-Pens in a Row, Bead String and the Phoria Eye Movement Direction swing with a light or colorful picture - chapter 23.

+Amblyopia - low, dull, ghostly or no vision in one or both eyes occurs when the vision is very unclear, often when a eye wanders extremely in, out, up, down... to the point that it interferes with overall vision.
The brain will temporarily shut off the visual image received by the eye that is functioning incorrect in an attempt to remove the incorrect images in the visual field produced by that eye. This enables the eye that works correct to function better without interference from incorrect images.
Improving the vision in the malfunctioning eye and correcting the wandering, crossed condition causes the brain to switch the vision back on for that eye so both eyes can return to normal function, working together with perfect clear vision.
Improving the clarity of vision in the malfunctioning eye will help correct the wandering/crossed condition. Correcting the wandering/crossed condition will improve the clarity of vision in the eye.
One eye might become dominant at certain distances. The other eyes vision will lower. See chapter 10 - 'Switching' to get the vision equal, perfect in the left and right eyes at all distances.

+Astigmatism can cause the single and double images of the stick, tree to appear distorted.
Astigmatism can also cause appearance of slightly double vision.

+The gate becomes smaller, the sticks closer together when looking at close objects. This activates central-fixation, clear vision when looking at objects, small parts of objects at close distances.
Continue to use the center of the gate when looking at close objects.

The central-fixation stick improves normal eye function, Correct Vision Habits, clarity of vision.

The central-fixation stick improves;

1 - <u>Central-Fixation</u>
Looking through the gate, placing the object (part of the object) the eyes are looking at in the center of the gate activates perfect central-fixation.
Central-fixation - To see clearest with the center of the visual field.
To see one object, one small part of a object clearest at a time in the center of the visual field.

The central-fixation stick is beneficial to people that have a high level of blur.
When the vision is very unclear, all objects, all parts of objects, the entire visual field, central and peripheral fields might blur together.
It's difficult to determine one object from another and to find the exact center of the visual field, and to use Correct Vision Habits; look at one object, one small part of a object at a time and shift from object to object, part to part.
Sometimes the peripheral field, though unclear is clearer than the central field. This is abnormal vision.
These abnormal conditions cause the person to avoid central-fixation, shifting. The person stares, squints, freezes the eyes, face, body immobile, tries to see all areas of the visual field, central and peripheral equally clear, tries to see all objects, all parts of objects equally clear at the same time without shifting, without central-fixation. The person might try to see with only the peripheral field.
These are; eccentric fixation, diffusion, the opposite of central-fixation and shifting.

These 'Incorrect Vision Habits, abnormal, tense eye function' cause and increase eye muscle tension, dysfunction, eyestrain, mental strain, blur, astigmatism, crossed, wandering eyes and other abnormal eye conditions.

Looking through the center of the gate of the central-fixation stick keeps the eyes, visual attention in the center of the visual field, both left and right eyes on the same point/object in the center of the visual field. Left and right eyes move together.
The person is able to learn, use central-fixation.
Even though the vision is very unclear, the person is placing objects in the center of the visual field.
This improves the clarity of vision and corrects wandering, crossed eyes & other abnormal conditions.
The eyes, brain can now see/distinguish individual objects, parts of objects and place them in the exact center of the visual field. Central-fixation and shifting improve.
The clarity of vision improves more and more as central-fixation, shifting are perfected.
Central-fixation, when combined with shifting, enables the eyes to see small parts, small fine details of objects at close and far distances clear. Microscopic and telescopic vision.

Practice with the memory and imagination to improve central-fixation and the clarity of vision when using the stick.

Example;
+Look through the gate and shift on objects inside the gate, at any distance. (Practice at close, middle, far distances).
Move the head/face, body with the eyes as the eyes shift from object to object, part to part on objects.
If the vision is very unclear, shift on the blurred images inside the gate and keep the eyes/visual attention in the center of the gate while still shifting about the visual field, moving the head/face, body with the eyes.
+While shifting on a object; remember, imagine the eyes see the object inside the gate, center of the visual field perfectly clear.
+Do this with the eyes open, then in the imagination with the eyes closed, then with the eyes open again.
Notice, imagine that objects in the center of the gate are most clear. Or, it's easier-This way; just allow objects in the peripheral field to be less clear, while looking at objects in the central field.

+Next; while keeping the eyes/visual attention on objects inside the gate; remember, imagine and notice that objects outside the gate, in the peripheral field are less clear than objects inside the gate.
Do this with the eyes open, closed, open.

Practicing seeing these correct images returns the brain, eyes, visual system to normal function and clear vision.
Improving central-fixation and the clarity of the center of the visual field improves clarity of the entire visual field, central and peripheral.
The center of the visual field will always be clearest; 20/20 and clearer.

Cataracts, macula degeneration, astigmatism, extreme blur are abnormal eye conditions that can lead to the use of Incorrect Vision Habits, abnormal eye function. These conditions cause the person to diffuse the mind and vision, to attempt to see clear with the peripheral field of vision while avoiding the central field, or to try and see both the central and peripheral field equally clear and at the same time. This causes increased vision impairment.
Using the central-fixation stick helps return the eyes to normal function, seeing clear/clearest with the center of the visual field and reverses/removes blur, astigmatism, cataracts, macula degeneration and other eye problems. See the Nutrition chapter for eye nutrients.

When using the central-fixation stick and the vision through the gate is unclear; relax, avoid staring, squinting. No effort to see. Blink relax. Shift on the objects inside the gate and vision will improve.
If objects are completely blurred, just shift on the blur. Even the blur has parts, details to shift on.
Breathe deep, yawn, blink soft and easy. Relax.

2 - Shifting - the central-fixation stick activates shifting, eye movement.
Shifting prevents staring, diffusion, strain, eye muscle tension and blur.
The head/face and body move with the eyes when the eyes shift from object to object and part to part on objects. The movement of the eyes and head/face, body with the eyes cause the stick/gate to move.
If the gate is not moving, the person is staring, not shifting; the eyes are immobile and/or the head/face is not moving with the eyes. When the gate is immobile, it reminds the person to shift the eyes and move the head/face and body with the eyes.
If the gate is moving; the eyes are shifting and the head/face, body are moving with the eyes.

(The body does not always have to move with the eyes if the eyes, head/face turn to a new direction for only a second or if the movement of the eyes is small.
Usually, even when looking at/shifting on a small object, small part of a object, there is a small head/face (sometimes body) movement causing the gate to also show a small movement.
Clear vision occurs when the eyes, head/face and body move together, easy, in synchronization, in the same direction, all facing the same direction at the object of visual attention.
This is normal eye, body function.

The gate, center of the visual field moves with the eyes, head/face and body as the eyes shift from object to object, part to part on a object and from one distance to another distance keeping each object, each part of the object the eyes look at in the center of the visual field and perfectly clear.

3 - Synchronized movement of the eyes, head, face, body The central-fixation stick prevents the Incorrect Vision Habit of moving the eyes, head/face, body in opposite directions.
Example; Eyes looking right with the head/face, body directed to the left.
Incorrect movement prevents central fixation, causes muscle tension in the eyes, head, neck and body.
Part of central-fixation is to face directly at the object of visual attention; eyes, head/face, body all directed at the object. Relaxation, movement occur with central-fixation.
Moving the head/face and body with the eyes keeps the eyes, head/face, body directed toward the object of visual attention for perfect central-fixation and balance. The eyes, head/face, gate, center of the visual field and body move together, in synchronization, at the same time, in the same direction.
The central-fixation stick activates this synchronized movement of the eyes, head/face and body.

Example; Looking at a large field of flowers, grass.
When the eyes/visual attention shift/move from a object on the left side of the field to a object on the right side of the field; the head/face, gate, center of the visual field and body move left to right with the eyes.
If the head/face, body do not move with the eyes, in the same direction the eyes move to, the gate will not move with the eyes.
The gate will remain immobile to the left < while the eyes are directed to the right >.
If the head/face, body move opposite the direction the eyes move to, (eyes right >, head/face, body left <) the gate will move left in the opposite direction the eyes move to; gate left <, eyes to the right >, and the gate may disappear, showing only one stick.
These are incorrect eye, body movements, functions that cause eye muscle tension, dysfunction, eyestrain, stiff neck, shoulders, back, body, disrupts balance, coordination, movement, causes unbalanced vision, unclear vision, astigmatism, crossed and wandering eyes.
Computer workers often develop this incorrect posture as they look left and right typing, copying, reading...





When the person moves the head/face, body with the eyes, in the same direction the eyes move to, the gate moves with the eyes, in the same direction the eyes move to. Relaxation, perfect, easy movement, balance, coordination, central-fixation, shifting and clear vision occur.
Looking through the gate, the eyes, head/face, body moving together, facing the same direction at the center of the visual field keeps the left and right eyes working together, looking at/focusing on the same point (object) in the center of the visual field for perfect;

+Convergence, accommodation at close distances,
+Un-convergence, (divergence) un-accommodation at far distances,
+Equally clear balanced vision in the left and right eyes,
+Correct fusion, binocular vision, three dimensional vision, depth, distance, time perception/calculation, definition and other functions. The left and right eyes work together.
+Blur, astigmatism, crossed, wandering eyes, amblyopia (low, no vision) are corrected.
+The left and right eyes work together. Crossed, wandering eyes are corrected by central-fixation, correct movement.

It is normal for the eyes, head/face to move in a direction opposite to the body as occurs when dancing, performing certain sports, exercises and this will not cause muscle tension, unclear vision.
It is only when the eyes, head/face and body are constantly maintained in opposite directions, done repeatedly as a habit, especially when using the eyes to see a object that muscle tension... and unclear vision occur.

Incorrect posture
Head/neck tilted, bent, twisted to the left or right side.
Shoulder on one side is also up, tense.



4 - Relaxation

Central-fixation, shifting, synchronized movement of the head/face, body with the eyes keeps the eyes, head/face, neck, shoulders, entire body relaxed and moving easy.
Neck tension, immobility is a main cause of eye muscle tension, eye immobility (staring) and unclear vision.
When the neck is relaxed and moves freely, relaxation and movement travels to the eyes, eye muscles, head/face, body. Clarity of vision improves.
When the neck is relaxed, moves freely; blood, oxygen, lymph, energy, nerve flow, signals to the head, brain, eyes, ears and body improve resulting in clear vision, improved hearing.

Incorrect posture
Shoulders pulled up, tense

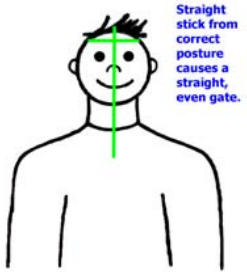


These incorrect postures cause muscle tension, impaired movement in the eyes, head/face, neck, shoulders, upper and lower back, legs, impaired circulation to the brain, head, eyes, ears, unclear vision, astigmatism.

5 - The central-fixation stick improves posture

Check for correct head, neck, body alignment with the stick.
+When the head/face, neck are straight, aligned with the body, (correct posture) and the stick is straight, vertical, the gate is straight.
(See picture of correct head, neck posture on the right.)
When the gate is straight; head, neck, alignment, posture is correct.
+If the gate is tilted left or right, this indicates that the head/neck are tilted, bent to one side. This is incorrect posture.
Tilting, bending, twisting the head, neck to the left, right... causes neck muscle tension, immobility and resonates muscle tension, impaired movement into the entire body; eye muscles, eyes, head/face, neck, shoulders, back, legs.
Balance and coordination are impaired.
Pressure on the neck vertebrae, vertebrae misalignment can occur.
Tense muscles, misaligned vertebrae places pressure, tension on the nerves, blood, lymph vessels in the neck and impairs blood, oxygen, nutrient, nerve, energy, lymph flow, signals to the brain, eyes, ears and from the brain, eyes, ears to the body.
This incorrect posture, abnormal conditions cause ; unclear vision, astigmatism, disrupts convergence, divergence, accommodation, un-accommodation, other eye functions, lowers eye health, leads to other eye problems, impairs hearing, causes headaches, eye pain, lowers brain function, memory, imagination, concentration and clarity of vision.

Correct posture
Head, neck straight, relaxed.
Shoulders down, relaxed.



Eyes, head/face, neck, shoulders, upper and lower back, legs, body relaxed, move freely, circulation normal, vision clear.

Correct posture - head, neck straight, aligned with the body, shoulders down and relaxed, corrects, prevents the abnormal conditions listed above.
Blood, nerve... flow returns to normal.

Relaxation and full movement returns to the eye muscles, eyes, head/face, neck, shoulders, back, chest and body.
All these correct conditions result in healthy eyes and clear vision.
Hearing, taste, smell, feeling in the head, face, eyes... is improved.
Balance, coordination, movement, breathing, eye shifting, central-fixation are improved.

Activities to remove appearance of incorrect images when using the stick, produce correct images and clear vision in the left and right eyes at all distances close and far.

Examples;
+Tilted gate; correct this by using correct posture - stick, head, neck straight, relaxed. Shoulders down, relaxed.
If eye function is causing the incorrect image, the following activities will correct it.

+Sticks uneven, at different heights, one stick in the left or right peripheral field is higher, lower;
(Place a small piece of white paper on the stick at eye level, then look to the distance beyond the stick and see if the two images of the white paper in the peripheral field are at a even height.)

1 - Look at the stick/white paper - shift on the stick/white paper.

2 - Then, look at the distant tree.
Shift on the tree while noticing the sticks/white papers in the peripheral field on the left and right sides of the tree. Remember, imagine that the eyes (peripheral vision) see the sticks/white papers at a even height with each other.
+Practice this with the eyes open,
+Then in the imagination with the eyes closed,
+Then with the eyes open again.
Practice a few times and see the sticks/papers move to a even height.

3 -Then; look at the stick/white paper and shift on the stick/paper with; both eyes together, then one eye at a time, then both eyes together again, remembering, imagining the stick perfectly clear.
Then; look at the tree again and repeat # 2, 3, 2...

The memory, imagination can be used to remember, imagine, see any incorrect image correct.

Example;
+When looking at the tree and the two sticks in the peripheral field are too close together or too far apart; Shift on the distant tree while remembering, imagining the image of the sticks is seen correct, evenly spaced on the left and right sides of the tree.
+ Repeat with the eyes closed using the memory and imagination. Then with the eyes open, closed, open...
+When looking at the distant tree;
If one or both sticks in the peripheral field appear light, dull, ghostly or are missing;
Shift on the tree and remember, imagine and see the two sticks in the peripheral field, left and right sides of the tree correct, equally visible and solid.
Do this with the eyes open, then in the imagination with the eyes closed, then with the eyes open again.

Then, look directly at the stick, close distance.
Shift on the stick and remember, imagine, see the stick clear, solid, one image of the stick.
Use central-fixation; shift part to part on the stick while seeing one small part at a time clearest in the center of the visual field. Blink.
Practice with the eyes open, closed, open.
Practice with both eyes together, then one eye at a time; left, then right, then left, then right..,
Then practice with both eyes together again.
If one eye needs more vision improvement, practice a little longer with that eye.
Shift on the stick with that one eye again and remember, imagine, see the stick clear, solid; eyes open, closed, open.
End with both eyes together again.

(When using one eye; cover the eye not in use with a black or white eye patch with the outer side of the patch open to keep some light entering the eye so the eye and areas of the brain controlling that eye stay activated, left and right brain hemispheres, visual cortex switched on, connecting and working with the left and right eyes. Black attracts light, white reflects it. White is good to prevent sunburn when practicing in the sunlight, but it may not work as well as black for eye patching activities.
Do not close the covered eye when the eye in use is open.
Keep the covered eye open under the patch.
When the eye in use is closed, close both eyes.)

+Look at the stick and see the double image of the tree in the peripheral field.
If one or both trees appear incorrect; lighter, dull, ghostly or missing;
Shift on the stick and remember, imagine and see the two trees in the peripheral field, left and right sides of the stick correct, equally visible and solid.
Do this with the eyes open, then in the imagination with the eyes closed, then with the eyes open again.
Looking at the object in the central field while also keeping the mental attention on the double images in the peripheral field can cause diffusion, (the opposite of central fixation) and strain - so do not do this activity for too long and do not do it as a repetitive exercise. Do it for only a few moments.

+Next; Look directly at the tree.
Shift on the tree and remember, imagine, see the tree clear, solid, one image of the tree.
Shift from part to part on the tree. Blink and relax.
Central-fixation; see one small apart of the tree clearest at a time in the center of the visual field/gate and shift continually, easy, relaxed from part to part. Blink.
Do this with the eyes open, closed, open.
Practice with both eyes together, then one eye at a time, then both eyes together again.
If vision is less clear in one eye; practice shifting on the tree, remembering, imagining it clear, solid; eyes open, closed, open a little longer with that eye.
Shift on the tree with that one eye and remember, imagine, see the tree clear and solid.

Remember; do not close the eye under the patch when the eye in use is open.
Both eyes close and open together even when one eye is patched.
Closing one eye causes muscle tension in the face, head, neck, eyes.

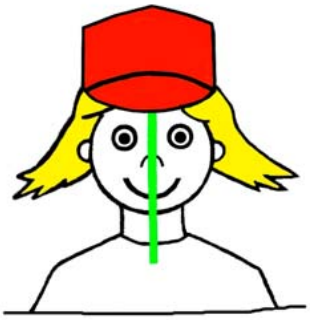
+Look directly at the stick.
If the stick is unclear, repeat the directions listed above for the tree on the stick.
Shift part to part on the stick; top and bottom, left and right, middle, and in any direction.
Remember, imagine, see the stick clear with the eyes open, closed, open.
Blink and relax. Central-fixation.
Practice with both eyes together, one eye at a time, then both eyes together again.

+Practice switching close and far on the stick and tree and see the correct images;
+shift on the stick and remember, imagine and see the stick clear. One image of the stick appears.
Remember, imagine and see the double image of the tree appear correct in the peripheral field, equally spaced on the left and right sides of the stick.
The two trees are equally visible, solid and at a even height.
Practice with the eyes open, closed, open.

+Switch to the distant tree.
Shift on the tree and remember, imagine, see the tree clear. One image of the tree appears.
Remember, imagine and see the double image of the stick appear correct in the peripheral field, equally spaced on the left and right sides of the tree.
The two sticks are equally visible, solid, at a even height.
Practice with the eyes open, closed, open.
Repeat shifting on the stick, then the tree, stick, tree...
Practice this with the stick or a ruler farther from the eyes.

These activities 'switch on' correct brain, eye function, gets the brain, eyes working together, activating clear vision.

All Correct Vision Habits; relaxation, shifting, central-fixation, movement, memory and imagination.., activities in this book and in this chapter produce correct images when using the stick and improve; convergence, divergence, accommodation, un-accommodation at close, middle and far distances, binocular vision, fusion, depth, distance perception, definition, color perception, shifting, (eye movement), central-fixation, clarity of vision, and; removes unclear vision, astigmatism, crossed, wandering eyes, amblyopia, and 'switches on' function of the brain with the eyes, nerves, eye muscles, retina.





THE CENTRAL FIXATION STICK CAN BE ATTACHED TO THE END OF A BASEBALL CAP VISOR.
THE STICK IS PLACED IN THE CENTER OF THE VISOR, BETWEEN THE EYES, IN THE CENTER OF THE VISUAL FIELD.
IF THE PERSON HAS A STRAIGHT NOSE, THE STICK CAN BE PLACED IN FRONT OF THE NOSE TO ALIGN IT PERFECTLY BETWEEN THE LEFT AND RIGHT EYES.

These are also improved by;

+Switching (with shifting, central-fixation) back and forth on objects at close, middle, far distances and remembering, imaging the objects clear with the eyes open, closed, open.
Practice this with both eyes together, one eye at a time, both eyes together again. chapter 10.

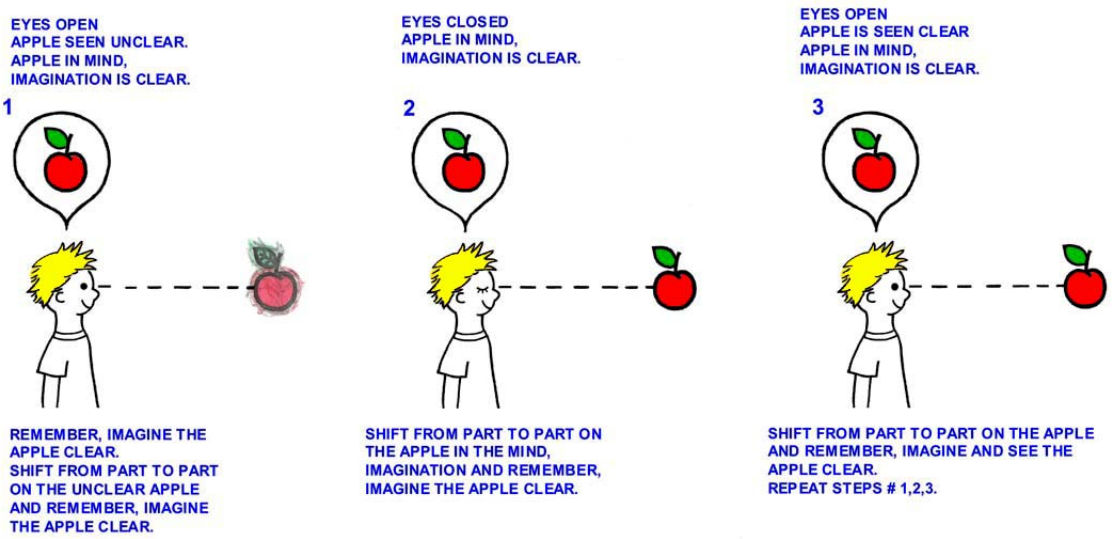
Practice switching, shifting, central-fixation as described above on;
+ The Pens in a Row - chapter 11.
+ The Bead String - chapter 11.
+ Correct Vision Habits Card - chapter 14.
Practice the long swing, rock, cross crawl and other relaxation, movement, left and right brain hemisphere activation, integration activities. chapter 16.

The central-fixation stick can be made using a baseball cap; A strip of colored cloth stuffed with cardboard to keep the cloth straight in the form of a stick is attached vertically to the end, center of the caps visor. See picture on right.

Avoid using the central-fixation stick as a eye exercise.
Use it with Correct Vision Habits # 1 to 8 (chapter 12) to test the vision, get the brain, visual system, eyes, body working together, correct and to learn, activate Correct Vision Habits, normal, relaxed, natural eye function. This will improve the clarity of vision.
99% of the time the stick is not used. The student practices Correct Vision Habits without the stick.

9 - MEMORY AND IMAGINATION

REMEMBERING, IMAGINING OBJECTS CLEAR IMPROVES FUNCTION OF THE BRAIN WITH THE EYES AND CLARITY OF VISION.



USE THE IMAGINARY NOSEFEATHER WITH STEPS # 1,2,3. (SEE NOSEFEATHER, CHAPTER ---)
REMEMBER, IMAGINE, SEE THE APPLE CLEAR WITH THE EYES OPEN, CLOSED, OPEN WHILE SHIFTING FROM PART TO PART ON THE APPLE WITH THE NOSEFEATHER. TRACE AROUND THE EDGES OF THE APPLE, STEM, LEAF WITH THE END OF THE FEATHER. TRACE SMALL PARTS OF THE APPLE.
PRACTICE STEPS # 1,2,3 WITH BOTH EYES TOGETHER, THEN ONE EYE AT A TIME, THEN BOTH TOGETHER AGAIN.
PRACTICE ON ANY SIZE OBJECT; LARGE, MEDIUM, SMALL, TINY AT CLOSE, MIDDLE, FAR DISTANCES.

Video

Improve and use the Memory and Imagination for Relaxation and Clear Eyesight

The brain controls the function of the eyes and clarity of vision. When the mind (brain) is relaxed it functions normally with the visual system, eye muscles, eyes, retina... and vision is clear.

Memory and imagination are main functions of the brain and visual system.
Memory and imagination function with the brain and eyes to produce clear vision.
When a object can be remembered and/or imagined perfectly clear, the brain, eyes produce a clear image of the object. This is the normal function of the visual system;
A baby learns to see clear by becoming familiar with objects.
Example;
The baby sees a new object; the eyes shift part to part on the object as the brain becomes familiar with the object and stores a mental picture of the object in the memory.
Each time the object is seen the mental picture is refined, perfected, becomes clearer and is reinforced in the memory. When the object is seen a few times it becomes a 'Familiar Object' and the brain stores a perfect clear image/picture of the object in the memory. Eye movements, shifting patterns on the object, the objects shape, size... are recorded in the memory.
When the object is seen again, the brain activates the clear memory picture of the object. This helps the brain and eyes work together to see the object clear. The brain sends messages to the eyes, eye muscles causing the eyes to shift quickly, perfectly on the object producing a clear image of the object. This process of storing clear pictures of objects in the memory occurs each time the baby sees a new object.
Notice that a new born baby's eyes move/shift less frequently when it is beginning to encounter, see new objects. The eyes move/shift faster, more frequently as the baby grows and becomes familiar with objects and the brain stores clear familiar pictures of the objects in the memory.
This continues into adulthood; notice that a new, unfamiliar object (usually a distant object that is unknown) may be a bit unclear until the eyes shift on it and the eyes/brain become familiar with the object; figures out the identity of the object. The person moves up close to the object, inspects parts, details. Viewing a unfamiliar distant object at a close distance helps the brain, eyes become familiar with it. Then the object becomes a 'familiar object' and is seen clear.
When a person strains, squints, stares, tries hard to see a unfamiliar object, the mind and eyes become strained and relaxation is prevented. The mind and eyes do not function together and the object is

seen unclear.
Familiar objects are relaxing to the eyes, mind because there is not any mental effort to see a familiar object. No strain. When the mind, eyes remain relaxed vision is clear.
Shifting, central-fixation, all Correct Vision Habits relax the mind and eyes.
Strain and unclear vision can be avoided when looking at a new unfamiliar object when relaxation and Correct Vision Habits are used. Relax, shift on the unfamiliar object and remember and/or imagine it clear, use central-fixation, blink and it will be seen clear.

Keep a Eyechart in the Home, School, at Work.
Look at the chart at close and far distances.
Shift on the letters, memorize the letters.
The chart will then become a familiar object.

Shift on letters on two identical, familiar Eyecharts. Remember, imagine the letters clear. Click here for directions, videos.

Notice that it is easy to see the letters on the chart when the brain knows what the letters are, has a clear picture of the letters stored in the memory.
This is not cheating! This is the normal function of the visual system.
Practicing Correct Vision Habits on the familiar eyechart daily; (shifting, central-fixation...) keeps the mind, eye muscles, eyes relaxed, memory and imagination strong.
The relaxed mind, eyes can then see a unfamiliar eyechart and all other objects clear.
Shift on letters on two identical, familiar eyecharts placed at close and far distances. Remember, imagine the letters clear. (See Eyecharts Chapter and Videos.)
Practice looking at, shifting on the letters on the charts with; both eyes together, then with one eye at a time, then both eyes together again. If vision in one eye is less clear, practice a little more with that eye.
Remember, imagine the letters clear.
Practice at close, middle and far distances.
Use Correct Vision Habits;
+See one letter at a time clearest in the center of the visual field. Shift from letter to letter moving the center of the visual field over one letter at a time.
+See one small part of a letter clearest at a time in the center of the visual field and shift continually, relaxed from part to part on the letter, moving the center of the visual field from part to part, seeing one small part at a time clearest as the central field moves over the part.
Avoid squinting, staring, trying hard to see clear.
Blink and relax.

Example;
Look at the letter **o**.
Shift from small part to small part on the o.
Shift left and right, top and bottom, diagonally and in any direction.
Move the head/face with the eyes in synchronization; at the same time, in the same direction.
This will be a very small head movement when looking at a small o. The eyes, head, neck relax.
(Large letters, objects=the body also moves with the eyes, head/face.)
Shift right > on the letter; eyes, head/face shift/move right >.
Shift left < on the letter; eyes, head, face shift/move left <.

The eyes, head, face, neck, shoulders and entire body are relaxed and move freely.
Avoid becoming stiff, immobile when looking at the letters.
Movement activates relaxation of mind, body, eyes and clear vision.

Straining and staring; trying hard to see a letter clear, looking at one letter for a long time without eye movement causes eyestrain, eye muscle tension and blur.
If a letter is unclear, shift on it, then; look at/shift to a different letter or object.
Shift on that object. The shift 'movement' of the eyes stops/prevents staring, strain and activates relaxation and clear vision.
Then, when the eyes are relaxed, return to the original letter, shift on it, and it will be seen clear.

Remembering, imagining objects clear produces clear vision.
Remember a object clear, or, if the mind does not have a clear picture of the object stored in the memory; imagine the object clear.
The memory and imagination function together.

Improve one and both improve.

Practice steps 1, 2, 3, shown in the picture of the man shifting on the apple and remembering, imagining it clear on a letter on the eyechart.

Example; **o** o 。

Shift from part to part on the letter o. Practice on large, small and fine print o's.
Remember/imagine the o is dark black and clear. Store this clear picture of the o in the mind/memory.
Imagine the vision is clear and the o is easily seen clear.
As the eyes shift from part to part on the letter, imagine each part is seen darkest black and clearest, one small part at a time, in the center of the visual field. Each part the visual attention, central field moves upon is dark black, clearest while looking at that part. (The eyes see one small part of a object at a time clearest in the central field, as the central field moves, passes over one part at a time. The central field may be on a part for only a fraction of second-during that fraction of second, that part (point) is clearest.)
Blink and relax. Take some slow, relaxed, deep breaths.
Relax, blink and rock side to side a little. (The rock chapter 16)
When a black letter is unclear, the letter also appears lighter black or grey.
When a black letter is seen clear, the color black is also perfect; dark black, with perfect outline and the white page is clear, pure white.
Remembering, imagining the letter dark black and clear, the way it should appear when seen clear, helps the brain and eyes function correct to produce the true correct clear image of the letter; dark black and clear. Relax, think positive. When the mind is perfectly relaxed the memory, imagination and vision are perfect.
Shifting on a object with the eyes open and shifting on the object in the imagination with the eyes closed improves the ability to maintain a clear image of the object seen by the eyes and in the mind when the eyes are open or closed. Shifting improves the memory, imagination, relaxation and clarity of vision.

Practice steps 1,2, 3;
1 - Eyes open.
Shift on the letter o.
Remember, imagine the o is dark black and clear.

2 - Eyes closed.
Shift on the letter o in the mind/imagination and
remember and imagine the o dark black and clear.

3 - Eyes open.
Shift on the letter o.
Continue to remember, imagine the o dark black and clear.
Check for vision improvement.
Repeat steps 1, 2, 3.
Read close vision-chapter 14. Remember and imagine the white spaces in and around letters and between sentences bright, pure, glowing white.

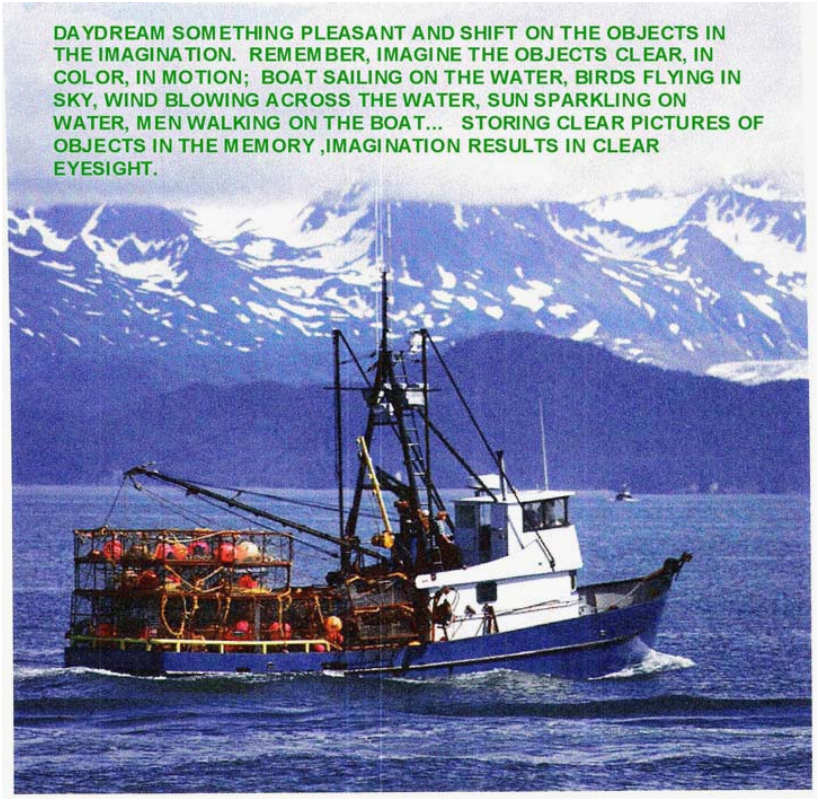
Imagine and see the 'Illusion of oppositional Movement' - 'The Swing' ; the o appears to move, a short, quick, easy 'swing' in the opposite direction the eyes shift to.
Shift left < - the o moves right >. Shift right > - the o moves left <. Chapter 17.
Remembering, imagining and seeing the illusion of oppositional movement improves the clarity of the letter, relaxes the mind and eyes. The illusion of movement is due to the movement of the eyes.

Practice steps 1, 2, 3 and see the Swing with; both eyes together; - then with one eye at a time (left eye only; 1, 2, 3 -, then right eye only; 1, 2, 3, then left, then right...). If vision is less clear in one eye, practice extra time with that eye to get the vision equal, perfect in the left and right eyes.
Then practice with both eyes together again; 1, 2, 3. Practice with the eyes open, then closed, then open again. When using one eye-start with the clearer vision eye to get the best, clearest mental,

memory image of the object into the brain.
Cover the eye not in use with a eyepatch and keep it open under the patch. Both eyes open, one eye covered. When closing the eye in use; close the eye under the patch also.
Practice steps 1, 2, 3 using the memory and imagination with; eyes open, closed, open on any objects, at any distance, close, middle, far.
Practice on a flower or fine print letter at close distances.
Practice on a distant tree, house, mountains, the moon at night...

Remembering, imagining any object perfectly clear (with the eyes open or closed) relaxes the mind, eye muscles, eyes and causes all objects to be remembered, imagined and seen clear.
Remember, imagine objects that you enjoy, something pleasant that brings the mind, eyes to a relaxed, positive state.
Read 'Better Eyesight Magazine' for memory, imagination exercises; Example; imagining a beach-ball on the water, up close, large, then floating farther and farther out to sea, until it is in the far distance, a small tiny speck, dot. Shift on it when it is large/up close, and smaller/farther away and very small/into the far distance, the size of a small dot, period.

With practice of shifting, central-fixation, Correct Vision Habits a 'Flash' of clear vision will occur lasting about a second or longer. Future flashes of clear vision last longer and become permanent. Avoid becoming immobile, staring, not blinking, attempting to hold onto the flash of clarity. Continue to shift, blink, move, relax and flashes will remain.
(It is natural for the refraction, focus of the eye to change when shifting from one object, distance to another, but when the vision is clear, eyes, eye muscles relaxed, eyes functioning normal; blur is not seen because the change in refraction, focus is very fast, quickly changing for the new object, distance.
Staring, not moving the eyes causes eye, eye muscle tension, a slow, stiff change in refraction, focus resulting in appearance of blur.)



+When reading or (working on a project) using the eyes; notice that if the mind is bored with the subject being read, worked and the mind drifts to something different and visualizes mental pictures,

thoughts of a different subject, different objects, while still trying to read, understand, think and visualize the subject in front of the eyes, the mind and eyes become strained trying to read, think two different things at the same time. This is diffusion-eccentric fixation-it prevents central fixation of the mind and eyes. This can cause eye muscle tension, eyestrain and unclear vision.

+If the person is reading something interesting, enjoyed, the mind stays on the subject being read, creates mental pictures of objects pertaining to this subject, is relaxed, positive, the eyes remain relaxed and vision is clear.

+Also; if the eyes are looking at a object, example; fine print and the person is not trying to read/understand the printed words, and the mind drifts to something pleasant, something different not associated with the subject printed, the mind is not trying to think about two different things; the print is in front of the eyes but the mind does not try to understand it-the mind is daydreaming something else, thinking pleasant thoughts, clear mental pictures of objects, events.., then; the vision will remain clear. In this case the mind and eyes stay relaxed and the print will flash perfectly clear because the mind is perfectly relaxed. Then the person can bring the mind back to the printed words and read them easily.
If the fine print is of a interesting subject, the mind stays on the subject being read, the mind, eyes relax and the print remains clear. (Fine print can be used as a close, reading vision Eyechart.)

Looking at the white spaces between sentences is a old activity to relax the mind and eyes. When looking at the spaces, moving the visual attention-central field left and right along the spaces and imagining them bright, pure, glowing white and clear, in deep relaxation, without effort, the print will flash dark black and clear when the right amount of relaxation occurs. Because there is nothing to see, no print on the white space, the person avoids effort to see, avoids strain and the mind and eyes relax, the eyes function correct. When the print flashes clear-look directly at the print, move the central the field to the print and read it.
Notice that in all situations it is the state of the mind that affects the function of the eyes and clarity of vision. Mind strained, tension = eyes strained = eye muscle tension = unclear vision.
Mind relaxed = eyes and eye muscles relax = vision clear.
Dr. Bates cured many patients by teaching relaxation.
Thinking pleasant thoughts, daydreaming happy positive things with the eyes open or closed relaxes the mind, eyes and brings clear vision. (Remember to let the eyes move, shift when daydreaming. Avoid staring into space, with the eyes immobile.)
People with unclear vision have been hypnotized and became able to see clear when a relaxed state of hypnosis with a positive suggestion of clear vision was given.

Past or present stressful experiences, trauma, negative thoughts, emotions can cause strain in the mind and unclear vision. Relax the mind, remove the negative thoughts, emotions and replace it with positive thoughts, emotions and vision improves.

Remembering, imagining objects clear improves the memory and imagination, relaxes the mind, eyes and improves the brains function of storing clear mental pictures of objects in the memory.
It is easy for the brain, eyes to produce clear vision when the brain has clear memory pictures of objects to work with.
Relaxation, good memory and imagination, Correct Vision Habits, left and right brain hemisphere activation and integration and clear vision function together, are integrated and strengthen each other. Improve one and all improve, vision becomes clear.

Example;
+Improving relaxation automatically improves memory, imagination, left and right brain hemisphere activation and integration, Correct Vision Habits and clarity of vision.
+Improving the memory and imagination improves relaxation, left and right brain hemisphere activation and integration, Correct Vision Habits and clarity of vision.

Practice improving all five for perfect 20/20 and clearer vision;
+ Practice Relaxation; Palming and Sunning.
All Natural Vision Improvement activities, Correct Vision Habits listed in this book induce

relaxation of mind, body and eyes and improve all other functions of the visual system.
+ Practice shifting, central-fixation, switching, abdominal breathing...
+ Practice remembering, imagining objects clear.
+ Practice left and right brain hemisphere activation and integration exercises; the rock, long swing, cross crawl, figure eight. These exercises also relax the mind, body, eyes and improve eye, body movement. Palm and remember, imagine happy things.

When relaxation of the mind is perfect; memory and imagination are perfect, left and right brain hemispheres are activated and integrated, Correct Vision Habits (normal eye function) occurs and vision is clear.

Forget memories, mental pictures of unclear vision.
Remember, imagine clear vision. Remember, imagine objects clear.
Store only clear memory pictures of objects in the mind.
If a object appears unclear, always shift on it and remember and/or imagine it clear. Shifting part to part on a object helps the brain store a clear picture of every part of the object, creating a complete, clear picture.

The mind works with the eyes to produce clear vision.
Try this activity; look at a unfamiliar object that appears unclear;
Example; a number on the front of a bus approaching in the distance.



The number of the bus is 7.
The number is unclear and the person does not know the number.
The person shifts on the unclear number and guesses the number;
+ First guess = number 4.
The person remembers, imagines a number 4 while shifting on the unclear number.
The brain causes the eyes to shift on a number 4.
This causes the eyes to look at, shift on areas where parts of a number 4 would be, where parts of a number 7 do not exist.
This confuses, strains the mind, eye muscles, eyes. The eyes should be shifting on a number 7, shifting on parts of a number 7.
The number remains unclear.
+ The persons then guesses number 3.
The brain activates eye movement, shifting that should occur on a number 3. Strain occurs. The vision remains unclear.
+ Next, the person guesses, remembers, imagines a number 7.
The brain activates eye movements for a number 7.
The eyes shift left and right along the top, and shift diagonally top and bottom and shift from part to part on any area of the 7. Blink.
The eyes shift on the correct areas of a number 7 and the 7 is seen clear.
The 7 becomes clear because the person remembers, imagines the correct mental picture; a number 7 and the brain, eyes relax, function together, the brain easily activates correct eye movements on a number 7. The 7 is seen clear.



Happy thoughts, mental pictures when palming.

Another way to see a unclear number, (any object) clear is to relax and daydream something pleasant and remember, imagine any pleasant object clear.
Don't try to see the number clear.
Just relax, look around and shift on any objects.
When the mind and eyes relax; look at the number, the number will be seen clear.

Palming is practiced with the memory and imagination. Palming relaxes the mind/brain, body and eyes. Relaxation activated from palming improves the memory and imagination.



Palming improves clarity of vision.

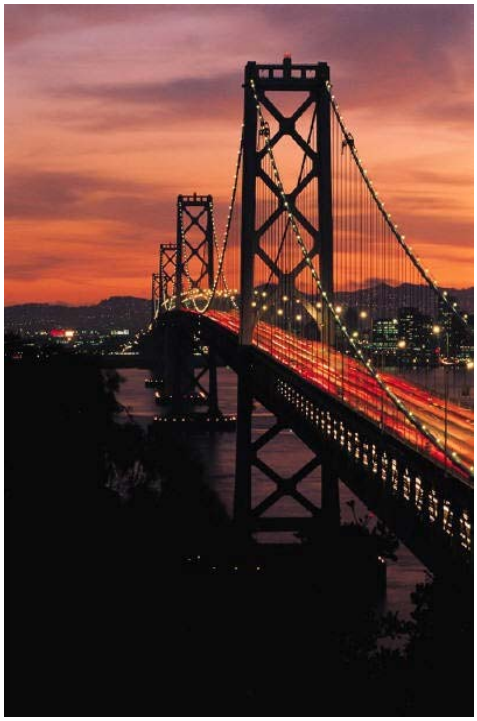
Improved memory, imagination increases relaxation. Perfect relaxation, memory, imagination activate clear vision. Clear vision improves the memory, imagination and relaxation. All improve, strengthen eachother. Improve one and all improve.

Memory, Imagination Exercises

Look at your hand. Trace around on the fingers, edges, outline of the entire hand and shift part to part on the hand with the eyes and the other hands finger; moving the visual attention and finger on the hand. Then; repeat in the imagination, using the memory, imagination with the eyes closed. Imagine seeing and tracing, shifting on the hand. Touch the hand, move the finger on the hand with the image, eye movement in the imagination. Notice the eyes move on the image in the mind. Open the eyes, repeat. Close, repeat...
The sense of touch with physical and eye movement and imagination, memory of the objects shape, parts improves the function of the brain with the eyes, clarity of vision.

Practice other memory improvement exercises; Remember every thing you did from the morning backward 2 days and nights. A week, month...
Imagine re-living a vacation; remember, see the towns, cities, land... every place you walked, drove through, things you did. Remember all the towns, cities along the west coast of California, or other states, countries...

Video - http://www.youtube.com/watch?v=WO9AS4A8f_c



Shift on Objects at Night and Remember, Imagine the Objects Clear; Eyes Open, Closed, Open.

10 - SWITCHING, SHIFTING CLOSE, MIDDLE AND FAR

Switching Close, Middle, Far on objects at different distances is a type of Shifting that improves the clarity of vision at all distances.



Switching; to switch (change) the visual attention from one distance to another distance.

Example;
+Look at a object at a close distance, the cat on the fence. Shift part to part on the cat. Blink, Relax.

+Then switch to a object at a far distance - trees, mountains, sky. Shift part to part on the far objects.

+Then switch back to the close object - cat. Shift part to part on the cat.

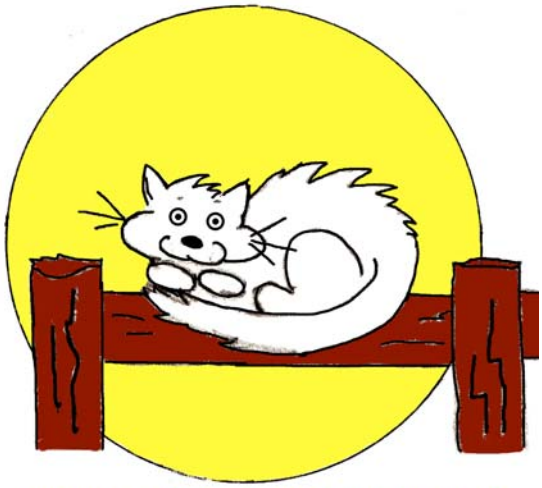
+Switch back and forth; cat, trees, mountains, sky, cat, trees, mountains, sky, cat... Shift on each object the eyes look at, one object at a time.

+Switch to the middle distance;
cat to house, house to cat, cat to house... house to trees, mountains, back to house, trees...

Switch back and forth on any objects, any distances, close, middle, far, in any order. Let the eyes move, shift freely from object to object and part to part on objects; shift along the fence, grass, flowers, truck, dog, house, owl, trees, mountains, sky, birds. Shift on small parts, tiny details on objects; shift part to part on the windows in the house, window panes, chimney, bricks in the chimney. Shift on the owls face, eyes, ears, wings, claws. Central-fixation: shift point to point on tiny parts. No effort to see. Blink, breathe deep, relax.
Trace on/along the edge of objects, parts of objects with the Nosefeather; mountains, hills, trees, house, fence, any object.

Switch on objects at close, middle, far distances that are in a straight line, row with eachother.

In the picture of the kitty on the fence, house, mountains; To practice switching, shifting on the objects; the person stands with the cat, fence at eye level. Height of the cat, fence is in front of the persons face. This causes some distant objects (house, trees...) to be directly beyond the cat, fence. The objects are aligned with eachother. Placing a few objects in a straight line with eachother greatly improves accommodation, un-accommodation and convergence, divergence when looking close, middle and far, switching back and forth on the cat, house...



Shift on the kitty, then the distant moon, then the kitty, then moon, kitty... Blink, relax.

Video **Video**

This improves the clarity of vision.
Example: See the picture of the kitty and moon. The kitty and moon are in a row, aligned.
Shift part to part on the kitty, then switch to the distant moon and shift on the moon, then back to the kitty, then moon, kitty… See the pictures below; The man switches, shifts close, middle, far on 5 telephone poles aligned with eachother, in a straight line down the side of the street. He shifts, traces on the poles, one at a time.



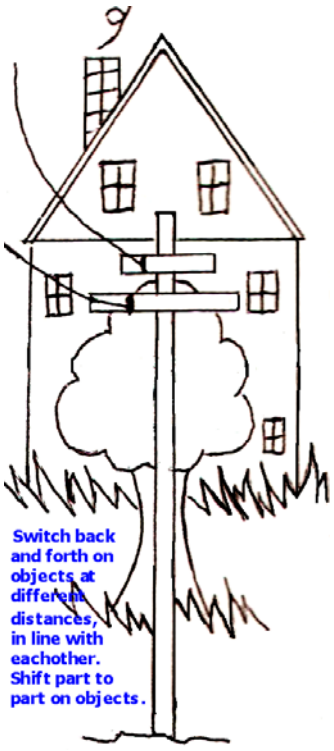
Switch, Shift, Trace on objects at different distances in a straight line with eachother to perfect: accommodation, un-accommodation, convergence, divergence, clarity of vision. Practice with: both eyes together, then one eye at a time, then both eyes together again.



Switch, shift, central-fixation on objects at different distances, close, middle, far, in a straight line with eachother.

He then does the Rock; moves the eyes, head, face, body side to side and notices oppositional movement of the poles; Poles at different distances appear to move against eachother in opposite directions as he rocks side to side. The close pole moves opposite his eyes, head, body moment and the far distant pole appears to move with him in the same direction.
He also switches, shifts on the houses along the side of the street. He gets a good view of the houses aligned by standing where the kitty is by the edge of the house.
The 2 other pictures show more objects in a straight line.
Example: Shifting part to part on the Pete's brewery sign, then on the truck beyond it, then back to the sign, then to the truck, then to the trees, back to the truck, then trees, sign, trees, truck… Switch to and shift on the fields, mountains, airplane, parachute, birds. Switch to any object, any order and shift on it.

(Switching is not done only on objects in a straight line. Switching is also practiced on objects at a variety of locations; left, right, up, down, diagonally… to give the eyes complete freedom of shifting movement. This is the normal, natural function of the eyes. Straight line switching is only practiced a short time to 'tune up' the eyes function, visual clarity.) More examples for switching in a straight line are in the 'Pens in a Row' section in this chapter.
Switching, shifting… at night video;
http://www.youtube.com/watch?v=r5JxOFVi3hc



Switch back and forth on objects at different distances, in line with eachother. Shift part to part on objects.

Practice switching, shifting, central fixation… on real objects in your environment. (Switching cannot be done on these pictures because they are on a flat surface, all are at

one distance so changes in convergence, accommodation, divergence, un-accommodation do not occur when looking at objects that appear at different distances on the paper.) Shifting, central-fixation can be done on the pictures with benefit.

When looking at a object; shift on it, even when looking at the object for only a few seconds. Shift from part to part .

Central-fixation - keep the object the eyes are looking at in the center of the visual field. The center of the visual field is clearest, clearer than 20/20. Placing the object (part of the object) the eyes are looking at in the center of the visual field keeps the object clear.
The center of the visual field moves with the eyes as the eyes move, shift from part to part on a object and from object to object keeping every object, every part of a object the eyes look at perfectly clear.
The head, face and body move with the eyes, at the same time, in the same direction.
The eyes, head/face, neck and body are relaxed and move freely, easy. Blink and relax.

Keep the eyes moving, shifting easy, relaxed from part to part and object to object. Look at a object and shift on it. Then look at a different object, shift on it, then look at another object, shift on it.
Eye movement keeps the mind, eyes relaxed and vision clear.
With practice the eyes shift 'on their own', automatically, without the person thinking about it, the true natural function of the eyes.

Practice switching back and forth on objects at close, middle and far distances with;
Both eyes together, then with one eye at a time, then, both eyes together again.
If vision is less clear in one eye, practice a little more with that eye to get the vision equal and perfectly clear in the left and right eyes at all distances. When the vision is equal in the left and right eyes, the vision quickly improves to perfect clarity. The memory, imagination, left and right brain hemispheres work with the eyes. Their function improves when the vision is equal in the left and right eyes. Brain function with the eyes, visual system, all brain functions and clarity of vision improve.

Keep the objects in the center of the visual field, between the left and right eyes, at eye level when using both eyes together and when using one eye at a time.

The eye that is not in use is covered with a eye patch and the eye is kept open under the patch. (Closing one eye causes eye muscle tension and blur so keep both eyes open when using one eye at a time). Both eyes close when the eye in use is closed. Leave a little space between the eye and patch so some light gets in to keep both eyes, left and right brain hemispheres activated.

Practice switching, shifting, tracing, central fixation on objects, parts of objects with the Nosefeather.

Switching improves convergence and accommodation of the eyes when looking at objects at close distances - (20 feet and closer) for clear close vision and improves un-convergence (divergence) and un-accommodation when looking at objects at far distances (about 20 feet and farther into the distance) for clear distant vision.



The author of this book learnt switching and shifting from reading Aldous Huxley's book 'The Art of Seeing' in high school, 1974 and regained 20/20 clear distant vision in 5 minutes and clearer vision in one day and threw away her glasses. Close and distant vision continues to be clear at age 54.

Window pane bars (wood surrounding a window pane) can be used to practice switching close and far.

The bar is the close object. The objects outside the window (tree, birds, house...) are the distant objects.
Switch back and forth, close and far, on a window bar and a distant object in line with the bar.
Then, move the eyes, (visual attention) throughout the scene, looking at, shifting on any objects, at any location. Shift on the close and far objects, use central-fixation, shift on small objects, parts. Blink.
Practice with; both eyes together, then one eye at a time, then both eyes together again. Extra practice with a eye that has less clear vision.

A open window is best, bringing full spectrum sunlight onto the face, eyes and a perfect view, unobstructed by glass. Open the window and hang a pencil vertically on a string in the center of the window for the close object. (Cap the pointed end of the pencil for safety.)

Switch, shift back and forth on the pencil and distant objects beyond the pencil.
Hang a few more pencils or other objects in the window so the eyes, head/face, body have more movement, more close objects (pencils…) to look at.
Objects can be hung on a rope at close, middle, far distances outside in the sunlight.

See The Illusion of Oppositional Movement

Rock the body side to side, left and right, while facing the window bar and distant objects and see oppositional movement, 'The Swing';

+ When the eyes, head/face, body move to the left <
the window bar (close object) appears to move in the opposite direction, to the right. >
+ When the eyes, head/face, body move to the right >
the window bar appears to move in the opposite direction, to the left. <
+ Notice that the house (distant object) appears to move with the eyes, head/face, body in the same direction.
+ Notice that the window bar (close object) and the house (distant object) appear to move against eachother, in opposite directions.

Do not lock the eyes/visual attention on any objects when moving left and right; just relax and let the objects move. Don't try to see anything clear.
This activity relaxes the mind, body, eye muscles, eyes and improves the clarity of vision.

When the eyes can move, shift on small and tiny objects and see oppositional movement-the eyes function is perfect and vision is most clear; Practice shifting on and seeing 'The Swing' of a small tiny object=fine print letter or tiny flower.

Shift left to right > on the letter - the letter moves, 'swings' to the left <.
Shift right to left < on the letter- the letter moves, 'swings' to the right >.
Blink and relax. No effort to see the letter or the swing. This brings very clear, fine detailed vision.

Practice shortening the rock, eye, head/face, body movement; shift on a small object; letter, fine print and see a small swing of oppositional movement. This activates saccadic eye movements, perfect central fixation and very clear vision. Small eye shifts, seeing tiny details clear with relaxation.

Switching, shifting on objects and seeing oppositional movement can be done most anywhere throughout the day and at night. There are always close and far objects in the visual field to practice on. Just a little practice, couple minutes a day or two, three days week will improve the vision. Once vision is clear, practice only if needed to bring the vision clearer than 20/20 in times of normal fluctuations. Keep natural, normal eye, visual system function as a healthy habit.





The business cards showing the San Francisco Bridge in California, USA and the field, trees can be given to people that need vision improvement. Pictures on the cards are pleasant to look at, induce a positive, happy state of mind, relax the mind, body and eyes. The person presenting the card can be a Natural Vision Improvement Teacher and give the person a quick, easy lesson by describing how to switch the visual attention back and forth on objects at close, middle and far distances; bridge at close distance, sea at middle distance, city of San Francisco and skyline, clouds far distance. Describe shifting from object to object in the visual field, shifting part to part on objects, moving the head/face, body with the eyes, central-fixation; placing objects, parts of objects in the center of the visual field,

seeing the central field clearest, seeing small fine details clear at close and far distances, relaxation, memory, imagination.

Videos - Most of the Authors 58+ YouTube videos show switching, shifting, central-fixation examples. Scroll through the Videos to find Switching Training;

http://www.youtube.com/watch?v=lkQ9KEpA8zE&feature=channel
http://www.youtube.com/watch?v=n1MWGeF0iU4

School Children
By Emily C. Lierman

Davey

(Switching, Shifting Example)

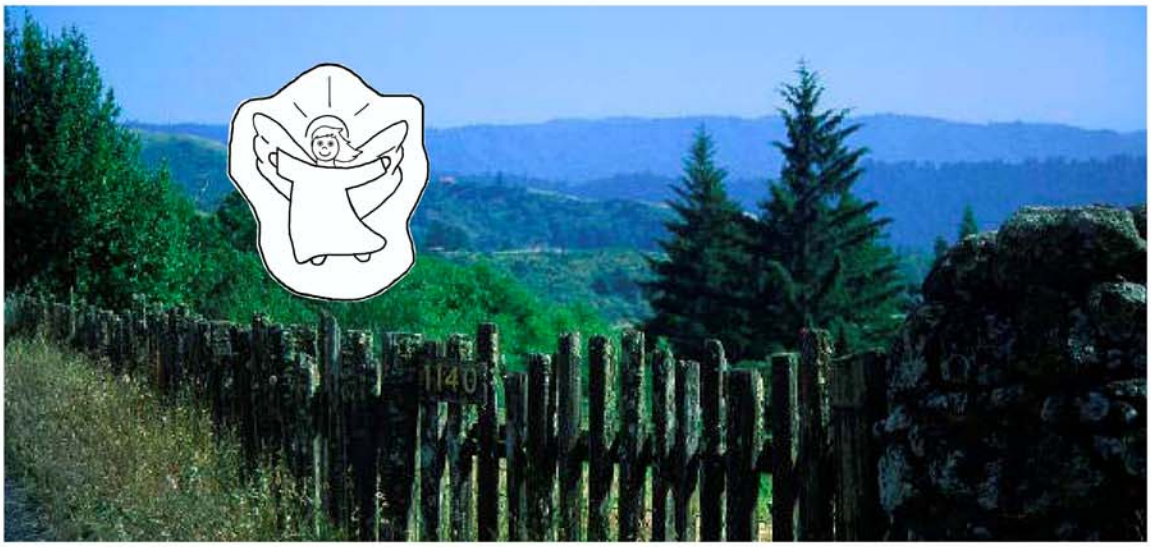
Davey, eight years old, was very near-sighted, and the glasses he was wearing, made him nervous and irritable. His father had been told about the Bates Method and what could be done to restore perfect sight without wearing glasses. Davey's father brought the boy to me, although he was skeptical and his mother was even more so. I could tell by the little boy's attitude toward me that the Bates Method had been much discussed in the home circle, and that I was considered a sort of mystic worker.
The first question Davey asked me was, "What are you going to do to me?"
I answered, "I am not going to do anything to you, but I will try to do a whole lot for you. I will help you to get rid of your thick glasses that I am sure you don't like."
His answer was, "O, yes, I would like my glasses if I could see out of them. Father said that if you don't help me, he will try to find other glasses that will help."
I let the little fellow talk for a while, because I thought it would help me to understand him better. I told him I was especially interested in children and that it was always my delight to give school children better sight. I said I would not interfere with him, if glasses were what he wanted most. He said that he was afraid to play baseball or other games which might not only break his glasses, but perhaps hurt his eyes.
I tested his vision with his glasses on, and found that at ten feet from the regulation test card, he could see only black smudges on the white, but no letters.
Then I placed the card six feet away. All he could see at that distance was the letter on the top of the card, seen normally at two hundred feet. I then had him take off his glasses to see what he could read without them. He could not see anything at all on the card. I asked him to follow me to the window and to look in the distance and tell me what he could see. To the right of me, about one hundred feet away, there was a sign. The letters of this sign appeared to be about three feet square. One word of the sign had four letters. The first letter was straight and the last was curved, and had an opening to the right. I explained this to Davey, as I told him to look in the direction in which I was pointing, and then to a small card with fine print that I had given him to hold. I told him to read what he could of the fine print. He read it at two inches from his eyes. Under my direction, he alternately followed my finger as I pointed to the fine print and then to the building sign. He told me he could not see anything in the distance. Davey felt very uncomfortable because of his poor sight and became rather restless. I told him to hold the fine print card closer, and not to read the print this time, but to look only at the white spaces between the sentences, and to blink often. He shifted from the white spaces of the fine print to the sign in the distance, watching my finger as I pointed, first to the near point and then to the distance. Suddenly, he got a flash of the first letter of the first word on the sign. This practice was continued for twenty minutes, and then we had a rest period. Davey sat comfortably in a chair and palmed his eyes. Children are very apt to become bored with anything that takes time and patience, and I know that Davey had little patience with anything regarding his eyes.
I asked him questions about his school work, and what subjects he liked best. He said he just loved arithmetic. I asked his father to give him an example to do while he palmed. The little fellow thought this was great fun, and without hesitation he gave his father the correct answer for each example. This gave Davey a rest period of fifteen minutes. His mother remarked that this was the first time she had ever noticed him sit quietly for so long a time.

Long Swing and Sway

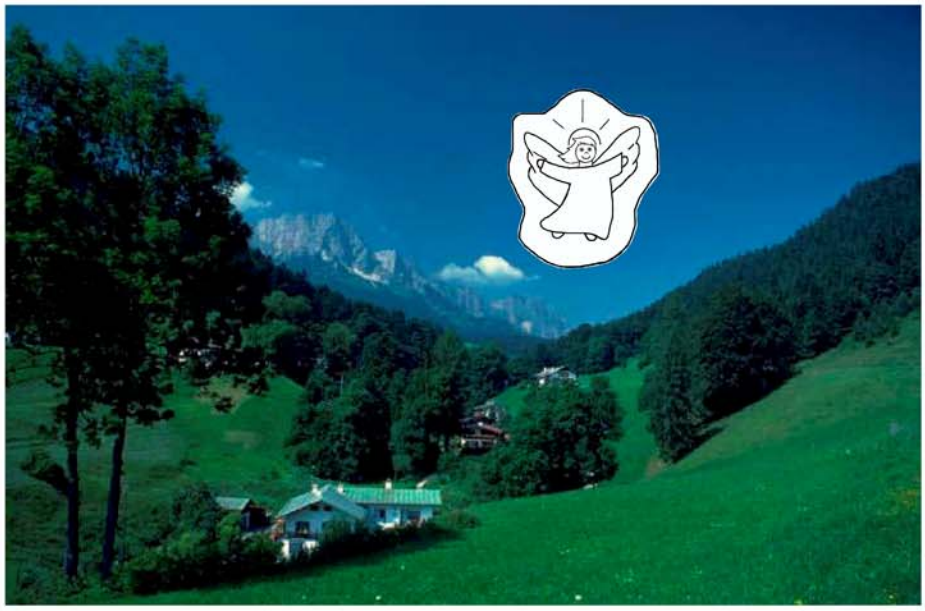
Davey was then shown how to swing, by moving his body slowly from left to right, and getting only a glimpse of the letters on the card, at six feet. When he looked longer than an instant at the card, he leaned forward and strained to see better, but failed each time. **When he learned not to stare, but to shift and blink while he swayed, his vision improved to 6/50.** We returned to the window. I told him to shift from the white spaces of the fine print, which I held close to his eyes, then to the distant sign, and he became able to read all of the sign without any difficulty.
Much had been accomplished in one treatment and both parents were grateful. Davey was given a card with instructions for home practice. He returned three days each week for further treatment. Every time he visited me, I placed the test card one foot further away. Eight weeks after his first treatment, he read all of the test card letters at ten feet. This was accomplished by reading fine print close to his eyes, then swinging and shifting as he read one letter of the card at a time.
This boy has sent other school children to me as well as a school teacher with progressive myopia, who practiced faithfully until she was cured. Every week, she sent me a report about her eye treatment and the progress she made. Her pupils noticed that she had discarded her glasses, and after school hours she invited some of them, who had trouble with their eyes, to practice the Bates Method with her. In eight weeks' time, her vision became normal, and all her pupils, with the exception of three, are improving their vision without the use of glasses.

Shift, Trace on objects in a favorite scenery: along the mountains, trees, fence...

All Switching Close, Middle, Far Exercises are The Bates Method combined with Behavioral Optometry.







Blink, Breathe, Relax.
Shift, central-fixation, switch on objects at close, middle and far distances.
Look at and through a fence. (See top picture.) Shift part to part on a fence post, then switch to a distant object beyond the post, shift on it, then switch back to the fence post, shift on it. Repeat.

Practice with both eyes together, one eye at a time, both eyes together again. If vision is less clear in one eye, practice a little extra time (30 seconds-1 minute) with that eye, to get the vision in both left and right eyes equal, perfectly clear.
Get outside daily in the sunlight. Walk 1-5 miles. Think happy thoughts!



Let the rope be loose, avoid tension. A relaxed feeling should occur as the eyes, visual attention move along the rope. Move, glide easy, relaxed on the rope. The rope makes it relaxing, easy for the eyes to converge, accommodate for close objects and diverge, un-accommodate for distant objects. This is especially relaxing for eyes that have tight muscles, crossed, wandering eyes. Stiff, rigid eye and neck muscles can cause a feeling of tension, pulling, a little dizziness as switching close and far is practiced and the eyes try to function, move normally, together and quickly. The rope helps to prevent this feeling of tension. It activates relaxation and quick, easy improvement of eye movement, visual clarity.
Blink, relax,, breathe, switch, shift, central fixation. Use the Nosefeather on the rope.

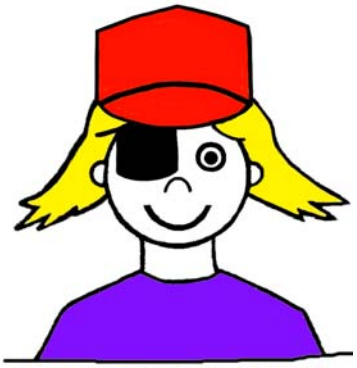
Close and Far Swing

Practice Switching Close, middle, Far on a Imaginary Rope

An imaginary rope can help the eyes switch back and forth on objects at close and far distances. Follow directions in the picture. Objects (kitty, tree) are in line with eachother and placed at; eye level, between the left and right eyes, center of the visual field. The eyes, visual attention glide easily to, from close and far objects along the rope. Use a thin rope. A thin string can be used for a lighter effect. A thin rope or string helps activate central-fixation. The end of the Nosefeather sweeps on/along the string and shifts, traces on objects: Shift, trace on the kitty, then move the end of the feather, eyes (visual attention, center of the visual field) along the string to the tree and shift, trace on the tree, then move the feather, eyes along the string back to the kitty - shift, trace on the kitty. Then move back to the tree and shift, trace on the tree, then the kitty...
Repeat in the imagination with the eyes closed: move along the string and shift, trace on the kitty and tree with the eyes, Nosefeather. Feel the eyes continue to move, converge, diverge; the eyes converge, diverge, accommodate, un-accommodate even when switching, shifting in the imagination with the eyes closed. The brain works with the eyes. A relaxed brain, mind relaxes the eyes, eye muscles, brings clear vision. Think a happy thought when practicing. Remember, imagine the objects clear.
Repeat with the eyes open again, then closed using the memory, imagination, then open again.

Continue to remember, imagine the objects clear when the eyes are open.
The eyes, head, neck, shoulders, body are relaxed and mobile.
Practice on objects at a variety of distances.

Eye Patch Switching, Shifting.., Activities - Directions



Baseball Cap with 2 Eyepatchs - One patch is tucked up inside the cap while practicing Natural Eyesight Improvement with one eye.

Cover the eye not in use with a eyepatch and keep it open under the patch. Both eyes open, one eye covered. Do not close the covered eye when the eye in use is open. When the eye in use is closed, close the covered eye - both eyes closed.

Closing one eye and holding the arm/hand up over the eye not in use causes muscle tension in the arm, shoulder, neck, head/face and eyes, impairs eye, head/face, body movement and lowers the vision. Closing one eye tenses muscles in the face, around the eyes, muscles around the outside of the eyeball and muscles inside the eyes. Use the patch to avoid muscle tension and to enable relaxed movement.

If you cannot find a eyepatch, use two pieces of black cloth and sew them onto the inside edge of the front of a baseball cap or hats visor. One cloth for the left eye and one for the right eye. Pull one cloth down to cover the eye not in use. Tuck the other cloth up under the hat. Be sure the cloth does not touch the eye. Both cloths can be tucked up inside the hat when not in use.

Patches are loose, 1 inch from the eyes; Keep the outside end of the patch (side near the outer side of the eye/face) open a little, some space between the face and patch to allow some light to enter under the patch, into the eye to prevent the eye not in use from being completely inactive. The light keeps the eye and areas of the brain, visual cortex controlling that eye activated, 'switched on', connected and working with the eye-the left and right brain hemispheres and left and right eyes activated and integrated, working together for equal, perfect clear vision in the left and right eyes at all distances, close, middle, far. This prevents one eye, one brain hemisphere from becoming dominant, stronger than the other. Dominate, unbalanced vision in the left or right eye, brain hemispheres causes strain and unclear vision in both eyes.

Black clothing attracts sunlight/sunburn. White reflects it. A white eye patch can be used when in the sunlight to prevent attracting strong sunlight/sunburn on the face, but a black patch may work better for eye patching activities.

Switching, Shifting Close and Far by Bernarr MacFadden - Click here

Videos - Switching, Shifting Close and Far - Click Here

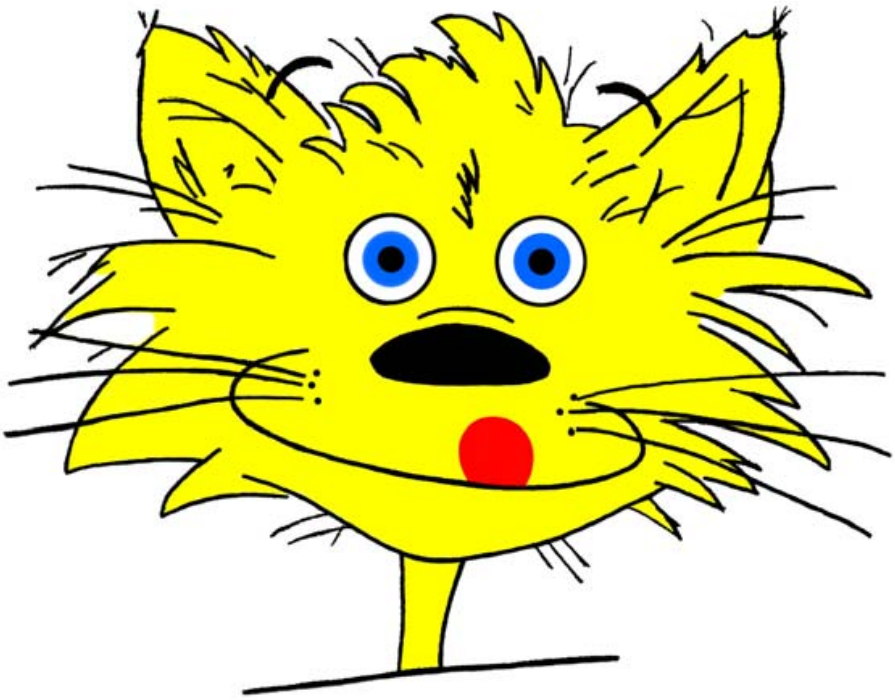
Video - Switching, Shifting…

Switching - Close, Middle, Far - Night Vision

Yellow Kitty Teaches Secret Switching

The next section of this chapter teaches 'Secret Switching' a advanced, detailed method for switching, shifting on objects at close, middle, far distances for equally clear, perfect 20/20 and clearer vision in the left and right eyes, at all distances, close, middle, far..

Yellow Kitty will assist us by hiding in a distant tree.



Yellow Kitty

Shift and Trace on Comic Book, Television Cartoon Characters. Practice with both eyes together, one eye at a time, then both together again. Central Fixation, Blink.

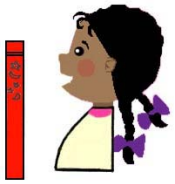
To be included in the final book upgrade.

Test for and Improve Convergence, Divergence, Accommodation, Un-Accommodation, Clarity of Vision, Binocular Vision, Fusion, 3-D Vision in the Left and Right Eyes at all Distances.

1 - Look at a distant tree. Place the tree in front of the eyes, in the center of the visual field.
+ Place a pen at a close distance, directly in line with the tree, between the left and right eyes, center of the visual field, top of the pen at eye level, about 4 12 inches from the eyes.
The pen is upright. Do not tilt the pen left or right.
Do not tilt the head. Keep the head straight.
+ See a double image of the pen appear when looking at the tree. The two images of the pen should appear in the left and right peripheral field, be at a even height with eachother and spaced evenly on the left and right sides of the tree.
See the double image of the Red Pen in picture #3.

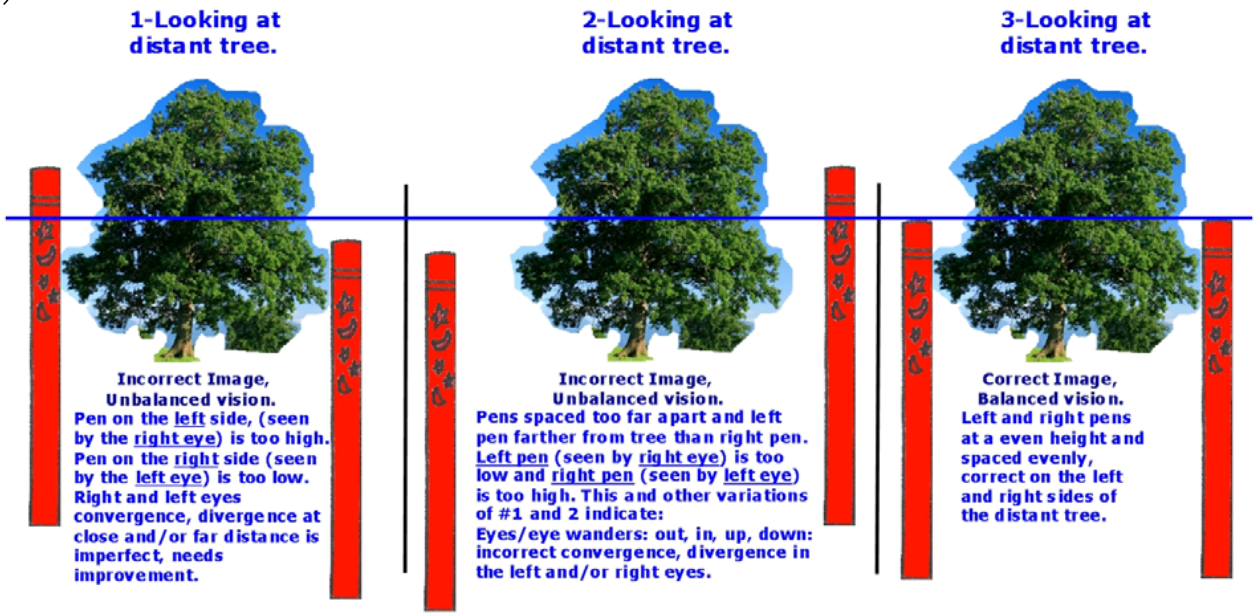


Shift on the Pen and Tree



The left eye sees/produces the image of the pen on the right side of the peripheral field.
The right eye sees/produces the image of the pen on the left side of the peripheral field.

Test for Correct Convergence, Divergence, Fusion, Binocular Vision.



Look at a distant tree. Place the tree in front of the eyes, in the center of the visual field. Place a pen at a close distance, directly in line with the tree, between the left and right eyes, center of the visual field, top of the pen at eye level, about 4-9 inches from the eyes.
See a double image of the pen appear in the left and right peripheral field when looking at the tree. The two images of the pen should be at a even height with eachother, spaced evenly on the left and right sides of the tree. (The blue line indicates correct level for the image of the pens in this test but it can vary depending on the size and distance of the tree and distance of the pen.)
The pen is upright. Do not tilt the pen left or right. Do not tilt the head. Keep the head straight.
Shift on the distant tree and notice the double image of the pen. If the images of the pen appear incorrect as in #1, 2 or other incorrect images appear:
Cover one eye at a time to determine which eye sees/produces the incorrect image. Then:
+Imagine the images appear correct. (See diagram #3) Imagine this while looking at the tree with the eyes open, then with the eyes closed using the memory and imagination, then with eyes open again. Check for improvement. Repeat.
+Then: Practice switching, shifting, central fixation: back and forth, close to far, far to close... on the distant tree and close pen with both eyes together, then one eye at a time, then both eyes together again. If ones eyes vision is less clear, practice extra time with that eye for equal, balanced clear vision.
+Then: Practice imagining the images are correct again.
+Next: Practice looking at, shifting on the close pen while seeing a double image of the distant tree. (See directions below.)

(The blue line indicates correct level for the double image of the pens in this test but it can vary depending on the size and distance of the tree and distance, height of the pen.)

+ Look at, shift on the distant tree and notice the double image of the pen.
If the images of the pen appear incorrect as in #1, 2 or other incorrect images appear:
Imagine the images appear correct with the eyes open, closed in the imagination, then, open again:
(See picture #3 for correct image.)

A - Look at, shift on the distant tree with the eyes open and imagine the two images of the pen in the peripheral field appear correct: at a even height, spaced equally on the left and right sides of the tree.
B - Shift on the tree in the imagination, use the memory and imagination with the eyes closed and imagine the images of the pen appear correct.
C - Shift on the tree with the eyes open again and imagine the images of the pen correct.
D - Check for improvement. Are the pens at an even height and spaced correct? The images should be solid; No light, ghostly images. Repeat the test.

2 - Next: Practice switching, shifting, central-fixation: back and forth, close to far, far to close... on the distant tree and close pen with:
+Both eyes together,
+One eye at a time,
+Both eyes together again.
+If vision is less clear in one eye at a specific distance; practice extra time with that eye to get the vision equally clear, balanced, perfect in the left and right eyes at all distances.
Keep the pen and tree in line with eachother and in the center of the visual field when using both eyes and when using one eye at a time when practicing these tests, activities.
+ When looking at, shifting on the pen or tree: imagine it is clear. Do this with the eyes open, then in the imagination with the eyes closed (continuing to shift on the object in the mind), then with the eyes open again.



Correct image of the pen in the left peripheral field: clear, solid.

Incorrect image of the pen in the right peripheral field: ghostly, lighter, blurry.

3 – Next: Repeat: Practice looking at the tree and see the double image of the pen in the peripheral field. Has it improved? Is it seen correct? If not, repeat steps #1, 2, 3.

4 – Next: practice seeing a double image of the tree:
Practice looking at, shifting on the close pen and see the distant tree appear double. Imagine the images of the tree appear correct in the peripheral field: even height, spaced evenly on left and right sides of the pen, no light, ghostly images.
Notice when looking at the close pen: the left eye sees the left image of the distant tree, and the right eye sees the right image.
+Practice steps #1-3 using the pen to shift on with double image of the tree.

5 - Check for clear/blurry vision in the left and right eyes at close and far distances:
+Look at the close pen and far tree; look at, shift on the pen, then the tree with both eyes and one eye at a time. Notice if vision is unclear in both eyes and less clear in one eye at close and far distances.
+Then use both eyes together and notice if one of the double images in the peripheral field are light, ghostly when looking at the pen and tree. Images should be solid, not light, ghostly.
(Do not look for or imagine double images in the peripheral field when using one eye. Do it only when using both left and right eyes together.
It's ok to look for the one image of the pen or tree that appears in the peripheral when using one eye. Example: looking at the distant tree with the left eye: one image of the pen in the right peripheral field appears. Notice if it is light, ghostly.)
A light, ghostly image in the peripheral field or a blurry image when looking directly at a object indicates unclear vision in the eye producing the image and/or imperfect convergence, divergence, accommodation, un-accommodation or the brain, one or both hemispheres not functioning perfectly with the eye, eye muscle/muscles tense, not functioning correct with the eye, brain.
Seeing incorrect images indicates unclear vision, unbalanced vision, imperfect convergence, divergence, accommodation, un-accommodation in the left and/or right eyes at close or far distances, brain, eye muscles not functioning perfectly with the eyes.
Cover one eye at a time to determine which eye sees/produces the incorrect image and unclear vision.

+Practice all steps with the pen, tree, (any objects) at a variety of distances, one distance at a time, and see, imagine the correct double image of objects the eyes are not looking directly at.
+Practice switching, shifting on the close, middle, far objects with both eyes together, one eye at a time, both eyes together again.
+Imagine objects clear with eyes open, closed, open.

+Practice with 3 pens or small colored toothpicks aligned in a straight line at close distances 1 inch apart, then 3 inches apart, then 12 inches to 3, 4... feet apart to improve close reading vision. Using the toothpicks improves central-fixation, seeing fine details clear and left and right eyes converging perfectly onto a point. Practice with the closest objects 1 inch from the eyes, 3,4, -20 inches, 1-3 feet,
(Be careful with toothpicks, do not place the ends close to the eye)
See the Correct Vision Habits Card in chapter 14 and switching, pens in a row in chapter 10-11.

When looking at the pen or the tree: always shift on the object to prevent staring.
Notice the double image of the object the eyes are not looking directly at in the peripheral field: Double images should appear in the peripheral field, not the central field. If the double image appears in the central field, imagine it correct in the left and right peripheral field and see the object the eyes are looking directly at in the central field. Keep the visual attention on the object in the center of the visual field, the object the eyes are looking directly at, shifting on and notice the double image of other objects in the peripheral field without staring, no effort, no strain. Relax.

The space between the pens will vary depending on the distance of the tree, pen, size of the tree.
The space between the pens decreases when pen is moved farther from the eyes and increases when the pen is placed closer. If in doubt as to the correct height and spacing of the images of the pens and which eye is producing a incorrect image:
Do all the activities listed here for imagining the images correct and practice switching, shifting, central-fixation, on the close pen and distant tree with both eyes together, one eye at a time, both eyes together again, and if vision is less clear in one eye, practice extra time with that eye. This will improve convergence, divergence, accommodation, un-accommodation, clarity of vision, fusion, binocular vision, 3-D vision, function of the brain with the eyes, eye muscle function for equally clear, balanced vision in the left and right eyes at all distances.
Practice with seeing the correct peripheral images for only a short time-1% of practice time. It is mainly to test the vision. Stop using it when the images are seen correct.
Convergence, divergence and accommodation, un-accommodation function together and effect eachother.
Example: Look at a object 2 feet from the eyes. The eyes converge and accommodate at the same time, an exact, specific amount for clear vision at that distance.
Improve convergence and accommodation improves.
Improve accommodation and convergence improves. Same for divergence, un-accommodation.
Practice improving all 4 for perfect clear vision at all distances close, middle, far.
Imperfect convergence, accommodation for close vision and divergence, un-accommodation for distant vision is a main cause of unclear vision. Even a slight imperfection can cause unclear vision.
Correcting convergence, divergence, accommodation, un-accommodation is often all that is needed to bring the vision to 20/20 and clearer at all distances. When convergence, divergence, accommodation, un-accommodation are normal, the eye functions correct: eye movement (shifting), central-fixation, all eye functions return to normal and vision is clear. When the vision in the left and right eyes becomes equal, vision in the less clear vision eye is improved to equal with the clearer vision eye; then vision in both eyes improves faster and easier to 20/20 and clearer. Bates Method practice is continued to maintain normal eye, brain function and clear vision.

Relaxation methods bring clear vision, relief of pain.



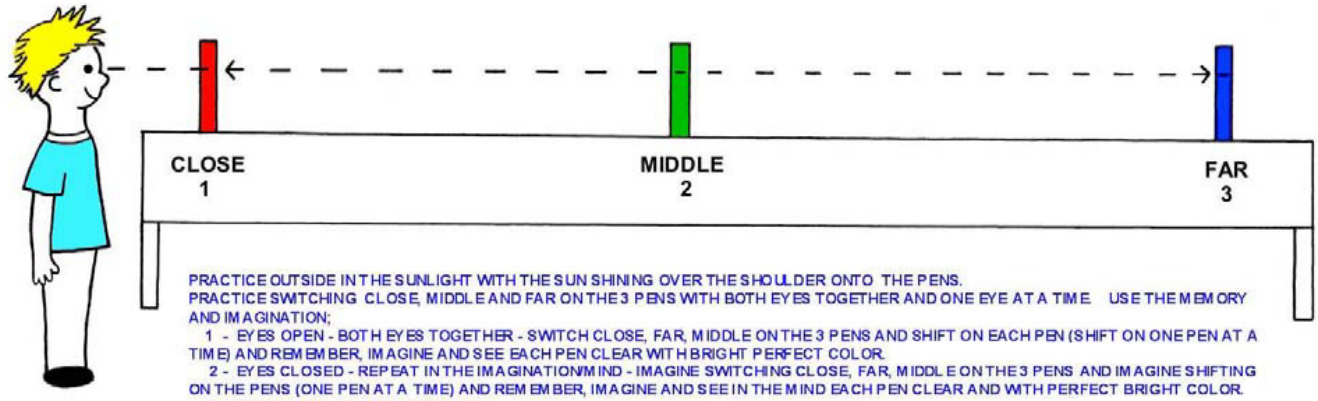
Fig. 51. Operating Without Anaesthetics

The patient suffered from ulceration of the eyeball resulting in the formation of holes through which the fluids of the interior escaped. These holes had to be closed by surgical operations, and fourteen of these operations were performed without anaesthetics, because the patient was able to prevent pain by the memory of a black period.

11 - SWITCH CLOSE, MIDDLE & FAR ON THE THREE PENS & THE BEAD STRING

SWITCH BACK AND FORTH; CLOSE, MIDDLE, FAR ON THREE PENS FOR CLEAR VISION AT ALL DISTANCES

DIRECTIONS; PLACE THREE COLORED PENS (OR POPSICLE STICKS) UPRIGHT INTO A CARDBOARD BOX, IN A STRAIGHT LINE AT CLOSE, MIDDLE AND FAR DISTANCES.
THE 3 PENS ARE IN THE CENTER OF THE VISUAL FIELD, BETWEEN THE EYES, AT EYE LEVEL.
RED, GREEN AND BLUE ARE THE MAIN COLORS OF THE SUNS LIGHT SPECTRUM. COMBINATIONS OF RED, GREEN, BLUE CREATES OTHER COLORS.
THE CONES IN THE EYES RETINA DETECT RED, GREEN, BLUE AND ALL OTHER COLORS.
RED ACTIVATES THE LEFT BRAIN HEMISPHERE AND CLEAR CLOSE VISION.
BLUE ACTIVATES THE RIGHT BRAIN HEMISPHERE AND CLEAR DISTANT (FAR) VISION.
GREEN ACTIVATES AND INTEGRATES BOTH LEFT AND RIGHT BRAIN HEMISPHERES AND CLEAR CLOSE AND DISTANT VISION.
ALL 3 COLORS ACTIVATE CLEAR MIDDLE DISTANCE VISION.
ACTIVATING AND INTEGRATING THE LEFT AND RIGHT BRAIN HEMISPHERES PRODUCES EQUALLY CLEAR PERFECT VISION IN THE LEFT AND RIGHT EYES AT ALL DISTANCES CLOSE, MIDDLE, FAR.
SWITCHING ON ANY OBJECTS; CLOSE, FAR, CLOSE, FAR, AND TO THE MIDDLE DISTANCE ACTIVATES AND INTEGRATES THE LEFT AND RIGHT BRAIN HEMISPHERES AND CLEAR VISION AT ALL DISTANCES. SWITCHING ON THE RED, BLUE AND GREEN PENS INCREASES ACTIVATION AND INTEGRATION THE LEFT AND RIGHT BRAIN HEMISPHERES AND CLARITY OF VISION.



PRACTICE OUTSIDE IN THE SUNLIGHT WITH THE SUN SHINING OVER THE SHOULDER ONTO THE PENS.
PRACTICE SWITCHING CLOSE, MIDDLE AND FAR ON THE 3 PENS WITH BOTH EYES TOGETHER AND ONE EYE AT A TIME. USE THE MEMORY AND IMAGINATION;
1 - EYES OPEN - BOTH EYES TOGETHER - SWITCH CLOSE, FAR, MIDDLE ON THE 3 PENS AND SHIFT ON EACH PEN (SHIFT ON ONE PEN AT A TIME) AND REMEMBER, IMAGINE AND SEE EACH PEN CLEAR WITH BRIGHT PERFECT COLOR.
2 - EYES CLOSED - REPEAT IN THE IMAGINATION/MIND - IMAGINE SWITCHING CLOSE, FAR, MIDDLE ON THE 3 PENS AND IMAGINE SHIFTING ON THE PENS (ONE PEN AT A TIME) AND REMEMBER, IMAGINE AND SEE IN THE MIND EACH PEN CLEAR AND WITH PERFECT BRIGHT COLOR.
3 - EYES OPEN - REPEAT NUMBER 1.

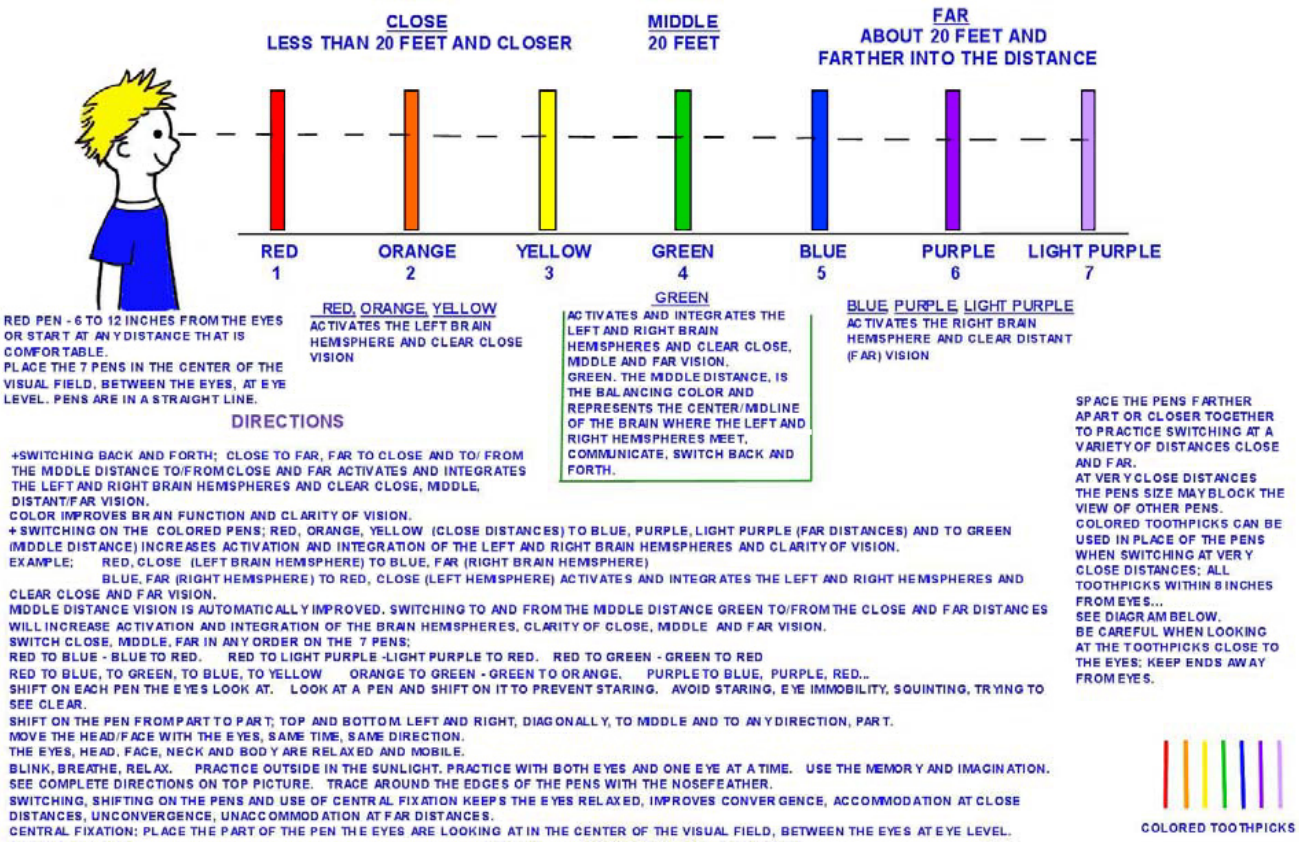
4 - ONE EYE AT A TIME - REPEAT NUMBER 1, 2, 3 WITH ONE EYE AT A TIME; LEFT EYE (RIGHT EYE COVERED WITH PATCH AND OPEN UNDER THE PATCH) - SWITCH, SHIFT ON THE 3 PENS AND REMEMBER, IMAGINE AND SEE THE PENS CLEAR AND WITH PERFECT BRIGHT COLOR WITH THE EYE OPEN, CLOSED, OPEN.
REPEAT WITH THE RIGHT EYE (LEFT EYE COVERED WITH PATCH AND OPEN UNDER THE PATCH).
REPEAT WITH LEFT EYE AGAIN, THEN RIGHT, LEFT, RIGHT.
IF VISION IS LESS CLEAR IN ONE EYE - PRACTICE WITH THAT EYE A LITTLE LONGER.
WHEN USING ONE EYE; KEEP THE PEN BETWEEN THE EYES, AT EYE LEVEL, CENTER OF THE VISUAL FIELD.

5 - END BY PRACTICING WITH BOTH EYES TOGETHER AGAIN - STEPS 1,2,3.

PRACTICE WITH THE PENS PLACED AT A VARITY OF DISTANCES FOR CLEAR VISION AT ALL DISTANCES.

Video - http://www.youtube.com/watch?v=xCAVnepbF2I&feature=mfu_in_order&list=UL

SWITCH ON THE SEVEN COLORED PENS PLACED AT CLOSE, MIDDLE AND FAR DISTANCES



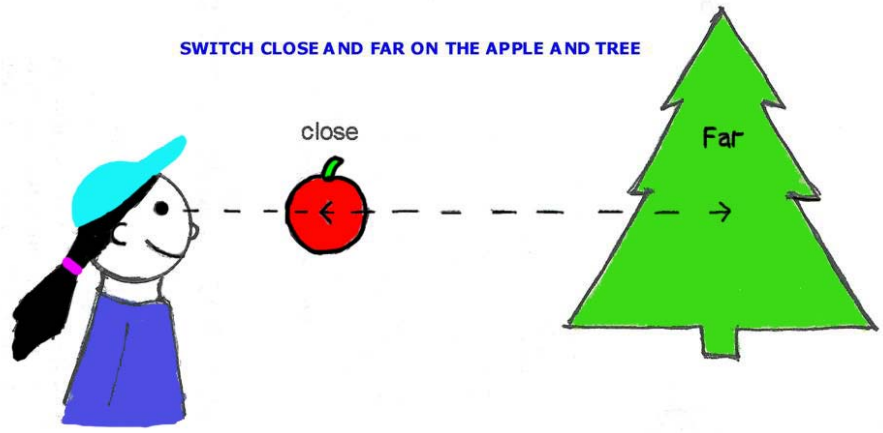
Switch back and forth; close, middle, far, in any order, on the 'Three Pens in a Row, Straight Line' to improve convergence, accommodation at close distances and un-convergence, un-accommodation at far distances for clear vision in the left and right eyes at all distances. Switching Close, middle, far and looking at the different colors also activates and integrates the left and right brain hemispheres. This increases the clarity of vision.

All 3 pens are placed in the center of the visual field, between the left and right eyes, at eye level.
Pens are in a straight line with each other, and upright, straight.
The head/face is straight, eyes looking at the pens. Avoid tilting the head left, right, up, down...

Practice switching close, middle, far on the pens with; both eyes together, then one eye at a time, then both eyes together again. If vision is less clear in one eye, practice a little longer with that eye.
(See eye patch directions.)
When using one eye, continue to keep all 3 pens between the left and right eyes, at eye level.
Do not place the pens in front of only one eye.
Placing the pens in front of only one eye impairs convergence, accommodation, divergence, un-accommodation, eye movement, central fixation...
Improving the clarity of vision in the eye with less clear vision improves vision in both left and right eyes and brings quick vision improvement. Often a slight imperfection in convergence, accommodation or un-convergence, un-accommodation in one or both eyes is the only cause of unclear vision and it can be easily corrected with switching, shifting, central-fixation and all Correct Vision Habits.
Switching improves the speed of adjustment, focus of the eyes to a new distance, object. This also prevents blur. Convergence, accommodation for clear close vision and un-convergence (divergence), un-accommodation for clear distant vision work together. Improve one and the other improves.
Practice improving all to reinforce perfection of all.
Switching close, far, close, far, middle often brings instant vision improvement.
When looking at a pen, shift on it; keep the eyes moving from part to part on the pen; left and right,

top and bottom, diagonally, middle and in any direction.
Move the head/face with the eyes at the same time, in the same direction the eyes shift to. The eyes, head/face, neck and body are relaxed and move freely. No tension in the eyes, head, neck. Avoid staring, squinting.
Relax, breathe deep, abdominally and blink, shift, switch on the pens.
The pens can be spaced at various distances to improve the clarity of vision at all distances;
Example;
10 feet apart to improve close and far vision.
1 foot apart to improve close vision.
1 - 3 inches apart to improve close reading distance vision.

Practice switching close and far on any objects that are in a straight line with eachother



Example; the apple is at a close distance.
The tree is directly in line with the apple at a far distance.
The girl is switching back and forth on the apple and tree.

She looks at the apple and shifts on it from part to part, shifts on small parts, (central-fixation-shift point to point on tiny parts) for a few seconds;
then she switches to the distant tree and shifts on it part to part,
then switches back to the apple, shifts on it, then tree, apple, tree...

She practices with both eyes together, then one eye at a time, then both eyes together again.
Practice switching, shifting on objects and use the memory and imagination to remember, imagine and see each object clear. Chapter 9.
Switching occurs naturally, all the time as the eyes, visual attention moves from object to object, distance to distance.

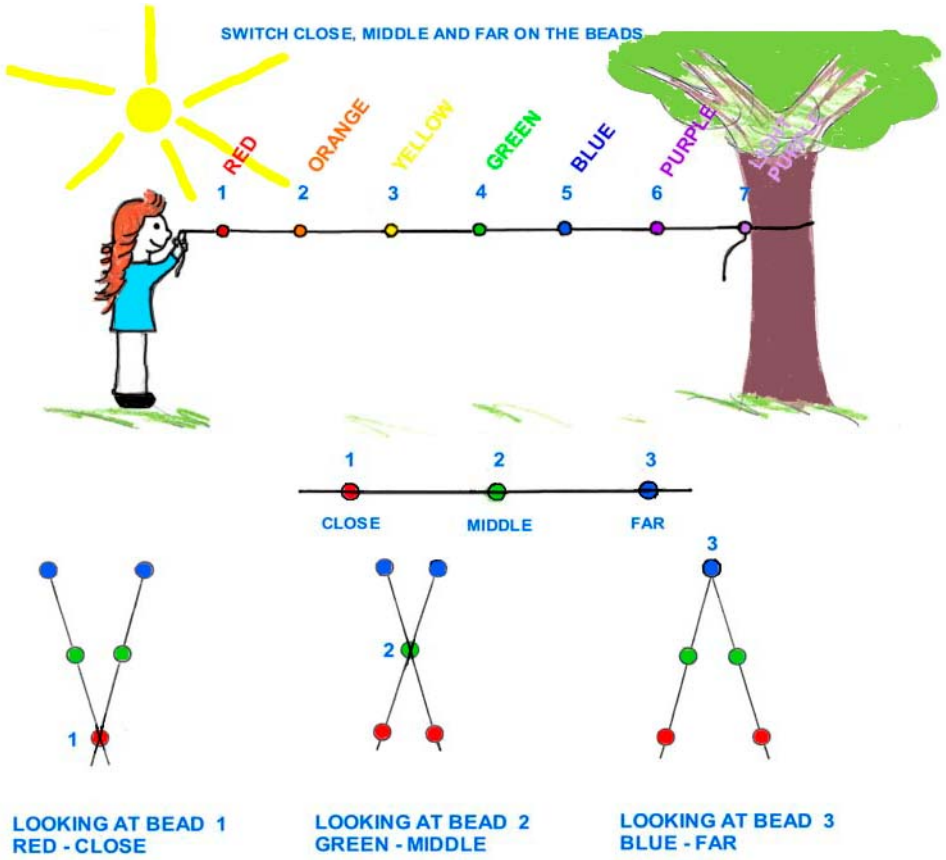
A few minutes practice time switching on objects that are in a straight line with each other like the three pens or the apple and tree greatly improves, increases perfection of; the eyes fusion, binocular vision, depth, distance perception, 3 dimensional vision, convergence, accommodation at close distances, un-convergence, (divergence) un-accommodation at far distances, central-fixation and clarity of vision in the left and right eyes at all distances.
Switching on objects in line with each other does not have to be done every day.
Switching must never be done as a repetitive eye exercise using effort, force.
Effort and force cause strain, tension and unclear vision.
The eyes normally switch, shift on objects at different distances, in line with eachother and not in line with eachother. Let the eyes move freely throughout the scenery shifting on any objects at any distances, locations.
Practice switching in a relaxed, easy, manner. Don't try to see clear.
Just switch and shift on close and far objects even if they are blurry. Vision will become clear on its own. Blink, breathe abdominally, comfortably deep and relax. Use the Nosefeather: shift, trace on

objects, parts of objects with the end of the feather.
Avoid staring, squinting when looking at a object.
The eyes, head/face, neck, shoulders and body are relaxed and move freely, easy.
Switching can also be practiced at night to improve night vision.
Hang a pen from a string upright, vertically in a open window.
Switch back and forth on the pen and distant objects in daylight and at night.
The pen can be taped to a window pane but the glass prevents perfect view of objects through the window and blocks part of the suns light spectrum causing unhealthy partial spectrum light to enter the eyes, just as eyeglasses and sunglasses do. Try to keep windows open and absorb healthy full spectrum sunlight. The eyes need full spectrum light to remain healthy and produce clear vision.
Sunlight enables the skin, body, eyes to absorb, use nutrients from the sun and food.
Avoid using screens. A window screen also prevents having a perfect view of objects outside the window and precise central-fixation and shifting on objects seen through the screen.

The Pens in a Row, Bead String and all Switching Activities corrects crossed, wandering eyes and returns the vision to 20/20 and clearer.

THE BEAD STRING

Switch the visual attention back and forth, close, middle, far on the beads on the String for perfect, equally clear vision in the left and right eyes at all distances, 20/20 and clearer.



SWITCH BACK AND FORTH ON OBJECTS AT CLOSE ,MIDDLE AND FAR DISTANCES WITH BOTH EYES TOGETHER, THEN ONE EYE AT A TIME, THEN BOTH EYES TOGETHER AGAIN TO IMPROVE CONVERGENCE, ACCOMMODATION FOR CLEAR CLOSE VISION AND UNCONVERGENCE, UNACCOMMODATION FOR CLEAR DISTANT VISION.

Bead String is also called 'The Brock String'.

Switching close, middle, far on the beads tests and improves convergence, accommodation for clear close vision, un-convergence (divergence), un-accommodation for clear distant vision, binocular vision, fusion, 3 dimensional vision, depth, distance perception and corrects wandering and crossed eye conditions and unbalanced vision; less clear, dim vision in one or both eyes.

+Switching back and forth on objects at different distances; close, middle, far activates and integrates the left and right brain hemispheres.
Activating and integrating the left and right brain hemispheres improves the clarity of vision in the left and right eyes at all distances, close, middle and far. Function of the brain with the eyes improves.
+Looking at different colors also activates and integrates the left and right brain hemispheres.
Colored beads are used to increase activation and integration of the brain hemispheres. (Use beads that contain colored sparkles; example; red bead with red sparkling glitter)
See chapter 16 for brain hemisphere functions, activities for improving brain, eye function.

+ RED, ORANGE, YELLOW (Beads #1, 2, 3 - Close Distances) activates the left brain hemisphere and clear close vision.
+ GREEN (bead # 4 - middle distance) activates and integrates both left and right brain hemispheres and clear close and distant vision.
+ BLUE, PURPLE, LIGHT PURPLE (beads # 5, 6, 7 - far distances) activates the right brain hemisphere and clear distant vision.

DIRECTIONS

In this first example, 3 beads are used; red, green, blue. (See picture above)
Place 3 beads on a string;
+ RED - Close - 7 inches from the end of the nose.
+ GREEN - Middle - 12 inches from red bead.
+ BLUE - Far - 12 inches from green bead.

Practice outside in the sunlight, sun shining over the shoulder onto the beads.
+ The far end of the string, bead # 3 - BLUE is attached to a tree or pole.
The blue bead is placed at nose level.
(Do not nail the string to the tree; if the nail pulls out it may fly into the eyes.) Tie the string around the tree.

The other end of the string is held up in front of the nose.
Pull the string tight and straight.
Avoid slanting the string left, right, up, down...
Keep it straight out in front of the nose.
The string and beads are placed between the left and right eyes, center of the end of the nose.
Do not place the string in front of one eye; placing it in front of one eye will impair convergence, divergence, normal eye movement.
The close end of the string is wrapped over the top of the index (pointer) finger and held in front of the end of the nose.
Do not touch the finger, string to the nose.
Place the finger, string one inch outward, away from the nose to enable the head, face, eyes to move freely and without affecting the placement of the string.
The RED bead is 7 inches from the nose.
The close end of the string can be tied to a pole with the top of the pole at nose level, one inch away from the nose to avoid holding the string up with the hand. (Holding the hand, arm up can lead to muscle tension, fatigue, limited movement of the arm, shoulder, neck, head, eyes.)
Keep the beads centered between the left and right eyes, in front of the nose when using the pole.

Stand or sit and look at the beads. Keep the beads in the central field without becoming rigid, stiff, immobile. Relax and allow some movement of the head, body.
Keep good posture; eyes, head/face, body are straight, and are relaxed and move freely.
Avoid bending, pulling the head, neck down, forward.
Do not tilt the head/face left, right, up, down...
The left and right eyes must be even, level, at the same height. Tilting the head places one eye higher

or lower than the other resulting in incorrect, uneven images when looking at the beads.

Use central-fixation; the bead the eyes are looking at is in the center of the visual field.
Looking at the beads does not produce perfect central-fixation, eye, head/face posture because; when central-fixation is perfect; the beads would be placed between the left and right eyes, at eye level. The eyes and face are in the same direction, both facing directly at the bead.
To see all the beads on the string it is easier to place the string, beads at nose level. The eyes look down to nose level to see the beads but the head/face does not move down with the eyes. The face is directed straight ahead and the eyes are looking down at the beads. This is imperfect central-fixation.
It is normal for the eyes to slant down a bit when looking at a object but not too much.
When looking at a bead, the bead is in the center of the eyes visual field, but for perfect central-fixation and relaxed eye muscles the bead should be at eye level so the eyes do not have to look downward.
Switching close, middle, far on the beads does produce very clear vision; 20/20+ but, since the eyes must look down to see all the beads and central-fixation, posture is not perfect; do not practice switching on the string all the time as a repetitive eye exercise. Use the bead string once in a while to improve the clarity of vision. Use the bead string in a easy, relaxed manner.
Don't force the beads to be clear.
Use Correct Vision Habits; Shift, central-fixation, blink, breathe abdominally and relax.
Practice switching on the beads then practice on the 3-7 pens placed in a straight line, row at eye level-perfect center of the visual field. Central-fixation is perfect when looking at the pens because the eyes and face are in the same direction when looking at the pens; eyes, face straight ahead directed at the pens and eyes, face, head move together up, down, left, right as the eyes shift part to part on the pens. Place small beads or draw a shape on the pens, all at the same height to replace the bead string.
Practice switching close, middle, far on any objects in your environment for complete freedom of eye, head, face, body movement.

SWITCH CLOSE, MIDDLE, FAR ON THE 3 BEADS

+ #1 RED to # 3 BLUE - Close to Far.
+ # 3 BLUE to # 1 RED - Far to Close.
Switch; Close, Far, Close, Far.
+ Switch to and from # 2 GREEN, middle bead to RED and BLUE.
Switch back and forth on the beads in any order.

Use all Correct Vision Habits; relax, blink, breathe abdominally, shift, central-fixation, movement, memory and imagination, switching.
Shift on the beads; shift from small part to small part on the bead the eyes are looking at.
Shift and trace on the bead with the imaginary Nosefeather.
Move the head/face and body with the eyes, same time, same direction the eyes move to as the eyes shift and switch on the beads. A small, relaxed movement with the eyes.
Eyes, head/face, neck and body are relaxed and move freely.
Avoid Incorrect Vision Habits; squinting, staring (eye, head, neck, body immobility), trying hard to see a bead clear.
Just relax, shift and switch.

Test the eyes for correct convergence, un-convergence, accommodation, un-accommodation, fusion, equally clear vision in the left and right eyes;

The picture on page-- shows how the string and beads appear when the eyes are functioning correct and vision is clear;

+Look at #1- RED bead - close distance. Shift on the bead.
One red bead is seen. It is clear, solid. The red bead is in the center of the visual field.
The GREEN and BLUE beads are in the peripheral field and appear double; two green beads, two blue beads.
The beads are at a even height- two green beads at the same level, even with each other.
Two blue beads even with each other.

This correct image indicates the eyes are even, balanced, perfect convergence, un-convergence, accommodation, un-accommodation.
The double images of the green and blue beads are spaced evenly on the left and right sides of the red bead. Double images of beads farther away from the red bead are spaced farther apart.
The string also appears as two strings forming a arrow < pointing toward the nose.
The two strings cross in a X over the red bead.
These images indicate normal eye function and clear vision.
The double images of the string and beads on the left and right sides in the peripheral field are equally visible, no lighter or missing images. See picture page 127.

Experiment

Double images of objects the eyes are not looking at will appear in the peripheral field on the left and right sides of the object the eyes are looking at when there is a object at a close distance about 20 feet and closer in line with the other close and/or distant objects.

Example; look at two objects in the distance beyond 20 feet - one at 40 feet and one beyond it at 200 feet. There are no close objects in front of the distant objects.
Notice that both distant objects are single = no double images.
Now; place your finger upright about two feet in front of the eyes, between the eyes, at eye level, center of the visual field, in line with the distant objects.
The finger is the close object.
+Look at the finger. The distant objects now appear double.
+Look at the distant objects. The finger appears double.
When there is a close object at about 20 - 19 feet and closer, in line with other objects, and the eyes look at that object, the objects the eyes are not looking at, at close or far distances appear double in the peripheral field, equally spaced on the left and right sides of the object the eyes are looking at.
The double images in the peripheral field are produced by the left and right eyes.
Cover one eye at a time to see which eye produces which peripheral image.
Left and right placement of double images from the left and right eyes change depending on the distance the object is at.
Notice the double images of objects at close and far distances and cover one eye at a time to determine which image, left or right is produced by which eye for each distance.

+Look at # 2 - GREEN bead, middle distance. Shift on the bead.
One green bead is seen, clear and solid, in the center of the visual field.
The RED and BLUE beads are in the peripheral field and appear double; two red beads, two blue beads and they are equally spaced on the left and right sides of the green bead.
There are two strings that cross each other in a X over the green bead.

+Look at #3 -BLUE bead, far distance. Shift on the bead.
One blue bead is seen, clear and solid, in the center of the visual field.
The RED and GREEN beads are in the peripheral filed and appear double; two red, two green beads and they are equally spaced on the left and right sides of the blue bead. The images of the red beads are spaced farther apart than the images of the green beads. The farther away a bead is from the bead the eyes are looking at; the wider will be the space between the double image of a bead.
There are two strings that form a arrow > pointing away from the nose.
The X is not seen on the far blue bead because the end of the string is attached to the tree. A arrow > is seen. Move the blue bead closer on the string if you want to see the X cross on the blue bead.

Seeing the images shown in the picture indicates normal eye function, clear vision.

If the images appear incorrect, the eyes need vision, function improvement; Example;
Bead the eyes are looking at, in center of the visual field is unclear, light, double, does not appear, appears in a incorrect place; left, right, up, down...or
one or more of the double images of beads in the peripheral field are very light, do not appear or appear in a incorrect place; too far left or right, too high, low, or one of the double images of a bead is higher, lower than the other image; (Example; double image of red bead; left up high, right at normal level,) or if the string does not appear double, or one double image of the string (left or right side) is very light, does not appear, one string higher than the other, or if the arrow pointing toward the nose

does not appear when looking at the close red bead, or the arrow pointing away from the nose when looking at the far blue bead does not appear, or if the X does not cross over the red or green bead.

These incorrect images can indicate; unclear vision in one or both eyes, less clear vision in one eye, dim, low, no vision in one or both eyes, (amblyopia)imperfect convergence, accommodation at close distances, imperfect un-convergence, un-accommodation at far distances in one or both eyes, wandering, crossed eyes...
All these conditions can be corrected by switching, shifting, central-fixation... on the beads on the string, pens in a Row and any objects at close, middle, far distances and practicing other Natural Vision Improvement activities; Left and right brain hemisphere exercises, moving picture, light direction swings.

If a incorrect image is seen; cover one eye at a time to determine which eye is causing the incorrect image or if both eyes are causing it. Determine the distance the incorrect image is at; close, middle, far or all distances. When the incorrect image disappears=the eye that is covered is causing the incorrect image.
Then practice switching close, middle, far on the beads to improve the function of the left and right eyes and clarity of vision at all distances.

Practice switching, shifting on the beads with; both eyes together, then one eye at a time, (left, then right, then left, then right), then with both eyes together again for equally clear, balanced vision in both eyes.
If vision is less clear in one eye, practice with that eye a little extra time.
Practice at all distances and a little more at the distance that needs vision improvement.
The beads are placed between the left and right eyes, in front of the nose when using both eyes together, and when using one eye at a time.
Do not place the string in front of one eye when using both eyes together or when using one eye at a time. Placing the string/beads in front of one eye will impair convergence, un-convergence, accommodation, un-accommodation in the left and right eyes.
(Switching with one eye, with objects in front of the one eye can be done in a specific way resulting in vision Improvement, but not when using the bead string.
See Secret Switching with Yellow Kitty in the free PDF E-Book new edition in July-August 2011.

Practice with the Memory and Imagination on the Beads

#1 - Eyes open; shift on the RED bead.
Remember and imagine it is seen correct; clear, solid, one single bead, center of the visual field.
Remember, imagine the beads in the peripheral field appear correct;
Two GREEN, two BLUE beads, equally spaced on the left and right sides of the red bead.
Remember and imagine the string appears as two strings, arrow < pointing toward the nose, X crossing on the red bead.

#2 - Repeat #1 in the imagination with the eyes closed.

#3 -Repeat #1, then 2, then 1.

#4 - Repeat #1,2,3 with one eye at a time.
Keep the string, beads between the eyes, at nose level.
Do not place the string/beads in front of one eye.
When using one eye - the normal images are;
Only one string appears, only one of each bead appears,
there is not a X on the bead, and there are no arrows.

#5 - Repeat #1, #2 and #1 with both eyes together.
Repeat # 1,2,3,4 &5 for each bead RED, GREEN, BLUE.
Then repeat # 1,2,3,4,5 on beads #1, 2, 3 while switching back and forth on the 3 beads.
Switch on the 3 beads with; the eyes open, then closed, then open while remembering, imagining and seeing the correct clear image for each bead.

Practice this with; both eyes together, then one eye at a time, (only left eye, then only right eye, left, right.., little more with less clear vision eye,) then with both eyes together again.
Use a eye patch and keep the patched eye open under the patch. Both eyes are open. Do not close one eye when using one eye at a time. Closing one eye causes eye, face and neck muscle tension and eventually unclear vision. (When practicing #2-using the memory, imagination with the eyes closed: close both eyes.

The beads can be placed at various distances;
1-6, 3-5 inches apart, with red bead at 1-5... inches from the nose to improve close reading vision. Start at a comfortable distance and move closer as vision improves.
(When practicing with the first bead closer, 1... inch from the nose, and with other beads, distances: move the beads, string up to eye level sometimes for practice with exact central vision; objects at eye level. This is better for the eyes than always practicing with the string at nose level.)
3-7 feet apart to improve middle distance vision.
5-10-15+ feet apart to improve far distant vision.

Using the 7 colored beads shown in the picture on page 127 increases activation and integration of the left and right brain hemispheres and provides more distances to practice at.
Place the beads in the order shown; RED, ORANGE, YELLOW, GREEN, BLUE, PURPLE, LIGHT PURPLE.
Practice visualization of these colors combined with abdominal breathing and deep relaxation; red - first stages of relaxation----light purple deepest state of relaxation.
See Color Breathing Relaxation Chart in the Palming, Sunning chapters # 19, 18.

Special note; if your nose is crooked: use the area exactly between the left and right eyes, under the center of the forehead, then straight down from there to nose level to center the beads evenly between the left and right eyes.

Correct Strabismus; crossed, wandering eyes with; Switching, Pens in a Row, Bead String in Chapter 10-11 and Eye Movement, Direction Swings in chapter 23.
Direction swings in new PDF in July-Aug., 2011.

The following chapter contains a short Natural Vision Improvement Booklet with the main Treatments, Activities described in this book; The Basic Steps for Clear Vision.

The first 3 pages teach *Switching and Secret Switching* with Pictures.
More pictures and a 3rd Switching Method will be placed here in 2015.



A case of divergent vertical squint ultimately cured by educational methods. In the picture at the left the right eye turns out and up, while the left eye looks straight. At the right the patient has learned to look straight with the right eye, while the left turns down and out.

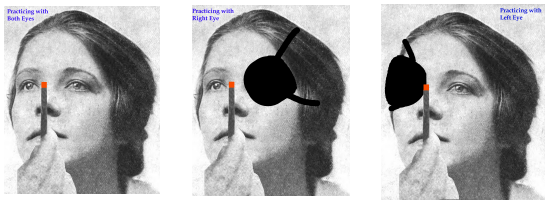


A part of the treatment. The patient has learned to turn both eyes in by looking at a pencil held over the bridge of the nose. Later she became able to turn them in without the pencil, or to turn either eye in while the other remained straight.

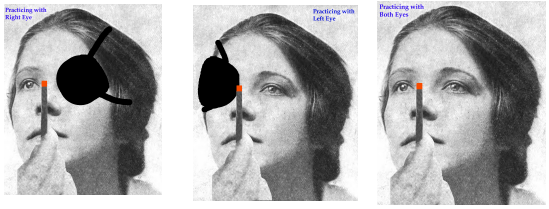


The same patient after a complete cure had been effected. All four pictures were taken within fifteen minutes of each other, the patient having learned to reproduce the conditions represented voluntarily

1-Both Eyes **2-Right Eye** **3-Left Eye**



4-Right Eye **5-Left Eye** **6-Both Eyes**



See complete practice on the right >

After using the pen, practice with any close object; a t-bear, ring, flower in your garden...

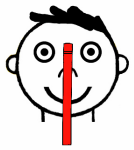
A - Eight Steps for Switching Close and Far with Both Eyes Together and One Eye at a Time with the Pen and Far Object Between the Left and Right Eyes, at Eye Level in the Two Eyes One Central Field. Shift on the close object, then on the far, then close, then far... Shift on middle distance objects. Practice this with the 8 steps below. (Picture is of a person facing you.) The person has 20/50 vision in the right eye and 20/100 (less clear) vision in the left eye. Practice brings the vision to equal, perfect 20/20 and clearer in both eyes at all distances. Practice with the close pen and far object at a variety of distances; 2 feet, 5, 10, 25, 40, 300...

Do not wear eyeglasses, contact lenses, sunglasses.

See the main book chapters for descriptions, directions for Shifting, Switching, Central-Fixation...

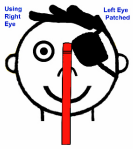
Right Eye **Left Eye**

1



#1 -Practice with both left and right eyes together. 30 seconds to 2 minutes... as is comfortable.

2



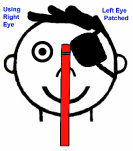
#2 -Practice with One Eye at a Time; Practice with the Right, clearest vision eye first to get the clearest visual, mental picture of the close and far objects stored in the brain, memory. (Patch the Left eye)

3



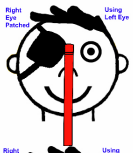
#3 -Practice with the Left, less clear vision eye. (Patch the Right eye)

4



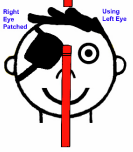
#4 -Practice with the Right clearest vision eye again. (Patch the Left eye)

5



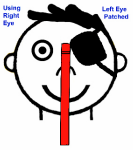
#5 -Practice with the Left, less clear vision eye. (Patch the Right eye)

6



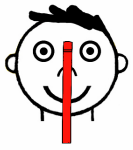
#6 -Practice extra time 10 - 30 seconds... with the Left, less clear vision eye. (Patch the Right eye)

7



#7 -Practice with the Right, clearest vision eye again, a short time, 2-5 seconds. (Patch the Left eye)

8

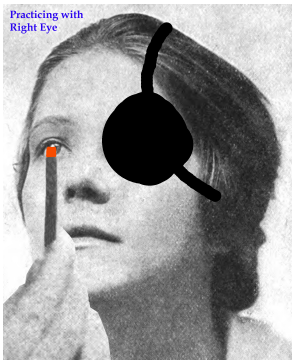


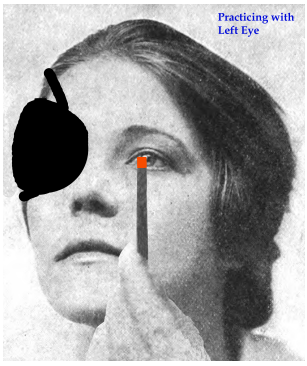
#8 -End; Practice with both left and right eyes together again for equally clear, balanced vision in the left and right eyes at all distances, close, middle, far.

Repeat Steps # 1-8

Now; practice the 7 'Secret Switching' steps on the next page. Then return here and repeat these steps # 1 to 8.

B - Seven Steps - 'Secret Switching' with Pen in Front of One Eye

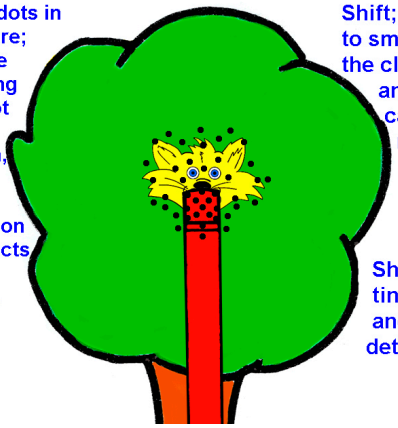




Switching Close & Far

The Pen and Yellow Kitty are aligned with eachother in the one eyes central field, in line with the eyes pupil.

Use the dots in the picture; Practice by shifting dot to dot in any direction, pattern. Then; practice on real objects without the dots.



Shift; small part to small part on the close pen and the far cat, tree near and around the top of the pen.

Shift on tiny parts and see fine details clear.

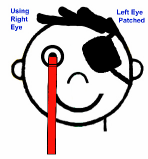
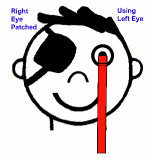
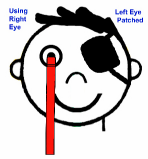
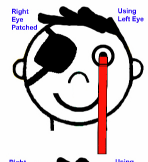
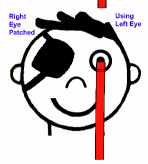
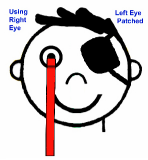
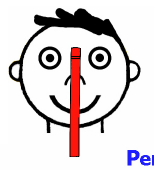
The pictures above show an additional practice, 7 Steps for 'Secret Switching'; changing 'switching' the eyes focus, visual-mental attention back and forth on close and far objects *with the pen in front of one eye*. (*Done only with one eye at a time. Never do this with the pen in front of one eye with both eyes together. Doing it wrong causes crossed, wandering eyes and unclear vision.*)

Done correct, it specifically improves, 'perfects'; lens, eye muscle function, accommodation, un-accommodation, central-fixation, shifting.., circulation, clarity better than 20/20 in each individual eye.

See Steps # 1-7 on the right. >

Place the pen top and a distant object in line with eachother in front of the eyes pupil-in that one eyes exact central field. Move the pen top down a bit so you can see the far object. Shift part to part on the close pen top. Then shift on the far object that appears in line with the pen top. Then back to the pen, then far again, then pen... Repeat. Blink and relax. Switch to middle distance objects to/from the close and far objects.

#7; Begin and end the practice with *both eyes together, pen between the left and right eyes*; repeat the A - #1-8 Steps on the previous page. These switching practices produce perfect clear eyesight in the left and right eyes at all distances and helps correct Strabismus.

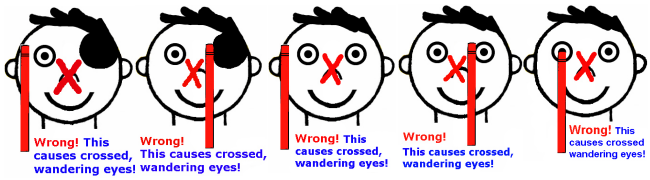
	Right Eye	Left Eye
1		**#1 -Practice with One Eye at a Time; Practice with the Right, clearest vision eye first to get the clearest visual, mental picture of the close and far objects stored in the brain, memory. (Patch the Left eye)**
2		**#2 -Practice with the Left, less clear vision eye. (Patch the Right eye)**
3		**#3 -Practice with the Right clearest vision eye again. (Patch the Left eye)**
4		**#4 -Practice with the Left, less clear vision eye. (Patch the Right eye)**
5		**#5 -Practice extra time 10 - 30 seconds... with the Left, less clear vision eye. (Patch the Right eye)**
6		**#6 -Practice with the Right, clearest vision eye again, a short time, 2-5 seconds. (Patch the Left eye)**
7		**#7 - End; Practice with both left and right eyes together again for equally clear, balanced vision in the left and right eyes at all distances, close, middle, far.**

Pen is always between the left and right eyes when using both eyes together.

Avoid eye muscle surgeries; Dr. Bates states that the true cause of most Strabismus (Crossed, Wandering Eyes) is a tense eye muscle pulling the eye in the direction it is crossed or wandered toward. Dr. Bates uses relaxation of the mind (the brain, positive thoughts, emotions), body and eye muscles, correct use of the eyes 'your vision' to cure the condition. The muscle on the opposite side of the eye is not weak or lazy and must not be cut! (Do not cut any muscles.) It might not be being activated correct by the brain to relax, contract normally. The tense muscle on the other side of the eye might be due to strain in the mind/brain, incorrect function with the brain. These conditions can be corrected naturally without surgery, using; left and right brain hemisphere activation, integration (the long swing, cross crawl, figure eight-infinity swing, juggling...), the bead string, moving pictures/lights, color, correct posture, relaxed neck, shoulders, central-fixation, shifting (relaxed correct vision habits) and other practices. Other causes of strabismus can also be corrected naturally.

Face directly at two objects in the central field; a close object and a far object in line with eachother. Example; looking at the pen and cat with both eyes together; they are in the central field and in line with eachother. Practice shifting, switching on the pen and cat, tree. Practice A-#1-8 Steps; with the pen, cat between the left and right eyes using both eyes together and one eye at a time. Practice B-#1-7 Steps with the pen, cat in front of one eye using one eye at a time.





Modern teachers include 'Phoria Directional Swings' to relax and gently coax a crossed or wandering eye to move correct, into normal position; the strabismic eye follows the movement of a light or brightly colored picture as it moves toward and onto the object of visual attention. The Bead String placed in the central field is a useful device. (See directions next page and page 245.) Playing catch, pointing to objects, juggling, left and right brain hemisphere activation and integration 'synchronization', movement, posture and other activities, relaxation of the neck muscles, alignment of the spine, hips, neck vertebrae and skull/eye-socket bones, jaw, the teeth are effective. Warning; Many people are being crippled, had strokes, balance, hearing, vision problems, develop strabismus due to Chiropractic treatments. It's become corrupt, doctors placing the bones out of alignment so they can sell more treatments! Even a honest chiropractor's treatment can result in injury. It is dangerous. It's best to seek alternative methods; natural body movements, massage, physical therapy, yoga... (professional only, every field has dishonest or inexperienced doctors that injure the spine, neck.) Artificial 3-D TV and computer screens-video games, dominance of one brain hemisphere, one eye from 3-D, schoolwork, stress, strain at school, a job... can cause strabismus, unclear vision. Dr. Bates cured many cases of strabismus with the Bates Method only, relaxation of the mind, visual system, eye muscles.

When using both eyes together or one eye at a time with the *pen between the left and right eyes* and when practicing with the *pen in front of one eye using one eye at a time*; do not move the pen and far object out, in to the left, right... away from, to the side of the eyes, eye or face. Main rule; eyes (when using both eyes), eye (when using one eye) faces the object you are looking at.

Never place the pen in front of one eye when using both eyes together.

(See pictures above ^ for wrong placements of the pen.)

When using both eyes together or one eye at a time with the pen between the left and right eyes; Shift on a far distant object in line with the close pen, that is between the left and right eyes as the pen is, in the central field. The eyes, eye may also shift on other far objects. (Head moves with the eyes, eye.) Blink. When returning to the pen; line up a far object with the pen first, between the eyes, look directly at it and then move 'switch' from that object back to the pen.

When using one eye with the pen in front of that one eyes pupil, that eyes central field; (Do not place the pen and far object left, right... away from the eye, face. Keep objects in that eyes central field.) The eye switches to, shifts on a far object that appears in line with the pen and can also shift on other far objects in the scenery. (Head moves with the eye, look directly at, shift on the objects.) This gives the eye freedom, more movement. Before returning to the pen, move to the object that is in line with the pen or line up a new object with the pen (eye, it's central field). Then 'switch' back to the pen. Shift on the pen.

Another practice is to move the pen close and far while shifting on it using the steps on the previous pages; A- #1-8, pen between the eyes and B- #1-7, pen in front of one eye. Repeat A- #1-8. Keep correct pen placement as described.

Try walking close and far-forward and backward as you shift on objects.

See the E-books for more pictures, practices with close and far objects.

When using both eyes together, pen and far object between the two eyes; When looking at the pen, the far object in line with the pen will appear double. When covering one eye the far object will appear to not be in line with the pen, but in reality it is, so; switch to that object from the pen and from that object back to the pen. This keeps normal convergence, divergence, accommodation, un-accommodation, left and right eyes working together.

When looking at the pen with both eyes, far objects appear double.

When looking at the far object with both eyes, the pen appears double.

When using both eyes, there are no double images when all objects are far, beyond about 20 feet. There are no double images at any distances when using one eye. When using one eye with the pen in front of that eye; the pen and far object in front of that eye appear in line with eachother. These are all normal images, indicates correct eye, vision, eye muscle and brain function.

For normal eye-visual system function, the head and two eyes naturally turn-face the object of visual attention but they do not always stop to align objects as done in these exercises. (unless applying some kind of mental-visual measurement, comparison, depth, distance... determination.) These Switching Methods are only extra practices to improve the eyes function, coordination and clarity of vision. Do not do it all the time. Start with 5-10 min. a day and skip some days. After it brings clear vision it's rarely needed. The practices taught here are a type of an exercise, works the eyes, lens, eye muscles, brain. Do it relaxed, integrate shifting, central-fixation and other Bates Method practices to keep the exercise as natural as possible. Use no effort, force. The true perfect natural vision function is when we stop practicing and let the eyes, vision work 'on their own'. Practice, then don't practice; relax, forget about the eyes, vision and the clarity will increase to better than 20/20 at all distances!

Always start and end the pen in front of one eye practice on the previous page with A- #1-8 Steps for practicing with the pen between the left and right eyes using both eyes together and one eye at a time as shown in the picture below. This maintains perfect, equally clear vision, coordinated eye movement in the left and right eyes and balanced brain hemisphere function with the eyes, eye muscles. Bates Method practices and the exercises also remove astigmatism.



End; Practice with both left and right eyes together again for equally clear, balanced vision in the left and right eyes at all distances, close, middle, far.

Pen is always between the left and right eyes when using both eyes together.

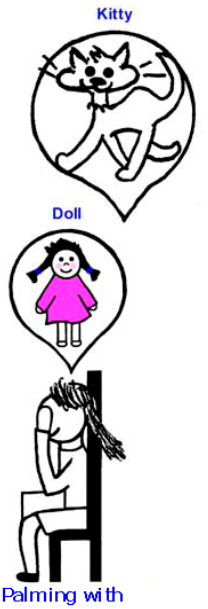
12 - EIGHT CORRECT, NATURAL VISION HABITS
(The Normal, Relaxed, Correct Function of the Eyes, Mind, Body)

Practicing Correct Vision Habits is; The act of 'Imitating Normal Eye Function' to gently coax the eyes, visual system back to normal function with clear vision. Practice them as a easy habit, in a relaxed, effortless manner. This removes abnormal eye function, eyestrain, mental strain, eye muscle tension and activates normal, correct, relaxed eye function, clear vision. Practice Correct Vision Habits # 1 to 8, then, don't practice, let the eyes work completely natural; the eyes will activate this correct function 'on their own, automatically', all the time, day and night, maintaining clear vision.

Correct Vision Habits Video



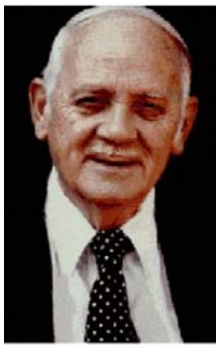
 # 1 - RELAXATION - Relaxation of the mind, body, neck, eye muscles and eyes. Relaxation is the main treatment that brings clear vision. All Correct Vision Habits and Natural Vision Improvement activities relax the mind, body, eye muscles and eyes.
Use Correct Vision Habits and, choose an extra relaxation method that is easy, best for you.
Each person is different; many students need to do only one thing to attain relaxation and clear vision.
Example; Correct Vision Habits; shifting, central-fixation... on objects may be enough to attain relaxation, clear vision. One or more of the following activities will also activate, increase relaxation, natural eye function and clarity of vision;



Palming with Memory, Imagination, Happy Thoughts.

PALMING; Covering the closed eyes with the palms of the hands while practicing relaxed abdominal breathing, thinking positive thoughts, letting the mind drift from one pleasant thought to another, and remembering, imagining objects, scenes in the mind clear, in color and motion (chapter 19), Sunning (chapter 18), the Rock, Long Swing - (chapter 16), Abdominal Deep Breathing, Self Hypnosis, Biofeedback, Tai Chi and any natural relaxation method brings clear vision.
Read the book; Psycho Cybernetics by Maxwell Maltz M.D. for relaxation and positive thinking methods, how to use, control the brain for success, health.

When the brain, body are deeply relaxed, the brain activates Alpha, Theta and Delta brain wave states.
+Alpha - awake while very relaxed.
+Theta - awake, deep relaxation, on the verge of falling asleep and into the first stages of sleep.
+Delta - asleep, deep sleep.
Use the Color Relaxation Chart (Chapter 19.).
Notice the deep perfect state of relaxation that is felt just before falling asleep. This is the alpha, theta and delta states.
Practice staying awake while in a deeply relaxed state of alpha, theta, drifting close to falling asleep toward delta, but remaining awake. Then drift awake more, then back toward sleep & feel, float in deep relaxation. Then drift into sleep.
Practicing this once or twice a day/night keeps the mind, body, eye muscles, eyes and neck relaxed and vision clear.
Relaxation remains when the person is fully awake, active in alpha, beta states.
(When in the deep relaxed state; choose a number, 3-7+ for this state. Think of, mentally state the number to activate a relaxed state anytime.


ROBERT MONROE

Read book by Aldous Huxley; 'The Art of Seeing' and read about 'Dynamic Relaxation', relaxed while active, alert. Deep and dynamic relaxation combined with positive thinking has many health benefits.
Robert Monroe, a businessman, (Author of 'Journey's Out of the Body' and other books.) invented the use of sound waves (person listens to a CD that places two different sound waves in the left and right ears) that produce deep states of relaxation; Beta, Alpha, Theta, Delta brain wave states, mind, body relaxation. The tapes, method also activates, integrates the left and right brain hemispheres, releases negative thoughts, emotions, removes unconstructive reactions to past and present stressful

events, experiences, and replaces them with positive thoughts, emotions, healthy ways of thinking about experiences... The tapes also teach relaxed abdominal breathing, energy circulation, control, color visualization, visualization of other objects, activities with the mind/brain, sprit and body, neck, eye muscle relaxation.

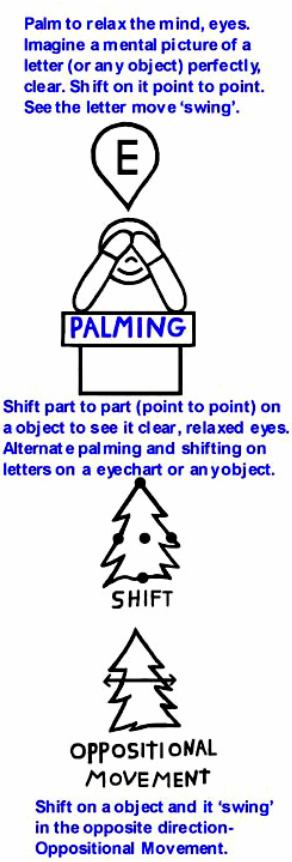
While in the deep relaxed state of alpha, theta, while still awake, the brain is very relaxed and receptive to instructions; the person can erase Incorrect Vision Habits from the brain/visual system and replace them with Correct, Relaxed Vision Habits, return the eyes, visual system to relaxation, normal function, clear vision.

Practice Correct Vision Habits, shifting, central-fixation, on objects in the imagination and remember, imagine clear objects, clear vision while in a deep relaxed alpha, theta state and while drifting off to sleep into delta. Also practice on objects with the eyes open when in alpha and lighter stages of relaxation. This will cause Correct Vision Habits and clear pictures of objects to be stored in the brain, left and right hemispheres, memory causing Correct Vision Habits, normal eye, brain, visual system function; shifting, central fixation, perfect memory, imagination... and clear vision to occur automatically, all the time.

The deep state of relaxation and positive state of mind activated by listening to the Monroe CD stays with the person after listening to a tape. After using the tape a few times the person can activate the relaxed state anytime without the CD. Continue to use Correct Vision Habits when active, fully awake in the alpha, beta states.

The relaxation, positive state of mind, left and right brain hemisphere activation and integration and other conditions produced by listening to the tape relax the mind, body, neck, eye muscles, eyes resulting in clear vision. Many people, including this books author experience perfect relaxation and immediate vision improvement; 20/20 and clearer after listening to Monroe's CD's.

A variety of self improvement CD's are available.

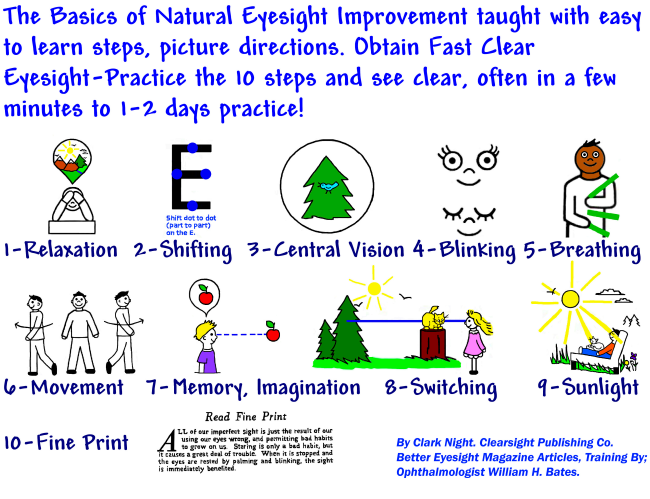


Ask for; The Gateway Experience - Discovery - Wave 1 - Focus 10 CD for Relaxation & Hemi-sync - Human Plus. In person courses are also available at the Monroe Institute in the mountains of Virginia, U.S.A. Visit the Virginia Beach after class.

Contact; www.monroeinstitute.org
THE MONROE INSTITUTE
365 ROBERTS MOUNTAIN ROAD
FABER, VA 22938
866-881-3440

SEE YOUTUBE VIDEOS; ROBERT MONROE & THE MONROE INSTITUTE
http://www.youtube.com/watch?v=VoZWOLWnQkw&feature=related

Ophthalmologist Bates applied relaxation to cure many people of unclear vision and other eye problems. Relax and see clear.



 # 2 - BLINKING - Allow the Eyes to Blink.





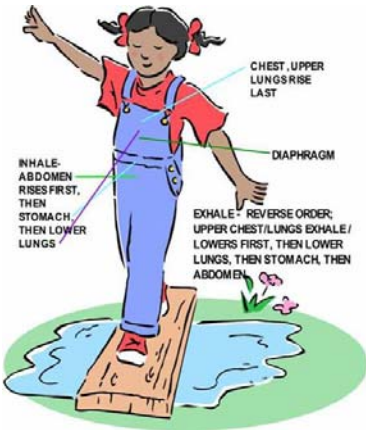
Blink often, relaxed, easy.
Blinking prevents staring, strain, effort to see and unclear vision.
Blinking causes the eyes to shift automatically.
Blinking coats the eyes with healthy tears and improves the eyes production of tears. A coating of tears on the eye, cornea improves the clarity of vision and protects the eyes, keeps them moist.

Blink soft, easy, light. Like a butterfly opening and closing its wings.
Blinking causes the eyes to move, shift automatically.
Blinking improves eye movement, shifting.
Blinking prevents staring, squinting, eyestrain and blur.
Blinking keeps the eye muscles relaxed. Blinking activates normal tear production and distributes/coats the eyes, corneas with tears. Tears contain water, oil, nutrients, natural antibiotics and other substances that nourish and protect the eyes, corneas.
Tears prevent dry eyes. Tears act as a natural contact lens that increases the clarity of vision.
If your eyes are dry; avoid dry air, dry heat and chemicals.

Avoid eye-drops, sinus sprays, drugs and drugs to increase tears. Many prescription and non prescription drugs to treat health problems cause dry eyes, cataracts, glaucoma and other eye, health impairment.
Eye drops contain chemicals that destroy the eyes natural tear structure and prevents the eyes from producing natural tears. Toxic chemicals in eye drops, sinus sprays, all drugs travel through the body and the outer eyes, skin, sinuses, blood stream into the eyes, brain, body causing eye damage, unclear vision, impaired eye, brain, body health. A main side effect of popular prescription and non prescription nasal sprays is glaucoma, cataracts, impaired retina function, health, lowered color perception, unclear vision, dull, blind like spots in the visual field. The drug companies are now forced to state some of these side effects on the product label, advertisements.
Eye drops are addictive and cause dry eyes. Drugs sold to improve tear production impairs natural eye tear production and health of the body and eyes.

Avoid caffeine. Caffeine dehydrates the body, eyes.
When the eyes, corneas become dry; dust, dirt, a foggy white film can form on the cornea and cause temporary unclear vision.
A normally moist, smooth cornea refracts/focuses light rays perfectly.
A dry cornea may become slightly uneven, temporarily or contain dust, dirt and this interferes with perfect focus of light rays by the cornea, causing temporary unclear vision and astigmatism...
When the eyes have less tears, the natural contact lens effect of tears over the cornea that produces an increase in the clarity of vision does not occur.
Imperfect vision, slightly imperfect cornea surface, dirt... on the cornea blocks perfect central-fixation, precise shifting and this contributes to blur.
Unclear vision due to dry eyes is temporary.
Avoid using eyeglasses to treat this condition.
The glasses will cause, increase and maintain eye muscle tension, abnormal eye/cornea shape, impair shifting and all Correct Vision Habits, prevent vision improvement, increase and maintain the blur.
Sinus congestion, infection, bloody nose occurs from dry heat, air. Sinus pressure affects the eyes, eye muscles, nerves, eye shape, eye movement, clarity of vision and causes astigmatism.
Drink water to stay hydrated.
Use a warm steam humidifier with purified water to eliminate dry air in the home caused by dry heat and low humidity in the winter. This will keep the nose, sinuses moist. No chlorine, other chemicals, fragrance... in the water. Filter the water two+ times. Chlorine burns, dries the eyes, corneas.
Avoid rubbing the eyes. Placing pressure on the eyes increases irritation.
A bit of natural, pure sea salt in the water acts as sea air and kills germs, prevents sinus infection.
Blink, yawn and shift the eyes to produce natural tears.
People that have unclear vision, especially eyeglass wearers do not blink enough.

They avoid blinking, they stare, squint, strain, try hard to see objects. Their eyes are often immobile and shift infrequently.
Blinking causes the eyes to shift. Shifting, eye movement also increases normal tear production and coating of tears evenly over the eye/cornea.
Not blinking reduces eye movement, causes eye muscle tension, dry eyes and unclear vision.
People with clear vision blink often, easy, soft, quick. The left and right eyes blink together.
Blinking is automatic, a subconscious habit. Blink and shift for clear vision.





A BABY BREATHES CORRECT; NATURAL, RELAXED ABDOMINAL BREATHING. NOTICE THAT THE BABIES STOMACH MOVES UP AND DOWN; BREATHE IN - STOMACH RISES BREATHE OUT - STOMACH LOWERS.

3 - BREATHING - Abdominal Deep Breathing.

Abdominal breathing relaxes the mind, body, eye muscles and eyes, improves oxygen, blood, nutrient, lymph and energy flow in the body, brain, eyes resulting in clear vision.
Abdominal breathing is also called diaphragmatic breathing because the diaphragm muscle, located below the lungs helps to expand the rib cage during inhalation to increase the amount of air entering the lower and upper lungs.
The diaphragm helps to contract the rib cage during exhalation to completely empty air from the lungs.
Practicing relaxation of the mind, body, will relax the diaphragm muscle, lungs and muscles in the chest, rib cage area, upper back resulting in easy, full relaxed breathing and clear vision.
Practice slow, comfortably deep abdominal breathing as shown in the pictures of the girl and baby.

+Breathe in - abdomen rises first, then stomach, then lower lungs inflate with air, chest begins to rise, then upper lungs/chest inflate with air, rise last.

+Breathe out - reverse order; upper lungs/chest exhale and lower first, then lower lungs exhale, then stomach lowers, then abdomen lowers.

Breathe in a relaxed easy manner.
Breathe slow and deep but comfortably deep, just enough to receive a good amount of oxygen; do not force the air into the lungs. Avoid tensing and pulling the shoulders up and forcing the chest to rise. Let the shoulders drop down and relax and allow the chest to expand naturally on its own when breathing in and lower by itself when breathing out. Read more in chapter 6, 7.



SHIFT FROM PART TO PART (DOT TO DOT) ON THE HOUSE

4 - SHIFTING - EYE MOVEMENT

Shift the eyes (visual attention, center of the visual field) from one small part to another small part on a object to see it clear. Shift continually, easy, slowly, relaxed from part to part. Blink. The eyes do move faster-let it occur naturally, on its own when first practicing.

The dots on the house and apple represent small parts of the objects. Shift from part to part (dot to dot) on the house, then on the apple.



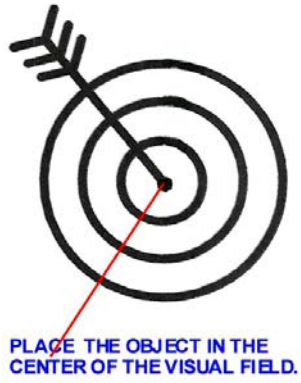
SHIFT FROM PART TO PART (DOT TO DOT) ON THE APPLE

Practice on objects in your neighborhood. Shift from object to object, part to part on objects. Shift on large and small objects, small parts of objects at close, middle and far distances. Shift on tiny parts, small details; point to point.



Shift and trace on objects and parts of objects with the Imaginary Nosefeather.
Shifting relaxes the mind, eye muscles, eyes and produces clear vision. Shifting, moving the eyes, helps keep good circulation of blood and other fluids inside and outside around the eyes. Shifting and blinking activates tear production and coats the eyes, corneas with healthy tears.

Shifting will become a automatic habit, natural eye function occurring all the time. Practice all the time, then, 'Don't Practice' - Let the eyes shift completely natural 'on their own'.



 # 5 - CENTRAL-FIXATION
The center of the visual field is clearest.
See objects in the center of the visual field clearest.
Place the object the eyes are looking at in the center of the visual field.
Place each part of the object the eyes look at in the center of the visual field, one small part at a time.
When the eyes use the center of the visual field, the central light ray focuses exactly on the fovea centralis in the center of the retina/macula producing perfect, clearer than 20/20 vision in the center of the visual field and perfect focus of peripheral light rays in the peripheral field of the retina for maximum clarity, function of peripheral vision.
The center of the visual field moves with the eyes as the eyes shift from object to object and from part to part on a object keeping each object, each part of the object perfectly clear. Saccadic and other automatic, subconscious fast shifting of the eyes moves the center of the visual field very fast, causing the entire visual field to appear clear, though, in reality, for the fraction of a second the small center of the visual field is on a small part of a object, that part is most clear; much clearer than 20/20.
Each eye produces its own central field. The left and right eyes central and peripheral fields combine into one central and one peripheral field. See picture.



 # 6 - MOVEMENT - Eye movement - Shifting and Movement of the head/face and body with the eyes and Oppositional Movement - 'The Swing'. (See Better Eyesight Magazine.)

Face the object you want to see for perfect central-fixation, easy eye shifting, relaxed neck, body.
The eyes, head, face and body move together, in synchronization, at the same time, in the same direction.
The object the eyes are looking at is in the center of the visual field, the eyes, head/face and body all directed toward the object.
Central-fixation is perfect when the eyes, head, face and body are facing the same direction, facing the object of visual attention.
It is normal to turn the eyes, head/face left, right, up, down... to look at something without moving the rest of the body but, maintaining this position too long pulls, twists, tenses the muscles in the eyes, neck, back, and entire body leading to impaired movement and unclear vision.
See the baseball player. When he hits the ball, he looks directly at the ball, turns and faces the ball with eyes, head/face and body directed toward the ball.
A object is seen clear when the muscles in the eyes, head/face, body are relaxed and the entire body moves easily. Face the object of visual attention and notice the muscles stay relaxed, eyes, head/face, neck, body move easily with clear vision.
The eyes, face, head should be facing in the same direction.
Constantly looking out of the top, bottom, sides of the eyes, face; eyes in one direction with the face/head in the opposite direction (example; looking up with the eyes, with the face/head down, or looking down with the eyes, with the head/face directed up) causes eye muscle tension, dysfunction, impairs central-fixation, shifting, movement, convergence, un-convergence, accommodation, un-accommodation and causes unclear vision and astigmatism.
Wearing eyeglasses, (especially bifocals) often results in this incorrect posture, this Incorrect Vision Habit; the person looks out over the top of close vision eyeglasses, eyes looking upward, head/face tilted down in the opposite direction to see distant objects or looks out over the top of distant vision glasses to see close objects, eyes up with face tilted down. The person looks out of the top section of bifocals, the eyes looking upward a bit and the head/face tilted down a bit or looks out of the bottom section of bifocals, the eyes looking down with the head/face tilted upward a bit.
These incorrect postures/habits, even when its only a little bit, cause extreme eye, neck, shoulder muscle tension, impaired neck, eye movement, eye muscle dysfunction, blur, astigmatism, cataracts,

lowered circulation in the head, eyes. Neck muscle tension further impairs head, eye movement and the neck tension travels into the eye muscles increasing eye muscle tension, impairing eye movement. Face the object the eyes are looking at for relaxed muscles and clear vision.

OPPOSITIONAL MOVEMENT - Notice Oppositional Movement; 'The Swing'.
Shift on a letter and see it appear to move in the opposite direction the eyes move/shift to. (Chapter 17) Do the rock, long swing in front of close and distant objects, relax and see oppositional movement of the objects. Taking time occasionally to see oppositional movement improves eye shifting, relaxes the mind, eyes and improves the clarity of vision.





7 - MEMORY AND IMAGINATION

Shift part to part on objects and remember, imagine the objects clear. Practice on small, large, any size objects at close, middle, far distances.
+ Remember, imagine and see the object the eyes are looking at clear while shifting part to part on the object.
Practice with the eyes; open, closed, open.
Shifting on the object with the eyes open and in the imagination with the eyes closed improves the memory, imagination image of the object in the mind and clarity of the object.
Remember, imagine the objects color is perfect.
When vision is unclear objects appear blurred and their color is lighter, duller. Remembering, imagining objects clear with perfect bright color improves the clear memory image of the object in the brain and the object is seen clear. Shift on and see parts of the object clear-look at smaller parts and remember, imagine them clear.

+ Practice daydreaming - Remember and/or imagine a pleasant object, scene, happy experience, favorite things... with the eyes open or closed. In the picture; the boy likes baseball-he gains relaxation, perfect memory, imagination and clear vision by palming and imagining playing baseball.
Example; fishing on the river, watching a boat on the ocean...
Let the mind drift from one pleasant thought to another.
Remember, imagine objects in the scene perfectly clear. Shift on the objects in the mind, imagine using all corrects vision habits.
Remember, imagine the objects in color.
Remember, imagine objects in motion; Boat moving on the water, ocean waves, birds flying, sun sparkling on the water... Look at a close object; sand, seashell in your hand. Shift on it, small part to small part. Hear the birds, feel and hear the wind blowing, feel the warmth of the sun.
Notice that the eyes continue to shift, move when shifting on a object in the mind with the eyes open or closed.
Vision is mainly mental, controlled by the brain.
That is the reason that relaxing the mind/brain improves the clarity of vision. When the mind/brain is relaxed, the brain, eyes function correct, the eye muscles relax, the eyes shift normally and vision is clear. The brain and mind are integrated, function together;
Brain=physical function of brain. Mind=thoughts, emotions, feelings, spirit.
+Left brain hemisphere-Mainly analytical, math, science, speech, memory, details, dominates close vision. +Right brain hemisphere-visualizing, imagination, memory, creativity, art, music, feeling, emotion, sprit.., dominates distant vision. The left and right hemispheres work with both left and right eyes and both close, middle, far vision/distances. The right hemisphere, more with distant vision, the left hemisphere, more with close vision.

Palming
Imagining something that is fun, interesting, pleasant relaxes the mind, eyes, improves the clarity of vision. The boy gains relaxation, clear vision by imagining playing baseball, his favorite subject. He sees the imaginary objects clear, in color and in motion like a movie in the mind: Sees and feels the bat hit the ball and the ball fly into the field, wind blowing the grass, trees... voices of friends. Sees, feels the sun shining.





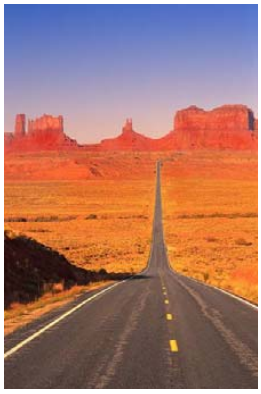
Remembering, imagining positive, happy scenes, events, pleasant objects clear relaxes the brain, mind and eyes. Notice that the vision is clear when the mind is relaxed, happy, thinking something positive

and not trying to see clear, not thinking, worrying about the eyes clarity of vision.
Palming can be used with the memory and imagination to increase relaxation of mind and eyes.
The Color Chart and Color Treatment can be used with palming.
Always remember, imagine objects clear, store only clear pictures of objects in the mind.



8 - SWITCHING

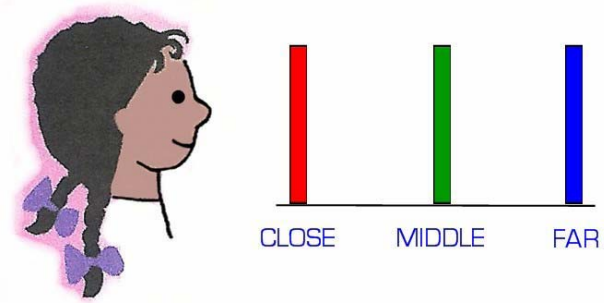
Change, 'switch' the visual attention from one distance to another distance. Switch back and forth on objects at different distances; close, middle and far.
+Shift part to part on a close object.
+Then, switch to a far object and shift part to part on it.
+Switch back to the close object, shift on it.
+Switch to the far object, shift on it.
+Switch to a object at the middle distance to and from close and far objects. Shift on the middle object.



Place the object the eyes are looking at in the center of the visual field, between the left and right eyes, at eye level.
Use all Correct Vision Habits; relax, blink, breath abdominally, shift, central fixation, movement, memory imagination.

Practice switching close and far with; both eyes together, then one eye at a time, then both eyes together again.
If vision is less clear in one eye, practice a little longer with that eye.
(See eye patch directions in the Switching chapter)

Practice Switching Close, Middle, Far on objects that are in a straight line with each other.
Example; Three pens in a row. The pens are aligned with eachother in a straight line, 3 pens placed between the left and right eyes, center of the visual field. See picture below.



SWITCH AND SHIFT ON THE PENS

+Shift on the RED pen. Then switch to the BLUE pen. Shift on it. Then switch back to the RED pen. Shift on it. Then switch to, shift on the BLUE pen again, then RED, BLUE, RED...
+Switch back and forth, to, from the GREEN pen to, from the RED and BLUE pens.
Blink, breathe, relax.
Eyes, head/face, neck, body are loose, relaxed and allowed to move freely.
Use the memory and imagination; shift on the pens and remember, imagine each pen clear with the eyes; open, then closed in the imagination, then open again.
Practice with; both eyes together, then one eye at a time, then both eyes together again.
If vision is less clear in one eye; practice extra time with that eye to get the vision equal, clear in the left and right eyes. Then; end by practicing with both eyes together again for equally clear, balanced,

perfect eye function, movement, vision in the left and right eyes. (Never work only one eye. Maintain a balance of practice with each eye. When the clarity of vision in the eye that has less clear vision is equal to the other eye; then practice equal time with each eye. No extra practice with the eye that used to have less clear vision unless it needs more vision improvement.

Keep the pens in the central field, between the left and right eyes when practicing with both eyes together and with one eye at a time.

Practice with the pens spaced and placed at a variety of close, middle, far distances.

Then practice on any objects.

Less clear vision in one and/or both eyes can be caused by one or both eyes not converging, accommodating perfectly at close distances or not un-converging (divergence), un-accommodating perfectly at far distances. Even a slight imperfection can lower the clarity of vision in both eyes. Practicing switching close, middle, far with both eyes and one eye at a time perfects convergence, accommodation, un-convergence, un-accommodation for equally clear, 20/20 and clearer vision in the left and right eyes at all distances. Improving the clarity of vision in a eye with less clear vision automatically improves the vision in both eyes. When the vision becomes equal in the left and right eyes, clarity in both eyes increases and improves quickly.

Practicing Correct Vision Habits; shifting, central-fixation, switching close, middle, far with both eyes and then with one eye at a time; left eye, then right eye, then left, then right, then both eyes together again keeps the vision balanced, equally, perfectly clear. Start with the left or right eye when using one eye at a time. If vision is less clear in one eye; start with the clearest vision eye to get the clearest visual image of objects into the brain, memory. Vision will improve easy, faster in each eye.

With practice the vision in the left and right eyes is so perfect and equally clear that the person may forget which eye had less clear vision.

Always practice switching, shifting in a relaxed, easy manner. No effort to see. Avoid staring, squinting. Always shift the eyes, visual attention from part to part on the object the eyes are looking at. Blink and relax.

The left and right brain hemispheres function together to produce equally clear vision in the left and right eyes.

Switching close, middle and far activates, integrates and improves function of the left and right brain hemispheres, their function with the eyes and clarity of vision.

Practicing left and right brain hemisphere activation, integration activities; the rock, long swing, cross crawl, figure eight, color treatment improves left and right hemisphere function and clarity of vision in the left and right eyes at all distances.

All Correct Vision Habits activate and integrate the left and right hemispheres.

Practicing the Eight Correct Vision Habits is the Basics of the Bates Method, produces clear vision;

1 - Relaxation, 2 - Blinking, 3 - Abdominal Breathing, 4 - Shifting, 5 - Central-fixation, 6 - Movement & 'The Swing'-Illusion of Oppositional Movement, 7 - Memory and Imagination, 8 - Switching Close, Middle, Far with both eyes, and one eye at a time.

Fine print, Small Objects, Close Vision Practice

+Reading fine print daily produces clear close and distant vision, prevents cataracts and other eye problems. Print the fine print in the boxes a variety of small sizes and read the smallest print possible with relaxation in the sunlight. Reading the print 1-3 times week keeps reading vision clear.

Read Fine Print in the Sunlight Daily

THINK RIGHT

"As a man thinketh in his heart so is he," is a saying which is invariably true when the sight is concerned.
When a person remembers or imagines an object of sight perfectly the sight is perfect; when he remembers it imperfectly the sight is imperfect. The idea that to do anything well requires effort, ruins the sight of many children and adults; for every thought of effort in the mind produces an error of refraction in the eye. The idea that large objects are easier to see than small ones results in the failure to see small objects. The fear that light will hurt the eyes actually produces sensitiveness to light. To demonstrate the truth of these statements is a great benefit.
Remember a letter or other object perfectly, and note that the sight is improved and pain and fatigue relieved; remember the object imperfectly, and note that the vision is lowered, while pain and fatigue may be produced or increased.
Rest the eyes by closing or palming, and note that the vision is improved, and pain and discomfort relieved; stare at a letter, concentrate upon it, make a effort to see it, and note that it disappears, and that a feeling of discomfort or pain is produced.
Note that a small part of a large object is seen better than the rest of it.
Accustom the eyes to strong light; learn to look at the sun; note that the vision is not lowered but improved, and that the light causes less and less discomfort.
Remember your successes (things seen perfectly); forget your failures (things seen imperfectly); patients who do this are cured quickly.
Ophthalmologist William H. Bates – Better Eyesight Magazine – Dec. 1921

- Modern Bates teacher's state to look at the sun with the eyes closed, but looking at the bright sky is ok as long as over exposure/sunburn is avoided.
- Palming = to cover the closed eyes with the palms of the hands and relax, think positive thoughts.
- Staring at a letter = eye immobility, not shifting from part to part on the letter, not using central-fixation/the center of the visual field.
- Seeing a small part of a large object better than the rest = using central-fixation; looking at one small part of the object at a time and placing it in the center of the visual field. This is done on any size objects, large or small at any distance close or far.
- Remembering, imagining objects clear, storing only clear pictures of objects in the memory relaxes the mind, eye muscles, eyes, activates normal eye muscle/eye function, movement... and clear eyesight.

Psalm 23 (King James Version)

[1]The LORD is my shepherd; I shall not want.
[2]He maketh me to lie down in green pastures: he leadeth me beside the still waters.
[3]He restoreth my soul: he leadeth me in the paths of righteousness for his name's sake.
[4]Yea, though I walk through the valley of the shadow of death, I will fear no evil: for thou art with me; thy rod and thy staff they comfort me.
[5]Thou preparest a table before me in the presence of mine enemies: thou anointest my head with oil; my cup runneth over.
[6]Surely goodness and mercy shall follow me all the days of my life: and I will dwell in the house of the LORD for ever.

Reading fine print, shifting on small tiny parts of close objects relaxes tension in the outer and inner eye muscles, returns the eye to normal healthy shape, improves function, health of the lens, retina and circulation to, in, out of the eye.

Shift point to point (small part to small part) on small objects, small parts of objects at close and far distances. See the small, tiny parts of a flower, stone. Break a stone open and look for gold, gems.





Practice Sunning - Get healthy full spectrum sunlight outside daily. No eyeglasses, contacts, sunglasses.

Palming, Sunning, The Rock (Sway), Long Swing, Figure Eight, Cross Crawl, Switching on objects in line with each other at different distances; close, middle and far with both eyes together and one eye at a time and all other Natural Vision Improvement activities are practiced to increase relaxation, activate Correct Vision Habits, correct eye/brain function and clear vision.

Correct Vision Habits # 1 to 8 occur together, are integrated, activated by the brain, eye muscles, nervous system, optic and eye muscle nerves, eyes and body. (Entire visual system.)
There is not a specific order to practice the habits. Start with relaxation, shifting. Practice all eight, and then, let the habits occur naturally, on their own, integrated together. Practicing one habit automatically activates the others;
Example; practice of relaxation, relaxes the mind, eye muscles, eyes, and gets the eyes moving, shifting, improves relaxed breathing and all other habits.
Practice of shifting, central-fixation, movement, abdominal breathing activates relaxation and all other Correct Vision Habits. Thinking positive thoughts, daydreaming and remembering, imagining objects clear, in color, motion induces relaxation, eye movement, shifting and all other Correct Vision Habits.

Correct Vision Habits are practiced to gently return the brain, visual system, eyes back to correct function and clear vision. Correct Vision Habits are practiced as easy relaxed habits all the time.
Practice the habits in a easy, effortless manner. Never as a strenuous exercise.
Practice, then don't practice. Forget about the eyes and let Correct Vision Habits, occur automatically, on their own. Then practice again. Do shifting, central fixation... anytime you notice that the eyes are

staring, trying, straining to see a object.
When effort, trying to see is avoided, the vision becomes clear.
Avoid Incorrect Vision Habits; staring, squinting, trying hard to see objects clear.
Correct Vision Habits are the normal, natural function of the eyes. With practice Correct Vision Habits; shifting, central-fixation.., occur automatically, on their own. Automatic, subconscious habits/functions of the visual system.
Relaxation of the mind, positive thoughts, emotions, relaxed eye muscles, eyes, neck and body are main Natural Vision Improvement treatments to produce clear vision. All Correct Vision Habits relax the mind, body, neck, eye muscles and eyes. Notice the clarity of vision when the mind, mood, thoughts, emotions are positive, happy - the vision is clear.

Many people that practice Natural Vision Improvement and obtain clear vision often experience improved hearing and other senses, improved function of the mind, body.



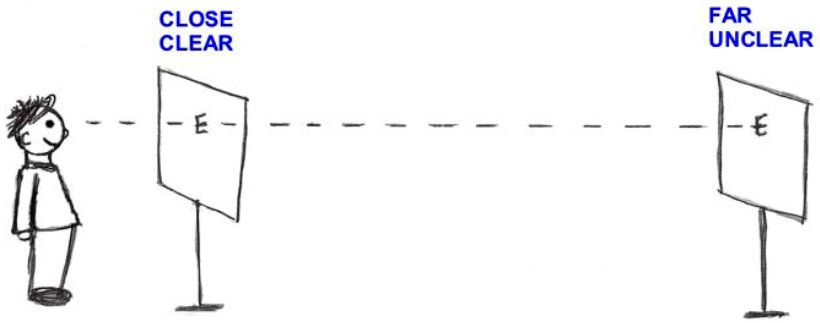
Palm and remember, shift on a favorite object: flower, colorful stone, jewelry, tree, land, old house... Improving the memory, imagination of clear mental pictures relaxes the mind, body, eyes and improves the vision.



Palm and imagine drifting down a river. See objects in color, clear, motion. Movement of the boat, water, wind, birds flying, sun shining, sparkling on the river, animals walking on the shore, colorful dragonflies... Imagine all the senses; touch, warmth of sun, feel the breeze, hear the water, birds, wind, taste your favorite drink...

13 - EYECHARTS TO TEST AND IMPROVE CLOSE AND DISTANT EYESIGHT

SWITCH AND SHIFT ON LETTERS ON TWO IDENTICAL EYE CHARTS PLACED AT CLOSE AND FAR/ CLEAR AND UNCLEAR DISTANCES.



Eyechart Videos

SHIFT FROM PART TO PART (DOT TO DOT) ON THE E'S



TOP AND BOTTOM | LEFT AND RIGHT | DIAGONALLY CORNER TO CORNER | MIDDLE | SHIFT FROM PART TO PART IN ANY DIRECTION

Videos - http://www.youtube.com/watch?v=863yFmc-Ius

Meaning of 20/20; (for Distant Vision)
+The top number indicates the distance the person is standing from the chart.
+The bottom number indicates the size of the letter, the line the eyes are looking at. A 20/20 letter is 3/8 inch. high.

E This E is about 3/8 inch. on 100% computer screen.

+The bottom number also indicates the distance that a person with clear vision sees the letter clear.

Example; the 20/20 line on the test chart for distant vision;
+The top number, 20 indicates; the person is standing 20 feet away from the letter on the eyechart.
+The bottom number, 20 indicates the person is looking at the 20/20 line, 3/8 inch. letter and, that; a person with clear 20/20 vision can see the letter clear at 20 feet away.

The eyechart is placed at 20 feet to test distant vision because the eyes do not need to un-converge, un-accommodate any further when looking at about 20 feet and farther into the distance. If the letters are seen clear at 20 feet, they are seen clear at all distances beyond 20 feet.

Here's another example; 20/200;

+The top number (20) indicates the person is standing 20 feet away from the eyechart.
+The bottom number (200) indicates the size of the letter, line the person is looking at.
The 200 line letter is the largest letter on the top of the chart. A 20/200 letter is 3 ½ inch. high.
+The bottom number, (200) also indicates that a person with

Distant vision - Big C eyechart with a small 5 line added at bottom.

CLEAR

20 = 20 feet
20 = 3/8 inch letter - 20 line.
Normal, clear vision.

20 = 20 feet
5 = Smallest letter, bottom of chart - 5 line.
Clearer than 20/20.

40 = 40 feet
5 = Smallest letter, bottom of chart - 5 line.
Most clear vision, much clearer than 20/20.
Person sees 5 line at 40 feet away.

UNCLEAR

20 = 20 feet
200 = Largest letter, top of chart - 200 line.
Most unclear vision for this eyechart.

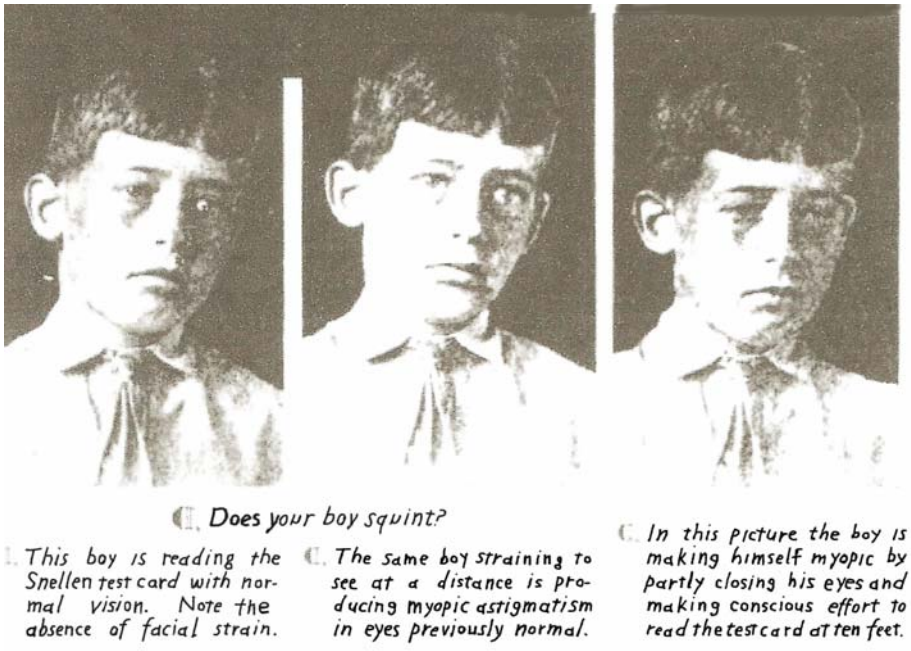
5 = 5 feet
200 = Largest letter, top of chart.
Vision more unclear.
The person must stand closer to the chart, at 5 feet, to see the 200 line letter clear.

20 = 20 feet
300 = Letter larger than 200 line.
More unclear than 20/200.
Person cannot see the 200 line clear.
A larger, 300 size letter is seen clear.
The 200 and other lines might be seen clear at closer distants to the chart.

clear 20/20 vision can see the letter clear at 20 feet and up to 200 feet away.
A person with 20/200 distant vision can see the large 20/200 letter at 20 feet but cannot see it clear farther than 20 feet. It may be seen clear at closer distances.
Smaller letters below the 20/200 line are not seen clear at 20 feet and farther away.
20/200 vision is very unclear, much less clear than 20/20.
Vision can be more unclear; 20/300, 5/200... Many people with 20/200, 300 and more unclear vision have attained 20/20 and clearer vision with practice of the Bates Method.

20/40 vision is clearer than 20/200 but less clear than 20/20. 20/40 is considered legal for driving in most states. 20/40 is close to 20/20 clarity and people can function comfortably with 20/40 vision without wearing eyeglasses. 20/30, 20/25 is clearer than 20/40 and almost 20/20.
When vision is less clear than 20/40; 20/50, 70, 100... it is still best to avoid wearing eyeglasses as much as possible. Eyeglasses maintain and increase the eye muscle tension and blur. When glasses are avoided the eyes, eye muscles, mind/brain, (visual system) relax, correct vision habits are easily applied and clarity of vision improves.
Close vision is tested with smaller letters with the eyechart placed at various distances closer than 20 feet. Reading vision is tested at 3 ft. to 6 inches and closer to the eyes with small and fine print. Seeing fine print clear at 5 to 1 to 1/4 inches from the eyes is very clear vision. Healthy for the eyes.

Relax and Shift, Blink when Reading the Eyechart. Use Central-Fixation



Immediate Production of Myopia and Myopic Astigmatism in Eyes Previously Normal by Strain to See at the Distance;

Fig 1 - Boy reading the Snellen test card with normal vision. Note the absence of facial strain.
A boy with normal eyes reading the X line of the Snellen test card at 10 feet.
Notice the expression of the eyes with the focus completely relaxed.

Fig 2 - The same boy trying to see a picture at twenty feet. The effort, manifested by staring, produces compound myopic astigmatism, as revealed by the retinoscope. Simultaneous retinoscopy indicated compound myopic astigmatism. He was unconscious of the fact that his eyes were focused for a near point. Note the manifestation of effort by staring.

Fig 3 - The same boy making himself myopic voluntarily by partly closing the eyelids and making a conscious effort to read the test card at ten feet. Functional myopia produced voluntarily by partly closing the eyelids (squinting) and making an effort to read the Snellen test card at ten feet.

There are large and small close and distant eyecharts on the last pages of this book and in the PDF E-Book.



Fig. 43

Patient with atrophy of the optic nerve gets flashes of improved vision after palming.

It is difficult to print the exact, correct letter size from a computer. Try printing at 100% or larger.
The Big C and E charts print out on 4 separate pages, 11 x 8 ½ inches, landscape. Tape them together after printing.
If the print is too light, darken it to dark black with a black marker.
If they print too small or large; place them in a copier and use the zoom setting to enlarge or reduce the letters until all letters are the correct eyechart size. See correct sizes listed below.
Letters on the charts can be reduced to small and fine print for testing, improving close vision and reading vision distances, 3 feet, 20, 10, 7, 6, 5, 3... inches away from the eyes.
Small charts are also provided.
The charts can be printed from the PDF E-Book with white letters on a black, blue... background. White letters are easy to see and relaxing to the eyes. Color activates, is healthy for the eyes, brain, visual system.

The reader can also create small charts as a identical copy of the big C, E charts. Place the identical copy at a clear close distance and look at the identical clear letters to strengthen the memory, imagination of the same letter on the distant chart. If preferred, use a large close and distant chart.

The Big C chart is the eyechart Ophthalmologist Bates refers to in his Better Eyesight Magazine.
The large big letter E and C charts are for testing distant vision.
Print the chart with correct letter size;

Start with the big letter E (or C) at the top of the chart - 20/200 line;

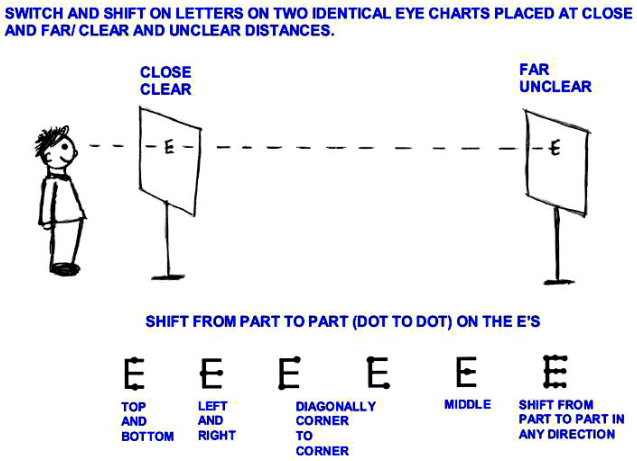
20/200 - 3 ½ inch. high
20/100 - 1 ¾ inch.
20/70 - 1 ¼ inch. **All numbers above 20/20 indicate vision**
20/50 - 7/8 inch. **less clear than 20/20.**
20/40 - 11/16 inch.
20/30 - 1/2 inch.
20/20 - 3/8 inch. ---------- Normal clear vision at 20 feet away.
20/15 - 1/4 inch. **All numbers below 20/20 indicate clearer**
20/10 - 3/16 inch. **than 20/20.**
20/5 - 3/32 inch.
20/4, 3, 2, 1... Letters are smaller. Very clear vision.

Standing farther away and seeing the letters clear;
Example 40/5; standing 40 feet away and seeing the 20/5, 3/32 inch letter and/or smaller letters clear indicates very clear vision, much clearer than 20/20.

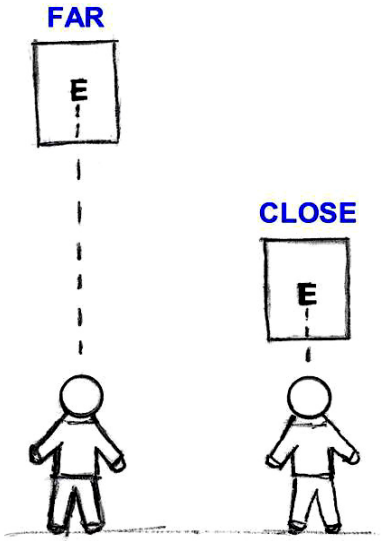
Practice Shifting, Central-Fixation, Switching Close and Far on the Eyecharts

Print the Eyecharts.

Make two identical copies of the chart, place them at close and far distances. Practice Correct Vision Habits: shifting, central-fixation... on the charts once or more per day.
Practice in the sunlight, sun shining over the shoulder onto the charts.
Shifting, switching on the two identical charts improves the memory, imagination, ability to remember, imagine and see the letters clear, improves the brains function of storing clear images of objects in the memory.
The eyecharts become familiar objects.
Familiar objects are relaxing to the mind, eyes and are seen clear. When a letter on the chart is seen clear at a specific distance; all objects at that distance are seen clear.



Practice Correct Vision Habits #1 to 8 on two identical eyecharts;
One chart is placed at a close distance.
The other chart is placed at a far distance. See picture.
Keep one chart at a clear distance.
When looking at a chart, place the chart at eye level, directly in line with the eyes, face.
The letter the eyes look at is placed in the center of the visual field; between the left and right eyes, at eye level.
The far chart is placed about 1 foot to the left or right (alternate) so the close chart does not block the view of the far chart.
When looking at a chart, maintain central-fixation;
when looking at the close chart - stand directly in front of it.
When looking at the far chart - move and stand directly in front of it.
See picture on right.



Shift on letters on the clear and unclear charts and remember, imagine and see the letters dark black and clear.
Practice with the eyes open, closed, open.
Practice with both eyes together, then one eye at a time, then both eyes together again. If vision is less clear in one eye, practice extra time with that eye. Then again a bit with the other eye, then both eyes together again to keep the vision balanced, equal in both eyes.
Keep the letter between the eyes, at eye level, center of the visual field when using both eyes together and when using one eye at a time.
Cover the eye not in use with a eyepatch and keep the eye open under the patch when the eye in use is open. Blink and relax.

Example; Person needs distant vision improvement.
Place one chart at a far, unclear distance.
Place the other identical chart at a clear close distance.
Look at the letter E at the clear close distance; shift on the letter.
Remember, imagine, see the E dark black and perfectly clear.
Do this with the eyes open, then, in the imagination with the eyes closed, then with the eyes open again.

Then; switch to the unclear distant chart.
Look at the identical letter E.
Shift on the E and continue to remember, imagine the E is dark black and clear.
Practice with the eyes open, closed, open.

With practice the distant E will be seen clear.

Switch back to the clear close E.
Repeat; shift on the E, Remember, imagine, see it dark black and clear.
Practice with the eyes open, closed, open.
Looking at the clear close E reinforces the clear image of the E in the brain/memory and helps the brain and eyes work together to produce a clear image of the E when it is seen at the far distance.

Switch back to the E at the far distance.
Shift on it, remember, imagine and see it dark black and clear.
Blink, breathe, relax.
Practice switching, shifting on the close and far E's with both eyes together, then one eye at a time, then both eyes together again for perfect equally clear 20/20 and clearer vision in the left and right eyes at close and far distances. Example: Both eyes together, then one eye at a time: start with either eye: left, then right, then left, right... If vision is less clear in one eye, practice extra time with that eye. Then; end with both eyes together again.

Allow the eyes, head/face, neck and body to relax, move freely when looking at the letters. Relaxation and movement bring clear vision.
Eye, head/face, neck, body immobility, tension, staring, squinting, straining, trying hard to see the letters clear produces unclear vision.

Practice on other letters.
Practice on smaller letters.
Practice at a variety of close, middle, far distances for clear vision at all distances.
Practice on two identical fine print charts with medium, small, smaller, and fine print size letters.
Place the charts at two different close distances.

Memorize the letters on the chart. Memorizing the letters causes the chart to become a familiar object, something that is easy to see. Familiar objects relax the mind, eyes and activate clear vision.
When the brain memorizes the letters, becomes familiar with them, there is not any effort to see them, mental strain and eyestrain are avoided, the mind/brain, eye muscles, eyes stay relaxed when viewing the chart and the letters are seen clear. This relaxation and clear vision continues when looking at other objects.
When taking a eye test at the eye doctors office, the patient is often hurried, pressured to see the letters on a unfamiliar eyechart clear.
This causes temporary mental strain, leads to squinting, staring, effort to see the letters. This causes temporary eye muscle tension, slightly altered eye, cornea shape with incorrect focus of light rays in the eye causing temporary blur that results in a unnecessary prescription for eyeglasses and over-corrected lenses that are too strong and cause increased eye muscle tension, abnormal eye shape, mental strain, increased blur and future prescriptions for stronger eyeglass lenses.
If the patient knew the letters on the chart and was allowed to relax, and use Correct Vision Habits; shifting, central-fixation... on the letters; the mind, eye muscles, eyes would remain relaxed, the letters on the memorized and unfamiliar eyecharts would be seen clear and the eyeglass prescription would be avoided.

Place a familiar eyechart in the home, work, school and shift on the letters occasionally.
Practice all Correct Vision Habits on the letters;
Central-fixation; the letter the eyes are looking at is placed in the center of the visual field; between the eyes, at eye level.
Look at and see one letter darkest black, clearest at a time in the center of the visual field. The letter the eyes are looking at is in the center of the visual field and is clearest.
Other letters on the chart around and away from the letter are in the peripheral field and are less clear.
Avoid staring, squinting, trying hard to see letters clear. Blink, relax and combine shifting with central-fixation;
When looking at a letter; shift on it from small part to small part. Move the small exact center of the visual field part to part, (point to point) on the letters. Blink, let the eyes move. Shift relaxed, easy, continually, restful.

See Doctor Bates directions in his articles in the Close Vision chapter; 'The Menace of Large Print' and 'Think Right'.

See the 'Illusion of Oppositional Movement'; the letter appears to move in the opposite direction the eyes move to, a small, quick movement no larger than the size of the letter. 'The Swing.' See Better Eyesight Magazine and Chapter 6 - The Long Swing, Rock, Short Swing.

When reading a eyechart;
Don't spend a long time looking at a letter if it's unclear. Avoid staring, squinting, straining, trying hard to see it. Shift on it, then move, shift to a new letter. Shift on that letter.
Blink, breathe abdominally, relax.
Shift from letter to letter on the chart.
It is ok to stay on one letter if relaxation, eye shifting occurs. Relax, shift point to point-see small parts-let the eyes move on the letter automatically, on their own.
The eyes, head/face, neck and body are relaxed and move freely. Move the head/face and body with the eyes when shifting on a letter and from one letter to another.

When moving to a new letter, move the head/face, body with the eyes and look/face directly at the letter.
The center of the visual field is clearest. The center of the visual field moves with the eyes from letter to letter, placing each letter the eyes look at, one letter at a time, in the center of the visual field, keeping each letter perfectly clear.
The exact center of the visual field is most clear; place the part of the letter the eyes look at in the exact center of the visual field.
Shift the eyes (visual attention) from small part to small part, moving the small exact center of the visual field from small part to small part (point to point), seeing one small part (point) of the letter darkest black, clearest at a time in the exact center of the visual field. (The part (point) of the letter the central field is on, moving upon/over is clearest while the central field is on that part.)
Practice on small and fine print letters.

The exact center of the visual field; produced by the fovea centralis in the center of the macula, in the center of the eyes retina can be seen/measured by looking at a capitol letter E, 3/8" high, 20/20 line of the distant eyechart, from 20 feet away.
When looking directly at the E, the E occupies space in the center of the visual field produced by the macula and fovea. When looking at a small part of the E (Example; a part in the center of the E), that small part is in the exact center of the visual field produced by the fovea.
+Light rays from this part of the E focus on the center of the fovea when looking at this part, placing it in the center of the visual field.
+Light rays from other areas of the center of the visual field focus on the macula around the fovea.
+Light rays away from the E in the peripheral field of vision focus on the peripheral field of the retina around/away from the fovea and macula.
The fovea (especially the center of the fovea) produces the clearest vision, clearer than 20/20.
The outer fovea and macula produce very clear vision, clearer than 20/20, but not as perfect as the center of the fovea.
The peripheral field of the retina produces less clear vision.
The far outer peripheral field is the most unclear.

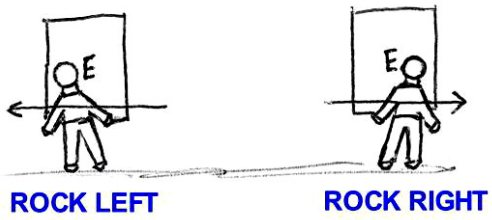
See a letter clear by placing it in the center of the visual field and then;
use the exact center of the visual field; place one small part of the letter at a time in the exact center of the visual field and see it darkest black and clearest.
Avoid staring; always shift the eyes to prevent staring, immobility; shift/move the eyes/visual attention (exact center of the visual field) from small part to small part on the letter; top to bottom, side to side, corner to corner, middle; shift from small part to small part in any direction on the letter.

Example; shift from dot to dot on the letter E. See picture on page 148.
As the eyes/exact center of the visual field move from part to part (dot to dot); see each part, one small part (dot) at a time darkest black, clearest in the exact center of the visual field.
The entire visual field moves with the eyes as the eyes shift from part to part;

Example;
Looking at the small part (dot) in the middle of the E.
This part is in the exact center of the visual field and is darkest black and clearest. All other parts are in the peripheral field and are less clear.
Now; shift from that small part in the middle of the E to a small part (dot) on the far edge of the top right side. The small part on the top right is now in the exact center of the visual field, its light ray is focusing on the fovea and it is seen darkest black and clearest.
The previous part and all other parts of the E are in the peripheral field and less clear.
Shift to a new small part; that new part is now in the exact center of the visual field and is darkest black and clearest. Blink.
The eyes can shift to a new part each second, fraction of a second, but, in that short time that a part is in the exact center of the visual field, it is seen darkest black and clearest. This is central-fixation.
When the eyes see the part/area of visual attention with the exact center of the visual field, central-fixation, the exact center is very clear, much clearer than 20/20, and the outer center of the visual field is also very clear, clearer than 20/20 and the peripheral field is normally less clear but is at its maximum clarity.
Seeing clear with central-fixation improves clarity and function of the entire visual field.

When the mind, body, eyes are relaxed the letters are clear.
Do the rock and long swing in front of the eyechart and do not try to see any letters clear. Just relax, rock or swing left and right and notice the soothing oppositional movement of the chart;
When the eyes, head/face, body swing left <; the chart appears to move right >.
When the eyes, head/face and body swing right >; the chart appears to move left <.
See chapter 6- rock, long swing.
Relax and rock or swing left and right without trying to see the letters.

ROCK LEFT AND RIGHT IN FRONT OF THE CHART
RELAX, DONT TRY TO SEE THE LETTERS CLEAR



Then, stop moving left and right. (Some small relaxed movement can be maintained.)
Look at the chart and shift on a letter for a second or two. Blink, breather, relax.

'The Short Swing'

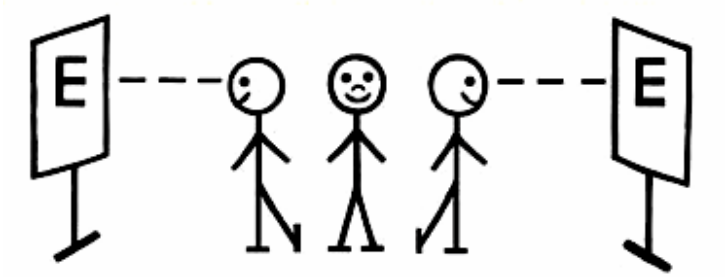
See the 'Illusion of Oppositional Movement' of the letter when the eyes shift on it;
+Shift from the left side of the letter to the right side > ;
the letter appears to move 'Swing' to the left <.
+Shift from the right side of the letter to the left side < ;
the letter appears to move 'Swing' to the right >.
Shift up, down, any direction and see the letter appear to move in the opposite direction the eyes/visual attention move to.
Practice shifting and seeing oppositional movement on large, medium, small and fine print letters at close, middle and far distances.
The movement of the letter is short, less than the width of the letter.
Blink and relax.
Seeing oppositional movement of the letter relaxes the mind and eyes, improves the clarity of vision.
Practice shifting on the letter and seeing the illusion of oppositional movement with the eyes open, then in the imagination (use memory, imagination) with the eyes closed, then with the eyes open again.
The long swing and rock are longer movements of the eyes, head, body and produce a longer (swing) appearance of oppositional movement.
Shifting on a small letter produces a smaller oppositional movement, a small Short Swing.
With practice, smaller shifts, on small letters, with a small appearance of oppositional movement Short Swing of the letter can be done. This greatly improves shifting, central-fixation and produces very clear vision. Short, small and tiny shifts, swings produce very clear vision, clearer than long, larger shifts, swings. All shifts, swings activate relaxation, movement and improve the vision.

Next; return to the rock or long swing.
The rock, long swing keeps the mind, body, neck, eyes relaxed, keeps the eyes shifting and vision clear. Stop rocking, swinging left and right every once in a while and then, shift on the letters on the chart again. Notice they are seen clear when the mind/eyes are relaxed and there is no effort to see.

Shorten the rock for a short shift, swing;
Rock left and right 2 feet, then 1 foot, then 6 inches, 4,3,2,1, ½... inch. Rock with a small movement ½ - 1 - 2... inches left and right and shift on the letters on the eyechart. See a small swing of oppositional movement of the letters. The rock keeps the eyes, head/face, neck, body relaxed, moving when looking at a letter. This prevents staring and blur. The small shift, swing also produces clear vision.

Practice Dr. Bates method of 'Flashing' the Letters; looking at, shifting on a letter for only a fraction of a second, then looking away to a different letter or object, shift on that object, then return to the letter, shift on it, fraction of a second, then look away, return, look away...
This prevents effort to see, prevents strain and blur; there is not enough time to strain, try to see any object so relaxation is maintained.
The normal eye moves continually, restful, shifting easy from point to point.

Practice The Long Swing with 2 Identical Eyecharts: Flashing, Shifting for a 'Fraction of a Second' on letters on the Eyecharts:



The Long Swing with Two Eyecharts
Identical eyecharts placed on left and right side of the body.
Swing and turn left and right and 'Flash' glance at, shift on a letter on the eyechart for a 'fraction of a second'-
Swing, turn left and 'flash' a letter on the left chart: Blink and shift quickly, easy on the letter. Do not stop swinging.
Swing and turn right and flash a letter on the right chart.
Keep swinging left and right, glancing at the letters. Relax, no effort to see - vision be comes clear.

Place 2 identical eyecharts on the left and right sides of the body.
Swing left and right and Flash a letter on the eyechart for a fraction of a second;
+Swing left < ; shift on, flash the letter for a fraction of a second on the left chart. Blink.
+Swing right > ; shift on, flash the identical letter for a fraction of a second on the right chart. Blink.
Then swing back to the left side, flash the same letter again... Repeat right, left, right, left...
Do this without stopping; keep moving, swinging left and right. Do not stop swinging when looking at the letter. The eyes, head/face and body move, swing and turn left and right together, at the same time, in the same direction. See The Long Swing.

The continual movement keeps the eyes, mind, body relaxed, left and right brain hemispheres integrated. The very short time the eyes, head, body are facing the chart prevents strain, staring at the letter. The eyes shift on the letter quick, easy, do not try to see it clear. Relaxation occurs and vision becomes clear. Practice on identical letters, then on any letters, then on smaller letters.

'Flashing the letters' = Shifting on a letter for a fraction of a second produces a 'Flash' of clear vision. The flash of clarity may last only a second but with practice, maintaining relaxation, the flashes occur more often, last longer, and vision remains clear.

Practice palming, covering the eyes, then reading, flashing the letters on the eyechart. Palming chapter 1.

+Palm for a while and relax.
+Uncover and open the eyes and look at a letter on the chart.
+Shift on the letter for only a second or fraction of a second.
No effort to see clear.
+Then cover the eyes and palm again. Think pleasant thoughts.
Remember, imagine shifting on the letter and see it dark black and clear in the mind. See the mental picture of the letter show oppositional movement as the eyes shift on the image of the letter.
+Uncover, open the eyes and shift on the letter again, fraction of a second.
+Palm again.
+Repeat palming and shifting on the letter (flashing the letter) for a fraction of a second.
This method keeps the eyes, mind relaxed, prevents effort to see, mental, visual strain and blur. Flashes of clear vision will occur.
When relaxation of mind, eyes continues, the vision, letters remain clear.

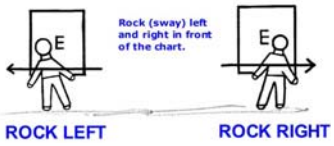
Rock, sway the body left and right in front of the eyechart again and see the chart, letters move, swing in the opposite direction.

Then; Reduce the length of the rock to 2-4 inches, moving left and right and shift part to part on a letter. Let the eyes move freely to another letter, then another as the body, head, eyes move left and right.
No effort to see. Just relax, shift, blink, breathe abdominally.

Rock up and down 1-2 inches. Rock on the feet 1-2 inches forward and backward.

http://www.youtube.com/watch?v=863yFmc-Ius
http://www.youtube.com/watch?v=mYpsYPPV_hg

Click the links for YouTube Videos teaching Natural Vision Improvement with Eyecharts.



The pothooks eyechart is designed for children, adults that have not yet learnt to read the alphabet. The person points their hand in the direction the E is pointing.
Familiar objects relax the mind, eyes and keep the vision clear. This eyechart is easy to see clear because it is a familiar object: the person knows that every letter on the chart is an E. This makes it easier, more relaxing to look at the different size unclear E's and use the memory and imagination to see the E's clear: the person only needs to shift on the E, guess, imagine which way the E is pointing to see it clear.
When the brain remembers, imagines a clear, dark black letter E and guesses, imagines the E pointing in the correct direction; the brain, eyes relax, the brain directs the eye muscles, eyes to move, shift correct, directly on the letter E and the E is seen clear.
If the person guesses an incorrect direction, the E remains unclear because the eyes, brain are trying to shift on, see an incorrect image, trying to shift, move the eyes along areas of the white page away from the E. See the Pothooks Eyechart on the right.

Read another example of guessing with the memory and imagination; looking at, guessing the # 7 on a bus; chapter 9 - Memory and Imagination.



Shift top and bottom, left and right on the E. (Shift dot to dot). Blink.

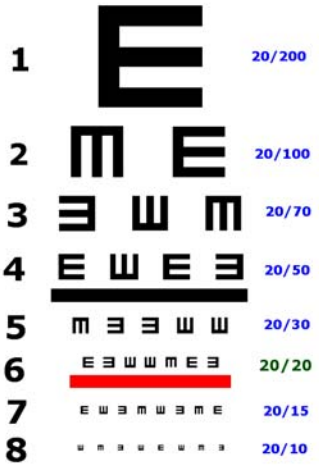


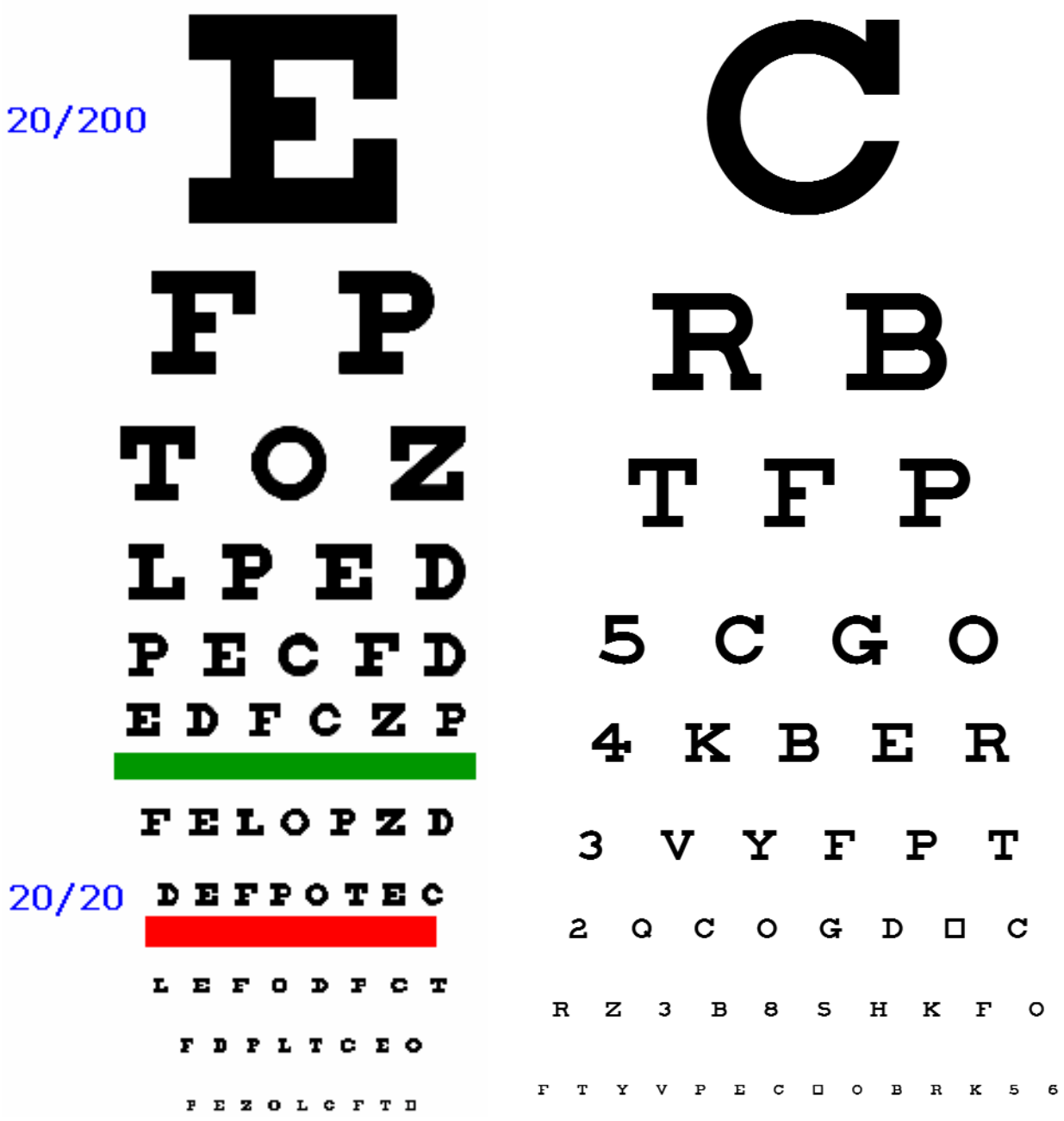


Flash a letter -
+Shift on the E for a fraction of a second then
+look away from it to another object or close the eyes, palm and remember the E, shift on it in the mind. Or just think any pleasant thoughts with the eyes closed.
+Open, shift on the E fraction of a second,
+Close, repeat...

+Use the memory, imagination:
Remember, imagine the E is clear when the eyes are open and when closed. Practice on any objects, at any distance.

Pothooks, Tumbling, Inverted E Eyechart

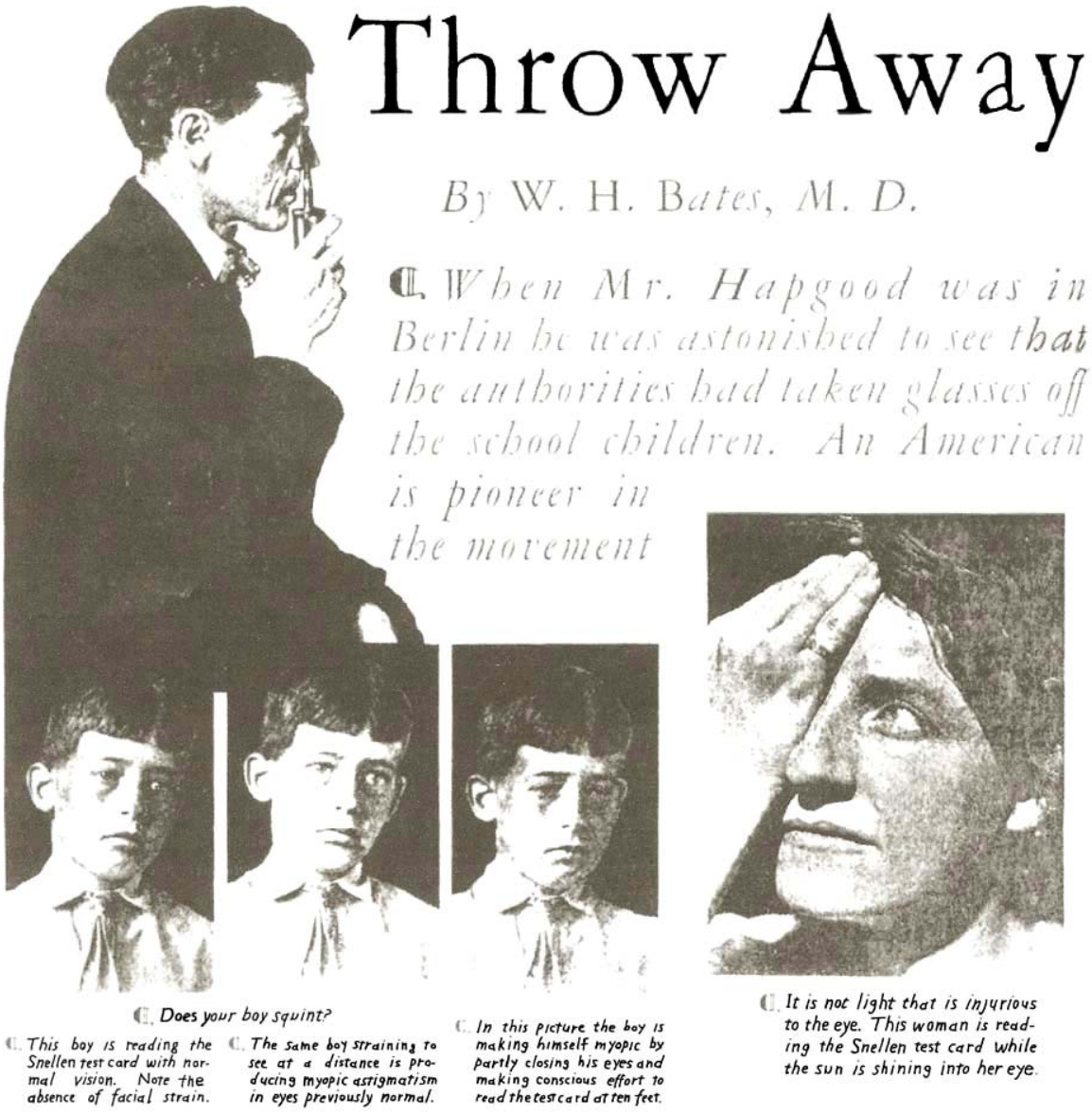




Eyecharts - Click Here

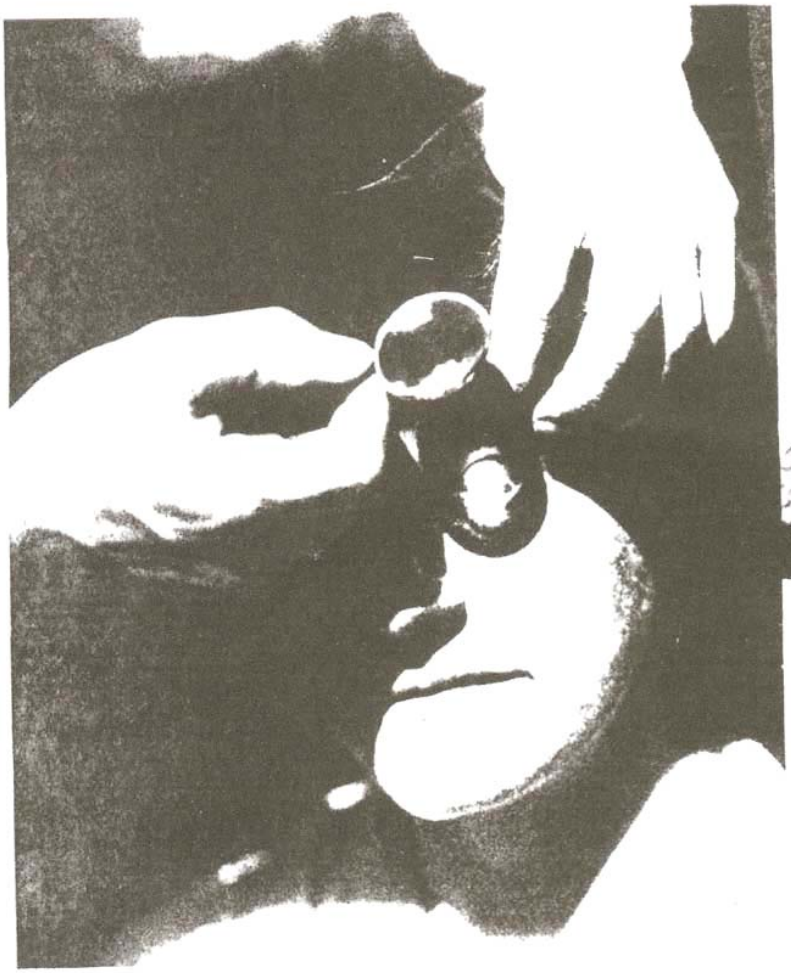
Eyechart Pictures From Ophthalmologist Bates Medical Articles

The pictures below show how strain, squinting, effort to see clear causes the letters on the eyechart to appear unclear.
Relaxation, no effort = the letters are seen clear.



Dr Bates, Emily Lierman, Bates and a Bates Method Student

Your Glasses



¶ A burning glass focuses light directly on the eye with beneficial results.



¶ Mrs. Lierman, Dr. Bates's assistant during four years of arduous labor, helped him make the tests that showed the way to new methods of healing imperfect eyesight.



¶ Palming or covering the eyes with the hands is one of the most effective methods of obtaining relaxation of all the sensory nerves.

The burning glass (sunglass) is used only by a Bates Method experienced Ophthalmologist and only if necessary to prevent, reverse blindness, advanced eye, vision impairment.

<u>It can burn, injure the eye</u> if used incorrect!

Applied correct, it can be beneficial in cases when other methods have not restored the vision. It has reversed blindness and corrected other eye conditions.

<u>Plain</u> daily full spectrum sunlight and closed eyes sunning (without use of the Sunglass) is most always all that is needed for clear vision. See the Sunning Sunlight chapter and Better Eyesight Magazine, Dr. Bates books for more directions.

Dr. Bates Directions for Eyecharts. From Better Eyesight Magazine

BETTER EYESIGHT

October, 1919

THE SWINGING CURE

If you see a letter perfectly, you may note that it appears to pulsate, or move slightly in various directions. If your sight is imperfect, the letter will appear to be stationary. The apparent movement is caused by the unconscious shifting of the eye. The lack of movement is due to the fact that the eye stares, or looks too long at one point. This is an invariable symptom of imperfect sight, and may often be relieved by the following method:
Close your eyes and cover them with the palms of the hands so as to exclude all the light, and shift mentally from one side of a black letter to the other. As you do this, the mental picture of the letter will appear to move back and forth in a direction contrary to the imagined movement of the eye. Just so long as you imagine that the letter is moving, or swinging, you will find that you are able to remember it, and the **shorter and more regular the swing, the blacker and more distinct the letter will appear**. If you a re able to imagine the letter stationary, which may be difficult, you will find that your memory of it will be much less perfect. Now open your eyes and look first at one side and then at the other of the real letter. If it appears to move in a direction opposite to the movement of the eye, you will find that your vision has improved. If you can imagine the swing of the letter as well with your eyes open as with your eyes closed, as **short**, as **regular** and as **continuous**, your vision will be normal.

FUNDAMENTALS OF TREATMENT

By W. H. Bates, M. D.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

June, 1921

HOW TO DEMONSTRATE THE FUNDAMENTAL PRINCIPLE OF TREATMENT

The object of all the methods used in the treatment of imperfect sight without glasses is to secure rest or relaxation, of the mind first and then of the eyes. Rest always improves the vision. Effort always lowers it Persons who wish to improve their vision should begin by demonstrating these facts.
+ **Close the eyes and keep them closed for fifteen minutes. Think of nothing particular, or think of something pleasant. When the eyes are opened, it will usually be found that the vision has improved temporarily. If it has not, it will be because, while the eyes were closed, the mind was not at rest.**
+ **One symptom of strain is a twitching of the eyelids which can be seen by an observer and felt by the patient with the fingers. This can usually be corrected if the period of rest is long enough.**
+ Many persons fail to secure a temporary improvement of vision by closing their eyes because they do not keep them closed long enough. Children will seldom do this unless a grown person stands by and encourages them. Many adults also require supervision.
+ To demonstrate that strain lowers the vision, think of something disagreeable—some physical discomfort, or something seen imperfectly. When the eyes are opened, it will be found that the vision has been lowered. Also, stare at one part of a letter on the test card, or try to see the whole letter all alike at one time. This invariably lowers the vision and may cause the letter to disappear.

ALL errors of refraction and many other eye troubles are cured by rest; but there are many ways of obtaining this rest, and all patients cannot do it in the same way. Sometimes a long succession of patients are helped by the same method, and then will come one who does not respond to it at all.

+Closing the Eyes. — The simplest way to rest the eyes is to close them for a longer or shorter period and think about something agreeable. This is always the first thing that I tell patients to do, and there are very few who are not benefited by it temporarily.

+Palming .— A still greater degree of rest can be obtained by closing and covering the eyes so as to exclude all the light. The mere exclusion of the impressions of sight is often sufficient to produce a large measure of relaxation. In other cases the strain is increased. As a rule, successful palming involves a knowledge of various other means of obtaining relaxation. The mere covering and closing of the eyes is useless unless at the same time mental rest is obtained. When a patient palms perfectly, he sees a field so black that it is impossible to remember, imagine, or see, anything blacker, and when able to do this he is cured. It should be borne in mind, however, that the patient's judgment of what is a perfect black is not to be depended upon.

+Central Fixation. — When the vision is normal the eye sees one part of everything it looks at best and every other part worse in proportion as it is removed from the point of maximum (central) vision. When the vision is imperfect it is invariably found that the eye is trying to see a considerable part of its field of vision equally well at one time. This is a great strain upon the eye and mind, as anyone whose sight is approximately normal can demonstrate by trying to see an appreciable area all alike at one time. At the near-point the attempt to see an area even a quarter of an inch in diameter in this way will produce discomfort and pain. Anything which rests the eye tends to restore the normal power of central fixation. It can also be regained by conscious practice, and this is

sometimes the quickest and easiest way to improve the sight. When the patient becomes conscious that he sees one part of his field of vision better than the rest, it usually becomes possible for him to reduce the area seen best. If he looks from the bottom of the 200 letter to the top, for instance, and sees the part not directly regarded worse than the part fixed, he may become able to do the same with the next line of letters, and thus he may become able to go down the card until he can look from the top to the bottom of the letters on the bottom line and see the part not directly regarded worse. In that case he will be able to read the letters. On the principle that a burnt child dreads the fire, it is a great help to most patients to consciously increase the degree of their eccentric fixation. For when they have produced discomfort or pain by consciously trying to see a large letter, or a whole line of letters, all alike at one time, they unconsciously try to avoid the lower degree of eccentric fixation which has become habitual to them. Most patients, when they become able to reduce the area of their field of maximum vision, are conscious of a feeling of great relief in the eyes and head and even in the whole body. **Since small objects cannot be seen without central fixation, the reading of fine print, when it can be done, (with relaxation, without effort, no squinting, strain) is one of the best of visual exercises, and the dimmer the light in which it can be read and the closer to the eye it can be held the better. (Practice reading fine print in the sunlight for healthy eyes.)**

+Shifting and Swinging.—The eye with normal vision never regards a point for more than a fraction of a second, but shifts rapidly from one part of its field to another, thus producing a slight apparent movement, or *swing*, of all objects regarded. The eye with imperfect sight always tries to hold its points of fixation, just as it tries to see with maximum vision a larger area than nature intended it to see. This habit can be corrected by consciously **imitating the unconscious shifting of the normal eye and realizing the swing produced by this movement**. At first a very long shift may be necessary, as from one end of a line of letters to another, in order to produce a swing; but sometimes even this is not sufficient. In such cases patients are asked to hold one hand before the face while moving the head and eyes rapidly from side to side, when they seldom fail to observe an apparent movement of the hand. Some patients are under such a strain, however, that it may be weeks before they are able to do this. After the apparent movement of the hand has been observed, patients **become able to realize the swing resulting from slighter movements of the eye until they are able to look from one side to another of a letter of diamond type and observe that it seems to move in a direction contrary to the movement of the eye.**
A mental picture of a letter can be observed to swing precisely as can a letter on the test card and, as a rule, mental shifting and swinging are easier at first than visual. The realization of the visual swing can, therefore, be cultivated by the aid of the mental swing. It is also an advantage to have the patient try to look continually at some letter, or part of a letter, and note that it quickly becomes blurred or disappears. When he thus demonstrates that staring lowers the vision he becomes better able to avoid it. **When visual or mental swinging is successful, everything one thinks of appears to have a slight swing**. This I have called the ***universal swing***. Most patients get the universal swing very easily. Others have great difficulty. The latter class is hard to cure.

+Memory.—When the sight is normal the mind is always perfectly at rest, and when the memory is perfect the mind is also at rest. Therefore it is possible to improve the sight by the use of the memory. **Anything the patient finds is agreeable to remember is a rest to the mind**, but for purposes of practice a small black object, such as a period or a letter of diamond type, is usually most convenient. **The most favorable condition for the exercise of the memory is, usually, with the eyes closed and covered, but by practice it becomes possible to remember equally well with the eyes open.**
When patients are able, with their eyes closed and covered, to remember perfectly a letter of diamond type, it appears, just as it would if they were looking at it with the bodily eyes, to have a slight movement, while the openings appear whiter than the rest of the background. If they are not able to remember it, they are told to shift consciously from one side of the letter to another and to consciously imagine the opening whiter than the rest of the background. When they do this, the letter usually appears to move in a direction contrary to that of the imagined movement of the eye, and they are able to remember it indefinitely. If, on the contrary, they try to fix the attention on one part of the letter, or to think of two or more parts at one time, it soon disappears, demonstrating that it is impossible to think of one point continuously, or to think of two or more points perfectly at one time, just as it is impossible to look at a point continuously, or to see two points perfectly at the same time. Persons with no visual memory are always under a great strain and often suffer from pain and fatigue with no apparent cause. As soon as they become able to form mental pictures, either with the eyes closed or open, their pain and fatigue are relieved.

+Imagination.—Imagination is **closely allied to memory,** for we can imagine only as well as we remember, and in the treatment of imperfect sight the two can scarcely be separated. **Vision is largely a matter of imagination and memory**. And since both imagination and memory are impossible without perfect relaxation, the cultivation of these faculties not only improves the interpretation of the pictures on the retina but improves the pictures themselves. When you imagine that you see a letter on the test card, you actually do see it because it is impossible to relax and imagine the letter perfectly and, at the same time, strain and see it imperfectly. The following method of using the imagination has produced quick results in many cases: The patient is asked to look at the largest letter on the test card at the near point, and is usually able to observe that a small area, about a square inch, appears blacker than the rest, and that when the part of the letter seen worst is covered, part of the exposed area seems blacker than the remainder. When the part seen worst is again covered, the area at maximum blackness is still further reduced. When the part seen best has been reduced to about the size of a letter on the bottom line, the patient is asked to imagine that such a letter occupies this area and is blacker than the rest of the letter. Then he is asked to look at a letter on the bottom line and imagine that it is blacker than the largest letter. Many are able to do this and at once become able to see the letters on the bottom line.

+Flashing.—Since it is effort that spoils the sight, many persons with imperfect sight are able, after a period of rest, to **look at an object for a fraction of a second**. If the eyes are closed before the habit of strain reasserts itself, permanent relaxation is sometimes very quickly obtained. This practice I have called *flashing*, and many persons are helped by it who are unable to improve

their sight by other means. The eyes are rested for a few minutes, by closing or palming, and then a letter on the test card, or a letter of diamond type, if the trouble is with near vision, is regarded for a fraction of a second. Then the eyes are immediately closed and the process repeated.

+Reading Familiar Letters.—The eye always strains to see unfamiliar objects, and is always relaxed to a greater or lesser degree by looking at familiar objects. Therefore, the reading every day of small familiar letters at the greatest distance at which they can be seen, is a rest to the eye and is sufficient to cure children under twelve who have not worn glasses as well as some older children and adults with minor defects of vision.

In the treatment of imperfect sight these fundamental principles are to a great extent interdependent. They cannot be separated as in the above article. It is impossible, for instance, to produce the illusion of a swing unless one possesses a certain degree of central fixation. That is, one must be able to shift from one point to another and see the point shifted from less distinctly than the one directly regarded. Successful palming is impossible without mental shifting and swinging and the use of the memory and imagination.

All these functions of the visual system work together, are integrated. Practicing, improving one, improves all. Practice improving each one and all are greatly improved. Relax, Blink, Breathe abdominally, Shift, Central Fixation, Memory and Imagination, Oppositional Movement (The Swing), Switching and Shifting on objects at close and far distances with both eyes together, one eye at a time, both eyes together again, shifting on familiar objects/eyechart letters, Flashing, Read Fine Print, Sunning, daily exposure to sunlight, Palming, Good Posture, exercise,
Diet …

STORIES FROM THE CLINIC

Better Eyesight Magazine

16: Methods That Have Succeeded

By Emily C. Lierman

The patients who come to our clinic do wonderful things, especially the schoolchildren. We can give each one of them, as a rule, only about five minutes of our time, and yet they are able to carry out the instructions given to them at home, and to get results. This is a great tribute to their patience and intelligence.

Most of the children, and of the grown people as well, are helped by palming, and some wonderful cures have been obtained by this means alone. In my first story for this magazine I told about a little boy named Joey whose left eye had been so injured in an automobile accident that he had only light perception left. It was some time before I could get him to palm regularly, but as soon as he became willing to do it many times a day his sight began to improve rapidly, and he is now completely cured.

There are some patients, however, who cannot or will not palm. One of these was a little colored girl, with corkscrew curls, for all the world like Topsy. She had been sent to the clinic because she could not see the writing on the blackboard, and the school nurse told me later that she was very unruly and a great trial to her teacher. She was something of a trial to me too at first, for I could not get her to palm for a moment, and did not know what to do with her. Then I discovered that she had a wonderful memory when she chose to use it, and I resolved to treat her by the aid of this faculty. I was able to improve her sight considerably, and the very next day her teacher noticed such a change in her behavior that on the next clinic day the school nurse came with her to see what I had done. I then asked her to remember, with closed eyes, a letter on the test card grey instead of black. She could not stand still a minute while she did so, and when she opened her eyes there was no improvement in her vision. Then I asked her to remember the blue beads she had around her neck. She did so for five minutes, standing perfectly still all the time, and when she opened her eyes she read an extra line on the test card. I had her do this again, and again she read an extra line. The nurse was thrilled by this demonstration of the fact that **perfect memory improves the sight and relieves nervousness**.

Recently a poor young man called at our magazine office and asked if Dr. Bates had written a book about the treatment of the eyes. When told that there was such a book, he bought it and also subscribed for the magazine. His sister was being treated at the clinic, he said, and he wished to take off his glasses as she had done. Later he came to the clinic, as he lives in the hospital district. I found that he could not read newspaper print without his glasses, while his distant vision was 12/70, both eyes. This was about six months ago. He now reads diamond type, and last week his sister asked Dr. Bates if he had finer print, as her brother found the diamond type so easy that he wanted something smaller. Dr. Bates gave her a page from a photographic reduction of the Bible, and he reads this also without any trouble. The methods he used were **swinging** and **flashing**, **together with palming**.

The influence of this cure has been extensive and is still going on. The patient loaned the book to a myopic youth in his office, and by means of palming he was able to improve his sight so that now he dispenses with glasses for long periods. An elderly man in the same office thought the palming a very absurd practice but, having borrowed the book, he started shifting and flashing at lunch time, just to pass the time. He now does much of his work without glasses.

HOW I IMPROVED MY EYESIGHT

By PAMELA SPEYER

This patient was wearing when first seen the following glasses: each eye, concave 5.00 D.S. combined with concave 1.00 D.C. A number of competent men had said that her myopia was progressive, and that her vision was certain to become very imperfect even with glasses. They all insisted that she must wear glasses constantly. Yet after she had discarded them her vision improved in two days from 6/200 to 20/100.

I have always been near-sighted. When I was six years old, my father took me to a famous oculist in London, and he prescribed and fitted me with my first glasses. With these lenses I was able to distinguish things at a distance which before I had not been able to see. I found that I could read or see objects at close range just as well without the glasses. The only difference that they made to my sight in this case was that print appeared smaller and less black.

Every year stronger lenses were given to me, and I visited several oculists in England and America, in the hope of improvement. When I was fifteen an oculist told me that my eyesight, instead of improving each year as I had hoped, would gradually become worse. By this time I was wearing glasses all the time.

Then, quite by chance, my father heard of Dr. Bates through a friend whose eyesight had been cured by him. I was taken there at once. The first thing Dr. Bates did was to take away my glasses. I sat down in a chair, opposite which was a Snellen test card, fifteen feet away. I could not see the largest letter, a "C" about four inches by three, which people with normal vision are supposed to read at two hundred feet. He brought the card five feet nearer and then I read the "C." It appeared very blurred and indistinct.

The smaller letters were so blurred that I could not see them at all.

Palming



Treatment steps

+Palm
+Swing
+Shift and see oppositional movement. Blink, relax.
+Long Swing
+Sway and shorter sway.
+Shift on a small or fine print letter and see a small, very short swing, (small oppositional movement).
+'Flash' letters, objects for a fraction of a second: Shift on a letter for a fraction of a second, then palm.
+Close the eyes and remember, imagine the letter clear and shift on it, see the swing in the mind.

After I had learned to "**palm**," I learned to "**swing**." The reason I strained my eyes so when looking at the card was that I stared at one place. So by **imagining the letter was swinging like a pendulum, I moved my eyes instead of staring** as I had done before. **At first the swing was a long one, but after practicing for some weeks, I began getting it shorter until it was only half an inch on each side of the letter. The short swing was more difficult to do than the long one, but it helped more in the end.**

Flashing

Then I learned to "**flash**." I looked at a small letter at fifteen feet distance and could not read it. The longer I looked the worse it grew. So by **closing my eyes, remembering the swing for a few seconds, I just glanced at the letter and closing my eyes at once, I saw the letter in a flash.**

All these things must be practiced every day, and even now I have to "palm" every morning and night.

Palming, swinging and flashing were the three fundamentals. As soon as they were mastered only practice remained. I have now been going to Dr. Bates for over a year, and my eyesight is almost cured. I often have flashes of perfect sight. Dr. Bates has certainly helped me in a remarkable degree, more indeed than I ever thought possible when I first went to him wearing strong glasses.

For Pilots - Aviators - Better Eyesight Magazine

Many articles on pilot's vision are posted in Dr. Bates Better Eyesight Magazines.
Do word search in the Adobe Reader Better Eyesight Magazine PDF; Aviators, Pilots, Air Force, Military, Marines, Navy, Army, War, Soldiers...

Here is one of the Pilots Articles from Better Eyesight Magazine;

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

September 1928

EYESTRAIN

The eyes of all people with imperfect sight are under a strain. This is a truth. Most people believe that during sleep the eyes are at rest and that it is impossible to strain the eyes while sound asleep. This, however, is not true. Persons who have good sight in the daytime under favorable conditions may strain their eyes during sleep. Many people awake in the morning suffering pain in the eyes or head. Often the eyes are very much fatigued and have a feeling of discomfort. There may be also a feeling of nervous tension from the eyestrain, or there may be a feeling as of sand in the eyes. At times all parts of the eye may be suffering from inflammation. The vision is sometimes lowered for several hours whereupon it begins to improve until it becomes as good as it was before the person retired the night before. Many people become alarmed and seek the services of some eye doctor. Usually the doctor or doctors consulted prescribe glasses which very rarely give more than imperfect or temporary relief.

There are various methods of correcting eyestrain occurring during sleep. Palming is very helpful even when practiced for a short time. A half an hour is often sufficient to relieve most if not all of the symptoms. In some cases the long swing, practiced before retiring, is sufficient to bring about temporary or permanent benefit. Blinking and shifting are also helpful. Good results have been obtained by practicing a perfect memory or imagination of one small letter of the Snellen test card alternately with the eyes open and closed. A number of patients were benefited and usually cured by remembering pleasant things perfectly.

AVIATORS' EYES

By W. H. Bates, M.D.

AVIATION is becoming more popular than ever before. The writer has treated many aviators who had, within a few months, acquired trouble with their eyes which made it dangerous for them to continue to fly. During the war a Major, an Aviator in the Army, consulted me about his eyes. His principle trouble was dizziness. He was wearing glasses for the correction of a slight astigmatism. The glasses did not relieve the dizziness. At this time a large number of aviators had been killed by falls.

The history of this aviator was very interesting and valuable. He was positive that a number of years previously when he began to practice flying that his sight was normal - 20/20 with each eye or with both. After a few years he noticed that his sight was impaired and that he had attacks of dizziness which did not last long in the beginning. These attacks of dizziness would come without warning while he was flying about one thousand or more feet above the ground. While he was conscious of the dizziness, he noted that his machine (plane) started to fall and continued falling until the dizziness stopped. It was some months before he realized that with every attack of dizziness the machine fell a greater distance, and he feared that these spells would ultimately cause his death.

Like most Army and Navy men, the Major did as he was told and was cured by me. This is the way it was done. I tested his eyes with the ophthalmoscope and retinoscope and found no disease of his eyes. The retinoscope revealed a small amount of astigmatism in each eye. His vision for the test card was 20/30. When he closed his eyes and rested them, the astigmatism became less and his sight for the test card became normal - 20/20. This was accomplished in about an hour. The improvement was only temporary, however, and he was given advice for treatment at home. A large test card was given him with directions to read it with each eye separately at twenty feet. He was directed to rest his eyes often by closing them. It was suggested to him that he look at one letter which he remembered better with his eyes closed than he imagined or saw it with his eyes open. By repetition, his vision for the known letter improved and his sight for unknown letters and other objects improved until his vision became 25/10. He was under treatment for about a month and he was seen at irregular intervals during that time. Since that time I have not heard from him personally.

Other aviators have been benefited by the same treatment. There is a right way and there is a wrong way to use the eyes when controlling a flying machine. The time required to do the wrong thing is just as long as the time required to do the right thing. The aviator can also demonstrate that an imperfect memory, imagination or sight is more difficult than a perfect memory, imagination or sight.

For example, a small letter "o" can be remembered imperfectly on one of the lines of small letters of the Snellen test card, but a stare or strain to see it with a white center as white as snow may require much effort, time and trouble. The imperfect whiteness of the letter soon disappears while its blackness turns to a shade of dark or light gray, all covered by a blurred cloud. The concentration, the effort to see, brings on discomfort, fatigue, pain, dizziness and other nervous symptoms which are all difficult to remember, imagine or feel. The memory, imagination or sight can only be demonstrated easily when exercised without strain. The successful pilot when at his best is always doing the right thing.

When riding in a fast moving train, the telegraph poles, although fastened to the ground, appear to move in the opposite direction. But any effort to stop this movement brings on a strain which may cause much pain, dizziness, fatigue or other nervous discomfort. The Major, who recognized the bad effects of dizziness from imperfect sight, believed that the dizziness, if sufficient, could cause fatal accidents when flying. He became able consciously to produce dizziness by eyestrain or by an effort to improve his vision.

He was taught to imagine the floor to be moving when he walked about his rooms. Swaying his head and eyes from side to side enabled him to imagine the floor to be always moving. When he steered his plane to the right, all objects seen appeared to move to the left. When he moved to the left all objects seen appeared to move to the right. He was able to lengthen the apparent movement of stationary objects. The wider the movement, the less was the sight improved, while a shorter movement of the eyes or head was followed by a greater improvement.

It was difficult for him to demonstrate that perfect sight can only be obtained by rest and prevented by an effort. But when he had learned that it was a truth without an exception he soon became able to demonstrate the facts. He was encouraged to improve his vision by using various or all parts of his machine as objects for testing and improving his sight. The more successful he was in improving his memory for objects, the better was the vision. We can only remember perfectly what we see perfectly; we can only imagine perfectly what we remember perfectly; we can only see perfectly what we imagine perfectly.

The time required for a cure varies with individuals. The eyes of some aviators may be under a greater strain than that of others.

The aviator should demonstrate that shifting the eyes or moving the eyes from one small part of his plane to other objects is restful and that his sight is always improved by resting his eyes. Blinking or closing the eyes and opening them quickly is also a rest. He should also demonstrate that closing the eyes for a few seconds or longer and then opening them for a shorter time is a benefit to the sight. Palming or covering the closed eyes with the palm of one or both hands when done right always improves the vision. Blinking, shifting, or palming can be practiced before entering the plane and so accidents may often be avoided.

While attacks of dizziness are a frequent cause of accidents, many of them fatal, there are numerous other causes which are just as serious or important. Many fliers of airplanes seldom have accidents. What is the secret of their success? It is due to their control at all times in all places.

Control of what?

The answer is: Control of the mind, control of the eyes and of all the nerves generally.

When the efficiency of the mind is at its maximum, it is at rest. Nothing is done consciously or unconsciously. It was a shock to the writer to discover with the aid of the retinoscope that the greatest strain of the body occurred during sleep. Strain is always accompanied by a loss of mental control when things go wrong. Accidents, fatal accidents, always mean a loss of mental control. The fact should be demonstrated. It should also be demonstrated that it is more difficult to fail than to succeed.

"Lindy" (Charles Lindbergh – Pilot) could not have crossed the Atlantic Ocean, a 3,000 mile journey, by making a constant effort to obtain nervous control. The effort would have caused fatigue, and no man can have control of his nerves by using some form of effort. Dizziness is caused by prolonged effort and no man could fly very far when dizzy. The eyesight of even the best of us would become imperfect in a few minutes or less. Now let me ask how many of the best aviators could be efficient if their sight should become imperfect?

Control is necessary.

How can it be obtained? Very easily. First demonstrate that doing the wrong thing - like staring, straining or making an effort to remember, imagine or see - requires an effort, while resting the eyes or mind is easy and requires no effort.

It is a common experience for many people to fail to remember a person's name. An effort to remember it always fails but if they rest their minds by thinking of something else the name comes to them without their volition. A perfect memory can be obtained by practice. Perfect mental control comes or is manifest when the memory is perfect. Practice is important and very necessary. One may see and remember familiar or well known objects with the eyes open but better with the eyes closed. By alternating, the memory with the eyes open improves until it becomes as good as with the eyes closed. This means mental control of the mind, eyes, and all the nerves of the body.

The imagination can also be improved by practice. For example, if a well known or familiar letter of a sign or print on a card can be imagined more clearly than it really is, the vision of all parts of the letter is improved as well as the vision for other objects which were not seen before. Imagining the letter alternately with the eyes open and closed is a benefit to the imagination and the memory as well as to the sight. The aviator can improve his control by improving his memory, imagination, and sight, while flying. It is not necessary for him to practice on letters or other objects several miles away. He can practice successfully, more or less continuously, on the face of his compass or some other part of his machine. Finally he should remember that perfect control can only be obtained by rest and not by any effort whatever.



Emily C. Lierman, Bates

PREFACE

The articles comprising this book were first published in the monthly magazine "Better Eyesight" during a period of five years.

Various eye defects are described in simple and intelligible language, so that those who are interested may follow the practical instructions and improve their own vision, or that of others.

The stories are drawn from my clinical experience in the cure of imperfect sight by treatment without glasses. I have been Dr. Bates' assistant for eleven years, and they were years of a great education in the knowledge of the eye, in health, and in disease.

To Dr. W. H. Bates, the discoverer of the method, I am indebted for his encouragement and help.

EMILY C. LIERMAN.

STORIES FROM THE CLINIC

By

EMILY C. LIERMAN

TO THE CHILDREN OF THE CLINIC
AND TO
W. H. BATES, M.D.,
THIS BOOK IS DEDICATED

CENTRAL FIXATION PUBLISHING CO.
NEW YORK CITY

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Emily C. Lierman

Stories from the Clinic

By EMILY C. LIERMAN

This valuable book fully describes:

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Her application of Dr. Bates' method of treatment to each individual case.

The symptoms and cure of imperfect sight by treatment without glasses.

How readers can benefit themselves.

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INTRODUCTION

I feel honored in being asked to write an introduction to this excellent book, "Stories from the Clinic," by Emily C. Lierman.

The stories have come directly from Mrs. Lierman's experience, and consequently are of intrinsic value. The patients, their symptoms of imperfect sight, and the treatment are all described in language which is so clear that anyone can understand.

For more than nine years Mrs. Lierman was my assistant in the out-patient department of the Harlem Hospital. She showed a great deal of understanding in treating the patients, adapting my method to each individual case. The cures she obtained were of the greatest value. She was particularly interested in the school children, and was so kind and patient with them that they all loved her. Her cures of imperfect sight without glasses were numerous. The way she treated the patients and the results obtained were a contribution to the practice of ophthalmology. For example, an old lady with absolute glaucoma in one eye, totally blind with no perception of light, visited the clinic to obtain relief from an agony of pain. Many doctors had previously advised the removal of one or both eyes, which has been for many years considered by regular physicians to be good practice. It has also been taught that no operation or treatment can cure the blindness resulting from absolute glaucoma. Mrs. Lierman was told that it was a hopeless case, but was asked to try to relieve the pain. She immediately treated

the woman, and much to my surprise not only relieved the pain, but also improved the eye until the patient became able to see at the distance, and to read fine print without glasses.

Of course, her work attracted attention and criticism. A prominent physician was sent one day to investigate. We told him the facts and a number of patients were treated for his benefit. He was very much interested in an elderly colored woman with cataract. This patient became able to read diamond type from six to fourteen inches from her eyes without glasses. The doctor, himself, was wearing glasses for distant vision and a stronger pair for reading. Mrs. Lierman treated him, also, with much benefit. From his personal experience and from his observation of the treatment of the patients by Mrs. Lierman, he was convinced that the method was one of great value. He had been sent to condemn, and remained to praise.

W. H. BATES, M.D.



WILLIAM H. BATES, M.D.
Ophthalmologist and Discoverer of the Cure of Imperfect Sight by Treatment Without Glasses

STORIES FROM THE CLINIC

CHAPTER I

EXPERIENCES WITH SCHOOL CHILDREN

TOPSY

THE patients who come to our clinic do wonderful things, especially the school children. We can give each one of them, as a rule, only about five minutes of our time, and yet they are able to carry out their instructions at home, and to get results. This is a great tribute to their patience and intelligence.

Most of the children and adults are helped by palming, and remarkable cures have been obtained by this means alone. A little lad had been so injured in an automobile accident that he had only light perception in his left eye. It was some time before I could get him to palm regularly, but as soon as he became willing to do so many times a day, his sight began to improve rapidly, and he is now completely cured.

A

Fundamentals of Treatment

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

June, 1921

HOW TO DEMONSTRATE THE FUNDAMENTAL PRINCIPLE OF TREATMENT

By W. H. Bates, M. D.





Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear. Relax.

The object of all the methods used in the treatment of imperfect sight without glasses is to secure rest or relaxation, of the mind first and then of the eyes. Rest always improves the vision. Effort always lowers it. Persons who wish to improve their vision should begin by demonstrating these facts.

+ Close the eyes and keep them closed for fifteen minutes. Think of nothing particular, or think of something pleasant. When the eyes are opened, it will usually be found that the vision has improved temporarily. If it has not, it will be because, while the eyes were closed, the mind was not at rest.

+ One symptom of strain is a twitching of the eyelids which can be seen by an observer and felt by the patient with the fingers. This can usually be corrected if the period of rest is long enough. Relaxation of the neck, shoulders helps. No chiropractic, it has caused many injuries, including stroke. See the warning in the E-book. Use safe, natural massage on the muscles, good posture and movement.

+ Many persons fail to secure a temporary improvement of vision by closing their eyes because they do not keep them closed long enough. Children will seldom do this unless a grown person stands by and encourages them. Many adults also require supervision.

+ To Experience, demonstrate that strain lowers the vision; think of something disagreeable-some physical discomfort, or something seen imperfectly. When the eyes are opened, it will be found that the vision has been lowered. Next; close the eyes and think something pleasant, happy. Open the eyes and notice clear or improved vision. Also, stare at one part of a letter on the test card, or try to see the whole letter all alike at one time. This invariably lowers the vision and may cause the letter to disappear. Staring, eye immobility cause strain, blurred vision. Shift, move the eyes, 'visual attention' from part to part on the letter and from letter to letter on the test card and experience relaxation, clear vision.

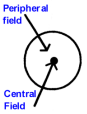
FUNDAMENTALS OF TREATMENT

ALL errors of refraction and many other eye troubles are cured by rest; but there are many ways of obtaining this rest, and a ll patients cannot do it in the same way. Sometimes a long succession of patients are helped by the same method, and then will come one who does not respond to it at all.

+Closing, Resting the Eyes.—The simplest way to rest the eyes is to close them for a longer or shorter period and think about something agreeable. This is always the first thing that I tell patients to do, and there are very few who are not benefited by it temporarily.

+Palming.—A still greater degree of rest can be obtained by closing and covering the eyes so as to exclude all the light. Both eyes are closed and then cover the eyes with the palms of the left and right hands with the fingers crossing over the center of the forehead. The mere exclusion of the impressions of sight is often sufficient to produce a large measure of relaxation. Palm gently, no pressure on the eyes.

In other cases the strain is increased. As a rule, successful palming involves a knowledge of various other means of obtaining relaxation. The mere covering and closing of the eyes is useless unless at the same time mental rest is obtained. When a patient palms perfectly, he sees a field so black that it is impossible to remember, imagine, or see, anything blacker, and when able to do this he is cured. It should be borne in mind, however, that the patient's judgment of what is a perfect black is not to be depended upon. While palming; imagining a happy, pleasant scenery, objects, color, positive thoughts can produce relaxation. Seeing black is not mandatory.



The center of the visual field is clearest. The peripheral field is less clear. This is normal vision.

+Central Fixation.—When the vision is normal the eye sees one part of everything it looks at best and every other part worse in proportion as it is removed from the point of maximum (central, macula/fovea) vision. When the vision is imperfect it is invariably found that the eye is trying to see a considerable part of its field of vision equally well at one time. This is a great strain upon the eye and mind, as anyone whose sight is approximately normal can demonstrate by trying to see an appreciable area all alike at one time. At the near-point the attempt to see an

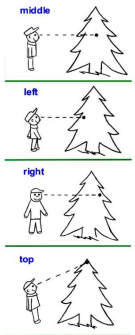
B

area even a quarter of an inch in diameter in this way will produce discomfort and pain. This is why the eye must shift. Shift from small part to small part on an object for relaxation and clear vision. Anything which rests the eye tends to restore the normal power of central fixation. It can also be regained by conscious practice, and this is sometimes the quickest and easiest way to improve the sight. When the patient becomes conscious that he sees one part of his field of vision better than the rest, it usually becomes possible for him to reduce the area seen best. If he looks from the bottom of the 200 letter (Big C on the eyechart) to the top, for instance, and sees the part not directly regarded worse than the part fixed, he may become able to do the same with the next line of letters, and thus he may become able to go down the card until he can look from the top to the bottom of the letters on the bottom line and see the part not directly regarded worse. (The part directly regarded is in the central field and is seen best.) In that case he will be able to read the letters. Try this on the dots on the letter E; look at the dot on the top of the E. The central field (eyes fovea) is moving on that dot and it is seen clearest. Next; look at the dot on the bottom. The eyes central field (eyes fovea) is now moving on that dot and it is seen clearest. On the principle that a burnt child dreads the fire, it is a great help to most patients to consciously increase the degree of their eccentric fixation. For when they have produced discomfort or pain by consciously trying to see a large letter, or a whole line of letters, all alike at one time, they unconsciously try to avoid the lower degree of eccentric fixation which has become habitual to them. They then experience central-fixation. Most patients, when they become able to reduce the area of their field of maximum vision, are conscious of a feeling of great relief in the eyes and head and even in the whole body. Shift=move that small area (central field, which is actually the central point) part to part on objects. Practice shifting dot to dot on the pictures.



Look at the dot on the top of the E.
The dot is in the center of the visual field and is clearest. The dot on the bottom is in the peripheral field and is less clear. Shift dot to dot seeing one dot clearest at a time.

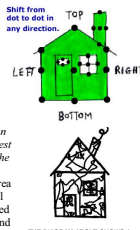
Face the object you want to see. Move the eyes, central field from part to part on the object. The man faces the part of the object he wants to see, then moves the eyes visual attention from part to part on that area. Blink, relax.



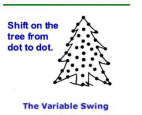
Since small objects cannot be seen without central fixation, the reading of fine print, when it can be done, (with relaxation, without effort, no squinting, strain) is one of the best of visual exercises, and the dimmer the light in which it can be read without effort and the closer to the eye it can be held the better. Reading fine print can prevent, cure cataracts, presbyopia, myopia.

(Practice reading fine print in the sunlight for healthy eyes, increased clarity. No eyeglasses, no sunglasses.)

+Shifting and Swinging.—The eye with normal vision never regards a point for more than a fraction of a second, but shifts rapidly from one part of its field to another, thus producing a slight apparent movement, or *swing*, of all objects regarded. The eye with imperfect sight always tries to hold its points of fixation, just as it tries to see with maximum vision a larger area than nature intended it to see. *(The word field in the above paragraph pertains to the scenery, objects in your environment the eyes see. The eyes entire visual field, central and peripheral moves with the eyes; the eyes moving the small central field from object to object and part to part on objects in the scenery. The eyes use the central field to see best, clearest because the eyes fovea centralis with its many cones in the center of the macula produces the clearest vision in the central field = Central-Fixation.)* The bad habit of holding a point or trying to see a larger area than nature intended, (trying to see all objects in the scenery and/or all parts of a object at the same moment, without shifting) can be corrected by consciously imitating the unconscious shifting of the normal eye and realizing the swing produced by this movement. At first a very long shift may be necessary, as from one end of a line of letters to another, in order to produce a swing; but sometimes even this is not sufficient. In such cases patients are asked to hold one hand before the face while moving the head and eyes rapidly from side to side, when they seldom fail to observe an apparent movement of the hand. Some patients are under such a strain, however, that it may be weeks before they are able to do this. After the apparent movement of the hand has been observed, patients become able to realize the swing resulting from slighter movements of the eye until they are able to look from one side to another of a letter of diamond type and observe that it seems to move in a direction contrary to the movement of the eye. A mental picture of a letter can be observed to swing precisely as can a letter on the test card and, as a rule, mental shifting and swinging are easier at first than visual. The realization of the visual swing can, therefore, be cultivated by the aid of the mental swing. It is also an advantage to have the patient try to look continually at some letter, or part of a letter, and note that it quickly becomes blurred or disappears. (Staring, not



THE DIAGRAM ABOVE SHOWS A EXAMPLE OF THE NATURAL SHIFTING PATTERN OF THE EYES. NOTICE THE EYES MOVE FREELY ON THE HOUSE IN A VARIETY OF PATTERNS, DIRECTIONS.





Place the finger in front of the face. Move the head-eyes left and right and see the finger/hand move in the opposite direction.

C

shifting.) When he thus demonstrates that staring lowers the vision he becomes better able to avoid it. When visual or mental swinging is successful, everything one thinks of appears to have a slight swing. This I have called the *universal swing*. Most patients get the universal swing very easily. Others have great difficulty. The latter class is hard to cure.

Practice shifting dot to dot (part to part) on the pictures. Then practice on any pictures and real objects. *Do not imagine dots on pictures, objects. The pictures with dots in this book are only for practice, to learn shifting, central-fixation.*

BETTER EYESIGHT

MAY, 1926

Demonstrate - Swinging



THAT the **long swing** not only improves the vision, but also relieves or cures pain, discomfort and fatigue. Stand with the feet about one foot apart, facing squarely one side of the room. Lift the left heel a short distance from the floor while turning the shoulders, head, and eyes (entire body) to the right, until the line of the shoulders is parallel with the wall. Now turn the body (shoulders, head, eyes) to the left, after placing the left heel upon the floor and raising the right heel. Alternate looking, turning (swinging) from the right wall to the left wall, being careful to move the head and eyes with the movement of the shoulders. When the swing is practiced easily, continuously, without effort and without paying any attention to moving objects, one soon becomes conscious that the long swing relaxes the tension of the muscles and nerves. It relaxes the body, eyes, mind, neck, improves eye movement, improves movement alignment of the bones in the spine, neck. When doing the long swing, stationary objects move with varying degrees of rapidity. Objects located almost directly in front of you, closest to you appear to move with express train speed, moving past you in the opposite direction and should be very much blurred. It is very important to make no attempt to see clearly objects which seem to be moving very rapidly. Don't stop the swing, don't lock the eyes, visual attention onto the objects. Just relax, swing and let the objects swing by.

The long swing seems to be very helpful to patients who suffer from eyestrain during sleep. By practicing the long swing fifty times or more just before retiring and just after rising in the morning, eyestrain during sleep has been prevented or relieved. It is remarkable how quickly the long swing relieves or prevents pain. I know of no other procedure which can compare with it. The long swing has relieved the pain of facial neuralgia after operative measures had failed. Some patients who have suffered from continuous pain in various parts of the body have been relieved by the long swing, at first temporarily, but by repetition the relief has become more permanent. Hay fever, asthma, sea-sickness, palpitation of the heart, coughs, acute and chronic colds are all promptly cured by the long swing.

With practice; a shorter swing can be done; the shorter the swing, the more the improvement in the clarity of vision will be. See the Sway for examples of a short swing; move side to side, left and right without turning left and right. See picture. >
Just look forward and sway 1 foot, then 6 inches, then 2, 1 inches, then try ½ inch and see a small swing. Shift left and right on a small letter on the eyechart, then a fine print letter for a tiny shift, seeing a tiny swing. Relax, blink.



Memory - When the sight is normal the mind is always perfectly at rest, and when the memory is perfect the mind is also at rest. Therefore it is possible to improve the sight by the use of the memory. Anything the patient finds is agreeable to remember is a rest to the mind, but for purposes of practice a small black object, such as a period or a letter of fine diamond type, **(E, O)** is usually most convenient. The most favorable condition for the exercise of the memory is, usually, with the eyes closed and covered, but by practice it becomes possible to remember equally well with the eyes open.

When patients are able, with their eyes closed and covered, to remember perfectly a letter of diamond type, it appears, just as it would if they were looking at it with the bodily eyes, to have a slight movement, (due to the shift of the eyes when open or closed) while the openings appear whiter than the rest of the background. If they are not able to remember it, they are told to shift consciously from one side of the letter to another and to consciously imagine the opening whiter than the rest of the background. When they do this, the letter usually appears to move in a direction contrary to that of the imagined movement of the eye, and they are able to remember it indefinitely. (Notice when imagining shifting on a letter with the eyes closed-the eyes move as if shifting on the letter with the eyes open.)



If, on the contrary, they try to fix the attention on one part of the letter, or to think of two or more parts at one time, it soon disappears, demonstrating that it is impossible to think of one point continuously, or to think of two or more points perfectly at one time, just as it is impossible to look at a point continuously, or to see two points perfectly at the same time. Persons with no visual memory are always under a great strain and often suffer from pain and fatigue with no apparent cause. As soon as they become able to form mental pictures, either with the eyes closed or open, their pain and fatigue are relieved.

D

Imagination - Imagination is closely allied to memory, for we can imagine only as well as we remember, and in the treatment of imperfect sight the two can scarcely be separated. Vision is largely a matter of imagination and memory. And since both imagination and memory are impossible without perfect relaxation, the cultivation of these faculties not only improves the interpretation of the pictures on the retina but improves the pictures themselves. When you imagine that you see a letter on the test card, you actually do see it because it is impossible to relax and imagine the letter perfectly and, at the same time, strain and see it imperfectly. The following method of using the imagination has produced quick results in many cases:

The patient is asked to look at the largest letter on the test card at the near point, and is usually able to observe that a small area, about a square inch, appears blacker than the rest, and that when the part of the letter seen worst is covered, part of the exposed area seems blacker than the remainder. When the part seen worst is again covered, the area at maximum blackness is still further reduced. When the part seen best has been reduced to about the size of a letter on the bottom line, the patient is asked to imagine that such a letter occupies this area and is blacker than the rest of the letter. Then he is asked to look at a letter on the bottom line and imagine that it is blacker than the largest letter. Many are able to do this and at once become able to see the letters on the bottom line.

Flashing - Since it is effort that spoils the sight, many persons with imperfect sight are able, after a period of rest, to look at an object for a fraction of a second. If the eyes are closed before the habit of strain reasserts itself, permanent relaxation is sometimes very quickly obtained. This practice I have called *flashing*, and many persons are helped by it who are unable to improve their sight by other means. The eyes are rested for a few minutes, by closing or palming, and then a letter on the test card, or a letter of fine diamond type, if the trouble is with near vision, is regarded for a fraction of a second. Then the eyes are immediately closed and the process repeated.

Better Eyesight Magazine

September, 1923

Blinking - It is a rest to the eyes to close them and keep them closed for a few minutes or a half hour or longer. When the eyes are open the vision is usually improved for a moment or longer. The normal eye can look at a small letter of the Snellen Test Card and see it continuously but when it does so the letter is always moving and the eyes are not kept open all the time. Closing the eyes effectually dodges perfect or imperfect sight. Usually unconsciously the normal eye closes and opens quite frequently and at irregular intervals and for very short spaces of time. Most people can demonstrate that when they regard a letter that they are able to see quite clearly it is possible for them to consciously close their eyes and open them quick enough and see the letter continuously. This is called Blinking and it is only another name for dodging. Dodging what? Dodging the tendency to look steadily at things all the time. All the methods which have been recommended for the improvement of the vision, central fixation, palming, swinging, blinking shifting can all be grouped under the one word—dodging. One of the characters in "Oliver Twist," by Charles Dickens, was called the "Artful Dodger." Persons with good sight may not be artful but they certainly are good dodgers.

The normal eye when it has normal sight, blinks quite frequently. By blinking is meant closing the eyelids and opening them so quickly that neither the patient nor his observers notice the fact. The moving pictures have shown that in some cases the eyes were closed and opened five times in one second. This is done unconsciously and is rather more than I can do consciously. Blinking is necessary in order to maintain normal vision continuously, because if one consciously prevents blinking the vision for distance or the ability to read fine print are modified. It is interesting to me how blinking, which is so necessary for good vision, has been so universally ignored by the writers of books on diseases of the eyes. Blinking is a rest, it prevents fatigue, and very important, it improves the sight in myopia, and helps to maintain good vision more continuously.

Blinking causes the eyes to shift automatically. Shifting keeps the eyes relaxed, in movement, the eyesight clear.

Reading Familiar Letters - The eye always strains to see unfamiliar objects, and is always relaxed to a greater or lesser degree by looking at familiar objects. Therefore, the reading every day of small familiar letters at the greatest distance at which they can be seen, is a rest to the eyes and is sufficient to cure children under twelve who have not worn glasses as well as some older children and adults with minor defects of vision.

In the treatment of imperfect sight these fundamental principles are to a great extent interdependent. They cannot be separated as in this article. It is impossible, for instance, to produce the illusion of a swing unless one possesses a certain degree of central fixation. That is, one must be able to shift from one point to another and see the point shifted from less distinctly than the one directly regarded. Successful palming is impossible without mental shifting and swinging and the use of the memory and imagination.

Dr. Bates taught Two Ways to learn Central Fixation;

 # 1 - Noticing the point, 'part of the object' not directly regarded is seen worse, less clear. The point not regarded is in the peripheral field. While doing this the eyes are on the part in the central field but the mental, visual attention is also on the part not directly regarded in the peripheral field. This is not done all the time, it's not regular use of the eyes. It's only a short practice to notice which area is less clear.

E

 # 2 - Noticing the point 'part of the object' directly regarded is seen best, clearest. The point directly regarded is in the central field. The person's eyes, mental and visual attention is on the part in the central field. As eyesight improves the central field is perfectly clear.

When the eyesight is very unclear, often the peripheral field, though unclear is clearest. The central field is unclear and less clear than the peripheral. This is abnormal eye, vision function and leads to increased blur. Returning best clarity to the central field is normal eye function and brings perfect clear eyesight.
When the eyesight is very unclear, some people find **# 1** easier but; developing a habit of looking at the central field while also looking at the peripheral field by trying to use the central and peripheral fields of the eyes retina-eyes visual field, looking at, thinking about two points, 'two parts of a object or two objects' at the same time causes; tension, strain in the eyes, mind, head, eye muscles, body and unclear eyesight. It causes diffusion, eccentric fixation which is the opposite of central fixation. It has the tendency to cause staring, interferes with normal eye movement.

I prefer **# 2** because; the eyes and mind are at rest, relaxed, functioning normal, best and eyesight is perfectly clear when the eyes, mental and visual attention is on the central field, seeing, noticing that the central field, point directly regarded is most clear. Using the eyes central area of the retina 'fovea', the eyes central field. Color is also brightest, best in the central field. With practice, relaxation, the central field will become perfectly clear, better than 20/20 and this also improves the peripheral field to its maximum clarity, function.

It is normal for the peripheral field (the point not directly regarded to be less clear. The brain, eyes do sense images in the peripheral field but normally functioning eyes, the mental, visual attention is in the central field to maintain relaxation and clear eyesight. The central field moves automatically with the eyes. If you want to see a object that's in the peripheral field; turn, move the eyes, face to look directly at the object, placing it in the central field and see it perfectly clear. The eyes are never 'fixed' on a point, but move continually point to point. Modern teachers use different words to describe central-fixation to prevent students from misunderstanding the word. Avoid fixing the eyes, vision on a object/staring at an object. Combine central fixation with shifting; let the eyes move upon the object of visual attention. Let the eyes move from object to object.



Better Eyesight Magazine

May, 1930

Suggestions to Patients

By Emily C. A. Lierman, Bates

The Use Of The Snellen Test Card - Test Card Practice

Editor's Note - The following is taken from Mrs. Bates' book, "Stories From The Clinic". Although the majority of our subscribers have Mrs. Bates' book, we believe that these suggestions can always be reread with benefit.

1 – Every home should have a test card.

2 – It is best to place the card permanently on the wall in a good light.

3 – Each member of the family or household should read the card every day.

4 – It takes only a minute to test the sight with the card. If you spend five minutes in the morning practicing with the card, it will be a great help during the day.

5 – Place yourself ten feet from the card and read as far as you can without effort or strain. Over each line of letters are small figures indicating the distance at which the normal eye can read them. Over the big C at the top of the card is the figure 200. The big C, therefore, should be read by the normal eye at a distance of two hundred feet.

If you can read this line at ten feet, your vision would be 10/200. The numerator, top number of the fraction is always the distance of the card from the eyes. The denominator, bottom number always denotes the size, number of the line read. If you can only read the line marked 40 at ten feet, the vision is 10/40.

6 – If you can only see to the fifth line, at ten feet for example, notice that the last letter on that line is a R.
Now close your eyes, cover them with the palms of the hands and remember the R. If you will remember that the left side is straight, the right side partly curved and the bottom open, you will get a good mental picture of the R with your eyes closed. Shift part to part on the letter in the mind; left and right, top, bottom, center, any direction, to any part. This mental picture will help you

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to see the letter directly underneath the R, which is a T. Shift part to part on the letter T. Shift continually, easy, relaxed from one small part to another.

7 – Shifting is good to stop the stare. If you stare at the letter T, you will notice that all the letters on that line begin to blur. It is beneficial to close your eyes quickly after you see the T, open them, and shift to the first figure on that line, which is a 3. Then close your eyes and remember the 3. You will become able to read all the letters on that line by closing your eyes for each letter. Shifting on the letter when the eyes are open, and when closed using the memory, imagination keeps the image of the letter in the mind clear and the image seen by the eyes clear.
Repeat this step for each line on the chart; look at the last letter on the line you can see clear. Close and cover the eyes (palm) and shift on the image of the clear letter in the mind, memorize a clear picture of the letter. Open the eyes and look at the letter on the line under it and see it clear.

Then practice at 20 feet, then 30, 40… (Practice at closer distances to start if needed and work toward farther distances.)

8 – Keep a record of each test in order to note your progress from day to day.
Fraction; Top letter is for the distance from the chart.
Bottom letter is the size of the letter, line on the chart.
5 minutes practice is beneficial. Time for testing the eyesight with the card can be only 1-2 minutes. The normal eye with clear vision can read a test card in less than 10 to 20 seconds. 5 seconds or less if not speaking each letter aloud.

9 – When you become able to clearly read the bottom ten line with each eye separately and both eyes together at ten feet; your vision is normal for the distance, 10/10.
At 20 feet=20/10 vision. At 40 feet=40/10. 20/20= seeing the 20 line at 20 feet

10 – The distance of the Snellen test card from the patient is a matter of considerable importance. However, some patients improve more rapidly when the card is placed fifteen or twenty feet away, while others fail to get any benefit with the card at this distance. In some cases the best results are obtained when the card is as close as one foot. Others with poor vision may not improve when the card is placed at ten feet or further, or at one foot or less, but do much better when the card is placed at a middle distance, at about eight feet. Some patients may not improve their vision at all at ten feet, but at one foot. While some patients are benefited by practicing with the card daily, always at the same distance, there are others who seem to be benefited when the distance of the card from the patient is changed daily.
Experiment with the test card placed at a variety of close, middle, far distances.

For close reading vision; practice at all distances, then closer and closer up to 6, 4, 3... inches from the eyes seeing small objects, fine print clear. See Dr. Bates fine print directions in the book.

Better Eyesight Magazine



SUN TREATMENT, SUNNING - The eyes need sunlight for perfect health, clear eyesight. Sunlight relaxes, rests the eyes, mind and body, keeps normal eye tolerance to bright sunlight, improves energy flow, strength, mood, emotions, thinking, sleep and health of the body, mind, eyes.

Some persons are unable to see in a bright light. Their vision is usually improved by the sun treatment. An important part of the routine treatment is the use of direct sunlight. It is best to let the eyes become accustomed to the sun by mild treatment at first.

Sit or stand in the sun with the eyes closed with the face, eyes turned toward the strong light of the sun. Expose the closed eyes to the sun, a few minutes at a time by letting it shine directly on the closed eyelids and slowly move the head (and eyes with the head in the same direction) a short distance side to side. Forget about the eyes, think of something pleasant, let the mind drift from one happy thought to another or think of nothing and just enjoy the sun. Before opening the eyes, palm for a few minutes.

The head, eye movement moves the sunlight evenly over the entire retina. Moving light activates the cones, rods, all parts of the eyes, improving their function and activates tiny, fast saccadic eye movements, prevents strain and over concentration of the sun's rays on the eye. Practice for half an hour or longer whenever possible. Morning, daytime, sunset, 2-10 minutes is also beneficial. Now turn the back to the sun and open the eyes. There should be relief at once. The eyes are rested, strengthened and gradually grow accustomed to the strong light of the sun. At first there may be slight discomfort which usually disappears in a few minutes. By repetition, strong sunlight will be tolerated easily and benefit becomes greater and permanent.

Do the Long Swing or Sway (Rock) facing the sun with eyes closed. Then with eyes open facing the bright sky, trees, clouds.

When the eyes are used to the strong sunlight, raise the upper lid of one eye, look downward to cover the eyes pupil with the lower lid and let the sun shine on the sclera, white part of the eye. Stop to blink as needed. Relax. Repeat with the other eye.

Then, try it with both eyes, at the same time. Then look up, head back to keep direct sunlight from entering the pupil, pull the lower lids down and let the sun shine on the lower white area of the eyes. Get sunlight daily, often as possible without sunburn.

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When the sun is not shining, a strong electric light (I000 watts) is substituted. The patient sits about six inches from the light, or as near as he can without discomfort from the heat, allowing it to shine on his closed eyelids as in the sun treatment. (Do not use fluorescent light. Use full spectrum lights. Open windows, skylights is the best natural light. I prefer not to use artificial light, light bulbs when sunning due to the risk of the bulb popping, breaking by accident or burnout resulting in eye injury.) People who work in mines, where there is no sun, sooner or later develop inflammations of the interior of the eyes. The cloudiness of the lens from cataract is lessened by exposing the eyes to the direct rays of the sun.

EYE-SHADES (Avoid Sunglasses, Tinted, Colored and UV Blocking Lenses)



When the eyes are hypersensitive to light, one usually obtains immediate relief from the discomfort by the use of an eye-shade. This relief, however, is temporary, and very soon glasses are prescribed which seldom are a permanent benefit. The conditions are not favorable for normal vision when using eye-shades. The normal eye is not made uncomfortable in a good light. An eye-shade makes the eyes more sensitive to light and causes eyestrain. Patients who have used eye-shades habitually, are very difficult to cure. Sun treatment, Sunning when used properly, is often followed by quick relief.

Sun-Gazing - Open Eyed; Open eyed sunning is practiced by some religions, nationalities. Modern Natural Eyesight teachers advise closed eye sunning only due to depletion of the earth's ozone layer. Other teachers state it is beneficial to look at the sun or near the sun at the bright sky. The head and eyes are moved continually left and right and in other directions and the eyes blink to avoid staring and concentration of the sun on any one area of the eyes to avoid sunburn, overexposure. Time looking at the sun is limited and location on the planet, ozone, strength of the sun's light is considered.

Do not be in a hurry to look in the neighborhood of the sun. The strong glare may cause a temporary loss of vision, and other discomforts, after images which may continue for some hours or days before recovery. There is no danger of a permanent loss of vision by looking more or less directly at the sun. Good nutrition must be applied. Avoid all drugs, sinus sprays, chemicals, some herbs, food that can impair eye function, normal light tolerance. Other conditions apply. See the entire sunlight directions, end of this book and in the E-book sunlight chapter.

Shifting on Small Objects, Shifting on, Reading Tiny Letters, Fine Print Daily or 1-3 Times Week



Read the section on Fine Print for directions. Shift on and see small details of small objects (a flower, rock) and fine, tiny print clear at close reading distances. Improves close and distant eyesight by improving central-fixation, tiny shifting, relaxation and naturally returns an abnormal lengthened eye that causes myopia and an abnormal shortened eye that causes presbyopia to a normal round shape for clear eyesight. Fine print improves convergence, accommodation, divergence, un-accommodation, circulation in the eye, function, health of the eyes lens and ciliary muscle that controls the lens, can prevent cataracts, astigmatism, other eye problems and prevent need for eyeglasses.

Better Eyesight Magazine

June, 1925

Suggestions to Patients By Emily C. Lierman, A. Bates

1 - Palm in the morning while in bed.

2 - Take sun treatment for twenty minutes or longer every day.

3 - Mentally or physically, keep up that pendulum-like motion. (Long Swing, Sway and see Oppositional Movement 'The Swing' produced by the eyes Shift.) Practice shifting on close and far objects in a pleasant scene or an eyechart and see the opposite swing. Place the chart in the scenery.

4 - After sitting in the sun, hold the small card and flash the white spaces.

5 - What you do not see immediately, do not worry about.

6 - While practicing with the Seven Truths of Normal sight, always move the card slowly from side to side as you hold it six or eight inches from your eyes.

7 - To induce sleep when suffering from headache or nervous strain, close your eyes, remember the small F or T of the ten line of the test card and imagine it is moving slightly, about one-quarter of an inch, either up and down or to the left and right. (Shift small

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part to small part 'point to point' on the letter in the mind or, just let the eyes shift automatically on their own as you imagine the letter moving.)

8 - There is a right way and a wrong way to blink the eyes while practicing. Children like to hold up their two hands about ten or twelve inches apart, looking first at one hand and then at the other. In this way one blinks when looking at the right hand and again when looking at the left hand. The head should turn in the same direction with the eyes.

9 - Nearsighted patients sometimes get along faster in the cure of their eyes by using two similar test cards at the same time while practicing. One card is held in the hand while the other is five or ten feet away. The patient looks at a letter up close and imagines he sees the same letter on the distant card. Then the patient closes his eyes and imagines that letter perfectly. Having seen it perfectly up close, he becomes able by practice to see it just as well on the distant card.

Suggestions to Patients - June, 1930

1. If the vision of the patient is improved under the care of the doctor, and the patient neglects to practice, when he leaves the office, what he is told to do at home, the treatment has been of no benefit whatever. The improved vision was only temporary. Faithful practice permanently improves the sight to normal.

2. If the patient conscientiously practices the methods, as advised by the doctor, his vision always improves. This applies to patients with errors of refraction, as well as organic diseases.

3. For cases of squint (crossed, wandering eyes) we find that the long swing is beneficial to adults and to children.

4. When a patient suffers with cataract, palming is usually the best method of treatment, and should be practiced many times every day.

5. All patients with imperfect sight unconsciously stare, and should be reminded by those who are near to them to blink often. To stare is to strain. Strain is the cause of imperfect sight. The following rules will be found helpful if faithfully observed:—

6. While sitting, do not look up without raising your chin. Always turn your head in the direction in which you look. Blink often.

7. Do not make an effort to see things more clearly. If you let your eyes alone, things will clear up by themselves.

8. Do not look at anything longer than a fraction of a second without shifting.

9. While reading, do not think about your eyes, but let your mind and imagination rule.

10. When you are conscious of your eyes while looking at objects at any time, it causes discomfort and lessens your vision. This is why it is good to learn, consciously practice shifting, central fixation, then; don't practice-let the eyes do it automatically, on their own without thinking about the eyes, clarity of vision.

11. It is very important that you learn how to imagine stationary objects to be moving, without moving your head or your body.

12. Palming is a help, and I suggest that you palm for a few minutes many times during the day, at least ten times. At night just before retiring, it is well to palm for half an hour or longer.

For Suggestion # 11; Most of the time the head, body moves with the eyes. This keeps relaxed and perfect eye shifting with central fixation. Seeing stationary objects move means; seeing the 'swing' of opposite movement; the object the eyes shift on produces an illusion-appears to move in the opposite direction that the eyes shift to. Shift from left to right >; the object moves left <. Shift from right to left <; the object moves right >. Moving the head, body with the eyes increases appearance of opposite movement, especially for close objects. Emily is saying; ability to see the opposite movement even when the head does not move means that the eyes are shifting with perfect relaxation, central-fixation from one point to another. It is easy to see opposite movement on close objects. Far objects also show opposite movement but; if the head moves a lot as when doing the sway, long swing-moving left and right; far objects can appear to move with the eyes, head/body especially when there is a closer object in front of the farther object. So; when looking for opposite movement of far objects; keep the head movement with the eyes no longer that the shift of the eyes from one point on the object to another. Perfect central-fixation. (This is also done when looking at, shifting on a close object. Read detailed information at the end of Emily's section in this book. Read Dr. Bates Better Eyesight Magazines for descriptions of many different swings, the swing of oppositional and same direction movements;

I

BETTER EYESIGHT - January, 1924 - THE VARIABLE SWING:

Some years ago a school teacher called for treatment. She had a conical cornea, which is a very serious disease of the front part of the eye. The cornea bulges and becomes conical. The apex of the cornea becomes ulcerated, and may become perforated with loss of aqueous. Various operations have been recommended, but the results have been usually very unsatisfactory. The vision of the patient was 1/20 of the normal. She was very much benefited by the variable swing. The variable swing is shorter at twenty feet, or further (far distances) than it is at six inches. In this swing the patient holds the forefinger of one hand to one side of the temple, and while looking at the Snellen Test Card, the head is moved from side to side a short distance. The patient when looking straight at the card, was able to imagine the finger moving from side to side an inch or more, while the test card moved a much shorter distance, or did not appear to move at all. By shortening the movement of the head, the swing became still shorter, until the finger seemed to move no more than its own width, and the card seemed stationary. It was very remarkable how her vision improved with the improvement in the swing. At the end of about an hour of the variable swing, her vision had improved to 1/2 with flashes of normal sight occasionally, which was a great deal better than the vision she obtained with her glasses.
There are some people who can practice the variable swing and obtain good results, while there are others who are not able to use it with any help or comfort. It is difficult for me to explain why or how, some people obtain good results from this form of a swing, while others require supervision with a great deal of mental gymnastics from their medical adviser.

NOVEMBER, 1922

THE VARIABLE SWING

(Oppositional Movement, Conical Cornea Cured)



RECENTLY I have been impressed very much by the value of the variable swing. **By the variable swing is meant the ability to imagine a near object with a longer swing than one more distant.** For example, a patient came to me with conical cornea, which is usually considered incurable. I placed a chair five feet away from her eyes, clearly on a line with the Snellen test card located 15 feet distant. When she looked at the Snellen test card and imagined the letters moving an inch or less (shifting on the letters) she could imagine the chair that she was not looking at moving quite a distance. As is well known; **the shorter the swing the better the sight**. Some persons with unusually good vision have a swing so short that they do not readily recognize it. This patient was able to imagine the chair moving an inch or less and the card on the wall moving a shorter distance. She became able to imagine the chair moving a quarter of an inch and the movement of the Snellen test card at 15 feet was so short that she could not notice it. In the beginning her vision with glasses was poor and without glasses was double, and even the larger letters on the Snellen test card were very much blurred. Now, when she imagined the chair moving a quarter of an inch and the Snellen test card moving so short a distance that she could not recognize it, the **conical cornea disappeared from both eyes and her vision became normal**. To me it was one of the most remarkable things I have seen in years. I know of no other treatment that has ever brought about so great a benefit in so bad a case. The variable swing is something that most people can learn how to practice at their first visit. Some people can do it better than others. The improvement depends directly upon their skill in practicing the variable swing.

JANUARY, 1926 - The VARIABLE SWING

Hold the forefinger of one hand six inches from the right eye and about the same distance to the right. Look straight ahead and move the head a short distance from side to side. The finger appears to move in the direction opposite to the movement of the head and eyes.

SHORT SWING: When the sight is normal, one can demonstrate the short swing. When it is imperfect, one can demonstrate only the longer swing. When a patient with imperfect sight regards the Snellen test card at ten or fifteen feet, he may be able to imagine one of the letters on the card to be swinging a quarter of an inch or less. The imagination of a shorter swing always improves the sight. Some patients can imagine the short swing better with their eyes closed than with them open. Alternate the imagination of the swing of the letter with the eyes closed and with them open. By repetition, the vision of the letter with the eyes open will improve (at first in flashes, later more continuously), if the memory of the short swing is perfect with the eyes closed.

JULY, 1928 - SHIFTING AND SWINGING

When shifting is done properly, it is practiced easily, without effort or strain. When one shifts from a point to the left to a point to the right, the swing produced is continuous, regular, and promotes relaxation. It is possible to shift with the eyes closed with as much benefit as with the eyes open. There are some people who cannot shift with the eyes open without a strain and yet they can shift or swing or imagine perfect sight with the eyes closed. Whenever the head and eyes are moved from side to side, one should imagine that stationary objects are moving in the opposite direction. This should be practiced at all times until the habit is obtained.

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JUNE, 1928 - VARIABLE SWING

The patients holds the forefinger of one hand six inches from the right eye and about the same distance to the right, as he moves the head a short distance from side to side. Look straight ahead. The finger should appear to move in the opposite direction to the movement of the head. This can also be done with the finger held on the left side or between the left and right eyes, at eye level. (Placing the finger to the side of the eye-face prevents the double illusion of the finger that is seen when looking to the distance with the finger in front of the face, between the eyes.)

The circular swing prevents the stare and relieves pain and fatigue;

Hold the forefinger of one hand about six inches in front of one eye and a few inches to the outer side of the face. Look straight ahead. By moving the head and eyes in a circular or an elliptical orbit, notice that the finger appears to move in the direction opposite to the movement of the head and eyes. Now realize that the hand must move with the finger because the hand and finger are fastened together. When one moves, the other moves in the same direction, up, down, to the right or left. The same fact is true of the arm fastened to the wrist. When the finger moves, the hand, wrist and arm in turn, all move and in the same direction. Likewise when the finger moves, the shoulder moves with it and other parts of the body fastened directly or indirectly to the finger. You may soon become able to imagine the chair on which you are sitting to be fastened indirectly to the finger. When one moves, the other always moves in the same direction. When you become able to imagine all things, one at a time to be moving with the finger, i.e., the universal swing, the stare is prevented and pain and fatigue disappear. The memory, imagination and vision are also improved. Distant objects will appear to move in the same direction the eyes, head, body move to. (The Figure Eight – Infinity Swing is a modern version of the circular and square swings.)

Seven Truths of Normal Sight

1—Normal Sight can always be demonstrated in the normal eye, but only under favorable condition.

2—Central Fixation: The letter or part of the letter regarded is always seen best.

3—Shifting: The point regarded changes rapidly and continuously.

4—Swinging: When the shifting is slow, the letters appear to move from side to side, or in other directions, with a pendulum-like motion. Optical drift, oscillations, saccadic... tiny automatic eye movements cause the object to show small movements in various directions and indicates normal, healthy eye, vision function.

5—Memory is perfect. The color and background of the letters, or other objects seen, are remembered perfectly, instantaneously and continuously.

6—Imagination is good. One may even see the white part of letters whiter than it really is, while the black is not altered by distance, illumination, size, or form, of the letters.

7—Rest or relaxation of the eye and mind is perfect and can always be demonstrated.

When one of these seven fundamentals is perfect, all are perfect.

All the functions of the visual system work together, are integrated. Practicing, improving one, improves all. Practice improving each one and all are greatly improved. Relax, Blink, Breathe abdominally, Shift, Central Fixation, Memory and Imagination, Oppositional Movement (The Swing), Shifting on Familiar Objects, Eyechart Letters, Flashing, Reading Fine Print, Sunning, daily exposure to Sunlight, Palming, Good Posture, Exercise, Diet…

Shifting back and forth (Switching) on objects at close and far distances with both eyes together, one eye at a time, some extra time with a eye that may have less clear vision, then both eyes together again is beneficial.

Free Natural Eyesight Improvement

Adults, children can experience free Natural Eyesight Improvement Training by watching how children (that have clear vision, when their eyes, visual system have developed) use their eyes: relaxed, their eyes move, 'shift' often, easily, clear vision occurs effortless, automatically without thinking about, controlling their eyes and vision. Do not let the child know you are watching their eyes because this might cause them to start thinking about their eyes, clarity of vision, try to control eye function and this will interfere with completely natural, normal eye function and visual clarity. Similar to a teacher placing a lot of pressure on a child to see an eyechart clear. The child must be allowed to see the chart in a relaxed state, memorize the letters. Same rule for adults testing the sight at the eye doctors or at home. Relaxation, good memory produces clear eyesight. Imitate, practice the child's correct eye function.

Clarification for the Variable Swing, top of the page; "Look straight ahead"; When you move the head side to side; the eyes move with the head side to side, in the same direction.

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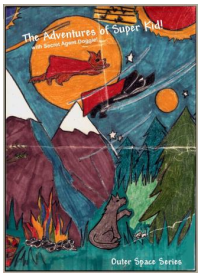


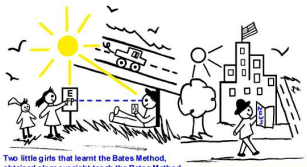
A new born, young baby's eyes move slow, less shifts as the visual system, brain, eyes are developing. The eyes, 'visual attention' move with less shifts upon objects as the baby's brain, eyes are becoming familiar with objects, developing, storing clear mental, memory pictures of each new object it encounters. A baby usually first practices this on its mother's face. When objects are memorized, mental pictures stored in the brain, then the next time the baby sees the objects they are familiar and the eyes move faster as the eyes shift quickly upon the familiar object. More shifts and small, tiny shifts occur on parts, details of the object. The vision is clear.
Reading comic books, any books with a lot of colorful pictures, interesting stories improves eye movement, memory, imagination, relaxation of the mind, eyes and the clarity of eyesight.
Encourage children to read comic books. School, college books should contain pictures to activate mental and visual interest, enjoyment when reading. The subject is easy to remember and school grades improve. Looking at pictures on paper is healthier for the eyes, brain function than computer screens.
Use the Adobe PDF E-Book to search for more examples, pictures for all these practices in Dr. Bates Better Eyesight Magazine and Clark Night's Books. Read Ophthalmologist Bates Better Eyesight Magazine Illustrated with 500 Pictures in the free color PDF E-book. Print it and read in the sunlight.

THE BLIND MAN

From Better Eyesight Magazine

Little Girls Cure Homeless Man of Blindness

Editor's Note. - This letter from a school teacher was just received, and seemed so worthwhile that we decided to make room for it in this issue. It substantiates Ms. Lierman's reports that those who know the method can improve the sight of others. We regret that we did not have time to obtain the permission of the writer to publish this article, and are therefore withholding her name.



Two little girls that learnt the Bates Method, obtained clear eyesight teach the Bates Method to a blind homeless man they found living outside under a bridge.
They cure the blindness, his eyesight and health are restored.
Treatment: Sunning, sunlight, palming, shifting and switching on letters on identical close and distant eyecharts, swinging, central fixation...
Children are often the best Natural Vision Improvement teachers.

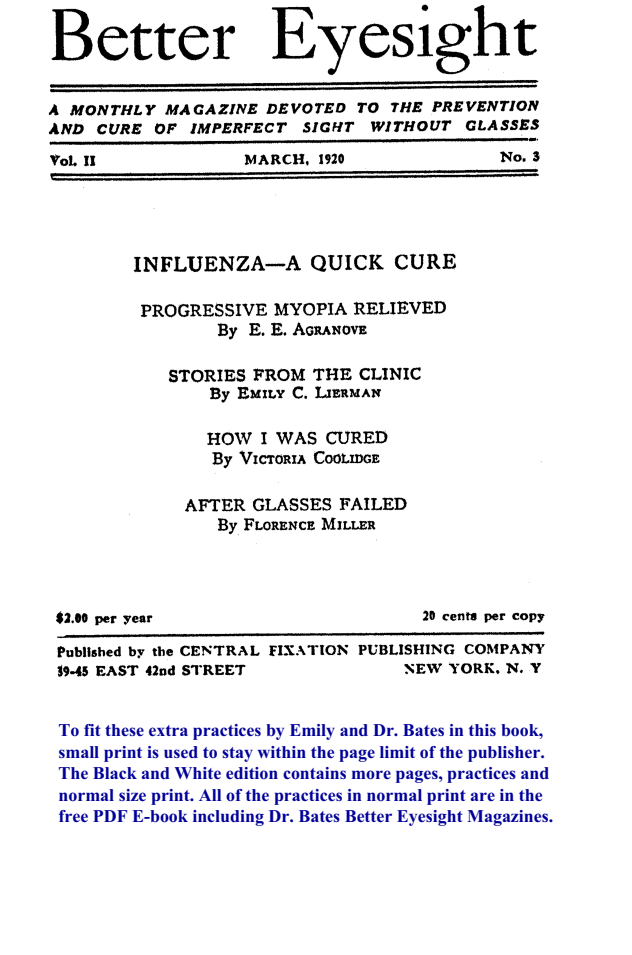
His blindness cured, he now reads the newspaper, walks the city on his own, looks for a job and continues to practice the Bates Method.

Dear Dr. Bates:

I cannot resist telling you what my little Edith Collins, aged twelve years, has done for a blind man that she picked up on the street. His eyes were very much sunken. She taught him to palm and sun-gaze. She and a little girl friend visited him in his hovel once or twice a week. Much of the time he was so ill that he kept to his bed, but had this so placed that the sun shone on his eyes. Little by little his eyes came forward. He palmed faithfully and swung a chart that was given to him.

A visiting nurse was telling him it was all "bunk" one day, as Edith entered. She spoke to the nurse and informed her it was not bunk, and that if she (the nurse) would come back in two or three months she would find out for herself. Well, up to July the reports were that he was gradually looking better, and his eyes seemed fuller. When school opened, Edith came into my room and said, "He sees!" I had forgotten about the man, and for a minute I wondered what she meant. She told me that she had met this man on the street a week or two ago - he was very happy - sees to get around, can read headlines in the papers, and can pick out the smaller words in spots. He has promised her that he will not stop exercising till he obtains perfect sight. He also told Edith that if he had not met her, he would still be a blind man begging for food. Now he intends to find work in some other city. Isn't this a **wonderful thing for a little girl to do**? Of course, if it were not for Edith, the man would still have been blind. Children do not discriminate as to whether a man is a beggar, a worker or worthy. To them there are no differences. They scatter the good into every nook and cranny, and what is more, if it had not been for the revolutionary discovery of this very, very natural way to see and think, I would not have been able to have carried it on to the children, who so unquestionably take to the truth when presented to them.

I have been so excited about this that I had to write you at once!



Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. II MARCH, 1920 No. 3

INFLUENZA—A QUICK CURE

PROGRESSIVE MYOPIA RELIEVED
By E. E. Agranove

STORIES FROM THE CLINIC
By Emily C. Lierman

HOW I WAS CURED
By Victoria Coolidge

AFTER GLASSES FAILED
By Florence Miller

$2.00 per year 20 cents per copy

Published by the CENTRAL FIXATION PUBLISHING COMPANY
39-45 EAST 42nd STREET NEW YORK, N. Y

To fit these extra practices by Emily and Dr. Bates in this book, small print is used to stay within the page limit of the publisher. The Black and White edition contains more pages, practices and normal size print. All of the practices in normal print are in the free PDF E-book including Dr. Bates Better Eyesight Magazines.

Suggestions

By EMILY A. BATES

1. If the vision of the patient is improved under the care of the doctor, and the patient neglects to practice, when he leaves the office, what he is told to do at home, the treatment has been of no benefit whatever. The improved vision was only temporary. Faithful practice permanently improves the sight to normal.
2. If the patient conscientiously practices the methods, as advised by the doctor, his vision always improves. This applies to patients with errors of refraction, as well as organic diseases.
3. For cases of squint we find that the long swing is beneficial to adults and to children.
4. When a patient suffers with cataract, palming is usually the best method of treatment, and should be practiced many times every day.
5. All patients with imperfect sight unconsciouly stare, and should be reminded by those who are near to them to blink often. To stare is to strain. Strain is the cause of imperfect sight.

The following rules will be found helpful if faithfully observed:—

6. While sitting, do not look up without raising your chin. Always turn your head in the direction in which you look. Blink often.
7. Do not make an effort to see things more clearly. If you let your eyes alone, things will clear up by themselves.
8. Do not look at anything longer than a fraction of a second without shifting.
9. While reading, do not think about your eyes, but let your mind and imagination rule.
10. When you are conscious of your eyes while looking at objects at any time, it causes discomfort and lessens your vision.
11. It is very important that you learn how to imagine stationary objects to be moving, without moving your head or your body.
12. Palming is a help, and I suggest that you palm for a few minutes many times during the day, at least ten times. At night just before retiring, it is well to palm for half an hour or longer.

Clarification for #11; The head does move with the eyes most all of the time. See next 2nd page for entire description of eye movement, head movement and the appearance of opposite movement of stationary objects .

Imagine and SEE the opposite movement, 'The Swing'

The pictures below and on the next page are from Emily A. Bates Fundamental Principles and Suggestions. She added this to the last pages of the final original 1940 print edition of Perfect Sight Without Glasses. (Fine print is used due to page limit by the printer for the color editions. Black & White books contain normal size print and more pages.)

CHAPTER XXXIII

HOW TO DEMONSTRATE THE FUNDAMENTAL PRINCIPLES OF TREATMENT

THE object of all the methods used in the treatment of imperfect sight without glasses is to secure rest or relaxation, of the mind first and then of the eyes. Rest always improves the vision. Effort always lowers it. Persons who wish to improve their vision should begin by demonstrating these facts.

To demonstrate the strain lowers the vision, think of something disagreeable, some physical discomfort, or something seen imperfectly. When the eyes are opened, it will be found that the vision has been lowered. Also stare at one part of a letter on the test card, or try to see the whole letter all alike at one time. This invariably lowers the vision, and may cause the letters to disappear. Another symptom of strain is a twitching of the eyelids which can be seen by an observer and felt by the patient with the fingers. This can usually be corrected if the period of rest is long enough. Many persons fail to secure a temporary improvement of vision by closing their eyes, because they do not keep them closed long enough. Children will seldom do this unless a grown person stands by and encourages them. Many adults also require supervision.

CLOSING THE EYES

The simplest way to rest the eyes is to close them for a longer or shorter period and think about something

agreeable. This is always the first thing that I tell patients to do and there are very few who are not benefited by it temporarily.

PALMING

A still greater degree of rest can be obtained by closing and covering the eyes so as to exclude all the light. The mere exclusion of the impression of sight is often sufficient to produce a large measure of relaxation. In other cases the strain is increased. As a rule, successful palming involves a knowledge of various other means of obtaining relaxation. The mere covering and closing of the eyes is useless unless at the same time mental rest is obtained. When a patient palms perfectly he sees a field so black that it is impossible to remember, imagine, or see anything blacker, and when able to do this he is cured. It should be borne in mind, however, that the patient's judgment of what is a perfect black is not to be depended upon.

THE LONG SWING

Demonstrate—That the long swing not only improves the vision, but also relieves or cures pain, discomfort and fatigue.

Stand with the feet about one foot apart, facing squarely one side of the room. Lift the left heel a short distance from the floor while turning the shoulders, head, and eyes to the right, until the line of the shoulders is parallel with the wall. Now turn the body to the left after placing the left heel upon the floor and raising the right heel. Alternate looking from the right wall to the left wall, being careful to move the head and eyes with the movement of the shoulders. When practiced easily, continuously, without effort and without paying any at-

tention to moving objects, one soon becomes conscious that the long swing relaxes the tension of the muscles and nerves.

Stationary objects move with varying degrees of rapidity. Objects located almost directly in front of you appear to move with express train speed and should be very much blurred. It is very important to make no attempt to see clearly objects which seem to be moving very rapidly.

The long swing seems to help patients who suffer from eyestrain during sleep. By practicing the long swing fifty times or more just before retiring and just after rising in the morning, eyestrain during sleep has been prevented or relieved. It is remarkable how quickly the long swing relieves or prevents pain. I know of no other procedure which can compare with it. The long swing has relieved the pain of facial neuralgia after operative measures had failed. Some patients who have suffered from continuous pain in various parts of the body have been relieved by the long swing, at first temporarily, but by repetition the relief has become more permanent. Hay fever, asthma, sea-sickness, palpitation of the heart, coughs, acute and chronic colds are usually relieved by the long swing.

MEMORY

When the sight is normal the mind is always perfectly at rest, and when the memory is perfect the mind is also at rest. Therefore it is possible to improve the sight by the use of the memory. Anything the patient finds it agreeable to remember is a rest to the mind, but for purposes of practice a small black object, such as a period or a letter of fine print, is usually most convenient. The most favorable condition for the exercise of the memory is, usually, with the eyes closed and covered, but by practice it becomes possible to remember equally well with the eyes open. When patients are able, with their eyes closed and covered, to remember perfectly a letter of fine print, it appears, just as it would if they were looking at it with the bodily eyes, to have a slight movement, while the openings appear whiter than the rest of the background. If they are not able to remember it, they are told to shift consciously from one side of the letter to another and to consciously imagine the opening whiter than the rest of the background. When they do this, the letter usually appears to move in a direction contrary to that of the imagined movement of the eye, and they are able to remember it indefinitely. If, on the contrary, they try to fix the attention on one part of the letter, or to think of two or more parts at one time, it soon disappears, demonstrating that it is impossible to think of one point continuously, or to think of two or more points perfectly at one time, just as it is impossible to look at a point continuously, or to see two points perfectly at the same time. Persons with no visual memory are always under a great strain and often suffer from pain and fatigue with no apparent cause. As soon as they become able to form mental pictures, either with the eyes closed or open, their pain and fatigue are relieved.

IMAGINATION

Imagination is closely allied to memory, for we can imagine only as well as we remember, and in the treatment of imperfect sight the two can scarcely be separated. Vision is largely a matter of imagination and memory. And since both imagination and memory are impossible without perfect relaxation, the cultivation of these faculties not only improves the interpretation of the pictures on the retina, but improves the pictures themselves. When you imagine that you see a letter on the test card you actually do see it, because it is impossible to relax and imagine the letter perfectly, and, at the same time, strain and see it imperfectly. The following method of using the imagination has produced quick results in many cases. The patient is asked to look at the largest letter on the test card at the near-point, and is usually able to observe that a small area, about a square inch, appears blacker than the rest, and that when the part of the letter seen worst is covered, part of the exposed area seems blacker than the remainder. When the part seen worst is again covered, the area of maximum blackness is still further reduced. When the part seen best has been reduced to about the size of a letter on the bottom line, the patient is asked to imagine that such a letter occupies this area and is blacker than the rest of the letter. Then he is asked to look at a letter on the bottom line and imagine that it is blacker than the largest letter. Many are able to do this, and at once become able to see the letters on the bottom line.

FLASHING

Since it is effort that spoils the sight, many persons with imperfect sight are able, after a period of rest, to look at an object for a fraction of a second. If the eyes are closed before the habit of strain reasserts itself permanent relaxation is sometimes very quickly obtained. This practice I have called flashing, and many persons are helped by it who are unable to improve their sight by other means. The eyes are rested for a few minutes, by closing or palming, and then a letter on the test card, or a letter of fine print, if the trouble is with near vision, is regarded for a fraction of a second. Then the eyes are immediately closed and the process repeated.

READING FAMILIAR LETTERS

The eye always strains to see unfamiliar objects, and is always relaxed to a greater or less degree by looking at familiar objects. Therefore the reading every day of small familiar letters at the greatest distance at which they can be seen is a rest to the eye, and is sufficient to cure children under twelve who have not worn glasses, as well as some older children, and adults with minor defects of vision.

CENTRAL FIXATION

When the vision is normal the eye sees one part of everything it looks at best and every other part worse in proportion as it is removed from the point of maximum vision. When the vision is imperfect it is invariably found that the eye is trying to see a considerable part of its field of vision equally well at one time. This is a great strain upon the eye and mind, as anyone whose sight is approximately normal can demonstrate by trying to see an appreciable area all alike at one time. At the near-point the attempt to see an area even a quarter of an inch in diameter in this way will produce discomfort and pain. Anything which rests the eye tends to restore the normal power of central fixation. It can also be regained by conscious practice, and this is sometimes the quickest and easiest way to improve the sight. When the patient becomes conscious that he sees one part of his field of vision better than the rest, it usually becomes possible for him to reduce the area seen best. If he looks from the bottom of the 200 letter to the top, for instance, and sees the part not directly regarded worse than the part fixed, he may become able to do the same with the next line of letters, and thus he may become able to go down the card until he can look from the top to the bottom of the letters on the bottom line and see the part not directly regarded worse. In that case he will be able to read the letters. Since small objects cannot be seen without central fixation, the reading of fine print, when it can be done, is one of the best of visual exercises, and the dimmer the light in which it can be read and the closer to the eye it can be held the better.

THE EFFECT OF LIGHT UPON THE EYES AND SUN TREATMENT

Although the eyes were made to react to the light, a very general fear of the effect of this element upon the organs of vision is entertained both by the medical profession and by the laity. Persons with normal sight have been able to look at the sun for a short length of time, without any discomfort or loss of vision. Immediately afterward they were able to read the Snellen test card with improved vision, their sight having become better than what is ordinarily considered normal. Some persons with normal sight do suffer discomfort and loss of vision when they look at the sun; but in such cases the retinoscope always indicates an error of refraction, showing that this condition is due, not to the light, but to strain. It has been my experience that all persons who wear dark glasses sooner or later develop inflammation of their eyes. The human eye needs the light in order to maintain its efficiency. The use of eye-shades and protections of all kinds from the light is injurious to the eyes. Sunlight is as necessary to normal eyes as is rest and relaxation. If it is possible, start the day by exposing the closed eyes to the sun. Just a few minutes at a time will help. Get accustomed to the strong light of the sun by letting it shine on your closed eyelids. It is good to move the head slightly from side to side while doing this, in order to prevent straining. One cannot get too much sun treatment

BRAIN TENSION

The brain has many nerves. Part of these nerves are called ganglion cells and originate in some particular part of the brain. Each has a function of its own. They are connected with other ganglion cells and with the aid of nerve fibres are connected with others located in various parts of the brain as well as in the spinal cord, the eye, the ear, the nerves of smell, taste, and the nerves of touch. The function of each ganglion cell of the brain is different from that of all others. When the ganglion cells are healthy, they function in a normal manner.

The retina of the eye contains numerous ganglion cells which regulate special things such as normal vision, normal memory, normal imagination and they do this with a control more or less accurate of other ganglion cells of the whole body. The retina has a similar structure to parts of the brain. It is connected to the brain by the optic nerve.

Many nerves from the ganglion cells of the retina carry conscious and unconscious control of other ganglion cells which are connected to other parts of the body.

When the ganglion cells are diseased or at fault, the functions of all parts of the body are not normally maintained. In all cases of imperfect sight, it has been repeatedly demonstrated that the ganglion cells and nerves of the brain are under a strain. When this strain is corrected by treatment, the functions of the ganglion and other cells become normal. The importance of the mental treatment cannot be over-estimated.

A study of the facts has demonstrated that a disease of some ganglion in any part of the body occurs in a similar ganglion in the brain.

Brain tension of one or more nerves always means disease of the nerve ganglia. Treatment of the mind with the aid of the sight, memory and imagination has cured many cases of imperfect sight without other treatment.

For Suggestion # 11 on the previous page by Emily A. Bates; When the eyes move, 'shift'; stationary objects show an illusion of appearing to move, 'swing by' in the opposite direction the eyes move to. 'The Swing'. (Stationary objects=objects not truly moving. A moving train or person walking... is a non-stationary object.) Close and distant objects show opposite movement when the eyes shift. Distant objects can appear to move with the eyes in the same direction when the head moves a lot; as when doing the sway; 'moving the head/body together back and forth, left and right'. (Close objects continue to show opposite movement when the head movement increases.) Practice shifting on close, middle and far-distant objects and see the opposite swing. Shift left and right, up and down, diagonally and in any direction and see the opposite movement. Practice with the eyes open and in the imagination with the eyes closed. Shift on a small part of an object and see a small swing. Shift on a flower in the far distance. Shorten the shift and see a tiny opposite swing; shift on a very tiny part of an object or a fine print letter and see a tiny opposite swing. Ability to do a tiny shift and see a tiny swing greatly improves the vision. Do it relaxed, easy, no effort to see. Blink. Seeing the 'swing' of opposite movement relaxes the mind, eyes, perfects eye shifting, central-fixation, brings very clear vision, improves depth, distance... perception. Practice shifting on one object, distance at a time.

Look out of a moving car window to see the different speeds, amount, appearance of opposite and same direction movement of stationary objects at close, middle and far distances. See 'double oppositional movement' as close and far objects appear to move against eachother in opposite directions. Notice that closest objects move opposite quickly with a large movement. Middle distance objects move opposite but slower and far objects appear to move slowest and with the eyes, car in the same direction. As time passes, the car moves down the road, the far distant object shows it has moved opposite, is now behind the car. See the different types, speeds, size of opposite and same direction movement by doing The Sway; move the head, body and eyes together; left and right, up and down, diagonally. Objects beyond the closest object, though still at a close distance show a shorter opposite movement than the closest object and can appear to move with the eyes in the same direction when the closer object is in front of it, nearer to the eyes. Example; Place two rulers in front of the face, between the eyes, at eye level, one at 7 inches, one at 2 feet. Move the head side to side and see the different movements. Vary the distance of the objects and see the movements change. Hold your finger in front of the face and move the head side to side while letting the visual attention sweep across the far distant scenery. See the finger move opposite. Now do this while the visual attention sweeps across the finger and close objects; notice the different types of movement produced. Walk forward and backward and see opposite movement of the floor and close objects on your left and right sides. Notice objects in front of you appear to move toward you when walking forward and move away from you when walking backward. The brain, eyes use these different movements, illusions to determine depth, distance, space, time, speed, size, level, height... The ears, balance work with the eyes, brain.

Usually the head/face (and often body) move with the eyes. Moving the head and body with the eyes when shifting, walking... is the normal function of the visual system and improves, perfects shifting, central-fixation, appearance of opposite and same direction movements. It keeps the eyes, eye muscles, neck, head and body relaxed, mobile, free of tension and the vision clear. Eye movement 'shifting', central-fixation are improved when the head moves with the eyes to face the object of visual attention. This is why modern teachers emphasize head movement with the eyes. Dr. Bates and Emily's other articles, Fundamentals in Better Eyesight Magazine do say to move the head with the eyes. The head moves with the eyes at the same time, in the same direction the eyes, 'visual/mental attention' move to. Notice this by watching a crown of people at a baseball, basketball, tennis game and when you read a book, someone calls your name...

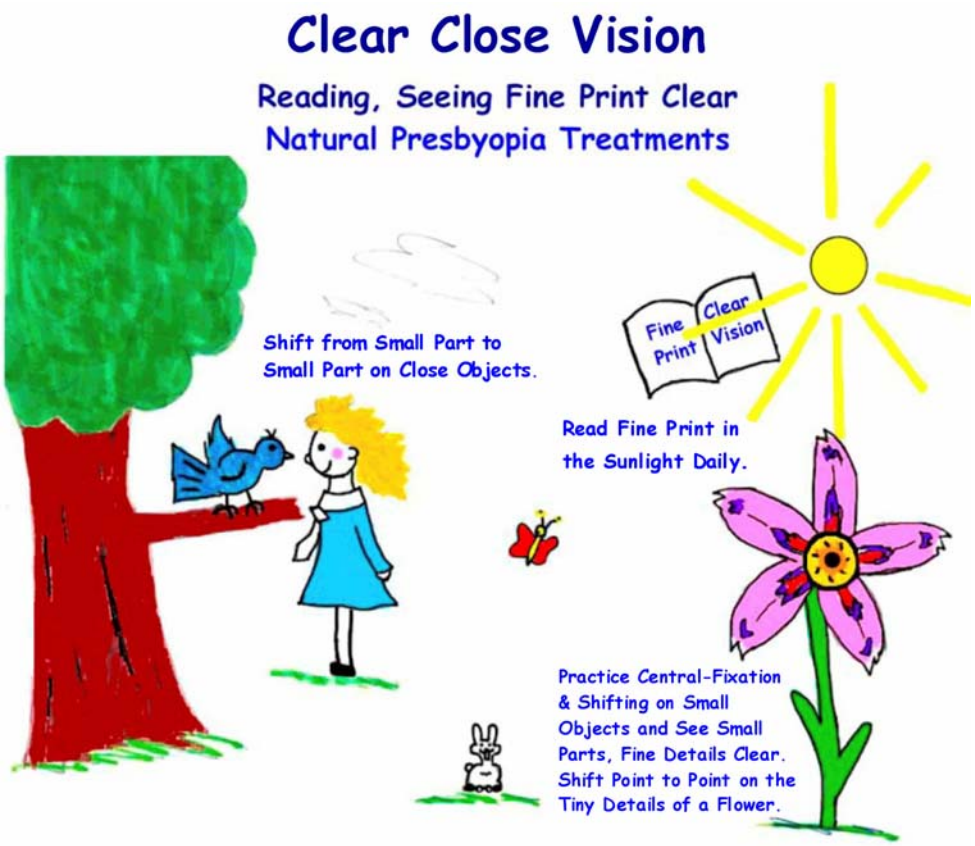
When shifts are small, tiny, shifting part to part on a very small object, fine print letter... the head movement may be very small or not seem to occur, but the head/face, neck, eyes remain relaxed, loose and there is usually a small or tiny underlining head movement with the eyes. Even when shifting on a small dot, period at the end of a sentence. Notice if you stare 'eyes, head immobile'; strain, tension and blur begin. The head movement with small and tiny shifts may not be noticed, it's a subtle, relaxed, automatic movement. Many eye shifts are microscopic; optical drift, saccades, high frequency tremors... They keep the eyes in movement, eye, eye muscles relaxed, good circulation, eyes healthy and the vision clear.

For #11; The ability to "imagine stationary objects to be moving" see the swing of opposite movement when shifting the eyes (and especially tiny shifting of the eyes) on close and far objects without the assistance of the head, body movement indicates there is perfect central-fixation, eye shifting and brings very clear eyesight. Imagining the opposite swing when shifting with eyes open and in the mind with eyes closed improves eye movement and the vision.* Always avoid tension, immobility; if you feel any tension in the eyes, head, neck... when trying this; allow the head to move with the eyes. Blink, relax. This non-head movement is just a test, is not to be done all the time. The normal healthy vision function is to allow head movement. There can be head movement when practicing # 11; the head movement is no longer than the shift of the eyes from one point to another point (central-fixation point to the next central-fixation point) on the object. When shifting on a small object the head movement is smaller but when shifting on a large object or across the scenery; a long head movement must occur with the long movement of the eyes. Opposite movement is seen when done correct. *See Dr. Bates Better Eyesight Magazines for many examples, physical-visual practices for seeing 'the opposite swing of stationary close and far objects'. Try the Long Swing described in this book.

14 - CLEAR EYESIGHT AT CLOSE DISTANCES

Reading - Fine Print Healthy for the Eyes - Read in Full Spectrum Sunlight

Video



Practice the same Correct Vision Habits (shifting, central-fixation) to see close objects clear.

Example; look at a small flower or piece of jewelry at 3 - 7 inches from the eyes.
Place the object up in front of the face, in the center of the visual field; between the eyes, at eye level.
Use good posture; avoid bending the head, neck down.
Keep the neck straight and relaxed.
Shift on the small parts, tiny details of the object. Shift part to part, small point to small point
See example of the girl looking at the bluebird; she has good posture, the bird is at eye level, center of the visual field.







Avoid staring. Squinting, trying to see.
Keep the eyes moving, shifting relaxed, slowly, easy, continually from one small part of the object to another small part. (Let fast, saccadic eye movements occur automatically, on their own.)
Blink, breathe slow, relaxed. The head/face, neck and body are relaxed and move freely.

Ophthalmologist Bates teaches his patients to use central-fixation and shifting when looking at any size objects at any distance close and far.

Central-fixation; see one small part of the object best, clearest in the center of the visual field and move the central field part to part on the object.
The part the eyes are looking at, in the center of the visual field is clearest because the center is the clearest area of the visual field.
The fovea centralis, in the center of the macula, center of the retina, produces the center of the visual field and clearest vision, clearer than 20/20; 20/10, 20/5... at all distances close and far.
Other parts of the object the eyes are not looking directly at are in the peripheral field and are less clear because the peripheral field/peripheral area of the retina produces less clear vision.
The far outer area of the peripheral field is most unclear. The inner peripheral field is clearer.
The peripheral field closest to the center of the visual field is more clear.
The exact center of the visual field is the clearest.
This is due to the position of cones and rods (light receptors) in the eyes retina.
Cones produce very clear vision and bright color.
Rods produce less clear vision and only gray, black, light, dark perception but also detect motion and they continue to function when in almost complete darkness.
The center of the retina contains many cones, with the exact center (fovea centralis in the center of the macula) consisting of only cones. The many cones in the center of the retina (fovea centralis), produce very clear vision and perfect color perception in the center of the visual field. The center of the fovea contains many cones, highly concentrated. This produces the exact center of the visual field, a small point of very clear, fine detailed vision. Move this small point, exact center of the visual field on small parts, tiny details of close and far objects. Practice on the flowers, butterfly in the picture, then on real objects. Practice in your garden in the sunlight. Practice at night in the moonlight, porch light.

There are less cones in the peripheral field of the retina. The peripheral field contains many rods, some cones. There are only rods, no cones, in the far outer area of the peripheral field of the retina.
This results in less clear vision in the peripheral field.
These conditions apply to close and distant vision.

See clear by using the center of the visual field, not the peripheral.
Place the part of the object you want to see in the center of the visual field.
+Central-fixation, seeing with the center of the visual field causes the central light ray to focus perfectly on the center of the fovea centralis in the macula/center of the retina resulting in perfect focus of light rays in the entire eye and clear vision-seeing with the center of the visual field improves clarity of the central and peripheral fields of vision.

+SHIFTING; to move "shift" the eyes, moving the center of the visual field from part to part on a object. As the eyes do this, one small part of the object is seen best/clearest at a time.
The time the part is in the center of the visual field and seen clearest may be for only a fraction of a second as the eyes continually shift, moving frequently from part to part, point to point but, during that fraction of a second that the part (point) is in the central field, that part is clearest.
As the eyes, center of the visual field moves continually, quickly from part to part, the entire object is seen clear.

Ophthalmologist Bates describes using central-fixation and shifting to see a letter clear in his monthly Better Eyesight Magazines.
Example; look at the big letter C.

C

look at one small part of the C. Example; top right corner. Place it in the center of the visual field. Shift on that small part for a couple seconds. Notice that it appears clearer and darker black than the other areas of the C which are in the peripheral field.
Now shift to a new small part - middle left side.
The new part is now in the center of the visual field and is darkest black and clearest. The top corner and all other parts the eyes are not looking directly at are in the peripheral field and are less clear.

Now, shift to a new part. The new part is now in the center of the visual field and is darkest black and clearest. All other parts are in the peripheral field and are less clear.
Shift continually from part to part. The center of the visual field moves with the eyes from part to part seeing each part clear.
Blink and relax.
When the eyes move, shift from part to part (shift) seeing one small part clearest at a time in the center of the visual field the C is seen clear.
Now, practice this on a small c. c

Practice on a fine print c, then on an o. c o

Notice Oppositional Movement (The Swing) when shifting on the letter; the letter moves in the opposite direction the eyes shift to;
Shift right >; the letter moves left <.
Shift left <; the letter moves right >.
The movement is short, less than the width of the letter.
Shift top and bottom and diagonally on the letter and see oppositional movement.
Blink, shift, relax.

Read Ophthalmologist Bates Better Eyesight Magazine articles;
+ Think Right - December, 1921
+ The Menace of Large Print - December, 1919

THINK RIGHT

Ophthalmologist William H. Bates Better Eyesight Magazine Dec. 1921

"As a man thinketh in his heart so is he," is a saying which is invariably true when the sight is concerned.
When a person remembers or imagines an object of sight perfectly the sight is perfect; when he remembers it imperfectly the sight is imperfect. The idea that to do anything well requires effort, ruins the sight of many children and adults; for every thought of effort in the mind produces an error of refraction in the eye. The idea that large objects are easier to see than small ones results in the failure to see small objects. The fear that light will hurt the eyes actually produces sensitiveness to light. To demonstrate the truth of these statements is a great benefit.
Remember a letter or other object perfectly, and note that the sight is improved and pain and fatigue relieved; remember the object imperfectly, and note that the vision is lowered, while pain and fatigue may be produced or increased.
Rest the eyes by closing or palming, and note that the vision is improved, and pain and discomfort relieved; stare at a letter, concentrate upon it, make a effort to see it, and note that it disappears, and that a feeling of discomfort or pain is produced.
Note that a small part of a large object is seen better than the rest of it.
Accustom the eyes to strong light; learn to look at the sun; note that the vision is not lowered but improved, and that the light causes less and less discomfort.
Remember your successes (things seen perfectly); forget your failures (things seen imperfectly); patients who do this are cured quickly.

+ Modern Bates teacher's state to look at the sun with the eyes closed, but looking at the bright sunny sky is ok as long as over exposure/sunburn is avoided.
+ Palming = to cover the closed eyes with the palms of the hands and relax, think positive thoughts.
+ Staring at a letter = eye immobility, not shifting from part to part on the letter, not using central-fixation/the center of the visual field.
+ Seeing a small part of a large object better than the rest = using central-fixation; looking at one small part of the object at a time and placing it in the center of the visual field. This is done on any size objects, large or small at any distance close or far.
+ Remembering, imagining objects clear, storing only clear pictures of objects in the memory relaxes the mind, eye muscles, eyes, activates normal eye muscle/eye function, movement and clear vision.

See a large or small object clear by relaxing; don't try to see.
Just shift from part to part, relax, blink, and the vision becomes clear.

For years schools have taught that large print is better for the eyes.
Bates teachers state that large print causes eyestrain and unclear vision because the eyes have to travel over more areas of the letter to see it and this is difficult, slow, when trying to read, so the person starts to stare, diffuse, try's to see all parts of the letter at once, central and peripheral fields equally clear at the same time while limiting shifting, avoiding central-fixation in an attempt to hurry and move along the sentence.

These are Incorrect Vision Habits that cause mental strain, eye muscle tension, eyestrain and unclear vision.

Small and fine print is easy, relaxing to the eyes.
Fine print is easy to read, the eyes activate central-fixation automatically and the eyes do not have to travel over a large area to see each letter, word. Small and more frequent eye shifting occurs-saccadic shifts. The mind, eyes... stay relaxed and the print is seen clear.
Placing a bookmark under the sentence being read and/or using the finger to point to the words being read, moving the finger along under the sentence as the eyes move along the sentence improves central-fixation and prevents eyestrain. Children do this naturally.

Read fine print daily, outside in the sunlight, sun shining over the shoulder onto the print.
Reading very small fine print improves the clarity of close and distant vision because fine print causes the eyes to use perfect central-fixation, the eyes center onto a very small point, placing it in the center of the visual field.
Central-fixation is a main Correct Vision Habit that results in perfect clear vision, clearer than 20/20.
Reading fine print is a main Natural Vision Improvement activity that produces clear close and distant vision. Improving the clarity of vision at any distance automatically improves vision at all distances.
Reading fine print, at close distances produces a round, naturally slightly lengthened eye shape while reading at the close distance. (Shifting point to point on close objects also does this.)
This corrects a abnormally lengthened eye shape. (The eye with unclear distant vision has a abnormal lengthened shape.) After reading the fine print, then looking to the distance; the eye changes to a normal round shape for clear distant vision. The relaxation and normal eye shape from reading the fine print helps to prevent eye muscle tension, abnormal eye shape when looking to the distance.

+Practice reading fine print at close distances; 3 ft from eyes, then 2 ft, 1 ft, 10 in, 7,6,5,4,3 inches from the eyes.
+Practice reading with both eyes together, one eye at a time, then both eyes together again.
+Practice closer - place the print close to the eyes almost touching the eyelashes, shift on the print and experience microscopic close vision.

READ FINE PRINT IN THE SUNLIGHT DAILY.

Three copies Dr. Bates 'Think Right' article in fine print;
Print them. Read the print without eyeglasses.

THINK RIGHT

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Rest the eyes by closing or palming, and note that the vision is improved, and pain and discomfort relieved; stare at a letter, concentrate upon it, make a effort to see it, and note that it disappears, and that a feeling of discomfort or pain is produced.
Note that a small part of a large object is seen better than the rest of it.
Accustom the eyes to strong light; learn to look at the sun; note that the vision is not lowered but improved, and that the light causes less and less discomfort.
Remember your successes (things seen perfectly); forget your failures (things seen imperfectly); patients who do this are cured quickly.
Ophthalmologist William H. Bates – Better Eyesight Magazine – Dec. 1921

+ Modern Bates teacher's state to look at the sun with the eyes closed, but looking at the bright sunny sky is ok as long as over exposure/sunburn is avoided.
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+ Staring at a letter = eye immobility, not shifting from part to part on the letter, not using central-fixation/the center of the visual field.
+ Seeing a small part of a large object better than the rest = using central-fixation; looking at one small part of the object at a time and placing it in the center of the visual field. This is done on any size objects, large or small at any distance close or far.
+ Remembering, imagining objects clear, storing only clear pictures of objects in the memory relaxes the mind, eye muscles, eyes, activates normal eye muscle/eye function, movement... and clear vision.

THINK RIGHT

"As a man thinketh in his heart so is he," is a saying which is invariably true when the sight is concerned.
When a person remembers or imagines an object of sight perfectly the sight is perfect; when he remembers it imperfectly the sight is imperfect. The idea that to do anything well requires effort, ruins the sight of many children and adults; for every thought of effort in the mind produces an error of refraction in the eye. The idea that large objects are easier to see than small ones results in the failure to see small objects. The fear that light will hurt the eyes actually produces sensitiveness to light. To demonstrate the truth of these statements is a great benefit.
Remember a letter or other object perfectly, and note that the sight is improved and pain and fatigue relieved; remember the object imperfectly, and note that the vision is lowered, while pain and fatigue may be produced or increased.
Rest the eyes by closing or palming, and note that the vision is improved, and pain and discomfort relieved; stare at a letter, concentrate upon it, make a effort to see it, and note that it disappears, and that a feeling of discomfort or pain is produced.
Note that a small part of a large object is seen better than the rest of it.
Accustom the eyes to strong light; learn to look at the sun; note that the vision is not lowered but improved, and that the light causes less and less discomfort.
Remember your successes (things seen perfectly); forget your failures (things seen imperfectly); patients who do this are cured quickly.
Ophthalmologist William H. Bates – Better Eyesight Magazine – Dec. 1921

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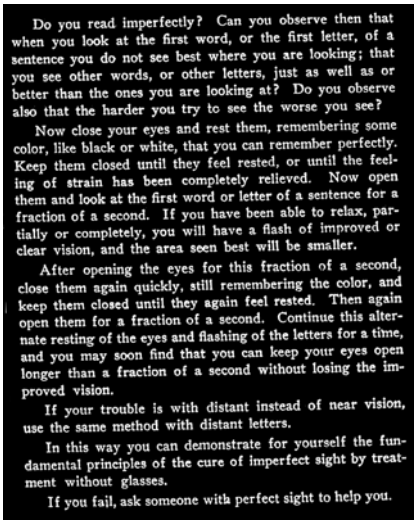


Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

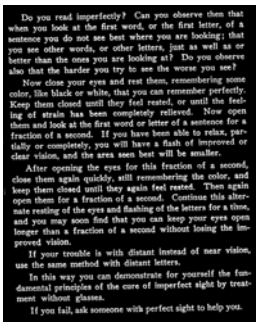
Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.





Print 3+ different sizes of small and fine print on small cards.
Keep the cards in a pocket and read the print in your spare time. Read in the sunlight.
Start with medium, small print if the fine print is not clear enough.
Then, as the eyes get used to small print, practice with smaller and fine print.
The eyes can read very small print; microscopic print. Even if the fine print is unclear; moving the eyes, center of the visual field on it, shifting on the letters, words will improve the vision.

Type your favorite verse using a computer, then change the letter size and print 3 - 5 different small/fine print sizes - 12 point, 10, 7, 5, 4, 3 point...
Read the larger type and memorize the words.
When the verse is memorized it becomes a 'Familiar Object' and will be easy to see when reading the small fine print size.

Avoid Incorrect Vision Habits; staring (eye immobility), squinting, trying hard to see clear.
Use Correct Vision Habits when reading; shift - move the eyes along the sentence even if it is unclear. Blink and relax. Breathe slow, comfortably deep.
Deep, slow, abdominal breathing (allowing the stomach/abdomen to rise when breathing in) brings oxygen to all areas of the lungs; upper and lower and increases blood, oxygen flow to the brain, body and eyes, relaxes the mind, body, eyes resulting in clear vision.

The picture below shows the true, natural eye movement pattern when reading. Patterns vary depending on the persons thoughts, subject reading...

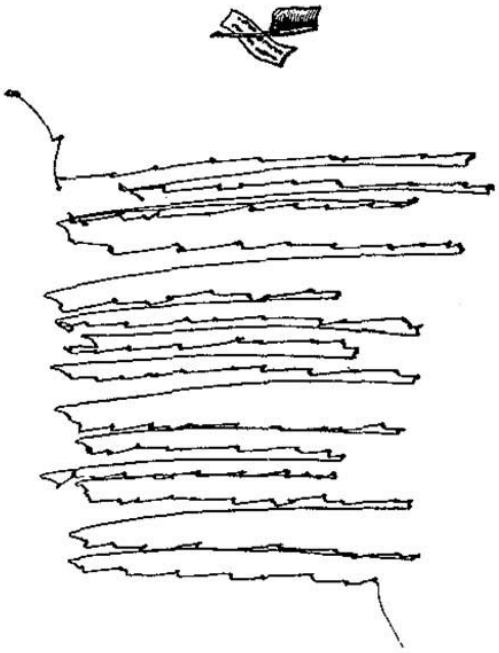
Eye Movements, Shifting, Saccades while Reading

Вы, мой стих не блещет новизной,
Разнообразьем перемен нежданных.
Не поискать ли мне тропы иной,
Приемов новых, сочетаний странных?

Я повторяю прежнее опять,
В одежде старой появляюсь снова.
И кажется, по имени назвать
Меня в стихах любое может слово.

Всё это оттого, что вновь и вновь
Решаю я одну свою задачу:
Я о тебе пишу, моя любовь,
И то же сердце, те же силы трачу.

Всё то же солнце ходит надо мной,
Но и оно не блещет новизной.



Use central-fixation; keep the word, letter the eyes are looking at in the center of the visual field and move the center of the visual field along the sentence passing over the letters, words being read. Let the eyes, central field move freely upon the words.

Some Bates Teachers tell the student to read through the '~~Center Of The Words~~' for even more exact central-fixation and this does produce clear vision.
Try reading through the ~~center of the words~~ to see the TV cable channel guide clear at a distance of 10 to 20 feet. Do it easy. Avoid tension, immobility, avoid trying hard to keep the visual attention on the center of the words.

Some students find it easier to use completely natural, un-controlled eye movement-to let the eyes move about freely on/along the sentence letters, words. See the pictures-eye movements, saccades here and in chapter 5. As long as the eyes move, use central-fixation, shift from point to point, the vision remains clear. This occurs quickly, automatically, no effort as the eyes move along the sentence.
Remember; don't try to see clear.
Effort interferes with the eyes natural function and causes strain and blur. Worrying about the clarity of vision interferes with relaxation and prevents clear vision, so, relax, 'forget about the eyes', and enjoy reading the print and the first flashes of clear vision will occur soon and more often, last longer, become permanent.
Use Correct Vision Habits, relax and the vision will become clear on its own.

Reading fine print with shifting and central-fixation improves; accommodation and convergence, eye muscle function, coordination at close distances and fast close vision improvement.

Reading fine print relaxes the mind and eyes because the mind, eyes must relax perfectly to see it clear.
Central-fixation activated by the fine print relaxes the mind, eyes.
Always read something you enjoy. This keeps the mind positive, interested in the subject, keeps the mind, eyes relaxed and vision clear.

Avoid bending the head, neck down or pushing the neck, head forward when reading or looking at any object. (computer...)
Use good posture; sit up straight. Neck straight and relaxed.
Place the print on a book holder up at eye level in the center of the visual field.
Dr. Bates taught that reading fine print in dim light (<u>without effort, no squinting, no straining to see), while in a relaxed state</u> greatly improves the vision. Sunlight also brings perfect clear vision.

Dr. Bates also stated that reading fine print (in good light) even if it is a bit uncomfortable in the beginning, will improve the sight and health of the eyes. Fine print activates perfect central-fixation as the eyes focus together on a small point-Both eyes on the same point, center of the visual field, moving from point to point perfects convergence, accommodation. Because fine print activates perfect convergence, accommodation, central-fixation, saccadic eye shifting and relaxation of the eyes, body, neck, head; it returns the eye to normal shape, removes tension, abnormal pressure on/in the eye, lens, retina, returns perfect circulation of blood, oxygen, lymph... flow in the head, eyes. Cataracts and other eye health impairment is avoided, reversed. Fine print does prevent cataracts along with good nutrition, sunlight, avoiding eyeglasses.

Better Eyesight Magazine - Dec. 1919

by Ophthalmologist William H. Bates

THE MENACE OF LARGE PRINT

If you look at the big "C" on the Snellen test card (or any other large letter of the same size) at ten, fifteen, or twenty feet, and try to see it all alike, you may note a feeling of strain and the letter may not appear perfectly black and distinct. If you now look at only one part of the letter, and see the rest of it worse, you will note that the part seen best appears blacker than the whole letter when seen all alike, and you may also note a relief of strain. If you look at the small "c" on the bottom line of the test card, you may be able to note that it seems blacker than the big "C". If not, imagine it as forming part of the area of the big "C". If you are able to see this part blacker than the rest of the letter, the imagined letter will, of course, appear blacker also. If your sight is normal, you may now go a step further and note that when you look at one part of the small "c" this part looks blacker than the whole letter, and that it is easier to see the letter in this way than to see it all alike.
Shift from one small part to another, seeing one small part at a time darkest black, clearest.

If you look at a line of the smaller letters that you can read readily, and try to see them all alike-all equally black and equally distinct in outline-you will probably find it impossible, and the effort will produce discomfort and, perhaps pain. You may, however, succeed in seeing two or more of them alike. This too, may cause much discomfort, and if continued long enough, will produce pain. If you now look at only the first letter of the line, seeing the adjoining ones worse, the strain will at once be relieved, and the letter will appear blacker and more distinct than when it was seen equally well with the others. Looking at one letter-placing it in the central field. The object in the center of the visual field is clearest.

If your sight is normal at the near-point, you can repeat these experiments with a letter seen at this point, with the same results. A number of letters seen equally well at one time will appear less black and less distinct than a single letter seen best, and a large letter will seem less black and distinct than a small one; while in the case of both the large letter and the several letters seen all alike, a feeling of strain may be produced in the eye. You may also be able to note that the reading of very fine print, when it can be done perfectly, is markedly restful to the eye.

The smaller the point of maximum vision, in short, the better the sight, and the less the strain upon the eye. This fact can usually be demonstrated in a few minutes by anyone whose sight is not markedly imperfect; and in view of some of our educational methods, is very interesting and instructive. See a large or small letter clear by shifting on it-shift small part to small part.

Here Ophthalmologist Bates lists a few examples of how schools and other institutions have allowed only large print to be read by small children. See entire article in Dr. Bates Better Eyesight Magazines & Medical Articles.

Yet it has just been shown that large print is a strain upon the eyes, while the retinoscope demonstrates that a strain to see at the near-point always produces hypermetropia (commonly but erroneously called "farsight"). We should naturally expect, therefore, to find hypermetropia very common among small children; and it is. Of children eight and a half years old in the public schools in Philadelphia, Risley found that more than eighty-eight percent were hypermetropic, and similar figures may be found in all statistics of the subject. The percentage declines as the children become older, but hypermetropia, or hypermetropic astigmatism, remains at all ages the most common of all errors of refraction. Hypermetropia is, in fact, a much more serious problem than myopia, or nearsight. Yet we have heard very little about it, for the specialists have concluded, from its prevalence and its tendency to pass away or become less pronounced with the growth of the body, that it is the normal state of the immature human eye and therefore beyond the reach of preventive measures. It is true that many young children are not hypermetropic, but this fact is easily disposed of by the theory that the ciliary muscle alters the shape of the lens in such cases sufficiently to compensate for the shortness of the eyeball.

The baselessness of this theory, as well as the relation of large print to the production of hypermetropia, may be demonstrated by the fact that the condition can be relieved, and has been relieved in numerous cases, by the reading of fine print, combined with rest of the eyes. A child of eight was cured in a few visits by this means. Yet according to the British association she should not, at this age, have been allowed to read any type larger than 12-point, with capitals more than an eighth of an inch in height. Many grown people have been cured of hypermetropia in the same way, and in all forms of functional imperfect sight the reading of fine print, when it can be done with comfort, has been found to be a benefit to the eyes. Even straining to see fine print is sometimes a benefit in myopia.

hands and invited them to dance on the green. While the fairies were dancing and the children were trying to imitate them, the princes came down from the tower and danced with them. The jailer was so taken up by the unexpected attentions of the children that he forgot all about his prisoners.

One of the fairies said, "Let us play 'Follow my leader'." She started off to run, and all the others behind her, but there were so many that they lost the leader and found themselves just going back toward London.

About this time the jailer appeared, and in a loud voice called out that he had something to say. So they placed him on top of a pillar where he could be seen by everybody. "My friends," he said, "I am only a poor jailer. Some wicked men in London came to me and offered me money to murder the two princes, because after they were killed their cousin would ascend the throne. But the fairies treated me so nicely and the princes treated me so nicely that instead of being their enemy, I am now their friend. Follow me to the house of those wicked men, and we will put them in a jail from which there is no escape."

All the men and women and the fairies and the children followed him to the house where the wicked people lived, and they were all dragged out and thrown into jail and placed under the care of the jailer. Then the princes and the fairies and all the people rushed up to the palace of the king and queen, and drove away the wicked soldiers who were holding them prisoners. The two princes were restored to their parents and there was great rejoicing. The king and queen felt very much indebted to the fairies because it was through their activity that things had all turned out so well. The two princes improved their sight very much by looking for the fairies; and the eyesight of the children in the kingdom was improved because they had to imitate the princes and be in the fashion.

Read Fine Print

ALL of our imperfect sight is just the result of our using our eyes wrong, and permitting bad habits to grow on us. Staring is only a bad habit, but it causes a great deal of trouble. When it is stopped and the eyes are rested by palming and blinking, the sight is immediately benefited.

Bad habit number two: The reading of large type in preference to finer print. It requires more of an effort to see a large letter than a small one, strange as it may seem. When you look at the big C on the Snellen Test Card, you don't see it all at once. You have to look at one part best, the hook on the upper right hand corner or the curve on the left side. You cannot look at the hook, the space on the right and the curve on the left side all at once. Some people think they see it at the same time, but they do not. Their eyes shift from one point to another, unconsciously.

Fine print is a benefit because it cannot be read while the eyes are under a strain. They have to be relaxed. For instance, in reading the chapter printed below, you cannot accomplish anything by staring at the letters, or screwing your face into a knot. Do not look at the letters but at the white spaces between them, and imagine them whiter than the margin. Blink and shift constantly to avoid the stare. If your eyes feel strained, stop and palm. You will notice that where it all looked blurred before, a word will appear clear and distinct. By constant practice more words clear up, until the entire chapter can be read easily.

S. MATTHEW 4
BEATITUDES



Bates Teachers teach relaxation and Correct Vision Habits that prevent strain when reading fine print. Dr. Bates cured his own vision; obtained clear close and distant vision with Natural Vision Improvement.

Dr. Bates shows his students how to experience use of Incorrect Vision Habits that result in discomfort, strain and blur and how to experience use of Correct Vision Habits resulting in relaxation, comfort and clear vision as described in the first paragraphs of 'The Menace of Large Print' article.
+ Incorrect Vision Habits = Staring, eye immobility, trying to see all parts of a object, and/or two or more objects equally clear at the same time without moving the eyes; not shifting from object to object, not shifting from part to part on a object and not using central-fixation; not seeing one object/one small part of the object clearest at a time in the center of the visual field results in eyestrain, discomfort and blur.
+ Correct Vision Habits = Central-fixation; seeing one object clearest at a time in the center of the visual field and seeing one small part of the object clearest at a time in the center of the visual field and, shifting, moving the central field from part to part on the object results in relaxation, comfort and clear vision.
When the student recognizes the cause of blur, he/she learns to avoid it and use the eyes correct resulting in clear vision.

More Fine Print at the end of the book.

MATTHEW 4
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11 Then the devil left Him, and behold, angels came and ministered to Him.
12 Now When Jesus heard that John had been put in prison, He departed to Galilee.
13 And leaving Nazareth, He came and dwelt in Capernaum, which is by the sea, in the regions of Zebulun and Naphtali.
14 That it might be fulfilled which was spoken by Isaiah the prophet, saying:
15 "The land of Zebulun and the land of Naphtali, *by* the way of the sea, beyond the Jordan, Galilee of the Gentiles:
16 The people who sat in darkness have seen a great light, and upon those who sat in the region and shadow of death light has dawned."
17 From that time Jesus began to preach and to say, "Repent, for the kingdom of heaven is at hand."
18 And Jesus, walking by the Sea of Galilee saw two brothers, Simon called Peter and Andrew his brother, casting a net into the sea…

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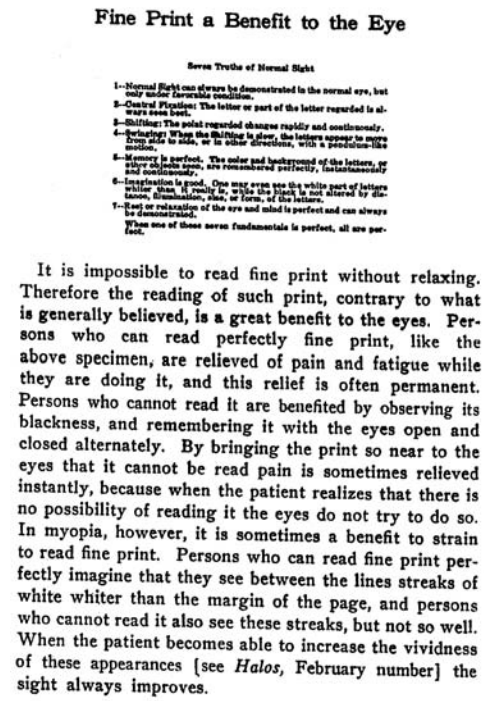
READ IN THE SUNLIGHT

Full spectrum sunlight improves the clarity of vision. The eyes have developed over millions of years due to exposure to and function with sunlight. The eyes are built for absorbing, using sunlight. The eyes, brain and body need exposure to full spectrum sunlight daily.

Full spectrum sunlight is obtained by going outside in the sun without wearing eyeglasses, contact lenses, sunglasses, tinted, colored, uv blocking lenses. Full spectrum sunlight is sunlight that is not filtered through glass, plastic...
All eyeglass lenses, contact lenses, sunglasses, tinted, colored lenses including window glass, plastic at home, work, in cars, buses... blocks out part of the suns light spectrum causing partial spectrum, unbalanced, unhealthy light to enter the eyes. Light travels from the eyes to the brain, up and down the spine to all organs, glands, systems, every cell, part of the body.
When the light is unbalanced; the eyes, brain and body receive abnormal light energy signals which impairs the health and function of the eyes, brain, all organs, glands, systems, areas of the body.
Unbalanced, partial spectrum light impairs melatonin, serotonin and other hormone/chemical balance, production in the brain, body resulting in disrupted sleep cycle, depression, lowered memory, imagination, concentration...and health impairment.

When full spectrum, balanced sunlight enters the eyes; the eyes, brain, body, systems... receive correct light energy signals, function correct and remain healthy.



Fine Print a Benefit to the Eye

Seven Truths of Normal Sight

1—Normal Sight can always be demonstrated in the normal eye, but only under favorable condition.
2—Central Fixation: The letter or part of the letter regarded is always seen best.
3—Shifting: The point regarded changes rapidly and continuously.
4—Swinging: When the shifting is slow, the letters appear to move from side to side, or in other directions, with a pendulum-like motion.
5—Memory is perfect. The color and background of the letters, or other objects seen, are remembered perfectly, instantaneously and continuously.
6—Imagination is good. One may even see the white part of letters whiter than it really is, while the black is not altered by distance, illumination, size, or form, of the letters.
7—Rest or relaxation of the eye and mind is perfect and can always be demonstrated.
When one of these seven fundamentals is perfect, all are perfect.

It is impossible to read fine print without relaxing. Therefore the reading of such print, contrary to what is generally believed, is a great benefit to the eyes. Persons who can read perfectly fine print, like the above specimen, are relieved of pain and fatigue while they are doing it, and this relief is often permanent. Persons who cannot read it are benefited by observing its blackness, and remembering it with the eyes open and closed alternately. By bringing the print so near to the eyes that it cannot be read pain is sometimes relieved instantly, because when the patient realizes that there is no possibility of reading it the eyes do not try to do so. In myopia, however, it is sometimes a benefit to strain to read fine print. Persons who can read fine print perfectly imagine that they see between the lines streaks of white whiter than the margin of the page, and persons who cannot read it also see these streaks, but not so well. When the patient becomes able to increase the vividness of these appearances [see *Halos*, February number] the sight always improves.

Artificial indoor lights produce unbalanced light, providing only part of the suns light spectrum.
When working, reading indoors always keep a open window with sunlight shining into the room.
Reading outside in the sunlight is the perfect reading light.
If the sun is too strong read under a tree. The eyes will still receive natural full spectrum light through the tree branches.

Avoid fluorescent light. Fluorescent lights are very harmful to the eyes, health and vision.
They produce very unbalanced light with extremes in one-two light waves, abnormal shadow, contrast, flicker and other unnatural effects. This strains, confuses the brain, visual system, eye muscles, eyes causing unclear vision, fatigue, tension, headaches, impairs color, depth, distance perception and other functions of the visual system, eyes.
The constant flicker fluorescent lights produce impairs function of the eyes iris, pupil causing it to constantly contract, un-contract, contract... with every flicker of the light. This strains, impairs function of the iris, pupil size/adjustment to light and dark, eyes, eye muscles, retina and brain. The ciliary/eye lens muscle is interconnected with the iris muscle. Tear muscle, tear production may be affected.
Fluorescent lights impair health and function of the eyes, brain and body.

In 2007+ the public is being pressured to buy, use the new small and larger fluorescent light bulbs to conserve energy. Exposure to fluorescent light at work and at home causes, increases vision impairment; blur, astigmatism and leads to other eye and health problems.
Exposing the eyes cornea, lens, retina to this unbalanced light can lead to macula degeneration, cataracts and other eye disease.

Fluorescent lights also emit mercury vapor and other toxic gases, substances, radiation and EMF's (electro-magnetic field radiation). Mercury is a poison.
EMF radiation, x-rays and other toxins emitted from fluorescent lights cause fatigue, impaired concentration, stress, and health, vision problems.
Some light bulbs contain lead, another poison.

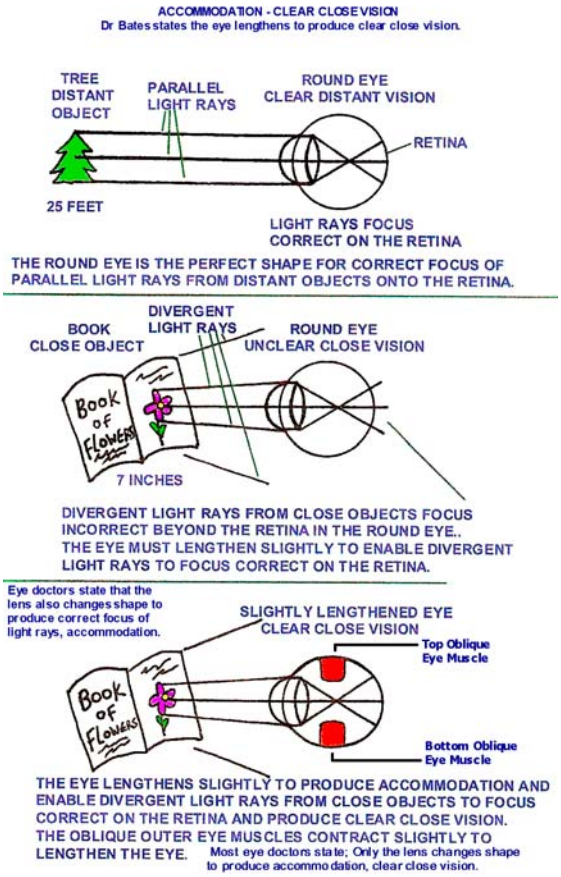
The plain old fashioned incandescent light bulbs do not produce full spectrum light but they are better for the eyes and health because they do not produce extremely unbalanced light waves, they do

produce better shadow and contrast and do not produce flicker, mercury vapor, radiation and other toxins that fluorescent lights produce. They do use more energy which contributes to pollution.
A low energy non-fluorescent bulb needs to be invented.
Some light companies sell full spectrum light bulbs but they are hard to find. Full spectrum fluorescent (and plain fluorescent) bulbs produce abnormal light and burn out partially resulting in production of extremely unbalanced partial spectrum light.
Most bulbs advertised as full spectrum are not truly full spectrum.
Full spectrum fluorescent bulbs still emit radiation, mercury and other toxins.
If fluorescent lights are the only source of light at work, bring your own incandescent and full spectrum lights to work. This will help bring a more balanced spectrum of light with shadow, contrast to the work area and reduce the unnatural effects of the fluorescent lights.
Look outside a open window often.
Colored bulbs; pink, blue, red... produce very unbalanced light.

Read books by John Ott; 'Health and Light', and Jacob Lieberman; 'Light, Medicine of the Future' for more information on full spectrum sunlight and where to find full spectrum, non fluorescent light bulbs.
Full spectrum bulbs or a mixture of incandescent light bulbs with sunlight through open windows, skylights provide a good source of light. Pure full spectrum sunlight through open windows without any artificial lights is the best, healthiest light.
When at home, work, take frequent breaks and go outside often and receive full spectrum sunlight.
Full spectrum sunlight is the healthiest light for the eyes, body.
Practice Sunning daily - chapter 14.

The picture shows why the eye needs to accommodate; the lens and/or eyes shape changes to focus light rays from close objects on the eyes retina, to see objects at close distances clear;

Light rays from close objects diverge and focus beyond the retina. Dr. Bates states that the round eye lengthens slightly to bring the light rays from close objects back onto the retina for clear close vision.
Most eye doctors state that only the lens changes shape.
A few doctors state that the lens and eye change shape to produce accommodation.



Seeing Fine Print Clear

Read fine print in the sunlight for clear close and distant vision.
Sunning, Palming and the Long Swing help to relax the mind, eyes and bring clear vision. (See other chapters.)
+Take a break from reading occasionally and look at the bright sky, clouds, trees.
+Then practice Sunning; Close the eyes, face the sun, move the head/face, eyes side to side.
+Stand and do the long swing or, rock side to side (sway).
+Look to the distance, infinity and shift on far objects.
+Palm; close and cover the eyes, relax.
Do not practice reading fine print and other treatments in this book on the computer or E-Book readers.
Print the pages and practice on real paper in the sunlight.
The computer screen is a flat surface, has limited dimension, artificial dimension, depth, distance, blocks many normal, healthy eye functions, produces EMF radiation, strain and when over-used for reading is unhealthy for the eyes.
Reading a book, printed ink on real paper, outside in the sun (or inside in good lighting) provides true dimensional vision, is natural, healthy for the eyes. Dr. Bates states that, even in dim light, fine print will not harm the eyes if strain is avoided and relaxation maintained. As long as there is a source of light to activate the cones in the eyes retina and objects are seen without effort, strain, the vision remains clear.

Reading Fine Print to Improve the Clarity of Vision

+ Read fine print at a variety of close distances from the eyes, moving closer and closer until it is seen clear at 6 inches and closer.

The goal is to be able to improve the vision to seeing the smallest fine and microscopic print at all close reading distances, up to 6 inches from the eyes and, if preferred, closer to the eyes; 5, 4, 3, 2, 1 inches from the eyes. More vision improvement occurs when the eyes can practice reading fine print comfortably at closer than 6 inches from the eyes activating microscopic vision. Many people can see fine and microscopic print clear up close to the eyes/eye with the print touching the end of the eyelashes; about 1/4th inch from the eyes. The eyes produce an effect like a microscope at these very close distances. Microscope eyes reading microscopic print. Like a child can look at a marble close to the eye and easily see it clear. This prevents presbyopia and cataracts. (Do this carefully, do not place the paper too close to the eyes, do not touch the eyes. Keep the sharp edge of the paper away from the eyes.) Reading fine, microscopic print also improves distant vision. (A natural, safe alternative to unhealthy, dangerous minus, plus eyeglass lenses and plus-lens eyeglass therapy.)

People have also experienced a type of telescopic vision when looking to the far distance using the Bates Method.

Normal reading distance is 6-20 inches, but the eyes should be able to see fine print clear at 6 inches when needed. 6-10 inches is good for reading a book. Practice at closer distances occasionally to keep clear vision available at all close distances for reading tiny print on medicine bottles, food labels...

+ To begin practice; Choose a print size that is comfortable to look at but still blurry. Start with larger print if needed and move to smaller, fine & microscopic, moving it closer and closer to the eyes as the vision improves, print is clearer. It is ok to start with the small, fine and microscopic print and at close distances from the eyes as long as it is done with relaxation. Fine and microscopic print activates natural, perfect central fixation, tiny saccadic eye shifting movements and clear vision.

Fine print cannot be seen clear without relaxation so it tends to cause the brain, eyes, body to activate relaxation when reading it. Then, as relaxation occurs, the vision clears. Dr. Bates says fine print is beneficial even when a little discomfort is felt. Relax away the tension, tightness in the eyes. See various print sizes in the Better Eyesight Magazine page samples in this book.

Use a Book-holder.
Place the print at eye level, center of the visual field. See pictures of the book holder-end of this book. Constantly looking too high or low to read a page causes the eyes, head, neck to be turned, held upward or down, tenses the eye, neck muscles and leads to fatigue, strain.

Use a hands free book-holder and spiral binding for the book or page clips to keep the book open and up at eye level. This keeps good posture, blood flow to the brain, eyes and the hands, arms, shoulders, neck, head and eyes free of tension. The reader can completely relax and enjoy the story.

+ Shift left and right, top and bottom, any direction on a letter, word.
Blink, Relax, Breath deep, easy, abdominal breathing.
Imagine the print is dark black and clear.
Do this with the eyes open, then in the imagination with the eyes closed, then eyes open again.

+ Read; move the eyes, visual attention along the sentences.
Move along, through a sentence, then backwards along on the white space below the sentence and down to the next sentence. Then read that sentence. (Moving on the white space does not have to be exact. Just shift to the next sentence.
Practice this even if the print is blurry. Just relax, blink, breath slow, comfortably deep and move the eyes, center of the visual field along the sentences. Avoid squinting, staring. Move the eyes in a easy, effortless manner.

+ Next; forget about the breath, do nothing, just relax, shift on letters, words and move along the sentences. Let the eyes move about freely on the words.

Some Natural Vision Improvement Teachers state to; Move the visual attention, tiny, exact center of the visual field through the ~~center of the words~~ to help the eyes apply central fixation on the blurry print. The reader can also move the pointed end of a nail or paperclip, through the center, eyes, exact

center of the visual field moving along with it. Children do this naturally by pointing, moving their finger along the sentence, eyes moving through the sentence with the finger tip.
Reading through the ~~center of the word~~s works, it brings clear vision. It is an optional technique.
Avoid becoming stiff, rigid, trying hard to be perfect when doing this.
Read through the center of the words, sentence easy, relaxed, no effort.

Reading through the center of the words does improve the vision due to its activation of perfect central fixation and the eyes also move, shift as they travel along the sentences. Done with relaxation, it's a good way to improve the vision as long as the eyes do not become stiff with limited movement; Avoid using effort to keep the eyes/visual attention (exact center of the visual field) moving through the center of the words. Relax. If the eyes, visual attention naturally move about to the top, bottom, corners… of the words, letters-that's normal, let the eyes move freely. You can bring the attention back to the center in a easy, relaxed manner.

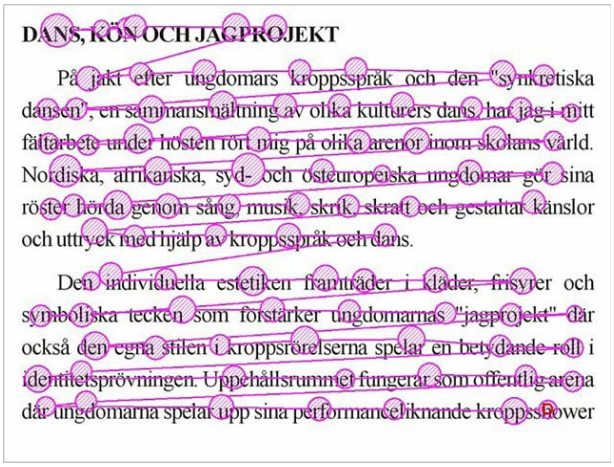
It is ok to let the eyes, visual attention move, jump, skip around on any area of the letters, words, sentence while moving through the center or when reading completely natural without reading through the center. This freedom of eye movement is natural, normal, healthy eye function. Clear relaxed eyes, vision is the goal. Choose the method that works for you.

Central fixation is combined with shifting; the eyes, central field moving from part to part (point to point) on the black print. True central fixation, shifting does not place limits on the eyes movement, it keeps the eyes on the object of visual attention but allows the eyes to move freely upon it. The eyes also look away from an object occasionally, then back to see it again; as when taking a break from reading to look to the distance or when looking at objects in your environment.

Squinting, staring prevents eye movement. Avoid eye, head, neck, shoulder stiffness, tension; let the eyes move. Blink, Relax. Move the head/face with the eyes. Neck relaxed.
The eyes shift about in a variety of movements when looking at an object. Forcing the eyes to remain still or constantly on only one area of the object disrupts normal eye movement, 'shifting' resulting in tension, unclear vision.

When reading a page, book held in the hand, let it move. Avoid trying to keep it perfectly still because this will cause the eyes, eye muscles, head, neck, arm, hand to become stiff, immobile and result in unclear vision. When the page moves, it causes the eyes to move, activates eye shifting, saccadic eye movements. This relaxes the eyes, improves the vision. When riding in a car, train; read a book and let it move about as the vehicle moves. Let the book, eyes, head/face, body relax and move freely. No tension=clear vision. This is healthy for the eyes. Look out the window and see the scenery passing by. This relaxes the mind, eyes, improves the vision.

Reading, Eye Movements - Shifting, Saccades with Central Fixation



DANS, KÖN OCH JAGPROJEKT

På jakt efter ungdomars kroppsspråk och den "synkretiska dansen", en sammansmältning av olika kulturers dans, har jag i mitt fältarbete under hösten rört mig på olika arenor inom skolans värld. Nordiska, afrikanska, syd- och östeuropeiska ungdomar gör sina röster hörda genom sång, musik, skrik, skratt och gestaltar känslor och uttryck med hjälp av kroppsspråk och dans.

Den individuella estetiken framträder i kläder, frisyrer och symboliska tecken som förstärker ungdomarnas "jagprojekt" där också den egna stilen i kroppsrörelserna spelar en betydande roll i identitetsprövningen. Uppehållsrummet fungerar som offentlig arena där ungdomarna spelar upp sina performanceliknande kroppsshower

The Picture above and on pg 7 show eye movements when reading. Movements and amount of movements (fixations and saccades shifts) change depending on the person's thoughts, speed, ease, type of reading; Skimming over the words or reading with more interest…

When the eyes, mind are relaxed with deep or active, dynamic relaxation; the eyes move, shift easy, saccades and other natural subconscious eye movements occur and vision is clear.

The Natural Eyesight Improvement student practices shifting part to part, detail to detail on objects, object to object to return the eyes to this normal, natural movement with clear vision.

Pictures of eye movement patterns are examples. There is not a set pattern of movement. The eyes move freely. Each person will produce their own variety, pattern of eye movements when looking at a object depending on the objects shape, size, distance... and the thoughts in the mind of the person when thinking about the object or other subjects while looking at, moving the visual attention on the object. Read Dr. Bates 'Do You Read Imperfectly?' Article in Better Eyesight Magazine-July 1919.

The reading pictures are examples of completely free, natural eye movements. The pictures do not show all of the smaller, tiny eye movements that also occur. For more detailed pictures of eye movements, see the Book 'Eye Movements and Vision' by Alfred L. Yarbus. Many pictures of various eye movements. This is an old book. I have not researched all of it, so I cannot recommend everything in the book. See the pictures of Saccadic Eye Movements. When the vision is clear, these 'Saccades' and other movements occur; Large, small, medium, tiny eye movements, fast, easy, relaxed movements, vibrations, optical drift, high frequency shifts of the eyes...

This is why the Natural Eyesight Improvement student should practice, then don't practice; give the eyes a chance to activate this normal function 'on their own', without thinking about or controlling the eyes. Practice imitating normal eye function; shifting, central fixation.., then let the eyes activate all these eye movements automatically, subconsciously, a normal body function, just as breathing, the heart beating occurs without conscious control. This is when the vision is clearest.

Eyeglasses block, reduce natural eye shifting movements, saccadic shifts. Avoiding eyeglasses, practicing relaxation and shifting relaxes the mind, eye muscles, eyes. All eye movements return to normal, saccadic shifts are frequent, convergence, divergence, accommodation, un-accommodation eye movements also return to normal, perfect movement for clear vision at all distances.
Blink-blinking causes the eyes to shift automatically, improves tear production, clarity of vision.

More Techniques to Improve the Clarity of the Print

5 Steps for Practicing; Shifting, Memory, Imagination with Both Eyes and One Eye at a Time

Imagine, remember the print dark black and clear.

+Read the print (or shift on a letter) and imagine it is dark black and clear. A perfect dark black.
Do this with;
1 - Both eyes together.
2 - One eye at a time – left, then right, then left, then right. Start with the clearest vision eye.
3 - If vision is less clear in one eye, practice extra time with that eye.
4 - Then practice a <u>little bit</u> again with the other, clearer vision eye; get the vision in the left and right eyes equally clear at all distances. Then practice time will be <u>equal</u> for each eye. This keeps the vision balanced, eyes working together correct.
5 - Practice with both eyes together again. Always end the practice with both eyes together to balance, integrate the left and right eyes function, left and right brain hemispheres, visual cortex, visual system. The brain working perfect, balanced with the left and right eyes and eye muscles.

Repeat steps 1 to 5 with;

1 - The eyes open.
2 - The eyes closed, using the memory, imagination.
3 - The eyes open again.
The eyes, head/face continue to move when imagining shifting on a letter or moving along a sentience with the eyes closed.
An eyepatch covers the eye not in use. The eye is <u>open</u> under the patch when the eye in use is open and it is closed when the eye in use is closed.

Practice until the vision is clearer than 20/20 and equal in the left and right eyes, at all distances.

The White Spaces, White Glow

This is an Old Effective Method Taught by Dr. Bates.

See The White Glow

Look at a page in a book. See the Black print on white paper in Dr. Bates Better Eyesight Magazine.

1 - Look at the edge of a white piece of paper. Notice that it appears whiter, a glowing bright, pure white line along the edge that is brighter white than the inner areas of the page. Move, shift the eyes along the edge to make the white glowing line appear. This also appears on a white page on the computer screen but is seen best and healthy for the eyes when seen on a real sheet of white paper.

2 - This same effect is seen anywhere the white page meets, is next, close to the black print, ink. The page is brightest, whitest closest to the edge of the black ink and less white away from it. Example; All areas of the white page next to, contacting the edge of the black ink of a letter, around the outer and inner edge of the letter is brightest white. Same thing appears around a word. Notice that the white spaces inside letters are whiter than areas of the page outside and away from the letters. Areas of the white space inside a letter that are closest to the ink are most brightest white.

+ Look at and shift point to point on the black print and imagine it is dark black and clear.
+ Then, look at and shift on the white page surrounding and inside the black ink and imagine it bright, pure, glowing white.
+ Then, look at, shift on the black print again and imagine it dark black and clear.
+ Repeat these 3 steps.

3 - Look at the white space between two sentences.
Notice it appears whiter, brighter than areas of the page that do not contain print.

4 - See the thin white line under a sentence;
+ Notice that the area of the space closest, next to the bottom or top of a sentence, next to the edge of the black print appears brighter white than areas of the space away from the sentence, away from the black ink.
+ Notice that this brightest area close to the sentence forms a thin bright white glowing line directly under and above the sentence. This line is the combined white glow around all of the letters in the sentence. The line under the sentence is straighter, easier to see due to the bottom of most the black letters being level, thus the line is not interrupted by parts of the letters being below the sentence.

5 - The white glow is created by the contrast between the black print and white page and other functions of the eyes, brain, visual system. The white glow is a normal function of the visual system, a normal thing to see and improves the clarity of vision. It is an illusion, but a good, healthy illusion. Because it is normal; imagining, remembering the white glow helps the eyes, brain, visual system return to normal function with clear vision. Remembering, imagining any normal function of the eyes, visual system (remembering, imagining the white glow, dark black print clear, all objects clear…) improves the clarity of vision.
+ Move the eyes (Central field) along the white space and imagine it is clear, a pure bright white, without gray blur scattering onto it from blurry black print. Look at, shift on and imagine the white space clear. Then; look at, shift on (move the central field upon) the black print and imagine it dark black and clear. Repeat on the white space again, then the print…
(Practice steps 1, 2, 3, 4, 5 with the eyes open, then in the memory, imagination with eyes closed.)
The white glow is also seen around blue, green… other colored print.

6 - The white glow can also be seen around, above the top of trees, mountains on the sky in the distance. Shift up from the tree to the sky above the tree, back to the tree, then up to the sky again and the glow will appear. The glow is also called the halo, energy field, aura.
Seeing the white glow indicates normal vision, healthy eyes.

Improve the clarity of vision by moving the visual attention along the white spaces between sentences with relaxation.

When a person with unclear vision looks at black or any color blurry print, they sometimes get into the habit of straining, trying hard to see, 'squinting, staring'. Staring = no eye movement. This causes tension in the mind, eye muscles, eyes, prevents clear vision.

The mind, eyes, eye muscles relax when looking at the white spaces between the sentences because the white space is a blank surface, there is nothing to see. (Unless you want to try microscopic vision and see the tiny wood fibers in the paper, with relaxation, but that's for another lesson.) Because there is nothing to see; the person does not try to see, there is no effort, no squinting, staring=no tension, no strain. The mind, eyes, eye muscles relax, eyes function normally and the vision becomes clear.

The white page also activates the cells, cones, rods in the eyes retina as light does.
White print is light, similar to sunlight, is soothing, relaxing to the mind, eyes, is easy to read.
Read the white print on black page background in the Better Eyesight Magazine pages in this book.

Black print does not do this as well. Black color ink is made of a few combined colors but it affects the eyes retina more as the darkness of night; no light. No light=no activation of the cones, rods in the eyes retina=no vision.

Colored print has more effect, activation of the retina than black. White the most effect, activation.
The white or other color page background helps the eyes retina see black print.
White print, the white page is light, like sunlight. Sunlight is white light, consists of, produces all colors of the light spectrum, a balanced, healthy, full spectrum light.

Directions

Move the eyes, the visual attention along the white spaces between sentences

Do not try to see the black print clear while looking at the white spaces. Use central fixation; look at one thing at a time.
+ As the eyes, visual attention move along a white space; imagine the space is bright, glowing, pure white. Brighter, whiter than it actually is. Imagine it is perfectly clear.
Practice this with the eyes open, then in the imagination with the eyes closed, then with eyes open again. Repeat.
This helps the mind, eyes imagine and see the white space the way it truly appears when the vision is clear; without the gray blur from the blurry black print scattering onto, covering the white space as is seen by eyes that need vision improvement.
Imagining the space correct; clear and white also improves the memory, imagination, function of eyes, brain, visual system and this improves ability to imagine, remember and see the print correct, dark black and clear.

Imagine painting the spaces;



+Remember the color of pure white paint.
(Snow, white cloud, any white object to help you visualize white. Shift part to part on the white object in the mind.)
+ Imagine painting the white spaces between sentences with pure, bright white paint, using a small white paintbrush (or white nosefeather attached to the end of the nose, with the end at eye level, center of the visual field) painting along the space.
See picture; Nosefeather and eyes moving upon, painting the white space. >
The end of this feather is fluffy, the shape if an artists paintbrush. The center of the end has a point that moves on the space with the center of the visual field. All areas of the end of the feather touch, move upon, paint the white space.
The end of the paintbrush moves left and right through the white space, with the eyes/visual attention on and moving with the end of the paintbrush. Blink, breathe, relax.

The white paint removes the gray blur from the white space and returns it to bright, clear white. Imagine this as you paint - the space is covered with bright white paint and is clear.

Move the head/face with the eyes as the paintbrush (or end of the nosefeather) paints back and forth, left and right along the spaces between the sentences. Eyes, paintbrush (or nosefeather), head, face move together, relaxed, in synchronization, at the same time, in the same direction.

+ See Oppositional Movement - As the paintbrush, eyes, head/face move left and right (this is a small Long Swing, Sway); Notice that the page, space moves in the opposite direction that the paintbrush, eyes, head/face are moving to;

+ Move the paintbrush, eyes, head/face left to right > along the space and see the page/space move right to left <.
+ Move the paintbrush, eyes, head/face right to left < along the space and see the page/space move left to right >.
This is oppositional movement. It relaxes the mind, eyes and prevents; staring, squinting, locking the eyes, visual attention on the page. This eyes, head/face movement and appearance of oppositional movement improves eye movement, the clarity of vision. Relax with this swing; move the paintbrush, eyes, head/face back and forth; left, right, left, right on the spaces. Blink, breathe abdominally, relax.

+ Imagine painting the spaces, moving the brush left and right, eyes, head/face moving with the brush, seeing oppositional movement of the space, imagining the space is bright, pure, glowing, clear white with;
+ The eyes open.
+ Then in the imagination with the eyes closed.
+ Then with the eyes open again. Repeat.
(Continue to move the imaginary paintbrush and the eyes, head/face with the brush when doing this with the eyes closed.)

Paint the thin white line under sentences with the tiny pointed, feathered end of the nosefeater or a thin paintbrush. Paint around the edge of words, letters. Paint the white spaces inside letters.
+ Move the pointed end of a iron nail (real, not imaginary) along the spaces; move the nail left and right along through the center of a white space and see the space appear to move in the opposite direction. Practice with the eyes open, then in the imagination with the eyes closed, (continuing to move the nail and eyes, head/face left and right, imagining seeing the oppositional movement of the space), then with eyes open again. Repeat.

See the Print Clear

+ When the mind, eyes are relaxed from looking at the white spaces and the black print flashes clear; Move the eyes, visual attention (center of the visual field) to the black print, look directly at the print and read the print. The relaxation activated by looking at the white spaces is maintained, continues when the eyes look at the black print, resulting in clear vision, the print is seen dark black and clear. Return to the white spaces anytime for reinforcement of the relaxation.

+Read the fine print, then look to the distance, shift on distant objects (letters on a distant sign…), then back to the print. Repeat.

Practice these activities to improve the vision and also; spend time just reading for pleasure. Forget about the eyes. The eyes, visual system work completely natural with most perfect clear vision when the mind is not thinking about the eyes, vision. Practice, then forget about the eyes. Let them work automatically, on their own. Even when doing the activities; let the eyes, vision act 'on its own' as best as possible.

Avoid Artificial 3-D Image Fusion Exercises!

They can disrupt the eyes convergence, divergence, accommodation, un-accommodation, brain, eye function and lower the clarity of close and distant vision. See the warning on the website; www.cleareyesight.info and in the E-Book.

Relax the Neck, Shoulder Muscles

Avoid repetitive stress injuries from the computer mouse, typing… Alternating mouse hands may help or may cause other injury or the same type injury in both hands, arms, neck… Voice activation software, tools to replace the mouse, keyboard typing can help lessen tension, strain in the hands, arms, neck, head and eyes but, if the fingers still press on buttons, pads; injury can still develop.

Time away from the computer is best. Look away from the computer, to the distance every 5-10 minutes. That's my Teacher's advice. Keep good computer posture and take frequent breaks, walk outside, look to the distance, infinity and shift on far objects. Do the figure eight, long swing. Avoid excess caffeine, sugar, aspartame, diet soda, food, drink with artificial sweeteners. Headaches can lower the vision. Check your diet, muscle tension and stress? Air quality.

Shift on Small parts, Details of Close and Far Objects





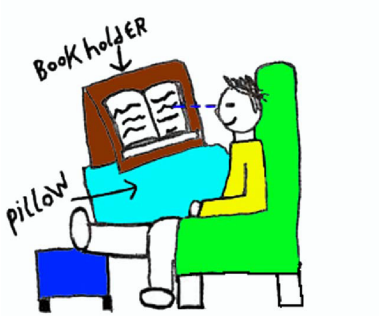


Carry rhinestones, diamonds, small stones in a pocket and look at them in the sunlight and at night in the moonlight. Shift part to part, tiny detail to tiny detail.
See the colors, rainbows in the stone, glass when placed close to the eyes.
Practice with; both eyes together, one eye at a time, then both eyes together again.
If vision is less clear in one eye, practice extra time with that eye, then practice a little time with the other clearer vision eye again. Then with both eyes together again. Practice until vision is perfect, equally clear in the left and right eyes. Then practice time will be equal for the left and right eyes.
Always end by practicing with both eyes together for balanced vision.
Practice time for the left and right eyes is determined by the level of clarity in the eyes;
Less clarity in an eye; more practice time for that eye. Less time as its clarity improves.
Practice at a variety of close distances.
Practice looking close and far; shift on the stone, then on a distant object, then back to the stone.

Fine Print and Clear Close Vision Videos

http://www.youtube.com/watch?v=t3qlFE8EKTo&feature=channel

http://cleareyesight.info/id79.html

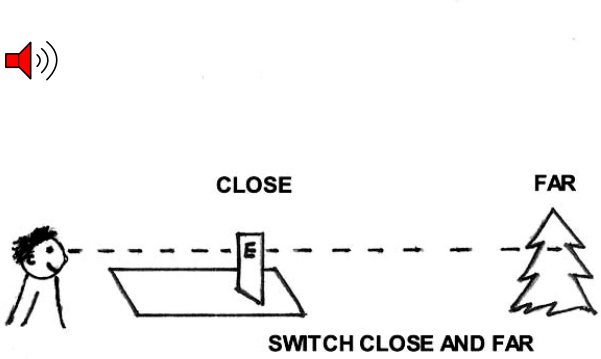


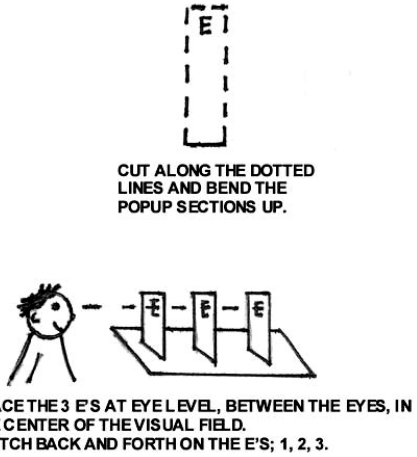
Use the Correct, Relaxed Vision Habits Card

Switching, shifting on the 3 identical pop-up section E letters as shown in this book and videos. It perfects the eyes convergence, divergence, accommodation, un-accommodation at close distances. Do not do as a constant eye exercise. Relax with it. Practice it occasionally to test and improve the vision. Can also be used for distant vision improvement. See card, directions on next page;

CORRECT, RELAXED VISION HABITS CARD

For Clear Close, Reading and Distant Eyesight





The Correct Vision Habits card lists the main correct, normal eye functions 'Habits' to practice on the right side of the card. Practice these activities on close and far objects.

Directions

Cut the card along the dashed lines. Then cut along on the lines on the 3 pop-up sections. Bend the sections upright as shown in the picture. Align them in a straight line. Tape or paste the card onto a piece of cardboard. Place the card on a table with the E's on the 3 sections at eye level, between the left and right eyes, center of the visual field. The 3 sections are about 1-2 inches apart depending on the size of the printed card. Practice with different size cards, spacing of the sections. Different spacing improves convergence, divergence, accommodation, un-accommodation, visual clarity at a variety of close and reading distances.

Start with the card at a comfortable distance from the eyes; E #1 at 1-3 feet or less. Practice until all E's are clear at all close and reading distances, up to 6, 5, 4, 3, 2, 1 and even ¼ th inch from the eyes.

Switching and Shifting on the Three E's ('Pop-Up' Sections) Improves Close Vision

Practice Switching, Shifting on the on the 3 E's ;

+ Shift part to part (point to point) on E #1 - closest E to the eyes.
+ Switch to E # 3 - farthest E from the eyes. - Shift part to part (point to point) on E #3.
+ Switch back to E #1. - Shift part to part (point to point) on E #1.
+ Switch to E #3 again, shift on it. Repeat the steps; #1, #3, #1, #3...
+ Switch back and forth to E #2 at the middle distance, to and from E #1 and #3.
Switch back and forth on the 3 E's in any order.
Shift part to part on each E the eyes switch to, look at, one E at a time.
Blink and relax. Practice seeing one small part of an E darkest black and clearest at a time in the center of the visual field as the eyes, central field moves from part to part on a E. (See Shifting and Eyecharts Chapters.) Practice all steps on the side of the card; Switching, Shifting, Central-Fixation, Tracing, Head/Face Movement with the Eyes, Oppositional Movement, Memory, Imagination, Relaxation, Breathing, Blink...

Practice with;
+ Both eyes together.
+ One eye at a time.
+ If vision is less clear in one eye, practice extra time with that eye.
+ End with both eyes together again.
Practice until the vision is perfect, equal in the left and right eyes at all close and reading distances.

E's are placed between the left and right eyes, at eye level (center of the visual field) when using both eyes together and when using one eye at a time. (When using one eye; do not move the E to the outer sides, areas of the eyes, face. Keep it between the left and right eyes. Use an eyepatch over the eye not in use and keep the eye open under the patch when the eye in use is open.

The body, neck, head, eyes are relaxed. Move the head/face with the eyes, eye in the same direction.

In the Audio above I accidentally referred to the eye with less clear vision as the 'weaker' eye. This is incorrect - The eyes must never be thought of or spoken of as weak: only as needing vision improvement. The correct words are: to practice extra time with the eye that has less clear vision, the eye that needs more vision improvement. Eyes are not weak. The eyes, eye muscles are only in a state of tension and need relaxation, a return to correct function.

Practice with the memory and imagination as described in this book;
Shift, switch on the E's and remember, imagine each E the eyes look at is dark black and clear.
Then; look at and remember, imagine the white paper surrounding the E is bright, pure, glowing white.

Practice all steps with;
+ The eyes open.
+ Then in the imagination with the eyes closed.
+ Then with the eyes open again. Continue to shift, switch on the imaginary E's in the mind when the eyes are closed.

Practice Switching and Shifting on Close and Distant Objects to Improve Close and Distant Vision;

Use one pop-up section (#1, 2 or 3) for a close object when switching close and far.
Practice with the card/section placed at various close distances.

+Shift on the E on the section. (close object)
+Switch to a object in the distance directly beyond the E section. Shift on the distant object.
+Then return to the E - close object, shift on the E. Repeat switching, shifting close and far.
Practice with objects at a variety of distances; close, middle, far for clear vision at all distances.
Use central-fixation when shifting on a E and distant objects. (See the Central-Fixation chapter.)

Practice switching, shifting, central-fixation with;

+ Both eyes together.
+ One eye at a time.
+ If vision is less clear in one eye, practice extra time with that eye.
+ End with both eyes together again.
Place the 3 E's and distant objects in the center of the visual field, between the left and right eyes, at eye level when using both eyes and one eye at a time.

Practice with the memory and imagination as described in this book;
Shift, switch on the E's and remember, imagine each E the eyes look at is dark black and clear.
Then; look at and remember, imagine the white paper surrounding the E is bright, pure glowing white, brightest white closest to the black ink.

Do this with;
+ The eyes open.
+ Then in the imagination with the eyes closed.
+ Then with the eyes open again. Continue to shift, switch on the imaginary E's in the mind when the eyes are closed.

When looking at an E on a section or a distant object; shift part to part on the object the eyes are looking at. Shift point to point for perfect central-fixation, fine detailed, very clear vision. Blink and relax. Take a few deep, slow, relaxed breaths. Yawn, stretch, make a sound, hum. Use all Correct Vision Habits listed on the card; Switching, Shifting, Central-Fixation, Tracing, Head/Face Movement with the Eyes, Oppositional Movement, Memory, Imagination, Relaxation, Breathing, Blink…
Practice shifting, all correct vision habits on the 3 smaller E's, then on the tiny dots below the E's for perfect central-fixation, tiny saccadic eye movements, very clear vision. Relax, Blink, Breathe.

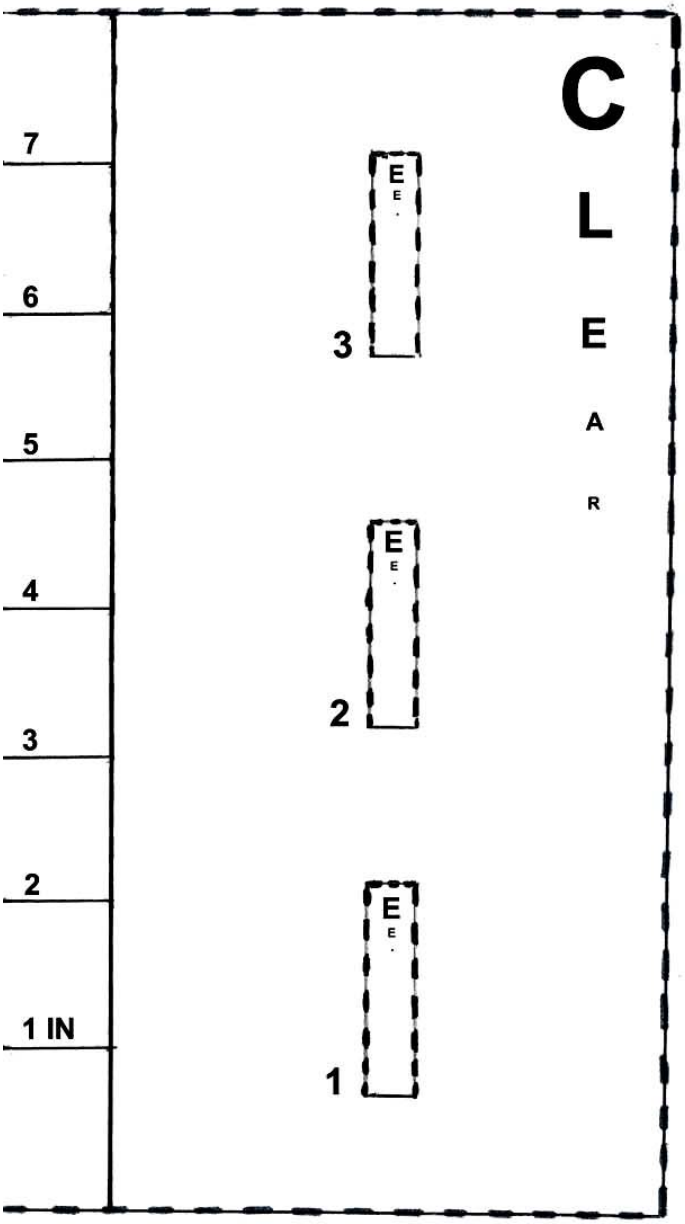
This is the same activity described for switching on the 3 Pens in a Row, chapter 9. Follow the directions for the Pens in a Row when using the correct vision habits card; Relax, move, good posture. Holding the card up with the hand enables the person to move, walk around and the section can be moved, aligned with various distant objects. Avoid holding the card up with the hand too long; place the card on a table to avoid tension, fatigue in the arm, neck.
Tape small and microscopic fine print and a sparkling mini color chart on the back of the card. Read the print in the sunlight. Practice color treatment with the chart; shift on the tiny colored sparkles with the card close to the eyes in the sunlight and moonlight. Close the eyes and see the color in the mind, memory and shift on the sparkles in the imagination.



Perfect convergence, accommodation produce clear close and reading vision.
Perfect divergence, un-accommodation produce clear middle and distant vision.

Correct, Relaxed Vision Habits Card

NATURAL EYESIGHT IMPROVEMENT
CORRECT VISION HABITS CARD



SWITCH BACK AND FORTH, CLOSE, MIDDLE, FAR ON THE THREE E'S PLACED AT THREE DIFFERENT CLOSE DISTANCES FOR CLEAR CLOSE EYESIGHT.

PRACTICE THE 8 CORRECT VISION HABITS ON THIS CARD WITHOUT EYEGLASSES.

PRACTICE CORRECT VISION HABITS #1 TO 8

1 - RELAXATION

2 - BLINK

3 - BREATHE RELAXED,
DIAPHRAGMATIC/ABDOMINAL

4 - SHIFTING - SHIFT ON THE LETTER E; SHIFT LEFT AND RIGHT, TOP AND BOTTOM, DIAGONALLY, TO THE MIDDLE AND TO ANY PART IN ANY DIRECTION.

5 - CENTRAL FIXATION - SEE THE CENTER OF THE VISUAL FIELD CLEAREST. PLACE THE PART OF THE E THE EYES LOOK AT IN THE CENTER OF THE VISUAL FIELD.
SEE ONE SMALL PART OF THE E CLEAREST AT A TIME IN THE CENTER OF THE VISUAL FIELD. SHIFT THE EYES/VISUAL ATTENTION FROM SMALL PART TO SMALL PART, RELAXED, SLOW, EASY, CONTINUALLY. THE CENTER OF THE VISUAL FIELD MOVES WITH THE EYES KEEPING EACH PART PERFECTLY CLEAR.

6 - MOVEMENT - MOVE THE HEAD/FACE AND BODY IN SYNCHRONIZATION WITH THE EYES, AT THE SAME TIME, IN THE SAME DIRECTION THE EYES SHIFT/MOVE TO.
THE EYES, HEAD/FACE, NECK AND BODY ARE RELAXED AND MOVE FREELY.
SEE THE ILLUSION OF OPPOSITIONAL MOVEMENT; THE E APPEARS TO MOVE IN THE OPPOSITE DIRECTION THE EYES SHIFT/MOVE TO.
SHIFT RIGHT - THE E MOVES LEFT
SHIFT LEFT - THE E MOVES RIGHT.
SHIFT UP - THE E MOVES DOWN.
SHIFT DOWN - THE E MOVES UP.

7 - MEMORY AND IMAGINATION - SHIFT ON A LETTER E AND REMEMBER, IMAGINE AND SEE THE E DARK BLACK AND CLEAR.
DO THIS WITH THE EYES OPEN, THEN CLOSED, THEN OPEN.
REMEMBER, IMAGINE AND SEE THE WHITE GLOW ON THE WHITE PAPER SURROUNDING/AROUND THE E..
PRACTICE PALMING AND REMEMBER, IMAGINE, THINK POSITIVE, PLEASANT THOUGHTS AND SEE OBJECTS IN THE IMAGINATION PERFECTLY CLEAR, IN COLOR, MOTION. IMAGINE USING CORRECT VISION HABITS; SHIFTING ON THE CLEAR OBJECTS IN THE MIND.

8 - SWITCHING - SWITCH BACK AND FORTH; CLOSE, MIDDLE, FAR ON THE 3 E'S #1,2,3 TO IMPROVE CLARITY OF EYESIGHT AT 3 DIFFERENT CLOSE DISTANCES.
SHIFT ON EACH E THE EYES LOOK AT, ONE E AT A TIME.

PRACTICE SWITCHING AND SHIFTING ON THE 3 E'S WITH ONE EYE AT A TIME;
BOTH EYES TOGETHER, THEN ONE EYE AT A TIME -- ONLY LEFT, THEN ONLY RIGHT,
THEN PRACTICE WITH BOTH EYES TOGETHER AGAIN.
IF EYESIGHT IS LESS CLEAR IN ONE EYE, PRACTICE A LITTLE LONGER WITH THAT EYE.
PLACE A EYE PATCH OVER THE EYE NOT IN USE AND KEEP BOTH EYES OPEN.

TRACE THE E'S WITH THE NOSEFEATHER

PRACTICE CORRECT VISION HABITS 1 TO 8 ON SMALL AND FINE PRINT LETTERS.
SHIFT ON THE SMALL DOT BELOW THE E ON EACH POPUP SECTION.

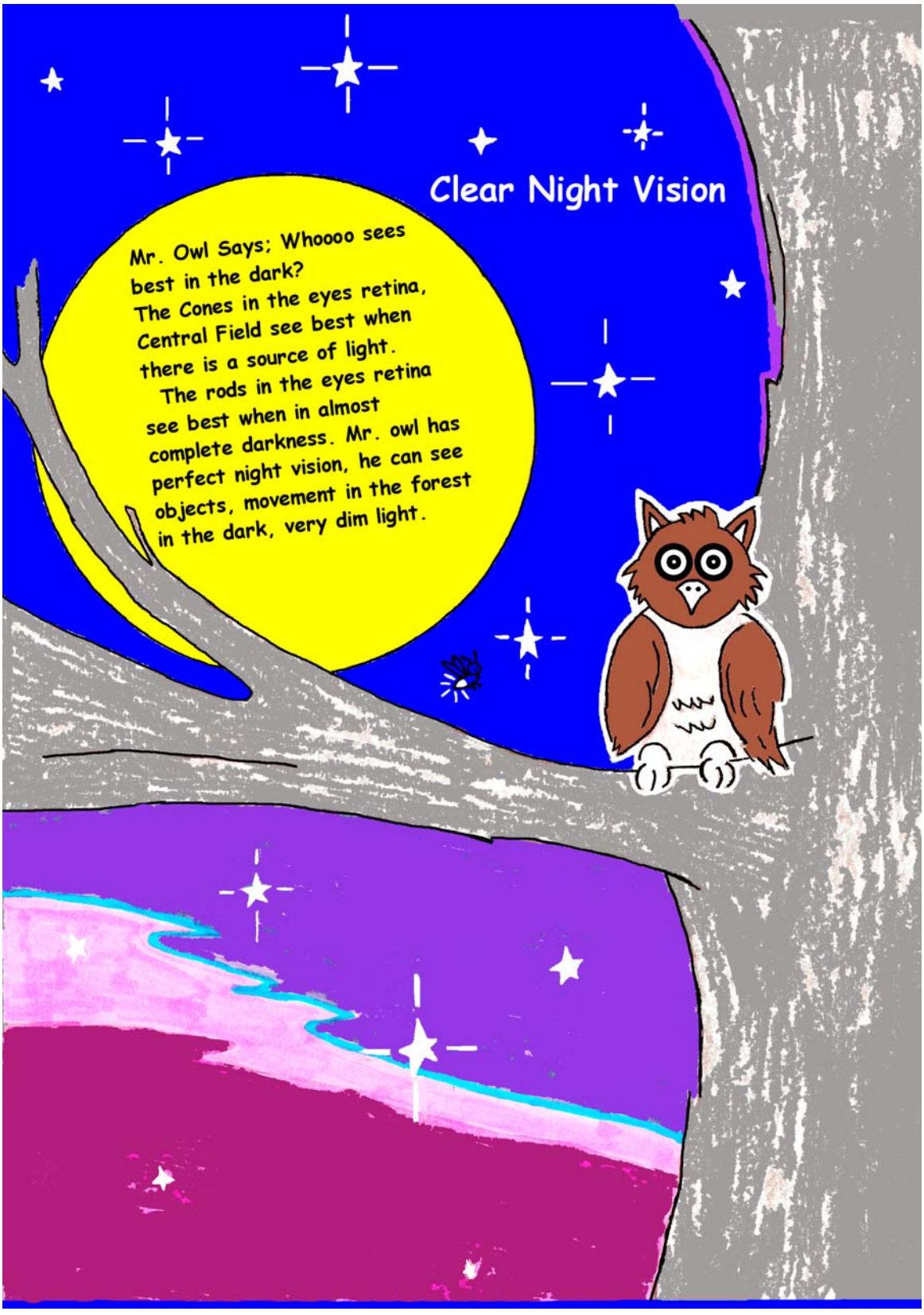
IMPROVE THE CLARITY OF DISTANT EYESIGHT BY SWITCHING BACK AND FORTH CLOSE, FAR, CLOSE, FAR... ON ONE POPUP SECTION AND A DISTANT OBJECT; HOUSE, TREE IN THE DISTANCE, IN LINE WITH THE SECTION.

AVOID INCORRECT VISION HABITS; SQUINTING, STARING, TRYING HARD TO SEE CLEAR.
BLINK AND SHIFT TO SEE A LETTER CLEAR.
LOOK AT SOMETHING ELSE, THEN RETURN TO THE LETTER.

PRACTICE WITH THIS CARD OUTSIDE IN THE SUNLIGHT. OBTAIN FULL SPECTRUM SUNLIGHT DAILY.
READ THE FINE PRINT ON THE BACK OF THIS CARD IN THE SUNLIGHT, SUN SHINING OVER THE SHOULDER, ONTO THE CARD.

PRACTICE CORRECT VISION HABITS ON ANY OBJECT, AT ANY DISTANCE; CLOSE, MIDDLE, FAR.
WITH PRACTICE CORRECT VISION HABITS BECOME AUTOMATIC, OCCUR ON THEIR OWN, ALL THE TIME, RESULTING IN CLEAR EYESIGHT.

15 - NIGHT VISION



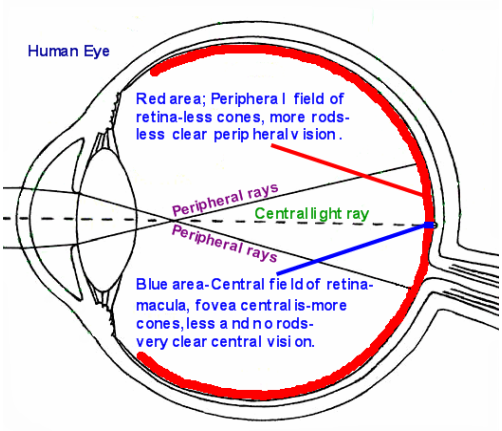
Video







The same Relaxed, Correct Vision Habits used to see clear in the daylight are used on objects at night in dimmer light. Print in this chapter is in Purple, Maroon/Red and Blue to remind the reader to eat Bilberries, Blueberries, and other colorful dark red/purple/blue pigment berries for healthy eyes, retina, lens and clear day, night vision. Also eat your dark green leafy and yellow, orange vegetables, Lutein, bioflavonoids. See Nutrition chapter.



As described on previous pages; the eyes retina contains cones and rods (light, energy receptors).
Cones produce very clear vision, better than 20/20 and bright color perception.
Rods produce less clear vision and only grey, black/light, dark perception. Rods sense movement.
The fovea centralis, (center of the fovea) in the macula, in the exact center of the retina contains only cones, no rods, and produces the exact center of the visual field, a small area of very clear vision.
The fovea centralis in the center of the retina is about the size of the pointed end of a pin.
The fovea centralis enables the eyes to see very small fine details of objects perfectly clear in the center of the visual field. The central field moves with the eyes as the eyes shift from part to part on objects, keeping the object of visual attention clear. Central-fixation.
Cones need a certain amount of light to stay activated.

Rods are placed in the peripheral field of the retina; all areas around, away from the center of the fovea centralis. There are very few rods in the outer area of the fovea, a bit more in the macula, and more rods into the areas of the retina away from the macula, into the retinas outer peripheral field.
There are some cones in the peripheral field of the retina; more towards the center, less away from the center and none in the far outer area of the peripheral field.
The peripheral field of the retina produces the peripheral field of vision. Due to less cones in the peripheral field of the retina; the peripheral field of vision is less clear than the center of the visual field.
Using the peripheral field of vision to see a object clear causes eyestrain and blur.
Always see a object clear by using the fovea centralis, placing the object in the center of the visual field.
The exception to this is; in very dim light, almost complete darkness the cones in the eyes retina stop functioning. Due to the fact that the center of the fovea centralis in the small exact center of the retina contains only cones, no rods and this area of the retina produces the exact center of the visual field; the exact center of the visual field stops functioning in almost complete darkness. (The macula also contains many cones and only a few rods).
Only the rods in the peripheral field of the retina, around, away from the center of the fovea centralis function in very dim light, so only this peripheral area of the retina, peripheral field of vision will function in very dim light.
In this case, which does not occur often, the person must use the peripheral field of vision to see. (This is taught in the military for soldiers on maneuver in the woods, swamp... at night in low light
In all other cases when there is enough light to activate the fovea, cones and center of the visual field, always use the center of the visual field to see with.

Rods detect movement of objects in the inner and outer (entire) peripheral field and outer central field.
It is ok to be aware of the peripheral vision, using it to cross a street... turning to look in all directions and also being aware of objects, movement in the peripheral field to maintain safety.
When you want to see a object in the peripheral field clear; turn and look directly at the object, placing it in the center of the visual field. The rods will detect a moving object: car, person approaching in the peripheral field and work with the brain to cause the eyes, head to turn and look in that direction, placing the object in the central field as the person quickly moves to a safe location.

Experiment;
Experience the shutting down of the cones and central vision in very dim light;
Buy a 'glow in the dark stickers kit' from a toy store.
Cut the glow in the dark stickers into very small pieces;
tiny stars, moons, each about 1/8th inch long and wide.
Place 10 of them onto a large piece of cardboard at 1, 2, 5, 7, 10... inches apart scattered about the board.
Place them near a light bulb to charge them.
After they are charged bring the board into a completely dark room. Sit and look at the board.
(Allow the eyes, retina about 5-10 minutes to activate visual purple and adjust to the darkness.)
Look at the glow in the dark pieces. Notice that when looking directly at a piece, placing it in the exact center of the visual field, the piece disappears.
This occurs because the center of the retina, (center of the fovea centralis and most outer parts of the fovea and macula) are not active due to lack of light and the center of the fovea contains only cones and the outer fovea and macula contains mainly cones and only a few rods.
Cones are not active in dim light so the center of the visual field/central vision is not activated.
The glow pieces do not emit enough light to activate the cones in the eyes retina and the many cones in the macula, fovea in the center of the retina.
Notice that glow pieces in the peripheral field that the eyes are not looking directly at are seen. They are not perfectly clear but the rods in the peripheral field of the retina see them because rods continue to function in very dim light.

When there is enough light at night, in dim light to activate the cones in the eyes retina and the center of the visual field, enabling objects to be seen in the center of the visual field; then, use the center of the visual field to see with.

Day and Night Visual Clarity-The Pinhole Effect

When vision is unclear, night vision often improves quickly after daylight vision starts improving.
Night vision sometimes takes a bit longer to improve due to the eyes pupil size at night and during the day;
+During the day the eyes pupil size is smaller causing a Pinhole Effect = a small pupil blocks out some of the unfocused light rays in the eye that has unclear vision causing day vision to be clearer.
+At night, in dim light the eyes pupil is larger and lets in more light. If the eyes need vision improvement and are producing unfocused light rays, then, when the pupil is larger, letting in more light, there are more unfocused light rays in the eyes, thus, less clear vision at night.
With practice of Natural Vision Improvement, the eye returns to normal function, shape and all light rays in the eye focus correct when the pupil is small and large for clear day and night vision.
Pinhole glasses work by this pinhole effect. Pinholes do block natural eye functions but are better than eyeglasses to use temporarily as the vision is improving.

Practice Correct Vision Habits on objects at night, in dim light to improve night vision; Shift and switch on objects at different distances. Practice central fixation...
Practice with; both eyes together, one eye at a time and both eyes together again. If vision is less clear in one eye, practice extra time with that eye for equally clear, perfect, balanced vision in the left and right eyes at all distances day and night.
Practice correct vision habits and remember, imagine the objects clear with the eyes open, closed in the mind using the imagination, and open again.

Shift on a close object; low tree branch in the moonlight or under a street light.

Then switch to a lighted sign or window in a building in the distance and shift on it.

Shift on the moon; part to part, left, right, top, bottom, diagonally. Trace around the edge of the moon counterclockwise, clockwise... with the imaginary Nosefeather.
(Shifting on round objects returns the eye, cornea to normal round shape, removes astigmatism, blur, gets the eye muscles, eyes moving easy, correct in every direction.)

Practice central-fixation; see one small part of a object clearest at a time in the center of the visual field as the eyes shift move the central field part to part on a object. Shift from small part to small part on the craters on the moon, window panes and other small parts of objects. See fine details clear. With practice the eyes can see small parts, fine details of objects; craters and small parts of the craters on the moon, people, objects inside a lighted window in a distant building and small parts of objects at close distances.









Practice on the pictures here, then on objects outside at night.

Shift on the buildings, windows, trees, sky, moon, lighted clock...
Shift on the numbers; shift from part to part on the 12, then on the 3, then 9,
Then 6, back to 12, 10, 4, 2 and any number. Shift from number to number.
Blink and shift. Deep, slow, abdominal breathing. Yawn, Hum.
Deep relaxation. Avoid trying to see. Let clear night vision come to you, effortless, easy.

Be patient, think positive.
Vision can become clear instantly or may become clear one, two days after practicing. Some people need more time, but with practice, relaxation and Correct Vision Habits, the vision will become clear.

Practice Shifting, Central-fixation, Switching on Objects at Close, Middle and Far Distances at Night

Night Vision Video for this picture:
http://www.youtube.com/watch?v=r5JxOFVi3hc



See the example in the picture: The light from the open window is shining on the tree branches.

The person in the back of the house is looking out the open window at the tree branch and the moon in the distance beyond the tree. The window light and moonlight shine on the tree branches.
This provides enough light to activate the cones and rods in the eyes retina for clear night vision.

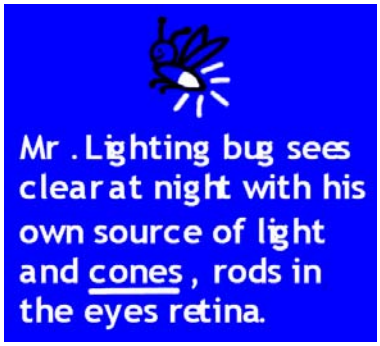
Find a scene like this one in your neighborhood.
Shift and switch on the tree branches (close object) and the moon (distant object);

+Look at the tree branch.
Shift on it part to part.
Shift on small details point to point.
Trace on/along the edge of the branches.

+Then switch to the moon in the distance.
Shift on the moon, part to part, point to point.
Shift on and trace the craters and other parts of the moon.
Trace around the moon counter-clockwise and clockwise.

+Switch back to the tree branch. Shift, trace on the branch.
Switch to the moon. Shift, trace on the moon.

+Repeat shifting, tracing, switching on the branch and the moon.



+Switch back and forth oh the airplane and moon.
Shift part to part on the airplane, then on the moon, then airplane, then moon…

Practice with; both eyes together, then one eye at a time, then both eyes together again.
If vision is less clear in one eye, practice a little longer with that eye until night vision is equal, perfectly clear in the left and right eyes, at all distances.
Relax, allow the eyes to blink, breathe abdominally, daydream something pleasant, happy.

Practice with the memory and imagination; as the eyes shift on the tree branch; remember, imagine it is clear. Shift on the moon and remember, imagine it clear. Practice this with the: eyes open, then in the imagination with the eyes closed, then with the eyes open again. Repeat.

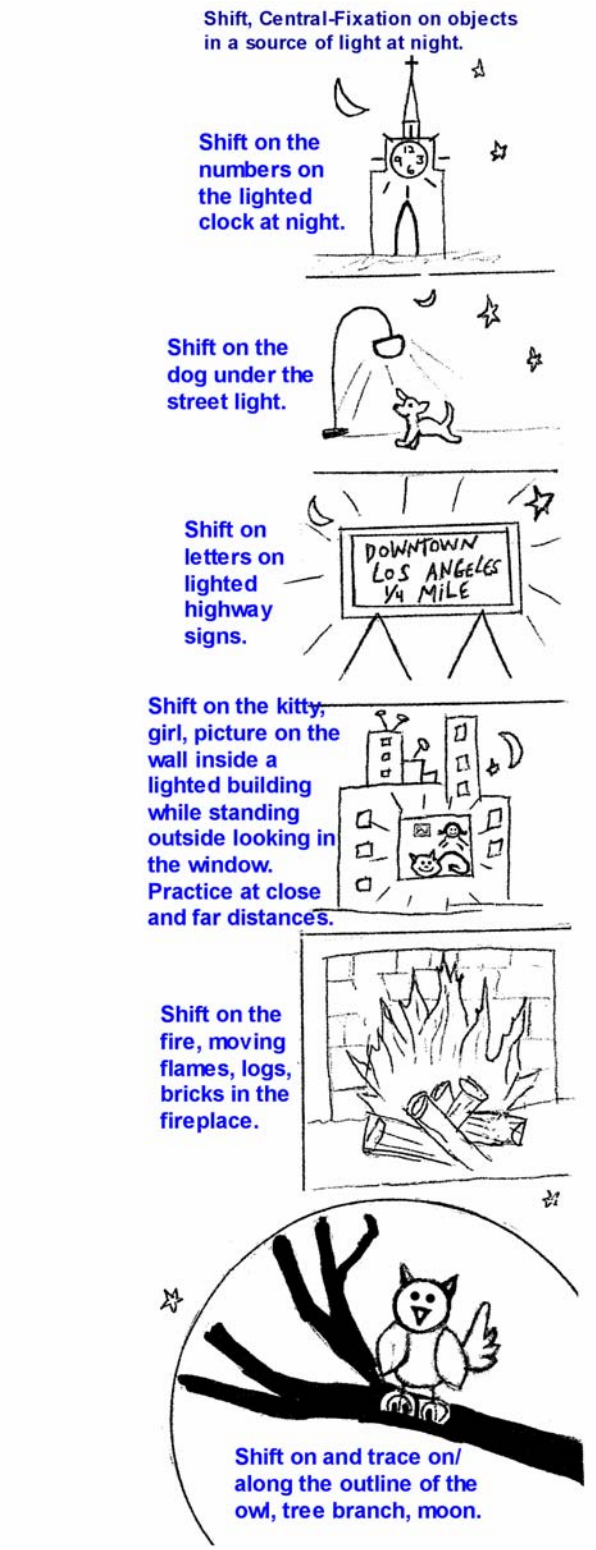
Practice central-fixation; see small fine details of objects clear in the moonlight, window light.
See small parts clear, one small part at a time in the center of the visual field. Move the center of the visual field from part to part, tiny point to tiny point.
The head/face and body are relaxed and move with the eyes.

Use the Nosefeather to help the eyes shift, trace, central-fixation, switch and activate easy eye, head/face, body movement. (chapter 6).

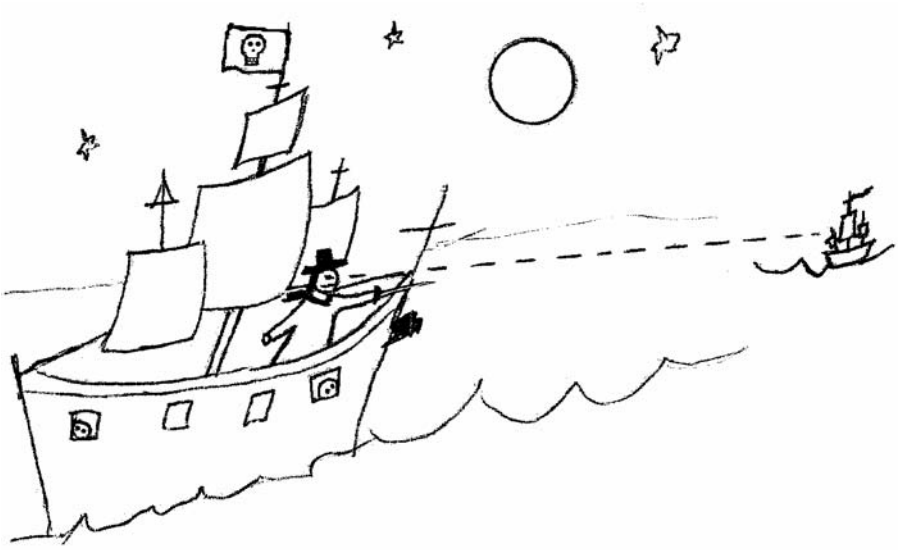
The man in the front of the house is looking out the front and side windows and shifting, switching on the trees, sky, distant mountains, cars on the highway and other objects outside the house.
He walks outside and practices switching, shifting, tracing on objects at a variety of distances; telephone pole, trees, house, moon, stars, plane, lights on the plane, flower, kitty, lightning bug...
He shifts, traces on windows, window panes, people inside the window, bricks in the chimney...

He practices switching; telephone pole to tree, tree to telephone pole.
Tree to house, house to tree.
House to moon, moon to house...
He shifts part to part on each object he looks at, one object at a time.
He relaxes, enjoys the things he sees.
He daydreams again and completely forgets about the eyes. Vision is clear.

Look out a open window at night.
Hang a pen upright, vertical on a string in the center of the window.
Practice switching close and far on the pen and the tree, moon in the distance.
Practice with; both eyes together, then one eye at a time, then both eyes together again.
If vision is less clear in one eye, practice a little longer with that eye.
When looking at a object, remember to shift on it.
See and shift point to point on small and tiny parts, fine details. Visually investigate, be interested in the objects.
Shift for a split second or longer, few seconds... before moving to a new object. No time limits, as long as the eyes shift, move-vision is clear.
Take a break, stop practicing and just enjoy the scenery, forget about the eyes, vision. Let the eyes function, shift completely natural, 'on their own'.



Practice the rock (chapter16) in front of the pen/window and see the pen, tree, moon show oppositional movement. (chapter 17). Do the long swing, cross crawl.
Relax, sleep tonight with happy dreams.



The Pirate Shifts, uses Central-Fixation on objects at night for clear vision. His central and peripheral vision, cones, rods in the eyes retina are activated by bright light and semi-dim light providing clear vision. He uses the central field to see clearest with. He sees the dimmest, smallest light emitting from the enemy ship in the far distance.
His peripheral vision, rods in the eyes retina are activated, continue to function in very dim light, almost complete darkness.

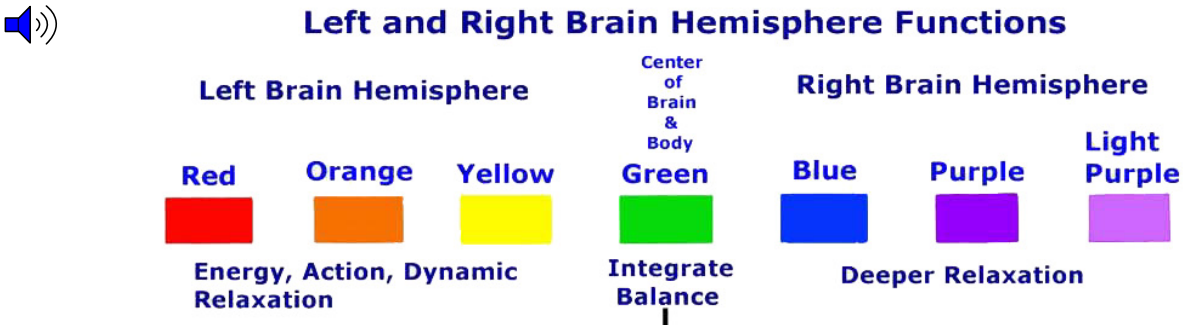
Other night vision activities; A long string of Christmas tree lights or glow in the dark objects can be used as a bead string to practice switching, shifting on the colored lights at close, middle, far distances. Make a 200 foot sting.

Play catch with Glow in the Dark Super Balls. Bounce the ball high into the sky.

The eyes, vision adjust to light and dark, day and night vision by producing, controlling visual purple in the eyes retina. Bilberries, dark green leafy vegetables and other healthy food and sunlight is needed for this eye function, clear day, night vision.
See Nutrition- chapter 27.

16 – LEFT AND RIGHT BRAIN HEMISPHERE ACTIVATION & INTEGRATION FOR PERFECT, EQUALLY CLEAR VISION IN THE LEFT AND RIGHT EYES AT ALL DISTANCES - CLOSE, MIDDLE, FAR

Left and Right Brain Hemisphere Functions



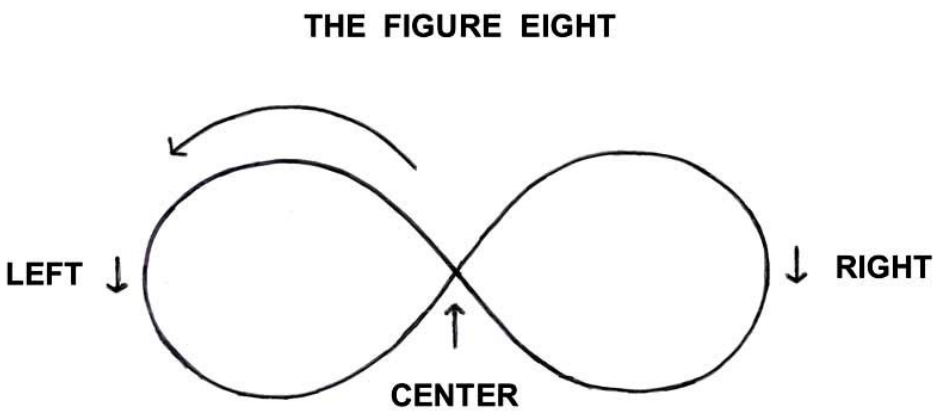
Dominates Close Vision Convergence & Accommodation	Dominates Distant Vision Divergence & Un-Accommodation
Eye muscles contract	Eye muscles un-contract
Right hand - Right side of body movement	Left hand - Left side of body movement
Dominates Hearing	Dominates Vision
Trying to see, concentrating, using effort, analyzing, a organized, detailed plan to see. Effort to move.	Easy, relaxed, effortless clear vision. Seeing occurs automatic without trying, not thinking about the eyes, vision. Moving the body, eyes/visual attention through space, the scenery easily, freely. Eye shifting.
Alert, Active, Energetic. Dynamic relaxation. Left and right brain hemisphere activation and integration is necessary for clear vision at all distances: close, middle, far in the left and right eyes. Practice left and right brain hemisphere activities.	Relaxed, calm mind, deep perfect relaxation of mind, body, eyes, muscles. Alpha, Theta, Delta deep relaxed brain wave frequencies. Activating the right brain hemisphere activates relaxation and practicing relaxation activates the right brain hemisphere. Deeper dynamic relaxation.
Learning new skills, calculating, analyzing, digital side of brain, math, science formulas, to design a plan, to figure out a solution to a question, puzzle, attention to small fine details. (Central Fixation) Thoughts in a specific order, rational, logic, reason, structured, organized.	Automatic, subconscious habits, functions: Riding a bike, singing, free type dance, swimming. Creative, imagination, art, emotions, feeling, intuition, 'gut feeling', sprit. When a skill is learned with the left hemisphere, the right hemisphere creates it into a automatic habit/function; the person does not need to think, analyze... to perform the activity. Movements occur automatic, easy. Left and right hemispheres work together.
Learning, consciously practicing correct vision habits to return the eyes, visual system to normal function, clear vision.	The right brain hemisphere activates automatic, subconscious correct vision habits, normal eye functions, clear vision.
Short term memory. Remembering a list of numbers, words... for a few seconds. Time.	Long term memory. Remembering things that occurred a hour, day, week, month, years ago. Space.

Practice a variety of left and right brain hemisphere activities; art, music, singing, dance, sports, science, math, language.., work with a variety of different colors to equally activate and integrate the left and right hemispheres for equal, perfect clear vision in the left and right eyes at all distances.

THE FIGURE EIGHT, THE ROCK, LONG SWING, CROSS CRAWL AND OTHER MOVEMENT, RELAXATION, LEFT AND RIGHT BRAIN HEMISPHERE ACTIVATION AND INTEGRATION ACTIVITIES

Figure Eight Video

THE FIGURE EIGHT (Infinity Swing)

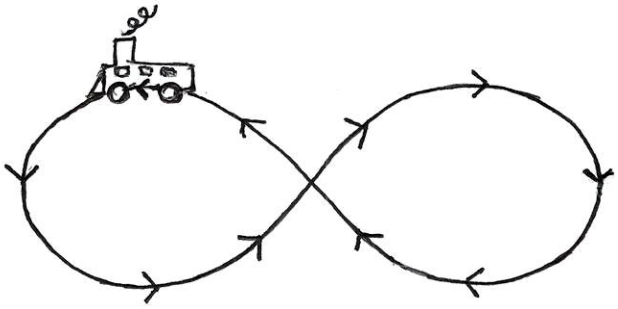


Drawing the Figure Eight
Improves the Clarity of Vision.

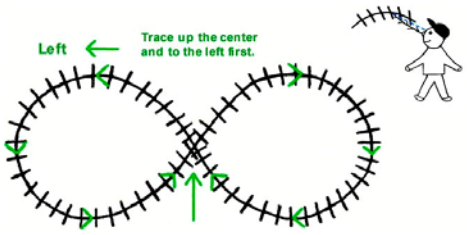
Trace the figure eight with the eyes and end of the imaginary Nosefeather. (Nosefeather is optional.) The eyes (visual attention, center of the visual field) and end of the Nosefeather move left and right, on/along the figure eight.

Trace up the center and to the left first <;
+Trace up and over the top left <, down the left side, along the bottom and up through the center again, then trace the right side;
+up and over the top right >, down the right side, along the bottom and up again through the center.
+Trace the left side again, then right, left, right, left...
+The left side < is traced counterclockwise. < Activates Right Brain Hemisphere.
+The right side > is traced clockwise. > Activates Left Brain Hemisphere.

Do not stop in the center when tracing. Keep the eyes moving, continually tracing up through the center and around the eight, left and right.
Relax, blink, breathe abdominally.

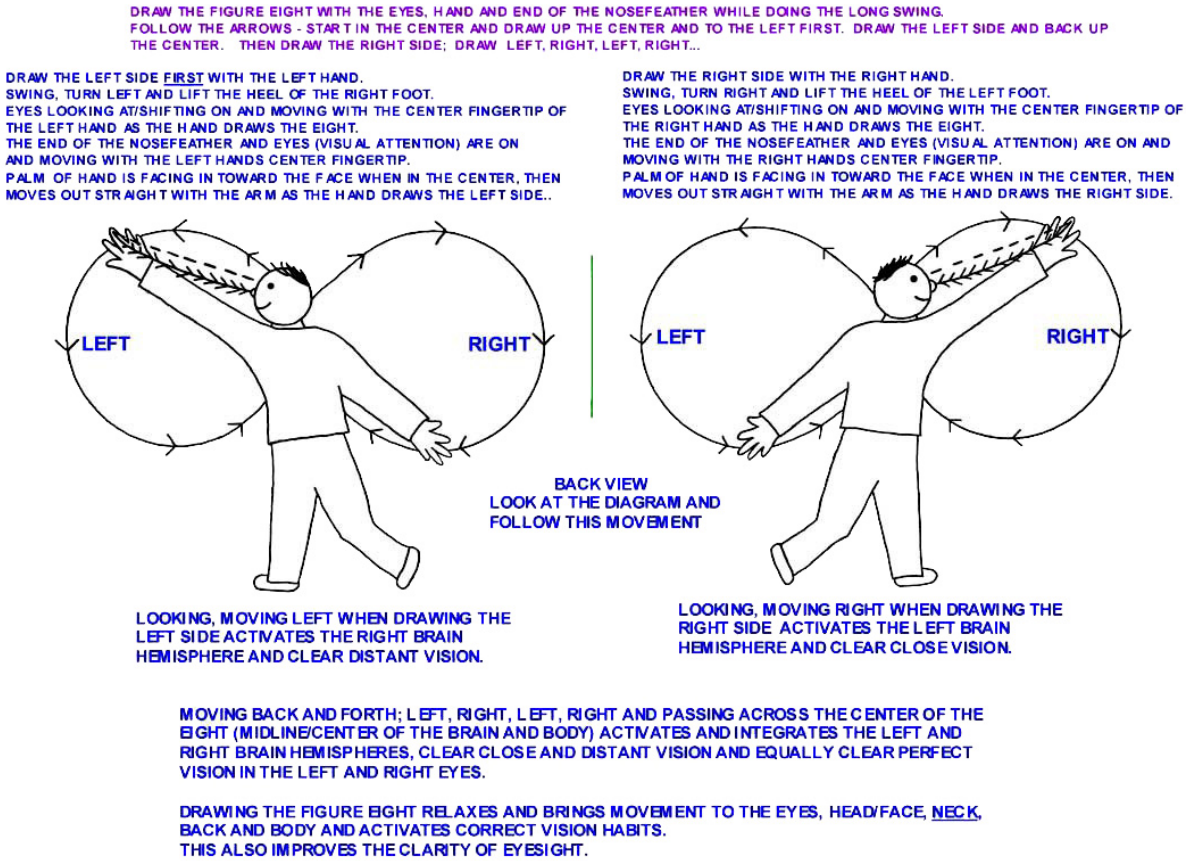


Move the eyes, (visual attention, center of the visual field), tracing around the eight as if watching a small train moving along the figure eight. Follow the arrows in the picture.
Trace at a comfortable speed; not extremely slow, but too not fast.
Movement and relaxation is the goal.
Practice drawing imaginary figure eights in the air with the eyes and Nosefeather.
Draw large, medium, small eights. Fine print size eights.
Drawing the figure eight activates eye, head/face, neck and entire body movement. Movement activates relaxation, positive energy and improves the clarity of vision.
Draw railroad tracks on large, small and tiny pictures of the eight and trace on it with the eyes, Nosefeather to activate saccadic eye movements. Blink.



Natural Vision Improvement Teachers include entire body movement when drawing a large figure eight, (similar to the long swing.);

Directions;

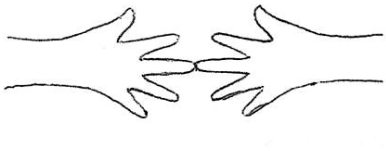


Draw the left side; the left hand extends out and moves up and around counter-clockwise < to draw the left side < of the figure eight with the eyes (visual attention, center of the visual field) and end of the Nosefeather on and moving with the hand, eyes looking at, shifting on the left hands center fingertip, while the body also leans, turns to the left and the heel of the right foot raises off the ground. The hand, eyes and Nosefeather move around the left side, under the bottom, then up the center of the eight, body moving back to the center with the hand, eyes, Nosefeather.
The heel of right foot returns to the ground.
The center fingertips of the left and right hands (palms facing inward toward the face) meet, touch together in front of the eyes in the center of the eight for a second as the eyes, end of the Nosefeather trace up through the center of the eight and shift from the left hands fingertip to the right hands fingertip. Do not stop in the center. Keep moving;

Draw the right side; then; the right hand extends out and moves up and around clockwise >to draw the right side > of the eight, with the eyes, (visual attention, center of the visual field) end of the Nosefeather on and moving with the right hand, eyes looking at, shifting on the center fingertip while the body leans, turns to the right and the heel of the left foot raises off the ground.
The hand, eyes and Nosefeather move around the right side, under the bottom, then back up the center of the eight, body returns to the center and the heel of the left foot returns to the ground.
The left and right hands center fingertips touch in the center of the eight again as the eyes, end of the Nosefeather shifts from the end of the right hands fingertip to the end of the left hands fingertip and then the left side is drawn again. Do not stop in the center; keep moving, continue drawing; left, right, left, right...
The eyes, Nosefeather, head/face, body look at, move in synchronization with the moving hand as it

draws the eight in the air. All move together, at the same time, in the same direction.

Drawing the figure eight increases relaxation and movement of the eyes, head, neck, shoulders and body, aligns the spine; lower, middle, upper back, neck vertebrae, improves balance, coordination, activates and integrates the left and right brain hemispheres, gets the eyes moving 'shifting', and moving together, correct. This results in clear vision at all distances, close, middle and far with equally clear vision in the left and right eyes.



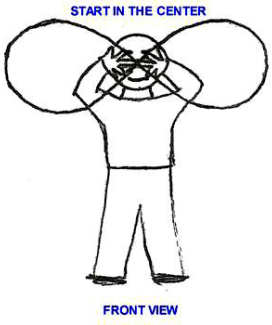
THE FINGERTIPS OF THE 3RD FINGER OF THE LEFT AND RIGHT HANDS TOUCH WITH THE PALMS FACING IN TOWARD THE FACE.
THIS IS THE START POSITION AT THE CENTER OF THE FIGURE EIGHT.

The figure eight relaxes and brings full mobility to the neck. Neck, shoulder muscle tension, stiffness, limited movement is a main cause of eye muscle tension, dizziness, headaches, reduced blood/oxygen, lymph, energy flow to the eyes, head/brain and unclear vision. Neck relaxation and movement removes these conditions and returns clear vision.



CENTER
STARTING POINT

Always draw the figure Eight as described in this book as shown in the pictures; up the center and to the left first <.
Down the outer sides.
Do not trace down the center, up the outer sides, to the right first. This is a incorrect direction, it can imbalance the left and right brain hemispheres, their functions.
A small percent of the population have some brain hemisphere functions reversed. Contact an expert in this field for directions on drawing the eight if your hemisphere functions are reversed.



START IN THE CENTER

FRONT VIEW

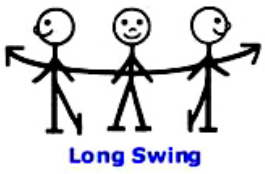
+Looking up to the left, < drawing a counter-clockwise circle activates the right brain hemisphere >.
+Looking up to the right, > drawing a clockwise circle activates the left brain hemisphere <.

An old exercise that balances the left and right brain hemispheres is alternating reading with the printed page normal, upright, then reading with the page, print upside down, backwards.

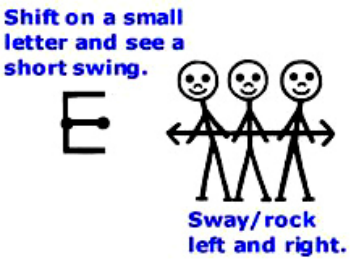
The Figure Eight (Infinity Swing) is a modern, improved, combined version of the elliptical, square, circular... swings described in Ophthalmologist Bates 'Better Eyesight Magazine'.

http://www.youtube.com/watch?v=BjQW2C4CPbA **- Figure Eight Video**

The Rock (Sway), Long Swing, Cross Crawl and Figure Eight are movement exercises that relax the mind, body, neck, eye muscles and eyes, breaks the staring habit, activates eye movement (shifting), brings synchronized movement to the eyes, head/face, neck and body, improves balance and coordination, activates and integrates the left and right brain hemispheres resulting in equally clear, perfect vision in the left and right eyes at all distances; close, middle and far.



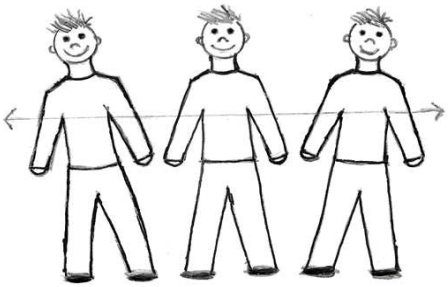
Long Swing



Pictures in this chapter show left and right movements for a person facing the reader. To view the pictures for the readers left and right; view the picture in a mirror or place the picture on your chest, facing outward and look down at the picture for a moment to memorize the movement before trying it.

The Rock - (also called The Sway)
Stand with the feet about 1-2 feet apart.
Depends on your physical size. Usually 1 Ft. is correct, comfortable. Bend the knees a little.
Rock (sway) the body side to side, left and right.
The eyes, head/face and body move together, in synchronization, at the same time, in the same direction.
The neck is relaxed and moves freely.
Do not stop in the center.
Rock slow, continually, relaxed; left, right, left, right...
Breathe slowly, relaxed. Blink soft, easy.
Think something positive, happy.
Rock 1 - 2 feet side to side.

THE ROCK



< ROCK RIGHT CENTER ROCK LEFT >

See 'The Swing' - Oppositional Movement;
+ Rock to the left < - close objects appear to move right >. Distant objects appear to move with the eyes, head, body in the same direction to the left <.
+ Rock to the right > - close objects appear to move left <. Distant objects appear to move with the eyes, head, body in the same direction to the right >.
+ When swinging left and right; close and distant objects appear to move against eachother in opposite directions. Middle distance objects also show specific movements.
See chapter 17 - Oppositional movement.

The rock can also be done by moving ½ - 1- 4+ inches side to side. A small movement that can be done at work, in line at the supermarket... for relaxation, clear vision. 'A Short Swing'.
Try rocking a few inches forward and backward on the feet; heel to toe, toe to heel.

Practice shortening the rock; 'doing a shorter swing' and see a 'Short Swing' of Oppositional Movement; Rock side to side, left and right; 1 ft, 6, 5, 4, 3, 2, 1, ½ inches and see a shorter and shorter swing. Practice in front of any object. Rock in front of a eyechart; See the chart and letters move in the opposite direction a shorter and shorter, smaller movement as the rock is shortened.

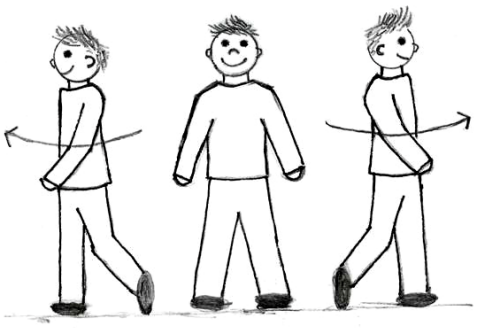
Shift on a small letter, small object and see it move in the opposite direction the eyes, head move to; a small, short, tiny shift producing a short, tiny, swing of the small letter. Practice on a fine print letter. Short shifts produce; perfect saccadic tiny eye movements and central-fixation=very clear vision, small fine details of objects are seen clear. Practice on close and far objects.

Eye movement, shifting produces the swing of oppositional movement. See the Rock with Eyecharts in chapter 13; Do a very short Rock and see a short, small swing of a letter on the eyechart as the eyes shift left and right on the letter with the movement of the head, body.
Eyes, head, body move together, same time, direction.

THE LONG SWING

The Long Swing - The Long Swing is a long movement of the eyes, head/face and body. A longer swing, long eye shift.
The eyes, head/face and body move in a long swing to the left and to the right. Follow the same directions as for the rock, except; the swing is longer and;
+When moving/swinging to the left <; turn and face the left.
+When moving/swinging to the right >; turn and face the right.
Do not stop in the center. Swing left, right, left, right, left...
Swing left and right continually, relaxed, easy, semi-slow at a comfortable pace. Eyes, head/face and body move together, in Synchronization, at the same time, in the same direction.

+ When swinging, turning left, the heel of the right foot raises off the ground as the foot and body turns.
+ When swinging, turning right, the heel of the left foot raises off the ground as the foot and body turns.

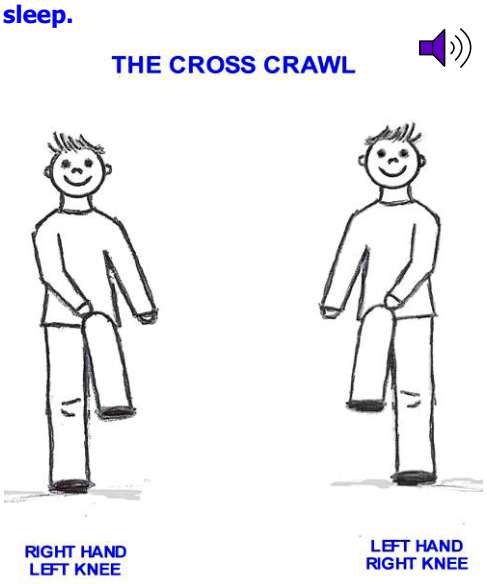


TURN AND SWING RIGHT CENTER TURN AND SWING LEFT.

The Rock produces a Shorter Swing of Oppositional Movement.
The Long Swing produces a large, Long Swing of Oppositional Movement.
Example;
+ Swing and turn to the left < - close objects appear to move, swing by to the right >.
+ Swing and turn to the right > - close objects appear to move, swing by to the left <.
Do not stop and look at the objects that appear to move/pass by in the opposite direction the eyes, head, body are swinging to. Avoid locking the eyes onto the objects because this will interrupt the swing. Just relax, continue to swing and let the scenery pass by in the opposite direction.

When doing the rock and long swing, the feet do not have to be straight; let the toes point outward a little as is comfortable and provides best balance. Let the legs, feet turn naturally and the arms move freely as the body swings and turns left and right. Complete relaxation and freedom of movement.
The long swing and rock brings deep relaxation to the mind, body, eye muscles, eyes and clear vision, prevents staring and improves eye movement 'shifting', increases relaxation and movement of the neck, brings movement to the entire body, moves and aligns the vertebrae along the spine, back, neck, relaxes muscles along the spine, back, neck, eyes and entire body, improves balance, coordination and activates and integrates the left and right brain hemispheres. The rock, long swing and other Natural Vision Improvement exercises are similar to tai chi, qi gong exercises.
Practice 50 - 100 swings twice a day.
Morning for clear vision and relaxation throughout the day and night for relaxing sleep and clear vision in the morning. It prevents eyestrain, eye muscle tension during sleep.

The Cross Crawl - The Cross Crawl gets the body moving, improves balance and coordination and activates, integrates the left and right brain hemispheres.
Activating and integrating the left and right brain hemispheres activates perfect, equally clear vision in the left and right eyes at all distances, close and far and improves all brain hemisphere functions; memory, imagination, mathematics, science, art, music, positive state of mind, emotions...



+ Moving the left side of the body activates the right brain hemisphere. The right hemisphere activates clear distant vision and relaxation.

+ Moving the right side of the body activates the left brain hemisphere. The left hemisphere activates clear close vision and energy.

+ Moving the left and right sides of the body, Example; left foot/right hand at the same time and then, placing them together, in the center of the body, activates and integrates the left and right brain hemispheres, all brain functions. Clear vision at all distances.
Repeat with right foot/left hand.

Left and right brain hemisphere activation, integration keeps the vision in the left and right eyes equal, perfectly clear at all distances; close, middle, far and corrects crossed, wandering eyes. Left and right hemispheres work with the left and right eyes.

Practice the cross crawl;
Stand with the feet comfortably apart.
 # 1 - Lift the left knee up and touch it with the right hand.
The knee and hand touch in front of the center of the body.
Then release the knee and hand and return the foot to the ground.

 # 2 -Lift the right knee up and touch it with the left hand.
Knee and hand touch in front of the center of the body.
Then release the knee and hand, foot returns to ground.
Then repeat the exercise, continually switching back and forth; #1, #2, #1, #2...
Practice at a comfortable, easy pace.

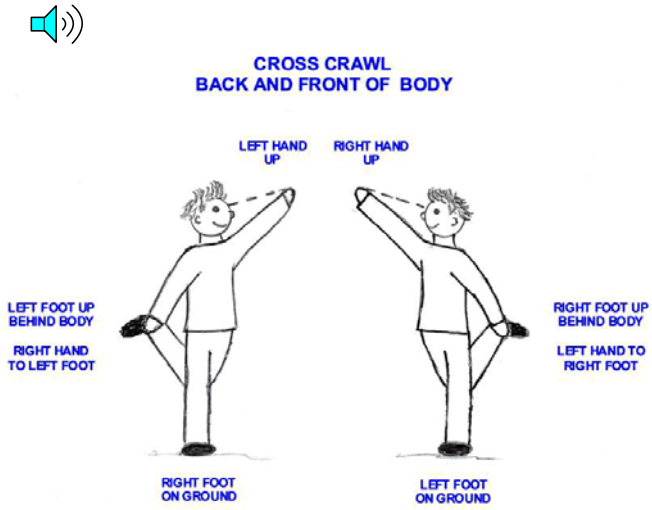
Combine the Cross Crawl with the Figure Eight for increased left and right brain hemisphere activation and integration; Do the cross crawl while drawing the figure eight in the air with the eyes and imaginary Nosefeather.

This exercise is similar; Draw a circle on the ceiling, sky while doing the cross crawl;
+Looking up to the left, < drawing a counter-clockwise circle activates the right brain hemisphere >.
+Looking up to the right, > drawing a clockwise circle activates the left brain hemisphere <.
Do this while practicing the cross crawl. Then move the eyes, visual attention freely, looking at any objects, directions while doing the cross crawl.

The picture below shows a Variation of the Cross Crawl done with hands and feet in the back and front of the body. The foot behind the body is touched for a second with the opposite hand. Then the hand/foot are released.
The person then switches hands/feet to the opposite side.

Example;
 # 1- Reach out and up with the left hand and look up to the left at the hand.
Place the left leg/foot up behind the body.
The right hand reaches behind the body and touches the left foot (top of foot or toes) for a second.
Then release the hand and foot.
Foot returns to ground and left and right hands move down to the left and right sides of the body.

 # 2 - Repeat with opposite hands, foot;
Right hand up, look up to right hand.
Right leg/foot up behind body.
Left hand touches right foot behind body.
Release hand, foot and left and right hands move down to sides.
Repeat; #1, #2, #1, #2...



A more simple version is done without raising, touching the foot.
Here's another exercise;

1 - Lift the right leg and right arm/hand > at the same time - Activates the left hemisphere <.
Place them back down, then;
2 - Lift the left leg and left arm/hand < at the same time - Activates the right hemisphere >.
3 - Lift left hand/arm < and right leg > at the same time; then, right hand/arm > and left leg < at the same time - Activates both left and right brain hemispheres.

Many variations of the cross crawl can be done throughout the day to relax the mind, eyes, stay alert, activate maximum brain function and clear vision;
+ Move the fingers of the left hand and toes of the right foot at the same time.
+ Then, move the fingers of the right hand and toes of the left foot at the same time.

A baby uses one and opposite sided body movements when learning to move, crawl, walk. With practice more integrated, left and right, opposite hand/arm, leg movements occur. This develops left and right brain hemisphere functions, integrates the brain hemispheres. Forcing a baby to walk too soon, using baby walkers interferes with the baby's brain development and can cause crossed, wandering eyes, unclear vision. Practicing the cross crawl and other left and right hemisphere exercises can correct the brains function and the eyes movement.
Persons with extreme blur, many years wearing glasses may be rigidly set into a state of one brain hemisphere dominance. Other exercises may need to be done first before the cross crawl, figure eight... are effective. Some of the exercises on the following pages may help free up this tension, dominance.
A small percent of the population have their brain hemisphere functions reversed. The brain hemisphere exercises may need to be done in an opposite way for this condition. See Janet Goodrich's Natural Vision Improvement Books and her children's books for more directions.

ANTI-GRAVITY EXERCISES

Examples of anti-gravity exercises are; jumping on a trampoline (rebounding), Hanging upside down; using an inversion table, body slant.

These exercises lighten and reverse the pull of gravity, releases pressure, tension on; the eyes, eye muscles and all muscles, organs, systems... in the body, all joints, bones including relieving pressure on the vertebrae, cartilage in the spine, back, neck, improves circulation to and health of all organs, systems, areas of the body, brain, eyes, ears, heart.., joints, bones in the body and vertebrae in the spine. The exercises help to align the joints, bones in the body, and vertebrae along the spine, back, neck, relaxes all muscles in the body, back, shoulders, neck, head/face and eyes.

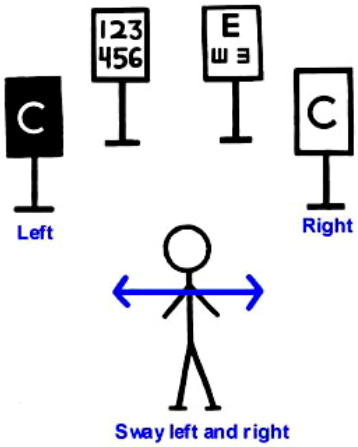
Blood, oxygen, lymph, energy flow in the eyes, muscles, body improves, improves health of all cells in the body, removes toxins from the body, improves health/function of the lymphatic/immune system, improves hormone, chemical balance and activates endorphins that keep the mind in a positive happy state. Anti-gravity exercises provide many health benefits including extending the life span.

Lying upside down on a inversion table also improves blood flow to the head and eyes. Children are the best Natural Vision Improvement teachers; notice how they jump, roll, hang upside down as they play. Watch the eye movements of children with clear vision; their eyes move 'shift' continually, easy when looking at a object. Watch a person with unclear vision, especially a person that wears eyeglasses; they stare, squint, use effort to see. Their eyes move slow, rigid, and infrequently.

Shifting, eye and body movement brings clear vision. Copy your children, shift the eyes and see clear. Get a variety of exercise, movement daily.

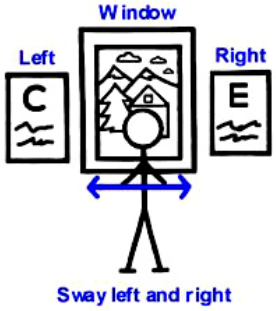


Palm and remember, imagine a flower, its color, white cloud with sun shining behind it, blue sky and any pleasant objects, scenery that is easily remembered clear, perfect.
See objects clear, in color, motion: wind blowing green grass, pink, blue, purple, red, orange... flowers, yellow black bee with golden pollen on its legs, rainbow colors in its clear wings flying about the garden.



Sway left and right in front of 4 eyecharts. Blink. Notice the charts appear to move past in the opposite direction to the movement of the body. (More movement is seen with the charts at close distances before 20 ft.) Shift without effort on a letter on the charts for a second, fraction of a second when swaying in the direction of a chart. No effort to see. No staring. Keep moving. Relax. Do the same with the Long Swing. Swing right and 'shift for a fraction of a second' 'flash' on the letter C on the chart on the right. Then swing left and 'flash' the letter C on the chart on the left. Then, flash a number on the card on the left when moving left and flash a inverted E on the E card when moving right. Practice flashing, seeing clear smaller letters at various distances.

Sway left and right



Sway left and right

Charts can also be placed on the left and right sides of a open window. Sway and swing left and right and shift, flash the letters on the left and right charts as described above. Shift on distant objects outside the window. Practice day and night.

Swinging examples;
+ Riding on a swing.
+ See-saw (careful when riding on a see-saw: tailbone, sacrum, back injury can occur when landing too hard.
+ Rocking chair.

These are all forms of the long swing, rock, anti-gravity exercises that keep the body, joints, muscles, eye muscles moving, relaxed, improves eye shifting and clarity of vision.

Practice seeing the ILLUSION OF OPPOSITIONAL MOVEMENT (chapter 17) while doing the rock, long swing and other swinging movements of the body.

See a few Bates Method activities in the picture on the right.

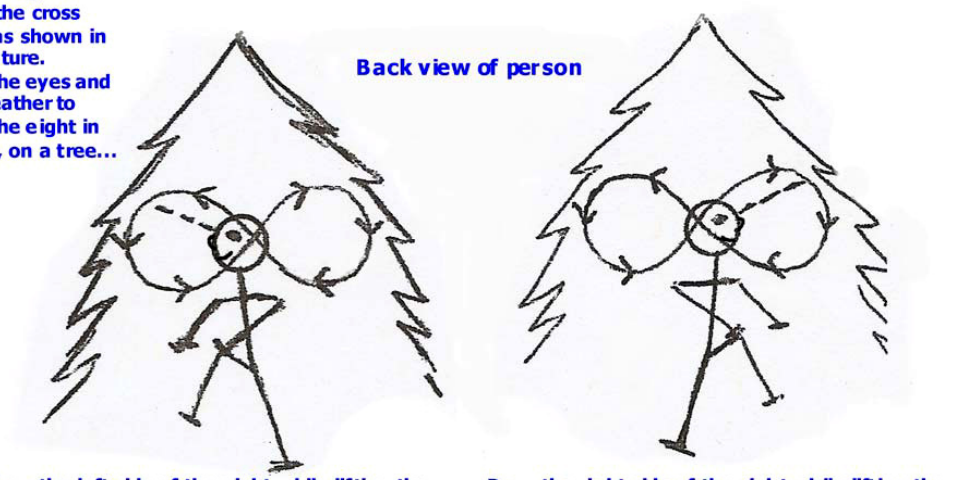
Do not do antigravity exercises, rebounding, body slant if a medical condition exists, especially; stroke, eye retina, vitreous detachment, other eye injury, condition, surgery, including cornea surgery, (any health condition). Check with your doctor first! These exercises reverse the pull of gravity on the eyes, head, brain, body, all organs and

increase blood flow to the head, eyes, brain. Under normal, healthy conditions (and with some medical problems) this can be beneficial, but it can cause health, eye impairment if a blood vessel is weak, eye, body needs or has had surgery. Sudden reversal of the pull of gravity and/or increase of blood flow into a weak blood vessel in the head, eyes.., through a weak, detached retina, any eye, brain part that is injured or has had surgery may cause a rupture, injury, interfere with the surgery, healing.

More Left and Right Brain Hemisphere Exercises:

Draw to the left side of the eight first, then to the right.
Draw continually left and right while doing the cross crawl as shown in the picture.
Use the eyes and nosefeather to draw the eight in the air, on a tree...

Practice the Figure Eight and do the Cross Crawl at the same time. A great left and right brain hemisphere activation, integration exercise.



Draw the left side of the eight while lifting the left knee and touch the knee with the right hand. Continue on to the right side of the eight.

Draw the right side of the eight while lifting the right knee and touch the knee with the left hand. Continue back to the left side of the eight.

The cross crawl can also be done in the opposite order;
+ Draw the left side of the eight and lift the right knee and touch it with the left hand.
+ Draw the right side of the eight and lift the left knee and touch it with the right hand.
Do the exercise continually; left, right, left, right.., slow, then fast. Practice with the eyes open, then closed, then open. Continue to physically move the eyes, body when practicing with the eyes closed.

Cross Crawl while walking

Walk by raising the arm, foot on the same side of the body, at the same time.



Activates Right Hemisphere



Activates left Hemisphere

Walk by raising the arm, foot on the opposite sides of the body at the same time.



Activates and integrates left and right Hemispheres

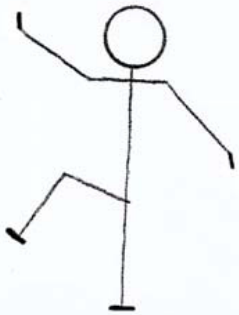
Normal walking is: Opposite sides: Left arm/hand and right leg/foot move forward, then, next step; the right arm/hand and left leg/foot move forward.
Left and right hemispheres activated and integrated.

Practice all the exercises while walking forward and backward.

Snap the fingers on the hand that moves forward. Then, on both hands.

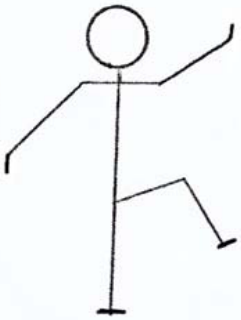
Variations of the Cross Crawl for Left and Right Brain Hemisphere Activation, Integration

Pictures are a back view of the person to make left and right movements easy to copy.

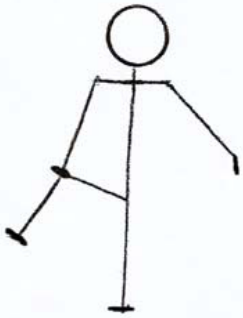


Lift the left hand and left foot up at the same time. 5 times. Activates the right brain hemisphere.

Lift the right hand and right foot up at the same time. 5 times. Activates the left brain hemisphere.

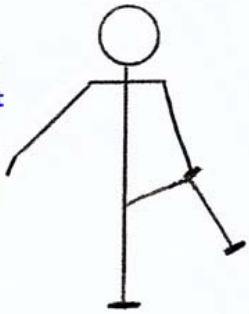


Practice all exercises with the eyes open, then closed, then open.
Look at the scenery and relax, shift on objects when doing the movements.



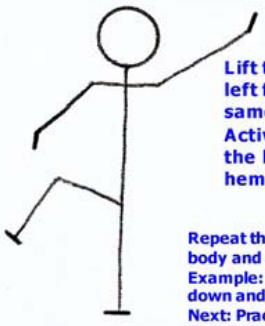
Lift the left foot/knee and touch the left knee with the left hand. 5 times. Activates the right brain hemisphere.

Lift the right foot/knee and touch the right knee with the right hand. 5 times. Activates the left brain hemisphere.



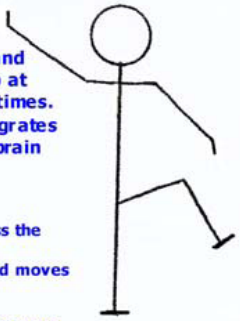
Shift on objects in the visual field while doing the exercise and look down on the floor to the right and shift on the floor.
Then: look down on the floor to the left and shift on the floor.
Continue: right, left, right, left... while doing each exercise.
Shift=To move the eyes/visual attention part to part on a object.

Next: Lift the hand and foot on opposite sides of the body.



Lift the right hand and left foot/knee up at the same time. 5 times. Activates and integrates the left and right brain hemispheres.

Lift the left hand and right foot/knee up at the same time. 5 times. Activates and integrates the left and right brain hemispheres.



Repeat the exercise and move the up-righted hand down and across the body and touch the knee on the opposite side.
Example: Right hand moves down and touches left knee or left hand moves down and touches right knee.
Next: Practice the Cross Crawl and the Figure Eight.
Notice if your math, science, art, music, thinking, relaxation skills improve due to left and right brain hemisphere activation, integration.

Move the fingers, toes on the left and right hands, feet to activate, integrate the left and right brain hemispheres.

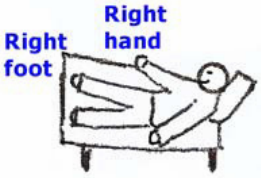
1 **Move the fingers on the left hand and the toes on the left foot at the same time.**

Activates right hemisphere



2 **Move the fingers on the right hand and the toes on the right foot at the same time.**

Activates left hemisphere



3 **Move the fingers on the left hand and the toes on the right foot at the same time.**

Activates and integrates left and right hemispheres



4 **Move the fingers on the right hand and the toes on the left foot at the same time.**

Activates and integrates left and right hemispheres

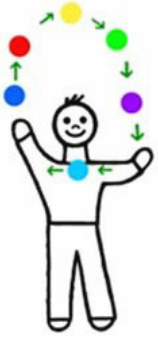


Repeat #3 & 4, then 1, 2, 3, 4.

Left and right brain hemisphere exercises also improve dexterity, equal skill/use of the left and right hands, feet.
Practice throwing, kicking a ball with left and right hands, feet.



Juggling



Throw a ball up in the air, in front of the face.
Reach out and grab it in mid-air as it falls directly in front of the face.
Practice throwing the ball up and catching it with the left hand.
Then the right hand.
Then alternate throwing it up with one hand and catching it with the other hand.
Then, use both hands to throw it up and catch it in front/center of the face/body.
Juggling, short order cooking... are good left and right brain hemisphere, dexterity exercises.



Left fist

Snap the fingers of the left hand first.



Then, snap the fingers of the right hand.





Right palm

Then, make a fist with the left hand, right hand palm open, facing left hand.



Hands move together: side of left fist into right palm.



Left fist into right palm

Repeat #1, 2, 3, 1, 2, 3 1, 2, 3... fast!

The hand that becomes the fist can be either the right or left for either exercise. Alternate.

Pictures are a back view of the person so it is easy to copy the left and right steps. For # 3; pretend to look through the persons back to see position of the hands.



Right fist

Do the opposite way:

1 - Snap the fingers of the right hand first.

2 - Then: snap the fingers of the left hand.



Left palm

Then, make a fist with the right hand, left hand palm open, facing right hand.



3 - Hands together: side of right fist into left palm.



Right fist into left palm

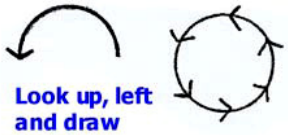
Repeat #1, 2, 3, 1, 2, 3 1, 2, 3... fast!
Repeat from the beginning.

Drawing Circles

Drawing circles counter-clockwise and clockwise, looking up left and right and doing the Cross Crawl activates and integrates the left and right brain hemispheres and gets the eyes moving, improves all Correct Vision Habits, normal eye functions: shifting, central fixation, convergence, accommodation, divergence, un-accommodation memory, imagination (clear mental pictures), relaxation... Drawing circles helps to remove astigmatism.

Do not hold the breathe when looking up. Breathe relaxed and normal.
If you get tired of drawing the circles: just shift on the ceiling , sky when looking up.

Look up and to the left.
Draw a counter-clockwise circle with the eyes and imaginary nosefeather on the ceiling or sky.
Blink, relax.
Drawing a counter-clockwise circle is similar to drawing the left side of the Figure Eight.

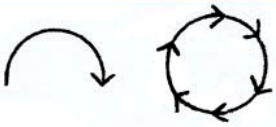


Look up, left and draw counter-clockwise.



Activates the Right Brain Hemisphere

Look up and to the right.
Draw a clockwise circle with the eyes and imaginary nosefeather on the ceiling or sky.
Blink, relax.
Drawing a clockwise circle is similar to drawing the right side of the Figure Eight.

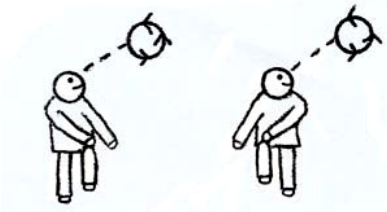


Look up, right and draw clockwise.

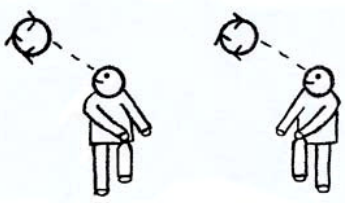


Activates the Left Brain Hemisphere

Draw circles while doing the Cross Crawl



Look up, left and draw counter-clockwise while doing the Cross Crawl.



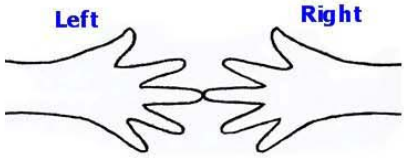
Look up, right and draw clockwise while doing the Cross Crawl.

Increases activation, integration of left and right brain hemispheres

Looking down left, right and drawing circles a specific direction while cross crawling... is taught by left and right hemisphere experts to help people with brain hemisphere imbalance or functions reversal.

Spin left and right while shifting on the moving finger. See Oppositional Movement of distant objects while keeping the visual attention on the moving finger. Relaxes and brings movement to the eyes, neck and activates, integrates the left and right brain hemispheres.

Start - Palms of hands facing inward toward the face, about 12 inches from the eyes. Middle fingertips touching, at eye level, center of the visual field. Relax.



Move the left hand to the left, in a semi-circle 1/4 of a turn counter clockwise. Finger moves at eye level. Horizontally.

The eyes look at, shift on and move with the middle fingertip.
Head/face and body move with the eyes and finger, all together, at the same time.
Move slow at first, then faster as is comfortable.
Lift the heel of the right foot when moving left.

Then return to the start position and place the fingertips of left and right hands together again.

Then spin to the right 1/4 turn as described below. The turn left again, then right, left...

Then turn left and right with a 1/2 turn.

Spin left < while shifting on, moving with the left hands middle fingertip.



Move the right hand to the right, in a semi-circle 1/4 of a turn clockwise.
Finger moves at eye level. Horizontally.

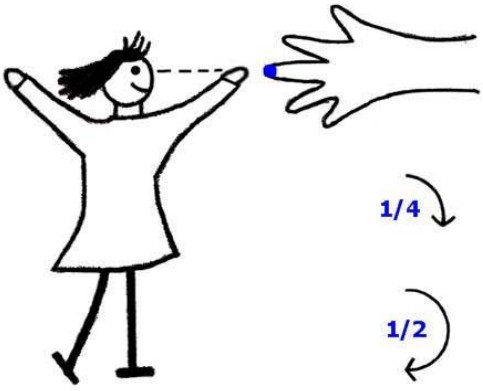
The eyes look at, shift on and move with the middle fingertip.
Head/face and body move with the eyes and finger, all together, at the same time.
Move slow at first, then faster as is comfortable.
Lift the heel of the left foot when moving right.

Then return to the start position and place the fingertips of left and right hands together again.

Then spin to the left 1/4 turn. The turn right again, then left, right...

Then turn left and right with a 1/2 turn.

Spin right > while shifting on, moving with the right hands middle fingertip.



+Practice moving left and right with the hands farther away and closer to the eyes.
+Practice moving the hand up and down, vertically... and follow it with the eyes.
+Practice spinning in a full circle left and right, counter-clockwise, clockwise.
See other diagrams.

See Oppositional Movement:
when spinning left, distant objects move right.
When spinning right, distant objects move left.

Spinning can improve the balance, coordination.
Ice skaters are experts at spinning and do not feel dizzy when spinning at a fast speed for a long time.

Spin left and right in a full circle while looking at, shifting on the finger tip at eye level, between the left and right eyes, center of the visual field. See distant objects pass by in the opposite direction as the eyes/visual attention stay on, move with the fingertip - Oppositional Movement. This gets the eyes relaxed, moving, shifting. Left and right brain hemisphere activation, integration.

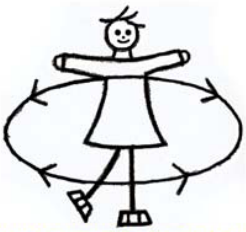
Start with the hand/finger 12 inches from the eyes, then practice at 1-2 feet and closer. Finger, eyes, head/face, body move together. Use the nosefeather to help the eyes shift on the finger and keep the balance.



Spin left, counter-clockwise while shifting on the left hands fingertip.
See Oppositional Movement.



Spin right, clockwise while shifting on the right hands fingertip.
See Oppositional Movement.

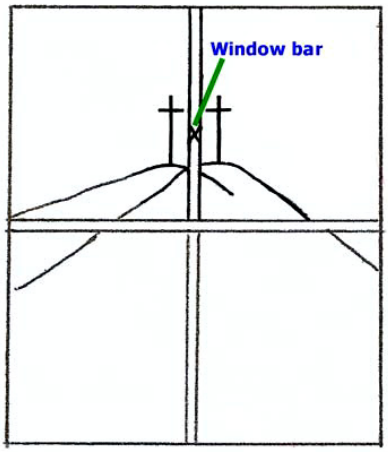


Spin left and right in a circle like an ice skater.
Practice slow and faster, more spins as is comfortable. Both feet and on one foot: left, then right, then left...

Practice spinning, shifting on the finger, seeing oppositional movement with the eyes open, then closed, then open.

Switching the visual attention back and forth: close, far, close, far, middle... activates and integrates the left and right brain hemispheres and improves the clarity of vision at all distances.

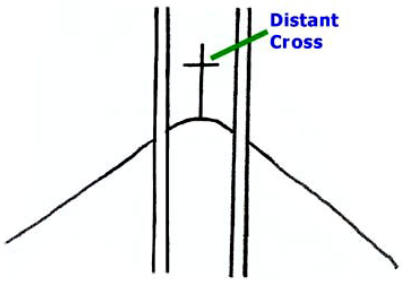
Look at, shift on the close window bar and distant cross on the mountain. Window bar and Cross are in line with eachother, between the eyes, at eye level, in the center of the visual field.



Look at, shift on the window bar.
The distant cross and hill appear double in the peripheral field.

Shift from part to part on the window bar.
Blink, relax.

Shift with both eyes together, one eye at a time, both eyes together again.



look at, shift on the distant cross.
The window bar appears double in the peripheral field.
Shift from part to part on the cross.
Blink, relax.

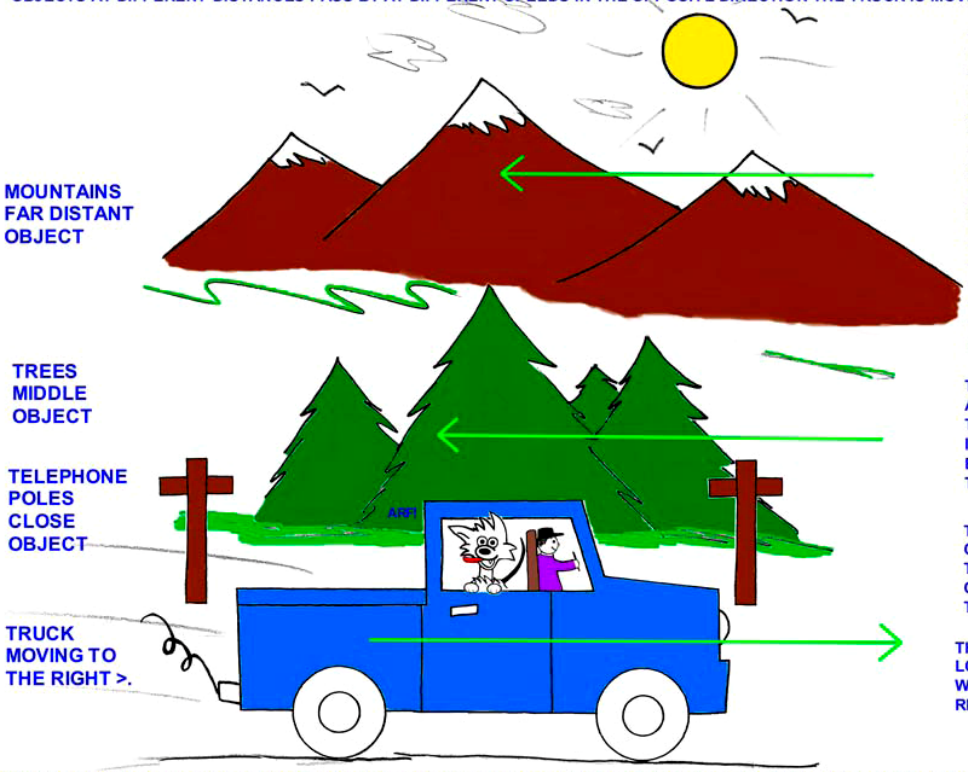
Shift with both eyes together, one eye at a time, both eyes together again.

Switch back and forth on the close window bar and distant cross.
Shift on the bar, then shift on the cross, then shift on the bar.
Shift on a object at a middle distance between the bar and cross.
Practice with both eyes together, one eye at a time, both eyes together again.
If vision is less clear in one eye, practice extra time with that eye.
Get the vision equal, clear in the left and right eyes.
End by shifting on any objects in the scenery. Blink, relax.

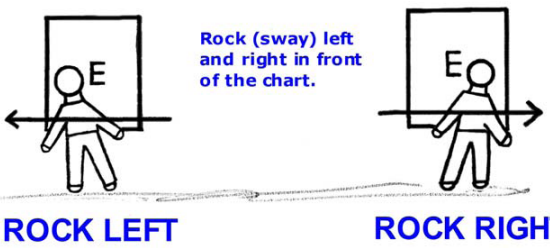
17 - THE ILLUSION OF OPPOSITIONAL MOVEMENT - 'THE SWING'

The illusion of oppositional movement is a Correct Natural Vision Habit, a normal function of the eyes, brain, visual system produced by the movement 'shift' of the eyes. The illusion of oppositional movement is also called 'the swing' because stationary objects appear to 'swing by' in the opposite direction the eyes, head/face, body move to.

SEE THE ILLUSION OF OPPOSITIONAL MOVEMENT WHEN RIDING IN A TRUCK. LOOK OUT THE SIDE WINDOW AT THE PASSING SCENERY AND SEE OBJECTS AT DIFFERENT DISTANCES PASS BY AT DIFFERENT SPEEDS IN THE OPPOSITE DIRECTION THE TRUCK IS MOVING TOWARD..



NOTICE THAT OBJECTS AT DIFFERENT DISTANCES APPEAR TO MOVE AGAINST EACH OTHER AS THE TRUCK MOVES; TELEPHONE POLES, TREES AND MOUNTAINS ALL APPEAR TO MOVE AGAINST EACH OTHER, IN OPPOSITE DIRECTIONS AND AT DIFFERENT SPEEDS.
EXAMPLE; TREES APPEAR TO MOVE LEFT < QUICKLY. MOUNTAINS APPEAR TO MOVE RIGHT >, SLOWLY AND EVENTUALLY SHOW THEY HAVE MOVED LEFT < VERY SLOW.
THESE ARE ALL NORMAL ILLUSIONS. THEY HELP THE EYES, BRAIN JUDGE DEBT, DISTANCE BETWEEN OBJECTS, SPEED OF THE TRUCK, TIME OF MOVEMENT, DIMENSION AND OTHER INFORMATION.
SEEING THE ILLUSION OF OPPOSITIONAL MOVEMENT IMPROVES EYE MOVEMENT, SHIFTING AND THE CLARITY OF VISION.
OPPOSITIONAL MOVEMENT OCCURS EVERY TIME THE EYES SHIFT. SHIFT THE VISUAL ATTENTION FROM PART TO PART ON A LARGE OR SMALL OBJECT. EXAMPLE; A LETTER E.
THE E WILL APPEAR TO MOVE IN THE OPPOSITE DIRECTION THE EYES SHIFT/MOVE TO. SHIFT RIGHT >, THE E MOVES LEFT<. SHIFT LEFT <, THE E MOVES RIGHT >.
SHIFT TO THE TOP, THE E MOVES DOWN. SHIFT TO THE BOTTOM, THE E MOVES UP.



See Oppositional Movement when moving left and right in front of the Eyechart. The chart appears to move in the Opposite Direction. See Eyecharts Chapter.

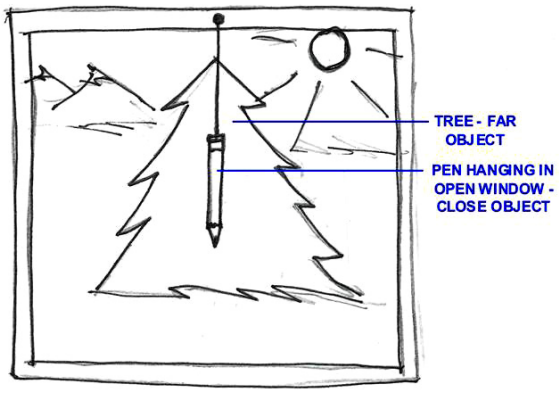
The illusion of oppositional movement is described as; when the eyes, head (face) and body move left, right, or in any direction, stationary objects appear to move;
+ Close objects will appear to move in the opposite direction the eyes, head and body move to.
+ Distant objects will 'appear' to move with the eyes in the same direction the eyes, head and body move to.
+ When the eyes, head, body move right >, close objects appear to move left <.
Far objects appear to move right > in the same direction with the eyes and body.
+ When the eyes, head, body move left <, close objects appear to move right >.
Far objects appear to move left < in the same direction with the eyes, head, and body.
+ When moving left or right, close and far objects appear to move against each other in opposite directions. > <
The illusion of oppositional movement can be seen when riding in a car and looking at the passing scenery.
+ Notice close objects pass by quickly in the opposite direction that the car (eyes, head/face, body) are moving toward.
+ Far objects appear to move slower and in the same direction the car (eyes, head/face, body) are moving toward.
+ Notice how close and far objects appear to move against each other in opposite directions.
+ Objects at the middle distance also appear to move in the opposite direction the eyes, head, body move to but move slower than close objects.
+ Far objects also appear to move opposite but the opposite movement is so slow that the far object 'appears' to move with the eyes, head, body in the same direction.

Example; notice that a distant mountain appears to move with the car, (eyes, head/face, body), but if you continue looking out the window at the mountain, in time, as the car moves farther down the road it is obvious that the mountain has moved by in the opposite direction and is now behind the car.
These illusions of movement are the normal function of the visual system and indicates clear vision, normal function of the brain with the eyes.
Oppositional movement is not always noticed but it can always be seen by the normal eye when the person brings their attention to it.
When the vision is very unclear the illusion of oppositional movement is not always seen. Practicing seeing the illusion of oppositional movement helps to return the eyes, visual system to normal function, restores normal eye movement 'shifting' and clear vision. Oppositional movement is relaxing, a 'Swing'.
When the vision is unclear objects may be so blurry that all objects in the visual field blur together and the person cannot distinguish one object from another.
Activating the illusion of oppositional movement; practicing seeing 'close objects move in the opposite direction the eyes move to, far objects move in the same direction and close and far objects move against each other in opposite directions when the eyes, head/face and body move' helps the eyes see individual objects.
Then, it is easy for the person to use Correct Vision Habits; look at one object at a time, in the center of the visual field (central-fixation) and shift from part to part on each individual object. This improves the clarity of vision.

A easy way to see the illusion of oppositional movement is to do the rock and long swing.
Example;
+ Stand in front of a open window with a view of a far (distant) object.
+ Hang a pencil from a string in the center of the window.
In the picture on the right the tree is the far object, the pencil is the close object.
(The window is open to allow healthy full spectrum sunlight to enter the eyes).

Practice the rock in front of the pencil.
Rock side to side, left and right.

SEE THE ILLUSION OF OPPOSITIONAL MOVEMENT
ROCK SIDE TO SIDE, LEFT AND RIGHT IN FRONT OF A OPEN WINDOW WITH A PENCIL HANGING IN THE CENTER OF THE WINDOW AND A OBJECT OUTSIDE THE WINDOW AT A FAR DISTANCE.



Do not look at any objects. Do not try to see anything clear. Just relax and rock side to side, and let the eyes sweep across the scenery.
Notice that the pencil (close object) moves in the opposite direction the eyes, head/face, body move to;
+When the eyes, head, body move right >, the pencil moves left <.
+When the eyes, head, body move left <, the pencil moves right >.
+Notice that the movement of the tree (far object) appears to move with the eyes, head, body in the same direction.
The pencil, window and all close objects that are at the same distance the pencil, window are at move in the opposite direction and at the same speed. Notice that closest objects will appear to move opposite fastest, middle objects move opposite slower, far objects move opposite very slow and can 'appear' to move with the eyes, head, body in the same direction.
Dr. Bates states that all objects move, they show some type of oppositional movement when the eyes move: 'The Universal Swing'. The universal swing relaxes mind, body, eyes, brings clear vision.

Rock side to side and let the eyes sweep across the close object; window, pencil.
Then, rock side to side and let the eyes sweep across the far object, tree.
Notice the difference in speed of movement of the close and far objects when sweeping the eyes across the different distances.
These functions of the visual system help the brain, eyes determine distance, depth, dimension, time, speed, space, size, shape, ect... of stationary and moving objects, conditions in the visual field, environment and keeps the vision clear.
Example; these illusions help the brain determine the speed of a approaching car on the road and the time it will take to travel from one place to another.

Practice the long swing in front of the window.
Notice the opposite movement of close objects is faster and longer when doing the long swing.
Practice the rock and long swing outside in the sunlight in front of close and far objects.
When practicing the rock and long swing, a main purpose is to relax, rest the eyes. The eyes relax when in they are in moving. The eyes move even during sleep.
When rocking, swinging side to side, don't stop and try to see objects clear. Avoid locking the eyes/visual attention on objects. Relax and keep swinging left and right at a comfortable, slow, flowing pace and let the scenery/objects move, pass by in the opposite direction.
The rock, long swing bring perfect relaxation to mind, body, eyes and clear vision.
(It is ok to look at, shift on objects when doing the rock when it is done shorter and when doing the long swing with eyecharts on the left and right sides of the body as described in the Eyecharts Chapter.) Combine the Short rock with the Long Swing: Occasionally switch from the long swing to the Short rock and shift on objects.
The shorter the shift, movement of the eyes, head, body, the shorter the swing of oppositional movement and the clearer the vision becomes! Practice the shorter and shorter rock movements and small, tiny eye shifts as described in the eyecharts chapter for perfect clear fine detailed vision, deep relaxation. Shift on a tiny fine print letter, a dot, period and see tiny oppositional movement.

If the eyes, body feel off balance when doing the long swing and the appearance of the illusion of oppositional movement is imperfect; does not occur, or the objects move rigidly, stopping and starting, this indicates that the eyes are staring, not moving fully, freely and there may be muscle tension in the eyes, neck, body. The normal illusion of oppositional movement is flowing, continuous, complete and easy.
Keep practicing, slow and easy, and relax, swing left and right, the eyes passing across the visual field, seeing oppositional movement, letting objects pass by in the opposite direction without trying to stop and see objects clear.
Relax, loosen the body, let the shoulders drop down, bend the knees a little.

The Imaginary Nosefeather (chapter 6) can be used when rocking, swinging left and right.
Sweep the end of the feather left and right with the eyes across the scenery in the visual field.
Use the thin feather or a medium size fluffy feather for this activity. The eyes do not stop to look at any objects when sweeping the feather along the scenery. Just relax and swing.
The soft end of the feather touches and sweeps across the objects.
The end of the feather moves with the eyes, head/face and body at the same time in the same

direction. The soft, soothing movement of the feather increases relaxation of the eyes, mind, body and keeps the eyes moving.
Eye movement 'shifting' causes the appearance of oppositional movement, 'The Swing'.
See oppositional movement when shifting on a object.

Example; shift on the letter o. **O** o

Shift part to part on the black ink.
+When shifting from the left side to the right > the o appears to move, 'swing' to the left <.
+When shifting from the right side to the left < the o appears to move 'swing' to the right >.
Moving the head/face with the eyes improves the appearance of oppositional movement.
Oppositional movement is relaxing to the eyes.
If the vision is unclear and the eye muscles are tense, oppositional movement may appear rigid, sputtering, not appear or appear too large.
As eye movement, central-fixation, relaxation and the clarity of vision improves the appearance of oppositional movement improves; it is smooth, flowing, quick.
When shifting on a small letter, normal oppositional movement is quick and short, no longer than the size of the eye movement across the letter from one part to another part, and is often smaller, shorter than the length of the shift from one point to another point. Practice shifting and seeing 'The Swing' on the small o.
Central-fixation improves shifting and the illusion of oppositional movement; shift from small point to small point on small parts of the object and see one small point (very tiny part) clearest at a time in the center of the visual field.

Shift on the o in any direction and see the o move in the opposite direction; shift; left, right, up, down, diagonally...
Practice on any letters and on very small fine print letters;

C L E A R C L E A R

When the eyes can shift on and see oppositional movement on small fine print letters (even smaller than the letters shown here) the vision becomes very clear, clearer than 20/20. This is a very short swing-tiny short eye movements, saccades - shifting point to point, seeing tiny details clear, microscopic and telescopic vision at close, far, all distances.

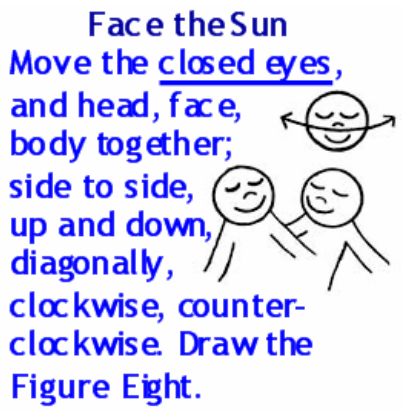
Shift, blink and relax when looking at a fine print letter.
Avoid staring, squinting, trying hard to see clear.
Just shift and the letter will become clear.

Shift and see oppositional movement on the green houses in chapter -6.
Practice shifting and seeing oppositional movement on large, medium, small, very small objects and parts of objects at close and far distances.

(The pointed end of the thin Nosefeather or tiny pointed end of a central piece of the medium size or big fluffy feather is used when looking at, shifting on objects, using central fixation.)

18 - SUNLIGHT, SUNNING, SACCADIC SUNNING





Sunning Video

SUNNING - Facing directly at the sun with the EYES CLOSED while moving the eyes, head/face side to side to distribute, move the sunlight, the suns light, energy spectrum over the entire area of the eyes, cornea, lens, retina improves the health of the eyes and clarity of vision.
(Allow the body to move with the eyes, head/face.)

Sunlight is healthy for the eyes and activates 20/20 and clearer vision day and night, close and far. Sunlight improves health and function of the cones, rods, macula, fovea centralis, cells, capillaries, nerves and all parts of the retina, the retinas production of visual purple for clear day and night vision/adjustment to light and dark, improves health and function of the eye muscles, optic and eye muscle nerves, the lens, cornea, iris, all parts of the eyes, and improves blood, oxygen, nutrient and energy flow in the eyes, brain, body.

Sunning is a very old Natural Vision Improvement activity.
Years ago the Natural Vision Improvement Student was taught to look at the sun with the eyes open.
Sunning is now done with the eyes closed.
Walking around outside in the sunlight daily and looking at the bright sunny sky (not directly at the sun) with the eyes open is healthy and safe for the eyes. (Avoid sunburn.)
Doctor Bates cured blindness and other eye problems by applying specific ways of exposing the open eyes to direct sunlight. Sunlight brings life, renewal to the retina and the cells, cones, rods, nerves in the retina.
Some people still practice sunning with the eyes open at sunrise and sunset when the suns UV light is lowest and for brief times during the day.
Their eyes are in continual movement, shifting, blinking and the head, face, eyes move together side to side, up, down and in other directions. Staring, eye immobility and overexposure to sunlight is avoided; they practice for only a short time when the eyes are open. Relax, allow the eyes to blink, move, think positive thoughts.
Looking at the sun with the eyes open is a ancient practice called Sungazing.
Sun-gazers state that the sun is the earth's energy source and allowing it to enter the eyes improves health of mind, body, eyes, sprit but; sungazing must be done correct.
Sungazing must not be done on areas of the planet where the ozone layer is depleted, holes in the ozone due to air pollution. The ozone layer absorbs different types of UV and other light waves to protect the planet, life on the planet from being over-exposed to specific light waves of the suns light

spectrum. The eyes cornea and lens, also contribute to this protection.
A normal ozone layer (not depleted) keeps a perfect, healthy, balanced amount of sunlight, light waves entering the planets atmosphere/surface.
Read the original and Modern Sungazing, Sunning and Sunglass articles, directions from Better Eyesight Magazine at the end of this chapter and book.

(Never face/look at the sun with the eyes open or closed during an eclipse of the sun. Looking at the sun during an eclipse can result in blindness. The blindness may or may not be temporary, curable but it is not worth taking a chance on eye injury.
Do not wear eyeglasses, contact lenses, sunglasses, tinted, UV blocking lenses when sunning (and sun-gazing). Avoid wearing eyeglasses, contacts... in the sunlight, artificial light, day and night-time. When sunlight passes through close or distant eyeglass lenses, contacts; the lenses act as a magnifying glass that concentrates and/or widens the light abnormally onto the eyes cornea, lens, retina. This can burn the cornea, lens, retina and impair the eyes function. It usually builds up over time, no effects until damage has occurred but can also occur quickly. Glasses without frames can also act as magnifiers along the edge of the glass burning the skin, eyes.
Never look at or near the sun with eyeglasses on with the eyes open or closed. Eyeglasses also reduce eye movement resulting in increased concentration of the light on one area of the lens, retina. This is similar to holding a magnifying glass still while sunlight passes through it and burns an object on the other side of the glass.
Eyeglasses, sunglasses, contacts, tinted, colored, UV blocking lenses also unbalance the suns light spectrum, block out part of the suns healthy full light spectrum, causing unhealthy, unbalanced, partial spectrum light to enter the eyes and travel to the brain, down the spinal cord and into the body causing; eye damage, unclear vision, impaired health of the eyes, brain, body. Even when not looking at/near the sun; eyeglass/sunglass... lenses cause an unbalanced, abnormal and/or concentrated amount of light to enter the eyes resulting in impaired health, function of eyes, brain, body.
Contact lenses seal over the entire pupil completely blocking out full spectrum light.
Eyeglasses, contact lenses, sunglasses, tinted, UV blocking lenses also impair, weaken the eyes natural tolerance to sunlight, impairs the iris/pupil, lens, retina function, adjustment to light and darkness, are addictive causing the eyes to hurt, water, experience abnormal, increased glare when in the sunlight and even in indoor light when the lenses are not worn. Wearing the lenses causes vision impairment, unclear vision. (The iris/pupil muscle functions with the lens/ciliary muscle.)
Never look at or near the sun with a telescope, binoculars, magnifiers. The sun will burn the eye.
A man lent his telescope to a friend. The friend forgot to place the eye protection piece back on the telescope for viewing the sky. The man then used the telescope, forgot to check for the piece, he looked into the sunny sky, the telescope moved near the sun and the sun burnt his eyes cornea. He had a blurred, blind spot in that eye due to the scar, damaged area on the cornea. I do not know if the eye completely healed. The man moved and has no forwarding address. He is using The Bates Method.

The eyes and entire body need full spectrum, balanced sunlight daily (without any type of eyeglasses, sunglasses...) to remain healthy with clear vision. Full spectrum sunlight is pure sunlight not filtered, not passing through eyeglasses, contact lenses, sunglasses, tinted, colored lenses, UV blocking eyeglass lenses, including glass and plastic windows.
Suntan lotion, sunscreen lotion, many skin creams, and face, body makeup also blocks full spectrum sunlight causing unhealthy partial spectrum light to impair the health of the skin, cause skin cancer and impair the sun/skins production of natural vitamin D. Chemicals in the products are toxic.
Go outside in the sun every day. Wear a hat with a wide brim and full clothing in place of sunglasses, skin creams in strong sunlight. See chapter 3-4 for more sunlight, eyeglasses information.)

Natural Vision Improvement Teachers continue to train their students to practice sunning only with the eyes closed. Open eyed sunning is omitted from later 2nd editions of Dr. Bates book but he may not have authorized this, may have been only after his death, done by other writers giving in to pressure from the AMA, Optical Industry. Sunlight does improve the eyes health, clarity of vision.
The Author of this book Clark Night practices Closed-Eyed Sunning. I also practice Open-Eyed Sunning, Sun-Gazing for a short time every few days. I follow the directions for keeping the eyes in movement. I shift from the left to right, top and bottom of the sun, diagonally... most often out to the sky around the sun, always keeping the eyes, head in movement and blinking. The healthiest I have ever been in Adult life is when I worked selling newspapers at the train station in Boston, MA and did

Sunning with a few seconds of Sungazing every day or two. People at the train station did this as a natural habit, with closed eyes. They never heard of Natural Vision Improvement.

In 2008 I was practicing longer, time open-eyed sunning to test its effect on the eyes before I wrote more in this book. I over-did the practice, too long, less eye movement and ended up with a scotoma; temporary sunspot in my visual field (not the type that refers to retina, eye injury, spot...). It stayed as a red color of light, then changed to different colors as time passed, day 3 changed to yellow and finally disappeared. I have not suffered any damage from this but now have gone back to staying with only the brief periods of glancing at the sun, open-eyed a few seconds only, lot of continual eye, head movement. Closed eyes sunning is done for a longer time. Vision is clear.

Avoid sunburn and overexposure to strong light. Sunlight can burn the eyes if the body, eyes are malnourished. When the eyes, body are healthy, receive a good diet/nutrition, normal sunlight will not harm the eyes. The eyes and body need sunlight and a healthy diet.
The eyes, body need a good diet with all vitamins, minerals, proteins, nutrients to fully absorb and utilize sunlight and prevent over-exposure to sunlight. The body needs daily sunlight through the eyes and on the skin for complete absorption and use/interaction of vitamins, minerals, proteins.
Sunlight produces natural vitamin D in the skin, body.
Natural vitamin D is necessary for absorption, use of calcium and other nutrients.

Many prescription and non-prescription drugs and some herbs impair the eyes natural tolerance to sunlight, leaving the eyes, lens, retina and skin prone to overexposure, sunburn, injury. The drugs, herbs also impair circulation of blood, oxygen, nutrients to/in the eyes, impairs eye pressure, fluid, tear production, flow and eye health resulting in cataracts, macula degeneration and other eye problems. Avoid drugs. Maintain a healthy diet. Read more on the Sunglass page, end of this chapter.

Sunlight at high altitudes is stronger; flying, mountains, skiing on snow in high mountains. Temporary sunglasses may be needed as the eyes adjust to these climates, areas. Snow-Sunburn on the cornea, irritation to the retina may occur causing temporary blindness. A good place to learn more about this might be the Air force: they tend to tell the truth about use of sunglasses since they need pilots with good vision, preferably without need for eyeglasses. The military has trained pilots in the Bates Method, Natural Vision Improvement and hired Bates Teachers during the War. Sunglasses are addictive, impair the health of the eyes, clarity of vision.

Sunning and daily exposure to sunlight improves the clarity of vision, color perception, can reverse/cure cataracts and other eye problems, types of blindness, stop watering of the eyes, eliminate depression, improve sleep, and cure arthritis and other health problems. Exposing the eyes, skin to sunlight increases, normalizes the eyes and skins natural tolerance to sunlight.
Persons of Irish.., white, light skin need more skin protection; clothing. Their skin burns easy.
A white, full facecloth with eye holes can be used to protect the skin, face from sunburn when sunning.

DIRECTIONS

Practice sunning in bare feet, standing or sitting on the plain ground, grass or sand (no concrete) for maximum absorption and circulation of the suns energy. Sitting in your favorite chair is ok.
Sunning is still effective if the person must wear shoes. Practice palming before and after sunning to increase relaxation and improve the eyes, pupil/iris, retina adjustment to light and dark and production, control of visual purple. Also practice alternating 5, 10-30 seconds of palming with sunning. Example; Palm for 5 seconds, then sun 5 seconds, palm again, then sun...
(Palming - chapter 19)

Practice sunning with eyes closed, 5 to 15, 30 minutes at sunrise and sunset.
UV light is weaker at sunrise and sunset so sunburn is avoided but; the eyes need UV light, all light waves of the suns spectrum, so; also, practice when the sun is higher above the horizon after sunrise and before sunset to get a full amount of light. A few seconds to 1-5 minutes of sunning can be practiced at other times throughout the day. If the suns too strong, sun under a tree.
It's beneficial to look at the bright sky, eyes open, away from the sun occasionally to increase eye health and vision improvement. Shift on the clouds, tree tops, birds, airplanes.

Practice Sunning;

Face the sun, eyes closed and move the eyes, head/face (and body also if moving longer as with the rock…) slowly side to side, left and right so the sun shines, moves upon all parts of the eyes and retina. The eyes, head/face and body move together, in synchronization, at the same time, in the same direction. This eyes, head/face movement improves activation, function of the retina, and all areas of the eyes and prevents concentrating the sunlight on only one area of the retina. Let the eyes move, shift. The normal eye is in movement, pulling light into the eyes, enabling light rays to continually move on the retina keeping the retinas light receptors, cones, rods active, healthy and preventing sunburn, overexposure to sunlight. Every cell in the cornea, lens, retina is nourished, energized. Sunlight brings life, action to the eyes.

Think something pleasant (as when palming), daydream something happy when sunning.
Practice the Figure Eight while sunning.
Practice the Rock and Long Swing when sunning. Chapter 16.
Trace around the sun counter-clockwise and clockwise with the imaginary Nosefeather. (eyes closed).

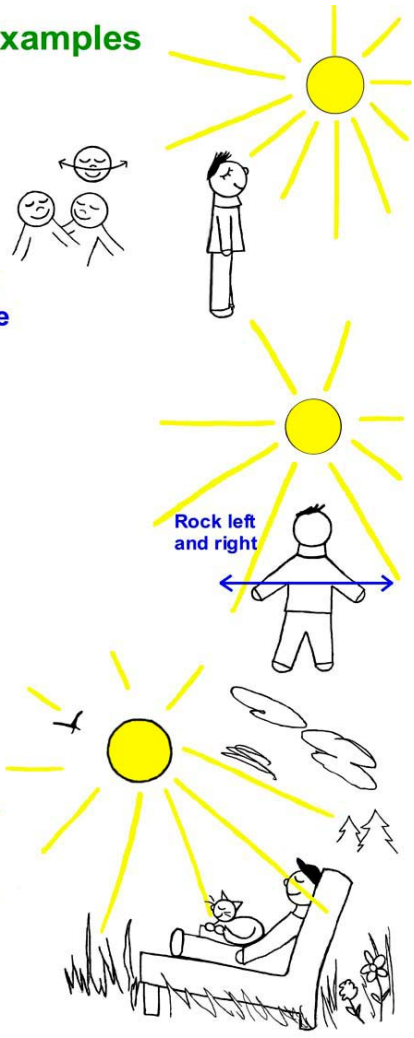
Sweep the feather across the sun and notice oppositional movement of the suns light on the closed eyes; Sweep right > - the sun moves left <
Sweep left < - the sun moves right >

Sunning Examples

Face the sun with the eyes closed and move the head/ face slowly, relaxed side to side; left, right, left, right... Feel and see the sun move across the face/closed eyes. Then, move the head/face up and down, then circular; trace around the sun counter clockwise, clockwise. The eyes, head/face (and body) move together, at the same time, in the same direction.

Do the rock while sunning; Face the sun with the eyes closed and rock the entire body side to side, left and right.
Do the long swing.

Sit facing the sun, relax, eyes closed and daydream pleasant thoughts. Occasionally move the head/ face side to side.



The pictures show a variety of sunning activities;
Face the sun with the eyes closed and move the head/face slowly side to side; left, right, left, right.
Relax, think positive thoughts or think nothing.

Then, move the head/face up and down, then circular; trace around the sun with the nose-feather, counter-clockwise and clockwise.

Face the sun, (eyes closed) and do the rock; rock, sway the whole body slowly, relaxed side to side; left, right, left, right. Then, do the long swing, then the figure eight while facing the sun.
(Practice can be done with the eyes open when the sun does not shine directly into the eyes).

Sit in your favorite chair outside in the sun.
Let the sun shine on the closed eyes and daydream pleasant thoughts.
Occasionally move the head/face side to side.
Move the chair under a tree and let the sun shine through the branches on the eyes, face, (a safe amount of sunlight that will not cause sunburn). The tree branches will move the light for you if there is a breeze; when the wind blows the branches, leaves on the tree. This activates moving light and shadows, colors on the eyes retina, healthy saccadic eye movements as described in the following pages, pictures; saccadic sunning.

Let the mind daydream happy things, drift into deep relaxation and sleep.
Notice how a cat and other animals will sit in a window or outside facing the sun, eyes open for a while, then close the eyes, relaxed, contented. Animals instinctively know the sun is healthy.
Sitting with your animals has a relaxing, healthy effect on the body, mind. Doctors prescribe pets to normalize blood pressure, improve mood, body, mind health.

SACCADIC SUNNING CANNOT BE DONE BY EPILEPTIC PERSONS PRONE TO SEIZURES CAUSED BY FLASHING LIGHT.
(All other persons can practice Saccadic Sunning for healthy eyes and clear vision.)

Saccadic sunning is taught by Natural Vision Improvement Teachers. (See pictures next page.)
Saccadic sunning relaxes the eyes, eye muscles and gets the eyes moving, shifting normally.
Saccadic sunning occurs naturally. Example;

When walking or driving in a car, train... under, beside, past trees, rungs of a fence with the sun shining through the tree branches, leaves, rungs of the fence.
As the person moves, the sun shining through the tree branches, rungs of the fence produce sparkling, flickering, moving light and shadows on the face, eyes, retina. This is very healthy for the eyes.
The shining, flickering, moving light and shadow on the eyes relaxes the mind, eyes, eye muscles, and activates saccadic eye movements - saccadic shifting of the eyes.

Saccadic eye movements are very small, tiny, including microscopic, fast, automatic eye movements. Watch a person that has normal eye function, clear vision; the eyes sparkle as their eyes move and light moves upon, reflects on the moving eyes. Saccadic movement is the most perfect, normal eye function that produces very clear vision, much clearer than 20/20.

The tiny movements also activate, perfect central-fixation; to shift on and see very small fine details of objects clear, to see clearest with the center of the visual field.

Saccadic sunning and saccadic eye movements massage, activate, improve function and health of; the eyes retina, cones, rods, optic and other nerves in the retina, the eye muscles, lens, cornea, iris, all areas of the eye. Eye movement, relaxed eye muscles improve/normalize blood, fluid flow in the eyes.

Saccadic movements also bring/pull light into the eyes. This is essential for sight and clarity.
Saccadic sunning can be practiced using the hands, a fence, tree, ladder.
(See pictures and directions on next page.)

Saccadic Sunning

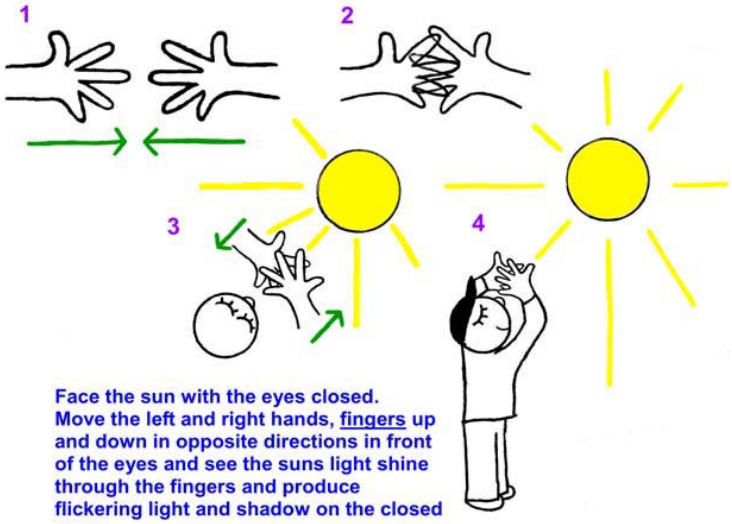
Face the sun with the eyes closed.

Place the hands in front of the eyes, the left and right hands 1-2 inches apart.
The hand closest to the face is 4-5 inches from the eyes.
The palms of the hands are facing inward toward the eyes with the fingers in front of the eyes.
The fingers are apart and relaxed, not stretched. See diagrams # 1 and 2.

Move the left and right hands (fingers) up and down in opposite directions in front of the closed eyes.
Move the head/face side to side.
See diagrams # 3 and 4.
As the fingers of the left and right hands pass eachother as one hand moves up and the other moves down, the sun shines on the eyes through the open fingers producing flickering, moving light and shadow on the eyes, retina.
Move the hands slow, then faster, slow... and notice the light, shadow move fast, slow and produce colors.

Palms of hands toward the face. Fingers apart, relaxed.

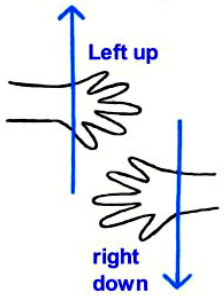
Move the fingers/hands in front of each other, not touching, not interlocked. The hands are about 1-2 inches apart. Hand closest to the face is 4-5 inches from the eyes.
Fingers are in front of the eyes.



Face the sun with the eyes closed.
Move the left and right hands, fingers up and down in opposite directions in front of the eyes and see the suns light shine through the fingers and produce flickering light and shadow on the closed eyes.

The flickering sunlight and shadow on the closed eyes activates eye, eye muscle relaxation and saccadic eye movements, shifting - very small, fast, automatic eye movements; the natural, most perfect eye function that brings light into the eyes, relaxes the mind, eyes, eye muscles and produces very clear vision.

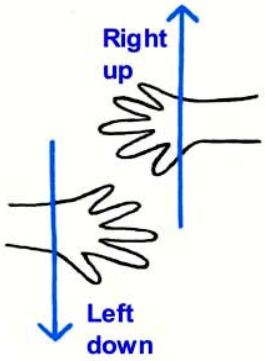
Saccadic Sunning, hand movement



Hands moving vertically up and down.

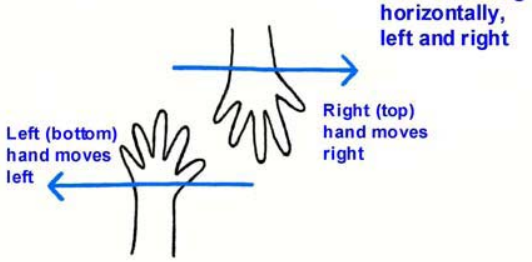
Move the left and right hands/fingers up and down, in opposite directions in front of the eyes.
Example;
left hand/fingers move up,
right hand/fingers move down.
The fingers of the left and right hands pass by eachother as they move in opposite directions.

Saccadic Sunning, hand movement



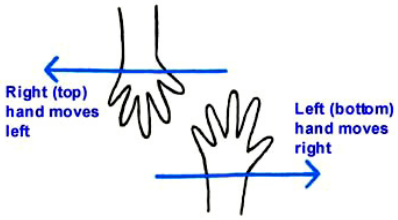
Example;
Right hand/fingers up,
left hand/fingers down.
Move the hands continually up and down.

Saccadic Sunning, hand movement



Alternate moving the hands left and right with the right hand on top then with the left on top.
When doing any of the movements, the left or right hand can be closest to the face.

Saccadic Sunning, hand movement



Move the hands back and forth, in opposite directions, left and right.
Then, switch hand position; move the hands left and right with the left hand on top, right hand on the bottom.
Alternating placement/movement of the hands and moving the hands left and right crossing against eachother in opposite directions activates and integrates the left and right right brain hemispheres for more vision improvement and keeps a balanced amount of movement in the arms, hands.

SACCADIC SUNNING WITH TREE, FENCE, NOSEFEATHER, SWING, ROCKING CHAIR - Oppositional Movement

The pictures show natural forms of saccadic sunning.
Everyone has experienced this. It is very relaxing, healthy for the eyes, visual system, improves brain function with the eyes, activates normal eye shifting, saccadic eye movements and clear vision.
A massage for the eyes, eye muscles, brain, entire system.

Saccadic Sunning with tree, fence and nosefeather

Saccadic Sunning can be done without the hands.
Stand under a tree or in front of a fence with open rungs or mesh.

Face the sun (eyes closed) through the branches of the tree or rungs of the fence.
Move the head/face slowly side to side, then;

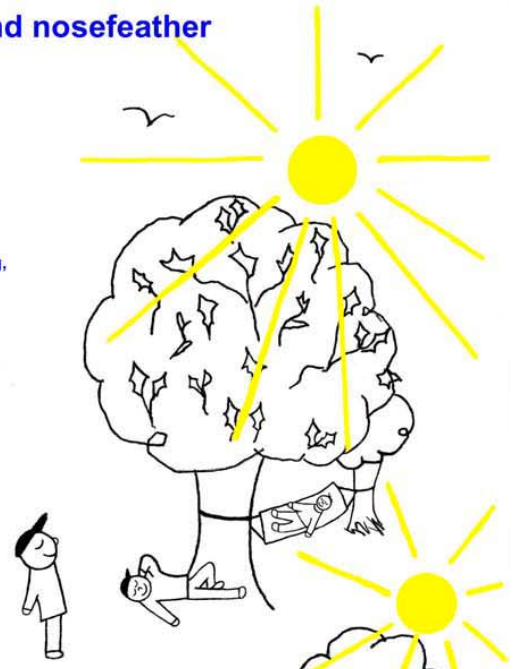
Do the rock or long swing; Move the whole body; head/face, body side to side;
left, right, left, right... while facing the sun through the branches or fence.
Eyes, head/face and body move together.
Breathe abdominally and relax.
The sun shining through the tree branches, leaves, rungs of the fence produces flickering, moving light, shadows, color on the closed eyes.

Next; move the head/face, body up and down.

Draw the figure eight while facing the sun through the fence or tree branches.

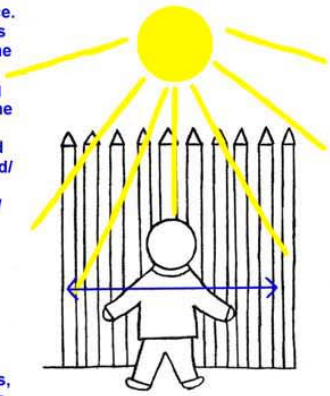
On a windy day, the wind blowing through the tree branches, leaves will increase the effect of moving light, shadow, color.
The person can relax, sit or lie in the grass under the tree, face the sun through the branches, eyes closed and experience the moving light, shadow, color.
Rocking in a hammock, swing, rocking chair will increase the effect.

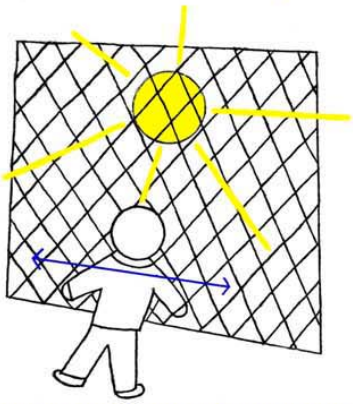
Looking at the leaves, branches moving in the wind (eyes open) also activates saccadic eye movement.
Open the eyes and look through the branches, rungs of the fence.
Avoid looking directly at the sun when the eyes are open.



Saccadic Sunning under a tree.

Use the imaginary nosefeather on the fence.
The end of the feather is at eye level, center of the visual field.
Do the rock, long swing and sweep the end of the nosefeather across, along the fence, left and right with the eyes, head/face, body.
The eyes, feather, head/face and body move together, same time, same direction; left, right, left, right.
The end of the feather hits the rungs of the fence making a gentle tapping sound and feeling in the head, eyes, body as it hits the rungs of the fence.
This increases saccadic eye shifting, relaxation of the eyes, eye muscles, mind and body.

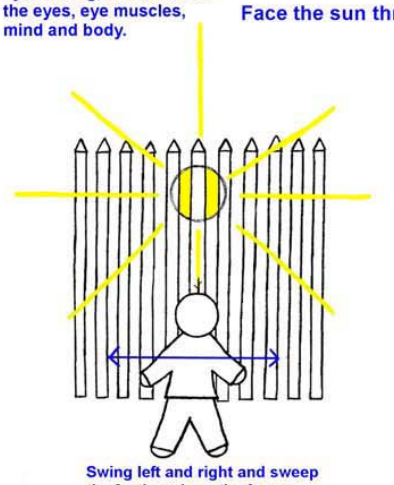




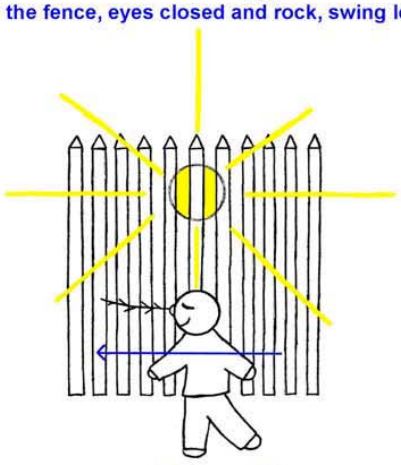


Rock, swing under the tree.

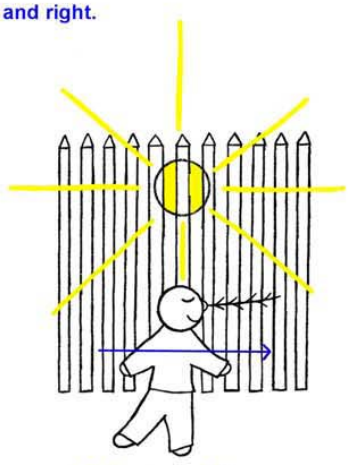
Face the sun through the fence, eyes closed and rock, swing left and right.



Swing left and right and sweep the feather along the fence.



Swing, sweep left



Swing, sweep right

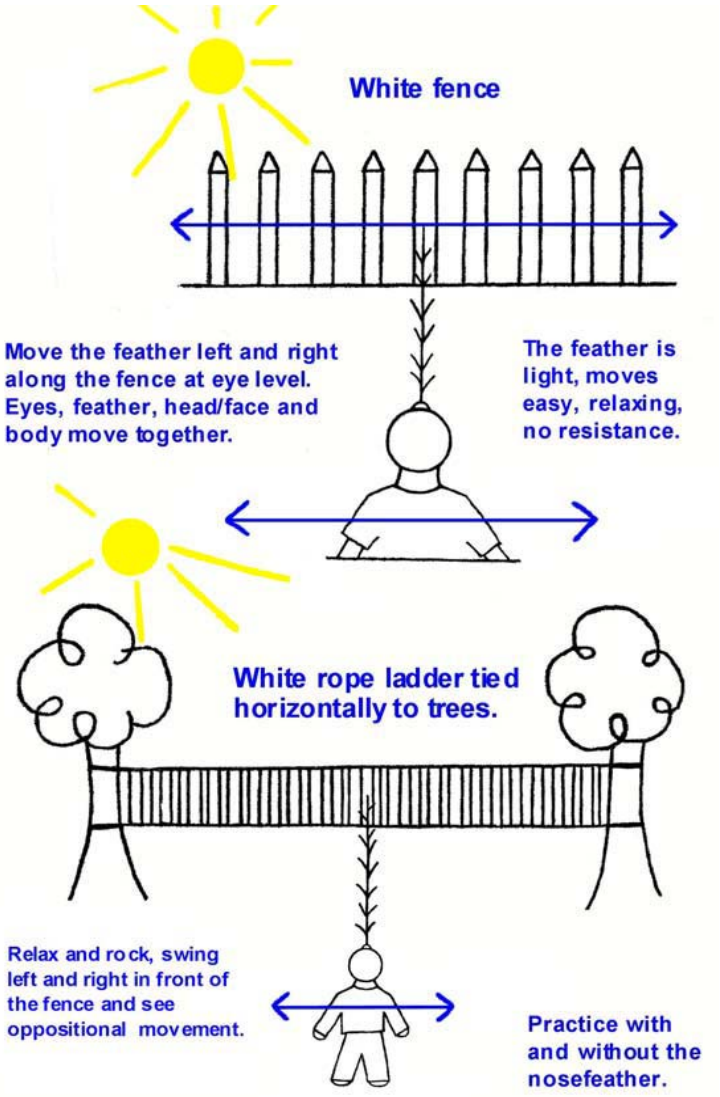
Face the sun through a fence, (Eyes closed if the sun shines directly into the eyes, eyes open if it's higher in the sky, still shining though the fence. Practice both ways for complete benefit.)

Sweep the end of the imaginary Nosefeather along the rungs of the fence while doing the rock or long swing. Imagine you can see and feel the soft end of the Nosefeather hit each rung of the fence as it sweeps over the fence; left and right, through the middle, left, right, left, right...
The eyes, end of the Nosefeather, head/face and body move easy, relaxed, together, in synchronization at the same time, in the same direction. A flowing, continuous movement.
Practice this activity with the eyes closed and see the moving, flickering, light, shadows, color on the closed eyes and continue to imagine you can see and feel the end of the feather gently hitting the rungs of the fence; hit, hit, hit, hit, hit as it passes along over the rungs.
Feel it as a gentle relaxing massage in the eyes, head, body.

Next; practice this again with the eyes open, closed, open.
When practicing with the eyes open, do not look directly into the sun.
Practice when the sun is higher in the sky, above the eyes but still shining through the fence.

Saccadic sunning and use of the Nosefeather activates relaxation of mind, body, eyes, eye muscles and normal movement of the eye muscles and eyes. Clarity of vision improves.

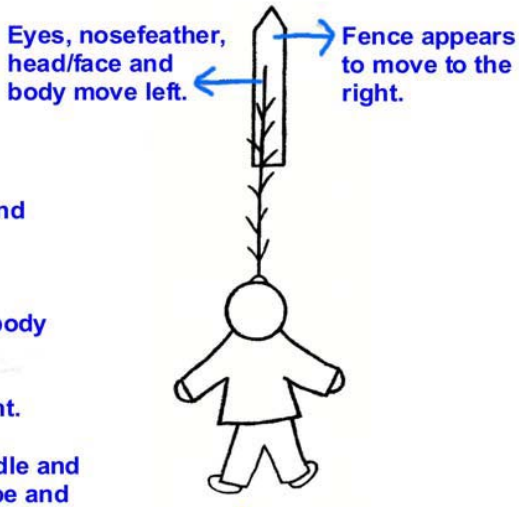
The Nosefeather increases relaxation and saccadic eye movement



OPPOSITIONAL MOVEMENT

See oppositional movement with the fence and nosefeather

Stand 15 feet from the fence.
The end of the nosefeather touches the fence at eye level.
Do the long swing or rock in front of the fence and sweep the end of the feather left and right along the fence.
The fence appears to move in the opposite direction the eyes, feather, head/face and body move to;



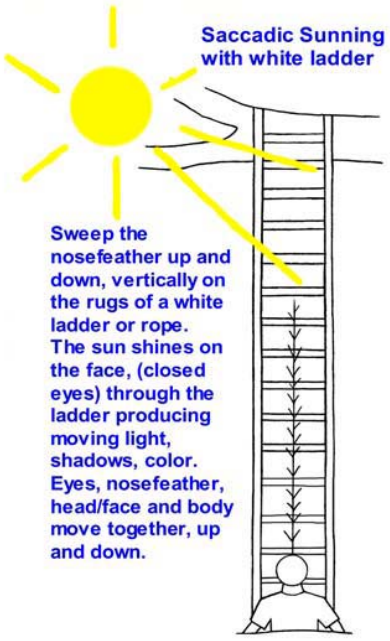
+When the eyes, nosefeather, head/face and body move left,
the fence appears to move to the right.

+When the eyes, nosefeather, head/face, body move right,
the fence appears to move left.
This is a horizontal oppositional movement.

Practice at different distances, close, middle and far from the fence and see the amount, type and speed of oppositional movement change.
When the fence is at a far distance it will appear to move in the same direction the person moves toward.
The closer the fence is, the faster the fence appears to move in the opposite direction and with more oppositional movement appearing.
Seeing oppositional movement relaxes the mind, body, eyes and improves the clarity of vision.

Follow directions for the long swing in chapter 16; relax and let the fence move in the opposite direction.
See chapter 17 - oppositional movement.
Don't stop to look at the fence or see it clear.
just relax, rock, swing.

Practice this on a vertical ladder; see diagram of white ladder hanging from tree on the right.
Move the eyes, nosefeather, head/face and body up and down in front of the ladder and notice vertical oppositional movement;
move upward - ladder appears to move down,
move down - ladder moves up.

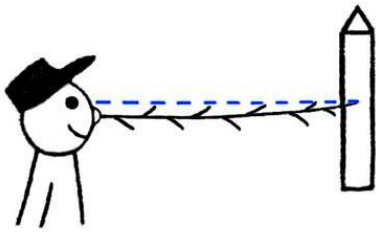


Keep good, relaxed posture; eyes, neck, head, body moving together without tension.

When moving the feather along the fence, ladder; the Nosefeather extends out from the nose and the end of the feather bends up to touch the object the eyes are looking at/moving along at eye level, in the center of the visual field.
See picture below; the end of the feather is touching the rung of the fence at eye level, center of the visual field.
When moving the feather along the fence, ladder, it will bend a little as a normal feather would when moving it along a object.

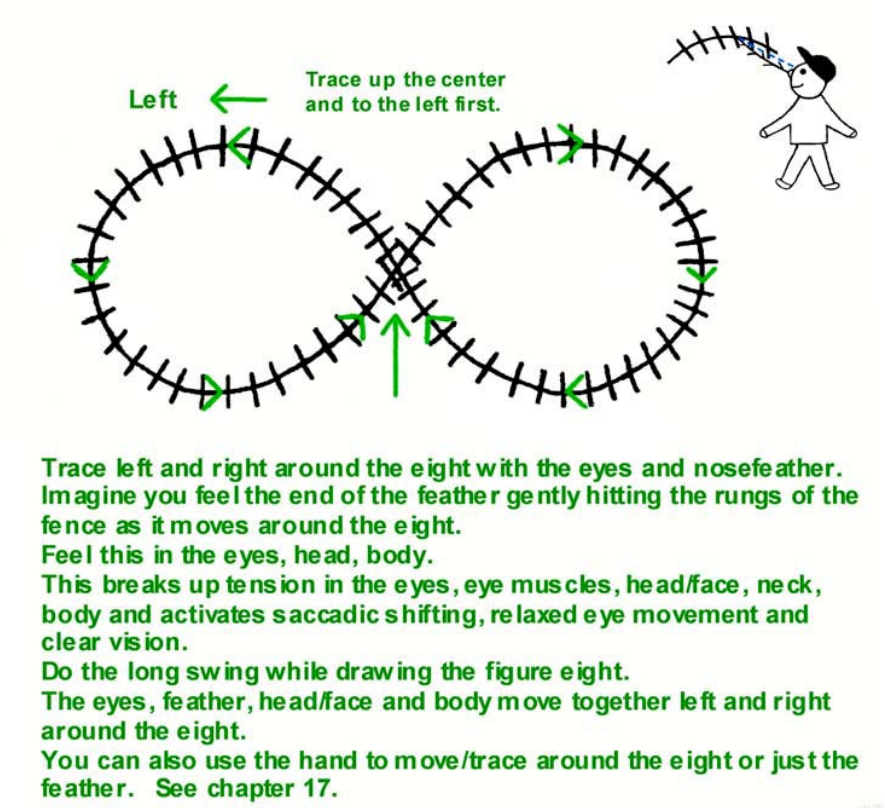
Don't concentrate on perfect central alignment of the feather. Just relax, move the feather left and right, up and down along the fence, ladder and allow it to bend.

Practice moving the eyes (visual attention) and Nosefeather on, around the figure eight to get the eyes, eye muscles, head, neck relaxed, moving freely, easy in all directions.
Place the figure eight in front of the sun with the sun shining through the eight onto the face/eyes.
Practice with the eyes closed, then with the eyes open when the sun is not shining directly into the eyes.



The end of the nosefeather touches the fence at eye level, center of the visual field.

Twist a rope ladder into the shape of a figure eight.
Place the eight sideways, suspended in the air by rope, tree branches.



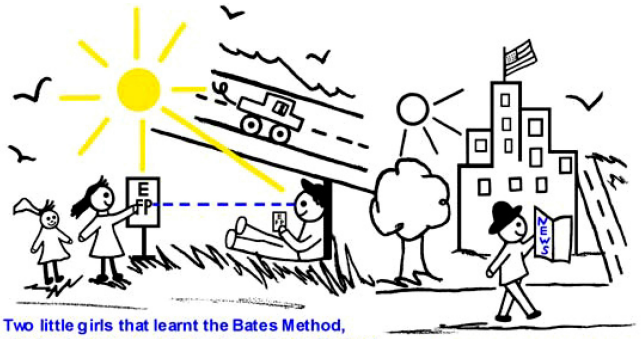
Trace left and right around the eight with the eyes and nosefeather.
Imagine you feel the end of the feather gently hitting the rungs of the fence as it moves around the eight.
Feel this in the eyes, head, body.
This breaks up tension in the eyes, eye muscles, head/face, neck, body and activates saccadic shifting, relaxed eye movement and clear vision.
Do the long swing while drawing the figure eight.
The eyes, feather, head/face and body move together left and right around the eight.
You can also use the hand to move/trace around the eight or just the feather. See chapter 17.

Sunning, Sun-Gazing For Healthy Eyes, Mind, Body and Clear Eyesight





Persons with normal sight can look directly at the sun without injury or discomfort. Note that the eyes are wide open, with no evidence of pain and no watering.



Two little girls that learnt the Bates Method, obtained clear eyesight teach the Bates Method to a blind homeless man they found living outside under a bridge.
They cure the blindness, his eyesight and health are restored.
Treatment: Sunning, sunlight, palming, shifting and switching on letters on identical close and distant eyecharts, swinging, central fixation... Children are often the best Natural Vision Improvement teachers.

His blindness cured, he now reads the newspaper, walks the city on his own, looks for a job and continues to practice the Bates Method.

Most modern teachers advise only closed eyes sunning. Others allow the original open-eyed method shown above by Emily C. Lierman. (Emily A. Bates, Dr. Bates Wife, Assistant in his Clinic in New York City.) The eyes are kept in constant movement; eyes, head/face moving side to side and in other directions. Blink often, relaxed, easy. Circle the sun counter-clockwise and clockwise, draw the figure eight. Shift the eyes and blink when facing the sun. Close and open the eyes. Palm. See the E-books for 'Saccadic Sunning', the end of this book and Dr. Bates Better Eyesight Magazines for pictures, more directions for Sunning, Sun-Gazing and drawing the Figure Eight correct.

The eye evolved in sunlight. The eyes and entire body; brain, all organs, systems, skin... need pure full spectrum sunlight, all frequencies, light waves to remain healthy, function correct, produce clear eyesight. Mood, sleep, absorption, creation and use of nutrients, chemical, hormone production, regulation, energy, chi, aura.., memory and all brain, body functions need full spectrum sunlight. Sunlight and raw apple cider vinegar and honey can cure arthritis. Eyeglasses, sunglasses, tinted, colored, uv blocking eyeglasses, windows, all glass, plastic... blocks out part of the suns light spectrum causing partial spectrum, unbalanced, unhealthy light to enter the eyes, brain, body lowering health and eyesight. Contact lenses completely seal over the cornea, pupil blocking out all full spectrum light. Sunlight destroys harmful bacteria, germs, mold.., protects the cornea, sclera, eyes from infection.

Like the sun, a strong electric light may also lower the vision temporarily, but never does any permanent harm. In those exceptional cases in which the patient can become accustomed to the light, it is beneficial. After looking at a

Additional page, photo from another 1920 edition.



FIG. 47. WOMAN READING THE SNELLEN TEST CARD WITH NORMAL SIGHT WHILE THE SUN IS SHINING ALMOST DIRECTLY INTO HER EYE

strong electric light some patients have been able to read the Snellen test card better.

It is not light but darkness that is dangerous to the eye. Prolonged exclusion from the light always lowers the vision, and may produce serious inflammatory conditions. Among young children living in tenements this is a somewhat frequent cause of ulcers upon the cornea, which ulti-

If the eyes are sensitive to sunlight from years of wearing eyeglasses, contacts or addiction to tinted lenses, sunglasses or just lack of sunlight exposure; start by sunning with one eye at a time. Equal time for each eye, alternating and then end with both eyes together to keep the treatment, vision balanced.

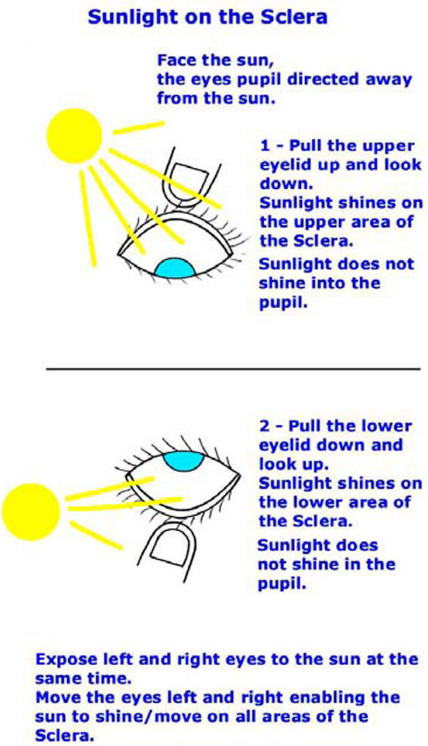
DR. BATES SUNLIGHT TREATMENTS
(As described in Better Eyesight Magazine)

Shining direct sunlight on the sclera, the outer white part of the eye is a old treatment Dr. Bates applied to bring life, health, activity to the retina and its cells, cones, rods, nerves, blood vessels. Dr. Bates cured unclear vision and other eye problems, diseases with this treatment. People that were blind or almost blind would begin to see light and obtain clear vision as result of this treatment and other Bates activities.

Directions

1 - Face the sun with the eyes pupil directed away from the sun. Allow full spectrum sunlight to shine directly on the sclera, (white part of the eye) by pulling the upper eyelids up while looking down. The sun shines on the upper white area of the eye. The eyes pupil is down, under the lower eyelid to prevent direct sunlight from shining into the pupil.

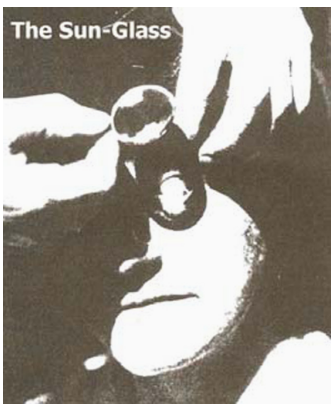
Move the eyes and head/face side to side to move the sunlight over the entire sclera and retina, lens through the sclera. Keep the sunlight moving on the sclera for a few seconds. Then stop, rest. Repeat if comfortable. Do not overdo it. Movement of the eyes, light places sunlight on all areas of the eye, retina, improves absorption, use of the light, activation of the retinas cells, light receptors... and prevents overexposure, concentration of the light, sunburn on the eye.



When pulling the eyelid; do not touch the eye or eyelid. Pull on the skin above the eyelid. Keep fingernails very short. Wash your hands first. Avoid chemical based soap.
Do both eyes at the same time; left thumb pulls left lid, right thumb pulls right lid. Pull gently.
This treatment also helps the eye build normal tolerance to sunlight, improves health and color of the sclera, perception of light, color, clarity of vision.

2 - Now, direct the sunlight onto the bottom of the sclera; Pull the lower eyelids down, move the eye/pupil up in the opposite direction so the sun shines on the lower area of the sclera and not directly into the pupil.
Move the eyes, head/face side to side. Keep the sunlight moving on the sclera for a few seconds. Then stop, rest. The head/body may need to be tilted back a bit to keep sunlight on the lower sclera and away from the pupil. Practicing this treatment repeatedly can tense the eye muscles and the pull of the fingers can irritate the eyelids, skin. Use it occasionally.

Sun-Glass Treatment



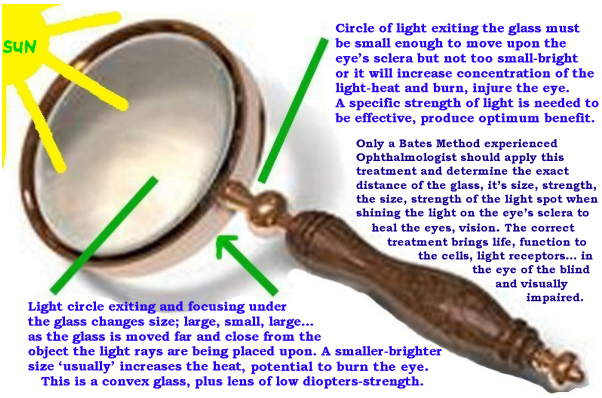
Dr. Bates cured advanced eye problems, blindness by the sunlight methods and, also applying the use of the Sunglass to increase the strength of the sunlight on the eyes sclera and retina through the sclera. He moves the sunlight through the Sunglass quickly over the sclera for only a second, few seconds. He also moves the sunlight through the Sunglass on/over closed eyelids. Light is not directed into the pupil. Light on closed eyelids is done first. The light is kept in movement and moved quickly on the sclera and not for too long; only a few seconds in order to prevent over concentrating sunlight on any one or more areas of the eye, to prevent overexposure, sunburn on/in the eye. Distance of the glass must be correct or the eye can be burned.

The patient is exposed to plain sunlight first, without the glass to get the eyes adjusted to the light before using the sun-glass.
Do not do this at home without an eye doctor's direction. Done incorrect, it can burn the eye.

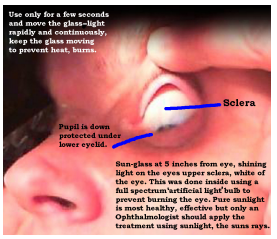
Closed-Eyes Sunning, (and Open-Eyes Sunning if needed), then the Sunlight on the Sclera treatment shown above are done first to adjust the eyes to bright light. THEN; CLOSED-EYES Sun-Glass Treatment is done first before Open-Eyes Sun-Glass. See the following pages for entire Sun-Glass, Open and Closed-Eyes Sunning directions. Find a Bates Method Ophthalmologist if you need this treatment. If the eyes have been treated with surgery, drugs, medicine, any medical treatment, drugs for the eyes, mind, body; the patient may not be able to do specific sunlight treatments. Lasik and other cornea surgeries, possibly certain lens surgeries, impair the eyes natural refraction, control, absorption and use of sunlight.

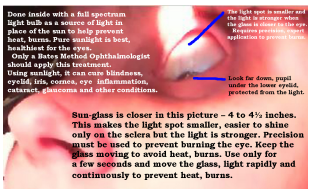
The Sun-Glass (Burning-Glass) Treatment is only for the blind, cases of advanced vision impairment. The sun-glass can burn the eye if done incorrect. It is a magnifying glass, it can set objects on fire! The sun-glass must be a small convex lens ( ) magnifying glass, plus diopters. When used correct it activates, brings function, life to the eyes retina, light receptors, nerves, lens... Closed Eyes Sun-Glass treatment is applied first. It is the safest way to do the treatment and is often completely effective along with the other sunlight treatments without applying the Open-Eyed Sun-Glass. For both closed eyes and open eyes sun-glass treatment; precautions must be taken. Only an Ophthalmologist trained in this method should apply it.

All these conditions must be exact so the light emitted from the glass does not burn the eye; Size, (length across the center of the circular glass from one side to the other), strength-diopter, thickness-amount of curvature of the convex magnifying glass, amount of magnification of the glass, the placement and angle of the glass and the distance the glass is placed from the eye, size and strength of the light spot on the eye (sclera), how strong must the light be to be effective but also safe, not too hot. Do not use the sunglass in very strong sunlight. The brightness, strength of the sun speeds and increases the heat of the light through the sunglass posing a risk of burning the eye. Strength of the sun-time of day, area on planet, ozone layer state and other conditions affect the heat of the light spot, it's potential to burn, injure the eye. Precision, perfect application must be applied. After distance of the glass is determined, then placement of the glass might be above the eye by the forehead, eyebrow or top sclera. Do not shine the light into the eyes pupil! When applying open eyes sun-glass; the eye looks far down with the pupil protected, covered by the lower eyelid. The upper eyelid is lifted. The Sun-glass light spot is then moved quickly, continuously for only a **few seconds** on the upper white (sclera) area of the eye. On the sclera only. (Patch the other eye.) Keep the glass moving-the light spot in **constant rapid movement** upon the eyes sclera for a short time; **Closed Eyes; part of a minute; 10-20... seconds, Open-Eyes; only a few seconds; 2- 3 seconds.** Movement of the light helps prevent heat, burns and activates all parts of the sclera and inside the eye, retina... Allow NO HEAT but get a good beam of light, not too strong but effective enough to activate the cells, light receptors... in the eye. Avoid placing strong, concentrated light on the cornea. See pictures > **(Read entire tests, directions below before applying.)**



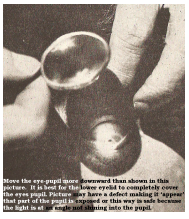


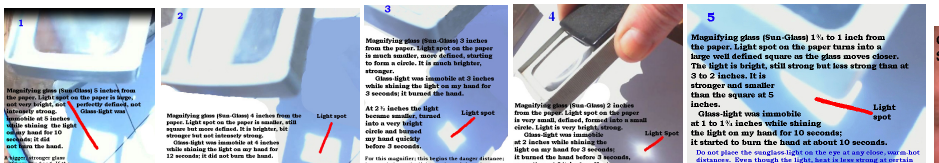




TEST the light strength, distance of the magnifying glass first; Test the strength of the sunlight 'heat' through the glass on a piece of paper first, then on the hands skin to determine the distance the glass is to be placed to control the strength of the light, avoid heat so it does not burn the skin. The distance of the glass changes the size of the spot of light emitted from the glass. The distance of the glass, size, brightness of the light spot circle affects the strength-intensity of the light, heat and the speed that the light spot becomes hot, can set things on fire. This is concentrated energy.., light waves. Test the distance; move the glass far away from the paper; the light is big and not very strong. When the glass is moved closer to the paper, the light spot turns into a small very bright circle of light and is very hot, burns the paper and hand quickly. This is the dangerous light. At very close distances, 1½... inches, the circle becomes large again, the heat is reduced but still burns the hand. Give it time on the paper, then hand/skin to be sure of the distance; Test, find the distance with the sun-glass light immobile on the hand without burning it, feeling no heat for 30 seconds. Then test at the same distance on the hand 1 minute with the glass-light moving. If no heat, no burn when it is immobile for 30 seconds and when moving it for 1 minute; that might be the safe distance to use the sunglass on the eye (sclera) for a few seconds.

I prefer a small round glass for an even circle of light as shown in Dr. Bates sun-glass picture on the right. > For the experiment below and above I used a small square magnifier. Below; test with pure sunlight. Above; test using a light bulb. Other size, strength magnifiers will act differently. Entire information with large color pictures are in the free PDF E-book. Picture below on the far right > shows a test using a light bulb, closer glass, small stronger light spot on closed eyes. The light bulb is unnatural, less beneficial. Read the Sunglass, partial light warning on the following pages. (In the experiment below for this glass; 5-4 inches might be the correct light, distance.)







1st tests; in pictures #1 to 5 above (light immobile) were done in Worcester, Massachusetts, USA on April 24th, 2013 at 5:30-6:00 PM on a sunny day, no clouds.
2nd tests; #1 to 5; the light was moving continual, rapidly on the hand for 10 seconds; I felt heat (mostly from the smaller, brighter lights) but it did not burn my hand.

The EYE WILL BE MORE SENSITIVE to the light, heat so additional adjustments are needed to prevent injury when the light shines on the white area of the eye and also when shining the light on closed eyelids. Do not allow heat to occur because it can quickly turn to fire. You want only the concentrated 'but not too concentrated, not too strong' light beam circle on the eyes sclera.

(Test the strength of the moving light on the forehead, then closed eyelids first before moving the light on the open eyes sclera.) Time the light is on the eye affects intensity of the heat; Short time=less heat. Rapid continual movement of the glass keeping the light spot moving on the sclera helps prevent heat. Pictures are a basic example. Ask the eye doctor for the exact distance, placement of the glass... Practice the entire Bates Method to gain clear eyesight. Do not rely solely on the sun-glass, sunning.)

Directions from Dr. Bates Better Eyesight Magazine;

THE normal eye needs light in order to maintain normal health and normal sight. People who do not see the sun always have eye trouble. Miners working in the dark all day long, and never seeing the sun, all have trouble with their eyes. Children living in dark tenement houses acquire a great sensitiveness to the light, and spend most of their time holding a cloth up to their eyes, or they bury their heads in a pillow, shutting out all light. They acquire many kinds of inflammation of the eyelids, and of the eyeball. The burning glass has a very wonderful effect on some of these cases. I remember one man who had not been able to do any work because of the sensitiveness of his eyes to the light. He was very promptly cured by a few minutes exposure of the eyeball to the strong light of the burning glass.

In using the burning glass, it is well to prepare the eyes of the patient by having him sit in the sun with his eyes closed. Enough light shines through the eyelid to cause some people a great deal of discomfort at first, but after a few hours' exposure in this way, they become able to gradually open their eyes to some extent without squeezing the lids. When this stage is reached, one can focus with the burning glass, the light on the outside of the eyeballs, which at first is very disagreeable! When the patient becomes able to open the eyes, he is directed to look as far down as possible, and this can be done in such a way that the pupil is protected by the lower lid. It is not well to use the burning glass when the patient squeezes the eyelids shut. As long as the light is focused on the white of the eye, and is done quickly, all heat is avoided. The length of time devoted to focusing the light on the white part of the eye, is never longer than a few seconds, moving the light from side to side, up and down, or in various directions.

WITHIN the past few months we have received innumerable inquiries regarding the use of the burning glass. It is well known that the sun strengthens the eyes, and with the aid of the burning glass the direct rays of the sun are focused on the sclera.

By persistence in looking at the sun, a person with normal sight soon becomes able to do so without any loss of vision; but persons with imperfect sight usually find it impossible to accustom themselves to such a strong light until their vision has been improved by other means. One has to be very careful in recommending sun-gazing to persons with imperfect sight; because, although no permanent harm can result from it, great temporary discomfort may be produced, with no permanent benefit. In some rare cases, however, complete cures have been effected by this means alone.

In one of these cases the sensitiveness of the patient, even to ordinary daylight, was so great that an eminent specialist had felt justified in putting a black bandage over one eye and covering the other with a smoked glass so dark as to be nearly opaque. She was kept in this condition of almost total blindness for two years without any improvement. Other treatment extending over some months also failed to produce satisfactory results. She was then advised to look directly at the sun. The immediate result was total blindness, which lasted several hours; but next day the vision was not only restored to its former condition, but was improved. The sun-gazing was repeated, and each time the blindness lasted for a shorter period. At the end of a week the patient was able to look directly at the sun without discomfort, and her vision, which had been 20/200 without glasses and 20/70 with them, had improved to 20/10, twice the accepted standard for normal vision.

Have you ever noticed that upon emerging from a dark room into a strongly lighted one, or from the dark movies into the sunlight, that you are temporarily blinded? This should not be. The normal eye accommodates to the varying conditions, and if it fails to do so the vision is defective. The burning glass accustoms the patient to the strong sunlight, and strengthens the eye.

Q—Is the effect of the burning glass and that of sunshine falling on closed eyelids different, so that one needs both kinds each day?
A—The sun treatment with the burning glass is more intensive than without it. At first, patients become accustomed to strong light by sitting in the sun and allowing the sun's rays to shine directly on the closed eyelids, as they slowly move their heads a short distance from side to side. Then, with the burning glass, the strong light of the sun is focused on the closed eyelids, and when the eyes are accustomed to that, one can consider the advisability of focusing the direct rays of the sun upon the eyeball, itself. This is done by lifting the upper lid while the patient looks down. When the sun is focused upon the naked eyeball, one should keep moving the glass from side to side, and for a short time only, so as not to produce discomfort from the heat. (Note by Clark Night; I notice in some of Dr. Bates, Emily's directions for using the sun-glass with CLOSED EYES; they do not say to look far down. I have advised looking far down for safety even when the eyes are closed but this may not be necessary all the time. Allowing the eyes to look to another direction when they are closed; up, down, sideways, corners enables the sun-glass light to shine through the closed eyelids onto more areas of the sclera; top, bottom, sides... Ask the Ophthalmologist to be sure. Looking far down is mandatory when using the sun-glass with the eyes open.) Never place the sunglass and its light directly in front of the eyes pupil when the eyes are closed or open.

When the eyes are inflamed from disease of the eyelids, the cornea, the iris, the retina, the optic nerve, from glaucoma and other inflammations, the use of the burning glass (sun-glass) has been followed immediately by a lessening of the congestion and a decided improvement in vision.

Many people ask the question: "How long does it take to obtain a sufficient benefit to be noticeable?" When the sun treatment is employed, the improvement in the sight may be demonstrated in a very short time. The sun treatment improves the vision of all patients who are wearing glasses for the relief of pain, fatigue, and imperfect sight, no matter what kind of glasses are worn or how strong they may be. (Do not wear eyeglasses, contact lenses, sunglasses... during any type of sunlight treatments.)

The direct sunlight focused on the white part of the eye is a benefit in many cases of blindness with hardening of the eyeball (glaucoma), or softening of the eyeball (cyclitis), also in cases of cataract, and of opacities in other parts of the eye. It was interesting to observe the improvement in a large number of patients blind from scar tissue on the front part of the eye, the cornea. They were benefited so much that their sight became normal. (Be careful using telescopes, binoculars... My friend burned his cornea, developed a cornea scar that blocked part of his vision by looking at the bright sky, near the sun with a telescope. The previous user forgot to replace the eye protection piece in the telescope.)

One of the best treatments is to focus the strong light of the sun on the white part of the eye with the aid of a burning glass (sunglass), which is kept moving from side to side to prevent the discomfort of the heat, while the patient is looking far down. In many cases treatment has accomplished in a few minutes a complete cure of sensitiveness to light. Paul was a boy who came for treatment. His father telephoned before sending his son, telling me that the school authorities had insisted very strongly that he get glasses for Paul, but the father refused to submit to such a thing, until he was sure that nothing else could be done. Paul had never worn glasses and when they were suggested to him, if Dr. Bates could not help him, he wept bitter tears and at times was disobedient, which sometimes called for punishment. Paul came with a written statement from his mother, saying that at the age of five years, he was taken ill with measles and after that sties appeared at intervals, causing an almost constant inflammation of the eyelids. Because Paul had played with a child who was supposed to have an incurable eye trouble, Paul's mother feared that he had acquired this incurable disease also. His eyelids were itchy most of the time and at the advice of an eye doctor a solution of boric acid was used and a medicine called "mecca" was also applied. Paul found some relief from the use of these applications, but the sties appeared just the same and he noticed that the letters on the blackboard at school became less distinct at such times. In 1928 he had scarlet fever, and pink eye began three months previous to his visit to me. Paul's vision with each eye was 10/10 but he strained to see as he read the smaller letters of the test card. The sun was shining through the windows in the room where I was treating him. I placed him in the sun with his **eyes closed** and used the sun glass rapidly on the edge of his eyelids as well as on the upper and lower lids. This was about midday, and the sun was rather hot so I had to use the glass very *rapidly* in order to avoid any discomfort or burning of the lids. His elder brother who came with him remarked how well the eyelids looked after the sun treatment. This was accomplished in less than an hour's time.

Question - a - How often should the sunglass be used? **b** - How long on the closed lids before using it on the eyeballs themselves? **c** - Can one use the sunglass on one's own eyes? **Answer - a** - Daily for two or three minutes. (Clarification; Two or three seconds at a time for open eyes. Applying the sunglass for only a few seconds prevents burning the eye. Minutes are too long if the eyes are open. On closed eyelids the time can be increased to part of a minute at a time.) **b** - Usually for several weeks on the closed lids before using it on the eyeballs themselves, although the length of time varies with each individual case. **c** - Some people can, but it is rather difficult and awkward to do.

In my experience, the wearing of dark glasses or the use of other methods to reduce the glare of strong daylight or artificial light is an injury rather than a benefit. One of the best methods to relieve or prevent the intolerance of all kinds of light is to encourage the individual to become accustomed to strong light. **Sunglass** - **A convex glass of about 18 D.** is very useful in these cases. One way to use the glass is to have the patient look far downwards while the instructor lifts the upper lid of the eyeball with the help of the thumb. This procedure exposes a considerable amount

of the sclera. The strong light of the sun is now focused on the white sclera for only *short periods of time* to prevent the heat produced by the strong glass from causing discomfort. (To be safe, I use a much lower D. 'diopter' than 18 D. Check with a professional Bates Method Ophthalmologist)

Dr. Bates examined a patient with the ophthalmoscope and found Keratitis, or inflammation of the front of the eyeball of the left eye. The right eye was normal. While the examination was going on, Albert's sister was weeping. She tried very hard to conceal her tears but in vain. They had been to other doctors and were told that Albert would always have to wear glasses to save the right eye; nothing more could be done for the left eye. The last oculist they consulted said the left eye had cataract and as there was no sight, there was no use to operate. What a shock it was to his family!

I placed Albert in the sun and focused the sunglass on his closed eyelid. Then I raised the upper lid and quickly focused the strong light of the sun on the white part of the eye as he looked down. Immediately he called out to his sister: "I see the light. I can see a sort of web inside of my eye when the light is focused on it." This made me very happy indeed. I knew then that Albert could be benefited.

The light through the sunglass is constantly moving and is used for a short time to prevent the sun from burning the eye.
(Closed eyes sun-glass treatment can be longer; part of a minute. Open eyes sun-glass treatment on the sclera is always only for a few seconds. The light is always moved rapidly and continuously on closed eyes sclera and on the open eyes sclera.)

Another one had irritated eyelids, the appearance of which was worse than the discomfort or pain that the boy experienced. He blinked more rapidly than the normal eye does unconsciously. Sun treatment was given to him also. When the mother saw that he had obtained a noticeable amount of relief from the first treatment, she purchased a sunglass and under my supervision she learned how to use the glass on his closed eyelids and in this way all he needed was the one treatment.

Dr. Bates discovered many years ago the benefit of strong light on the eyes and I have seen many patients cured by the sun treatment alone. Some of these cases were seriously affected because of their inability to stand even the rays of the sun. It is curious but true that this patient has been benefited mostly by a magnifying glass which focused the light on the white part of each eye as he looked down while the upper lid was raised. In the beginning of his treatment the mere mention of light would make him frown and shrink with fear. Now he enjoys sitting in the sun all day long and realizes that it gives him the greatest benefit. He is steadily improving. While he is not entirely cured, he reads the bottom line of the test card occasionally at ten feet.

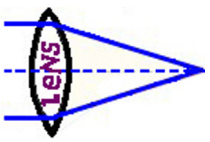
Sun treatment is an immediate benefit to many diseases of the eye. Before the treatment, take a record of your best vision of the Snellen test card with both eyes together and each eye separately without glasses. Then sit in the sun with your eyes closed, slowly moving your head a short distance from side to side, and allowing the sun to shine directly on your closed eyelids. Forget about your eyes; just think of something pleasant and let your mind drift from one pleasant thought to another. Before opening your eyes, palm for a few minutes. Then test your vision of the test card and note the improvement. Get as much sun treatment as you possibly can, one, two, three or more hours daily. When the sun is not shining, substitute a strong electric light. A I,000 watt electric light is preferable, but requires special wiring. However, a 250 watt or 300 watt light can be used with benefit, and does not require special wiring. (Full spectrum bulbs, no fluorescent) Sit about six inches from the light, or as near as you can without discomfort from the heat, allowing it to shine on your closed eyelids as in the sun treatment. (Warning; light bulbs can suddenly burn out and break throwing glass into the eye. Avoid other people, pets, clutter so the bulb is not accidently broken by people, pets running by... Do not practice during a lighting storm which can blow out, shatter the electric bulb. Avoid high heat bulbs... that can burn the eyes, skin.)

The strong light of the sun focused on the sclera, or white part of the eyeball, with the sun glass, also improves the vision. After the eyes have become accustomed to the sunlight with the eyes closed, focus the light of the sun on the closed eyelids with the sun-glass. Move the glass rapidly from side to side while doing this for a few minutes.

Then have the patient open his eyes and look as far down as possible, and in this way, the pupil is protected by the lower lid. Gently lift the upper lid so that only the white part of the eye is exposed, as the sun's rays fall directly upon this part of the eyeball. The sun glass may now be used on the white part of the eye for a *few seconds*, moving it quickly from side to side and in various directions. Notice that after the use of the sun-glass, the vision is improved. When the light is on the sclera, it is normal to see a reflection of the blood vessels in the eye.

Whenever possible she was placed in the sun, and the sunlight was focused on her closed eyelids with the sunglass. This always improved her vision. When there was no sun, I placed her close to a strong electric light for a half hour or longer. She liked this treatment because the sunlight was so restful to her, and she could read the test card at ten feet. *More of Dr. Bates sun-glass, sunlight articles can be found in his Better Eyesight Magazines by searching in the PDF for; Sunglass, Sun-Glass, Burning Glass, Sun Treatment.*

The Eye is a Natural Sun-Glass



Plain sunlight, closed and open-eyes sunning and sunlight on the sclera without the sun-glass is all that is needed in most cases to return the vision to perfect clarity with healthy eyes. Plain open-eyes and closed-eyes sunning, daily sunlight with the natural eye is the healthiest way to obtain sunlight. The eyes lens is a double convex lens. See picture on right. > It is a perfect, natural, safe sun-glass (burning glass)! The eyes cornea is also convex. The cornea, aqueous, lens, vitreous... control the amount, focus of light entering and in the eye. The cornea, lens, eye... are the exact shape, thickness, curvature, (diopters) strength, distance, position to perfectly focus-refract, concentrate sunlight in the eyes and on the retina safely.

For Sun-Gazing, Sunning, Sunlight Practice (no sunglass) ;



The mind, body, eyes must be relaxed, happy positive thoughts. Keep good and easy relaxed posture. Avoid twisting the neck, tilting the head to one side. Avoid tensing the face, head, neck muscles. No squinting, staring. Relax, allow movement. Teeth apart-not clenched together. Deep but relaxed, comfortable abdominal breathing. Nose in and out breathing is most relaxing, beneficial. If it is more comfortable; breathe out through the nose and mouth. Yawn to stretch, relax the neck, head... muscles and produce healthy tears. Deep breathing, yawning induces relaxation and brings oxygen, blood, lymph, energy flow to the head, eyes, body. The brighter the sunlight, the more it relaxes the eyes, mind and body. The best, brightest sunlight is when it's strong, high in the sky; 11 am-1 pm but sunburn occurs faster at this time. Also, the head has to be tilted up more and this can tense the neck, unless you sit or lay back. Sunning is best with bare feet on the bare dirt ground because this connects the body with the planet's energy. Native American Indians lean against a tree to connect with its energy into the earth and up into the air. Deep breathing strengthens the energy. Sunlight is energy. Full spectrum sunlight contains all colors, frequencies, energy of the light spectrum even more than seen in the rainbow. See the E-book color chart chapter for chi energy circulation, strengthening, movement. Area of the planet, ozone layer should be considered when sunning when the sun is brightest, strongest. When sunning, (open and closed eyes), moving the head and eyes side to side, up and down... ; see oppositional movement 'the swing' of the sun; the sun appears to move in the opposite direction the eyes, head move to. Shift and blink. Shift the eyes, head across the sun left and right, up, down, diagonally from one side of the sun to the other. Shift to the left and right, top, bottom... area of the sky around the sun. Do the long swing and sway at sunrise and sunset; swing, rock left and right and see the sun appear to move opposite. This helps blind people regain their vision. Practice swinging with the sun shining through a fence to activate massage and saccadic eye movements. (see e-book) Do the figure eight.

Avoid staring at the sun. Do not look at the sun longer than a fraction of a second before moving the eyes, head (visual position) to a new part of the sun or sky. Keep the eyes (where you look) moving across the sun and sky. Look away from the sun to the sky often. Blink frequently. Staring 'eye immobility' causes eyestrain, eye muscle tension and unclear vision. When the eyes are strained, sunlight can feel uncomfortable and cause colored light-spots in the visual field. If the sun makes the eyes feel like they need to close 'sleepy'; close the eyes. Take a break. Do closed eyes sunning. Take your time building tolerance to full open-eyed sunlight. Sun-Gazing, open-eyes does NOT mean staring at the sun, eyes immobile. Always keep the eyes, head moving and look away from the sun often. Limit time the eyes look directly at the sun to a few seconds.

THE USE OF THE SUN GLASS

In using the sun glass, it is well to accustom the eyes of the patient to the strong light by having him sit in the sun with his eyes closed, and at the same time he should slowly move his head from side to side, in order to avoid discomfort from the heat. Enough light shines through the eyelid to cause some people a great deal of discomfort at first, but after a few hours' exposure in this way, they become able to gradually open their eyes to some extent without squeezing the lids. When this stage is reached, one can focus, with the aid of the sun glass, the light on the closed eyelids, which at first is very disagreeable. When the patient becomes able to open the eyes, he is directed to look as far down as possible, and in this way the pupil is protected by the lower lid. Then by gently lifting the upper lid, only the white part of the eye is exposed, while the sun's rays strike directly upon this part of the eyeball. The sun glass may then be used on the white part of the eye. Care should be taken to move the glass from side to side quickly. The length of time devoted to focusing the light on the white part of the eye is never longer than a few seconds. After such a treatment the patient almost immediately becomes able to open his eyes widely in the light.

Most Modern Natural Eyesight Improvement Teachers do not apply the Sunglass Treatment -(Mainly due to fear of the AMA.) Ophthalmologist Bates cured many vision problems, eye diseases, various types of blindness with the Sunglass and Sunlight, Sunning Treatments. Try plain Sunning, Sunlight first.

The Sunglass treatment is to be done by a Bates Method Experienced Ophthalmologist and only if necessary in cases of blindness, extreme vision impairment and only after closed eyes sunning, daily sunlight exposure; eyes open (never staring into the sun), yes; looking at, shifting on the bright sunny sky, clouds, trees and other Bates Method Treatments have been tried first. (See other sunlight treatments in this book.)

If these have not brought vision improvement, the Sunglass Treatment may.

Be aware that certain types of glass act as a magnifying glass. The Sunglass is a magnifier and sunlight passing through the Sunglass can burn the eye.

Only a professional should apply this method;

The glass is never still; the glass is moved continually side to side... causing the light to move quickly on the top white area of the eye. A short time; only a few seconds of light is placed on the eye. Do one eye at a time.

(Patch the eye not being treated with a thick white eyepatch to prevent the eye, pupil from moving into the light of the Sunglass. Keep the patch open on the outer side away from the glass to allow plain daylight into that eye to keep both brain hemispheres, eyes active.

Do not wear any type of eyeglasses, contact lenses, sunglasses, tinted, UV blocking lenses when using the Sunglass, Sun-Gazing, Sunning.)

Distance of the glass from the eye must be exact, a specific distance and the time the light is on the eye (white area, sclera only, through eyelids or eyes open) must be brief, a few seconds or the eye can be burned.

It is a certain type of magnifying glass;

Type, size, thickness, curvature... of the glass, distance, angle from the eye, strength of the sun affects the strength, intensity, concentration of the light ray beam, heat of the sunlight through the glass. The heat increases with the amount of time the light is on the eye. The correct amount is relaxing, healthy for the eyes. The light must never shine on/into the eyes pupil. Keep the light away from the pupil, iris. Keep the eye, pupil far down, under the lower lid to prevent the light beam from shining into the pupil. Do not move the eyes when the Sunglass light is on the eyes.

Start with eyes closed, look far down. Bring the glass, light beam close, but a safe distance from the eye. Move the light beam on the white area of the eye through the closed eyelids. The movement helps to prevent heat. Test the intensity of the light, heat, distance of the glass... on the forehead, closed eyelids first. Through closed eyes notice the size of the light spot on the eye and the blood vessels... in the eyes, sclera. Keep the light moving, move it quickly on the upper sclera for a few seconds. (Light is kept away from the eyes pupil.)

Then, repeat with the eyes open; still looking far down, eyes pupil under the lower eyelid, protected from the light. Do one eye at a time; lift the upper eyelid, eyes open and move the light quickly side to side, small circles... a few seconds on the white area, upper sclera of the eye. Then repeat the steps with the other eye.

(When the eyes are closed; do one eye at a time and then you may also move the light over both eyes; side to side, up, down, diagonally.)

The Sunglass is a glass. As described in other chapters; All glass, plastic..; eyeglasses, windows, sunglasses block out part of the sun's light spectrum causing unhealthy partial spectrum, unbalanced light to exit the glass and shine into the eyes, travel to the brain, body. This impairs health, function of the brain, body, eyes and clarity of vision. For this reason the sunglass is only used to get the cells, light receptors, capillaries... in the eye, retina, lens back to full life, activity, bring the vision back. Then the glass is not used. Plain sunlight not passing through glass is used by practicing Sunning, Sun-Gazing... as described in this chapter.

Read more directions for Sunning, Sun-Gazing, Sunglass Treatments in the PDF Natural Eyesight Improvement E-book; Ophthalmologist Bates 'Better Eyesight Magazine' describes this treatment.
See; Better Eyesight Magazine; April, May, June, August, October, December, 1926 and November, 1924 and

other 'Use of the Sunglass, Burning Glass' articles. Better Eyesight Magazine article June, 1926 in original form is shown on this page.
I place the instructions here due to the many cures Dr. Bates, Emily Lierman, Bates, other doctors obtained with the Sunglass and to enable persons to know if their Eye doctor is doing the treatment correct, safe.

Sun-Gazing; Looking into the sun with the eyes open, while moving the eyes, head/face side to side, keeping the eyes, head/face in movement 'shifting' is still done by some people in various countries, cultures.
For sun-gazers that do look at the sun with the eyes open; Practice only for 5-10 seconds occasionally, always moving the head/face, eyes; shifting side to side, top and bottom... across the sun. Blink often.
Never stare into the sun. Application time may vary with certain cultures, countries, treatments by experts.
Avoid areas where the sunlight is concentrated or the ozone layer is depleted.
Looking at the sun at sunrise, sunset in safe areas of the planet is allowed as long as staring, over-exposure is avoided. People have been looking at the sky, sunrise, sunset for millions of years.

Due to the depletion of the ozone layer, Modern Bates Teachers do not advise looking into the sun with the eyes open. Closed Eyes Sunning only is practiced.
Looking at the bright areas of the sky, clouds, tree tops with the eyes open on a sunny day is allowed.
Never look at or near the sun during a solar eclipse of the sun.

Good nutrition is necessary to maintain the eyes natural protection and tolerance to sunlight.
Sunlight through the eyes and on the skin is also necessary for the body to absorb, create, function with nutrients, vitamins, vitamin D, calcium.., minerals, to help protect the eyes, skin from sunburn, overexposure to sunlight, to produce, balance, control hormones, chemicals in the brain, body, body organs, systems, including melatonin for a normal sleep cycle and serotonin, tryptophan... for a positive state of mind, good mood, positive thoughts, emotions. The eyes need sunlight to remain healthy, keep the vision clear.
Most drugs and some herbs impair the vision, eye health, natural tolerance, protection from over-exposure to sunlight.

Chi, the body's electrical-magnetic energy flow is strengthened by sunlight.
Sunlight contains all colors, frequencies, energy of the light spectrum.



People that have had eye surgery; 'the eyes lens altered, removed, replaced', cornea surgery; 'part of the cornea removed or altered' or other eye surgeries might not be able to practice certain types of sunlight treatments, especially the sun-glass. Plain closed-eyed sunning, possibly some open-eyed and daily sunlight with open-eyes, not facing the sun may be practiced but check with your eye doctor first because; the cornea.., lens, vitreous control the amount of sunlight entering the eyes, prevents over-exposure. An artificial or altered lens in the eye might not function perfectly correct with sunlight as the eyes natural lens.
A partial and/or altered cornea will not function perfectly correct with sunlight.
Sunlight is necessary to keep the eyes, cornea, iris, lens, retina... healthy. It can help eye, vision conditions, surgery to heal, it fights infection. Sunglasses, eyeglasses and avoiding sunlight leads to eye problems, blindness.
Use the Bates Method to avoid eye, vision impairment and surgery.

Aspirin, sinus sprays, tobacco impair the eyes health and vision. Skin creams, soaps, food containing chemicals, phony natural ingredients that harm the eyes health can raise or lower eye pressure to abnormal levels.

Better Eyesight

SUN TREATMENT. The eyes need sunlight. People who work in mines, where there is no sun, sooner or later develop inflammations of the interior of the eyes. The cloudiness of the lens from cataract is lessened by exposing the eye to the direct rays of the sun. When using the sun treatment, it is best to let the eyes become accustomed to the sun by mild treatment at first. Have the patient sit in a chair with his eyes closed and his face turned toward the sun. He should slowly move his head a short distance from side to side. The movement of the head prevents concentration of the sun's rays on one part of the eye. After some days of treatment, or when the patient becomes more accustomed to the light, one may use the sun-glass with added benefit. Direct the patient to look far down and while he does this, lift the upper lid gently, exposing to view the sclera or white part of the eye. Now, with the aid of the sun-glass focus the sunlight on the forehead or on the cheek, and then rapidly pass the concentrated light over various parts of the sclera. This requires less than a minute of time. It is not well to be in a hurry. One should wait until the patient becomes sufficiently accustomed to the sun to permit the upper eyelid to be raised while he looks far down, exposing the sclera only. It is important that the patient be cautioned not to look directly at the sun.

Prognosis

The cure of cataract is usually accomplished more quickly than the cure of some other diseases of the eye. My assistant, Emily C. Lierman, has had unusual success in treating cataract cases, as she adapts my methods to each individual case. In her book, "Stories from the Clinic," the treatment is described in detail.

Light is necessary to the health of the eye, and darkness is injurious to it. Eye shades, dark glasses, darkened rooms, weaken the sight and sooner or later produce inflammations. Persons with normal sight can look directly at the sun, or at the strongest artificial light, without injury or discomfort, and persons with imperfect sight are never permanently injured by such lights, though temporary ill effects, lasting from a few minutes to a few hours, days, weeks, months, or longer, may be produced. In all abnormal conditions of the eyes, light is beneficial. It is rarely sufficient to cure, but is a great help in gaining relaxation by other methods.

For Healthy Eyes, Body & Clear Eyesight





Also for the blind, advanced vision impairment, cataract, glaucoma and people very sensitive to sunlight due to addiction to sunglasses or many years wearing eyeglasses. (Epileptics affected by flashing, moving light cannot do parts of this practice. See 'Saccadic Sunning' with the tree leaves, fence, hands... in the E-book. If the eyes had surgery; see the previous page for directions.) Other people may do all the practices. Practice in a state of relaxation. The body, eyes should be free of drugs, medications, eye drops, chemicals. A good diet, nutrition maintained. Avoid eating soy, tofu, certain herbs. They impair the vision, thyroid and eye function.

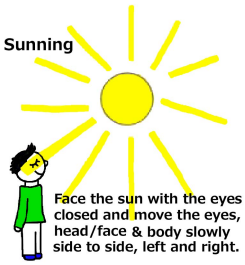
Sunlight, Closed & Open-Eyed Sunning, Sunlight on the Sclera and the Sun-Glass Treatment are applied in this way, order #1-8b; (Take your time. # 7 - 8b can be practiced in the future after the eyes build tolerance to sunlight.)

1 - Expose the open eyes to natural full spectrum sunlight outside. No sunglasses, tinted, colored, uv blocking... lenses, no eyeglasses or contact lenses. No sunscreen, uv blocking skin creams. Start by walking around in partial shade under a tree. Wear a white hat with a wide brim if the light feels too strong.

2 - Face the sunlight, then the sun through the tree leaves. Blink and move 'shift' the eyes and head/face with the eyes side to side; left, right, left, right, then up, down... Relaxed, easy, slowly. Then; work your way into the sunlight with, then without the hat. Walk around in the sunlight, look at the tree tops, clouds. Blink, eyes shifting.

3a - Face the bright sky, then sky near the sun with eyes open. Blink, eyes shifting. Then, close the eyes and face directly at the sun with the hands a few inches in front of the eyes. Open the fingers and move the hands-fingers across the eyes/face; left and right, up and down, diagonally... allowing sunlight and shadows to shine, move upon the closed eyes. The eyes, head are moved side to side, up, down... as the hands, fingers also move.

3b - Repeat # 3a with eyes open. Blink frequently, keep the eyes, head moving, shifting. Rest.



4 - Practice Open-Eyes Sunning, briefly, for a few seconds. (no hands) Face the sun. Keep the eyes and head moving. Eyes shifting. Blink frequently. Then stop. Rest. Repeat, then rest. Bare feet, stand on the earth's land when sunning.

Try Saccadic Sunning; move the hands-open fingers up and down, left and right, diagonally... in front of the eyes while facing the sun; eyes open, then closed, then open. Eyes, head moving. (see picture below)

When facing the sun, sunning; a white cloth mask with non-obstructed eyeholes (and nose-mouth-breathing holes) is worn to protect the face from sunburn. Get some sunlight on the skin for vitamin D... production and top of the head (no hat) to strengthen chakras, chi energy centers, flow. (When sunning, moving the head, eyes; see the sun 'swing' opposite.)

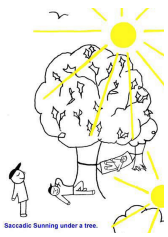
5 - Practice the Sunlight on the Sclera 'white of the eye' Treatment. Face the sun. Eyes open. Look down, the eye's pupils under bottom eyelids. Pull both eyes top eyelids up and move the eyes, head side to side to move sunlight upon the top of the sclera. Then do the bottom sclera. (See directions on previous pages.) Stop the sclera treatment. Rest.



6 - Do Closed-Eyes Sunning. Face the sun. Move the eyes, head/face side to side-left and right, up, down, diagonally, circle the sun counter-clockwise, clockwise, draw the figure eight. The head moves with the eyes in the same direction. Closed eyes sunning can be done for 10-30... minutes or longer. (No sunglasses, eyeglasses..!)

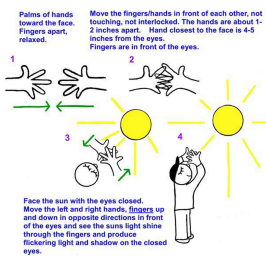
7 - Practice Open-Eyes Sunning, briefly, a few seconds. Keep the eyes and head moving. Head moves with the eyes, in synchronization. Blink frequently. Then stop and rest. Repeat, then rest. Open-eyed sunning can be practiced for a bit longer time as the eyes get used to the sunlight. If you see a light-spot in the visual field (like a temporary after-image seen after looking at a light bulb or a neon sign at night); stop, limit open-eyed sunning exposure time until the eyes build more tolerance to the sun. Light-spots are yellow, red, blue, various colors and change color. Light-spots should disappear in a short time. When the eyesight, eyes, mind-visual system are functioning normal, relaxed, healthy, no tension, strain; there is no sensitivity to sunlight, light-spots are few and fade away. Light spots and other effects in the visual field can last for months if sunning is done wrong and/or there is tension, strain in the visual system. Limit eye exposure to a few seconds.

Improve adjustment of the eyes, vision, retina, visual purple production, iris-pupil reaction size to light and dark by alternating; Palming, Sunning, Palming, Sunning. Sunlight, Sunning and Palming improves day and night vision. Sunlight relaxes the mind, body, eyes and eye muscles. The clearer the vision=the less sensitivity to sunlight.



8a - Use the Sun-Glass Treatment on Closed Eyes. Do one eye at a time. (See complete directions, placement, distance of the glass, heat tests... on previous and next pages. Use only if necessary.) Look far down, the eyes pupil is under the lower eyelid to keep light away from the pupil. Keep the eyes closed. The 'light spot' through the sun-glass is moved rapidly and continuously side to side... 10-20 seconds on the closed eyelids, upon the upper sclera area, through the eyelid. Then do the other eye. Alternate on left and right eyes. The eyes can be moved up, down, left, right as long as thye stay closed. This way the light shines on many areas of the sclera through the closed eyelids. Light on the closed eyelids is also healthy.

Rest. Repeat if comfortable. (For 8a & 8b; Time the light is on the eye can be longer when done by an eye doctor.)



8b - Use the Sun-Glass Treatment on Open Eyes. (See complete directions, placement, distance of the glass, heat tests... on previous and next pages. Use only if necessary.) Do one eye at a time. The eyes look far down, the eyes pupil is under the lower eyelid to keep the light away from the pupil. Sunlight through the glass must not shine into the pupil! (Patch the other eye.) Lift the upper eyelid of the un-patched eye. The light spot through the sun-glass is moved rapidly and continuously for a few seconds on the eyes upper sclera 'white area' of the eye. Stop. Now switch the eyepatch to this eye. Do the sun-glass treatment on the other eye. Stop the sun-glass treatment. Rest. Walk around in normal sunlight alternating with shade under a tree. Do a few seconds of open-eyed sunning (no sun-glass); blink and shift the eyes across the sun to get balanced, full spectrum sunlight into the eyes because; a negative effect of the sun-glass is that it emits unbalanced light. (See next page.) If blind; watch for moving light, shadow when doing sunlight treatments. Watch for flashes of clear or partially clear vision immediately or as time passes. Moving the hands in front of the eyes when facing the sun helps activate the retina, cones, rods, nerves, lens, brain's function with the eyes and appearance of moving light which leads to a return of the vision. ***(The Sun-Glass Treatment is used only if necessary, temporarily and is applied only by an experienced Bates Method Natural Eyesight Improvement Ophthalmologist with many excellent patient references.)***

Precautions, Benefits for the Sun-Glass, Sunlight Treatments

This is an old-time Bates Method treatment. It can heal some types of blindness, advanced eye problems, cataract, glaucoma... It must be preserved but done correct. Complete old-original and modern directions, warnings must be taught for safety of the Sunglass (Burning Glass) because it is a magnifying glass and sunlight passing through a magnifying glass can burn, blind the eye. Dr. Bates is not here now to apply it, teach us how to use it correct. It must not be advised for, given out carelessly to every student.

The sunglass is not needed except sometimes in advanced cases of vision impairment, blindness and should be done only by an expert Ophthalmologist experienced in the Bates Method and only after other Bates' methods are tried first. This type of doctor is hard to find so people often apply this method on their own or with a friends help. Be careful! Study the directions completely and be sure you can trust the friend. Experts with clear enough eyesight and/or perfect perception of the location of the light can do it themselves.

The Sunglass is a magnifier, a glass and similar to a strong reading eyeglass prescription; sunlight passing through it becomes very unbalanced, no longer full spectrum, it converts to partial spectrum light and abnormally focused light which is not healthy, it's not the beneficial full spectrum sunlight we get when it's not passing through glass, plastic, windows, eyeglasses... People that use the Sunglass every day or weekly... are placing unbalanced, partial spectrum light on the eyes. This continual exposure to unbalanced sunlight waves, frequencies, altered energy is unhealthy. Even monthly or less often can be harmful; it is only needed for treating blindness.., some types of eye infections. and must be a temporary practice!

Using the sun-glass inside under artificial light bulbs (which produce unbalanced light), makes the light through the sunglass more unbalanced, unnatural, removes more of the light spectrum, impairs the eyes, retina, lens... health, function and clarity of vision. The light is not 'perfect' full spectrum as healthy natural pure sunlight not passing through a glass, even if you use the best full spectrum lamp. A safe type of full spectrum lamp (no fluorescent, no types that are too hot) is healthy for indoor light and can be used for sunning the eyes when stuck working inside and in low sunlight areas of the planet, but; passing this light through the sunglass makes it partial, unbalanced, unhealthy. This lamp can be used with the sun-glass for some benefit to the blind if pure sunlight is unavailable.

Used correct, temporarily by an Ophthalmologist, the sun-glass treatment with pure sunlight can save the eyesight, the eyes health, but; it's a temporary treatment and is combined with permanent use of the Bates Method and natural full spectrum sunlight NOT passing through the sunglass. The Sun-Glass and Open-Eyed Sunning are not needed for most cases. Open-eyed sunning (and the Sunglass Treatment) are also controversial due to the depletion of the planets ozone layer from pollution so detailed instructions, precautions must be given. Some areas of the planet have better ozone protection. Colored spots in the visual field lasting for days, months is a side effect when these treatments are done wrong. Some open-eyed sunning can be done safely and with great benefit to the health of the eyes, body, mind and vision. Sunlight is a natural antidepressant, a healer. Vision can become clear, eyes healthy with use of the Bates Method, avoiding eyeglasses and obtaining natural exposure to normal sunlight by just walking outside daily, looking at the bright sky, clouds, trees, moving the eyes, head/face across the sun with blinking for short periods and using Closed-Eyes Sunning.

Do not wear any type of eyeglasses, sunglasses, tinted, colored, UV blocking lenses, contact lenses... while sunning, sun-gazing, applying sunlight on sclera, using the sun-glass or any sunlight treatments. These eyeglasses, lenses can act as a magnifying glass causing sunlight through the eyeglass lens to burn the eyes even when the eyes are closed. The eyeglasses, lenses impair the natural structure of the suns light rays causing unbalanced, partial spectrum, unhealthy light to enter the eyes, visual system resulting in eye, vision, health impairment. NO binoculars, telescopes when facing the sun! (The sun-glass light never shines on, in the eyes pupil. It shines only on the sclera, white area of the eye.)

I prefer direct, pure full spectrum, balanced sunlight on the sclera `white of the eye' (pulling the eyelids up, down while looking in the opposite direction with the eyes pupil away from the sun. See directions, pictures on previous pages) without the light passing through the sunglass or any type of glass, plastic, eyeglasses, sunglasses... I also use closed eyes sunning and a bit of occasional open-eyed sunning done correct; look directly at the sun, always with eye, head movement, keep the eyes shifting, blink often, avoid staring. Move the head with the eyes, at the same time, in the same direction. Limit eye exposure time and protect the skin from sunburn.

Do the long swing, sway, figure eight facing the sun and see opposite movement; eyes closed, open, closed. Try saccadic sunning by facing the sun under a tree or in front of a fence or with hand/fingers movement. I like to watch, copy animals, birds natural reaction to the sun, their instincts. Good nutrition, diet, no drugs, chemicals... Healthy eyes work best with healthy full spectrum sunlight.

SUN TREATMENT

Most ophthalmologists prescribe dark glasses to nearly all of their patients who suffer from the brightness of light. This practice, in my opinion, has been overdone. I remember one patient who was in the hospital for two years in a dark room, with both eyes bandaged with a dark binding day and night continuously. When she left the hospital she was in a very pitiable condition. She was practically blind in the bright sunlight. She went to a great many clinics and eye doctors and all they did for her was to give her stronger dark glasses. In time these dark glasses did not give her any relief. Instead of being helpful to her weak eyes, the glasses had the effect of making them more sensitive to the light than they had ever been before. It has been my experience that all persons who wear dark glasses sooner or later develop very serious inflammation of their eyes. The human eye needs the light in order to maintain its efficiency. The use of eye-shades and protections of all kinds from the light is very injurious to the eyes.

Sunlight is as necessary to normal eye as is rest and relaxation. If it is possible, start the day by exposing the eyes to the sun—just a few minutes at a time will help. Get accustomed to the strong light of the sun by letting it shine on your closed eyelids. Later, when you can look down sufficiently, by gently lifting the upper lid the white part of the eye can be exposed, while the sun's rays strike directly on it. It is good to move the head slightly from side to side while doing this, in order to prevent straining. One cannot get too much sun treatment.

By Dr. Bates; Looking at the sun, while slower in its results, has often been sufficient to effect permanent cures, sometimes in a very short time. There is a right way and a wrong way to do this. Persons with imperfect sight should never look directly at the sun at first, because, while no permanent harm can come from it, great temporary inconvenience may result. Such persons should begin by looking to one side of the sun, and after becoming accustomed to the strong light, should look a little nearer to its source, and so on until they become able to look directly at the sun without discomfort.

This book includes all Dr. Bates treatments and gives exact directions. If advanced treatments are needed; ask an experienced Bates Method Ophthalmologist. The sunlight section of this book is a bit repetitive. This is to ensure that people learn how to apply the practice correct. Repetition improves the memory and automatic correct habits, functions.

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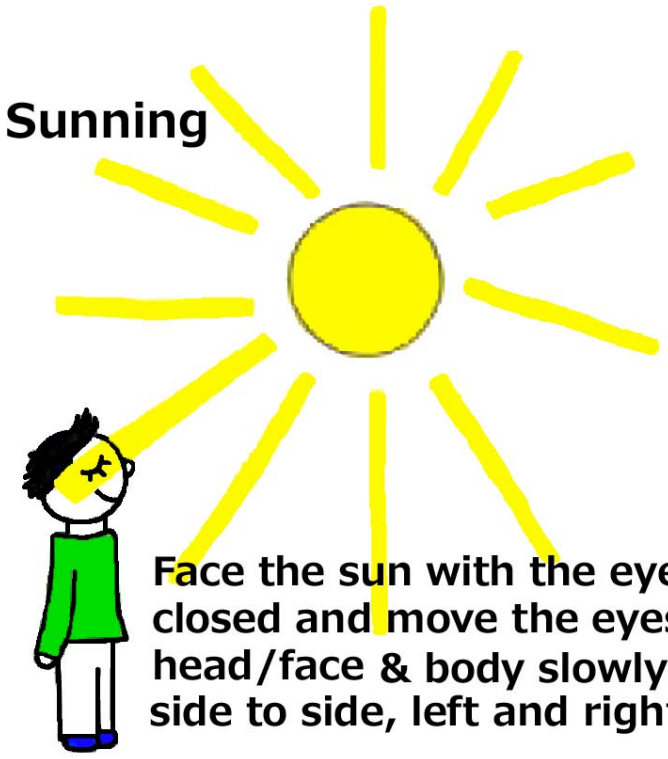
Sunning



Face the sun with the eyes closed and move the eyes, head/face & body slowly side to side, left and right.

Stories from the Clinic

NO. 76: CATARACT

By **EMILY C. LIERMAN**

MANY patients, after being cured of imperfect sight, go their way and we never see them again. However, many come back, even after a period of five years or more, to report, or to show their gratitude. If a patient is cured quickly, he is very apt to forget that he ever had eyestrain. Normal vision helps him to forget, and he is able to go on with things that interest him without tension or strain.

There is nothing that affects the whole nervous system more than eye strain.

I have deep sympathy for patients suffering from cataract. Some of these have told me that, when they first discovered, or were told that they had acquired cataract, the shock was so great it sometimes made them very ill. I have often wished that I could broadcast to every human being troubled with cataract, that they need not worry about an operation, nor fear blindness.

While treating patients at the Harlem Hospital Clinic, Dr. Bates placed under my care many patients with cataract. Some of them were children who were born with it, while others acquired it from an injury of some sort. If they faithfully practiced the daily treatment for their particular case, they always improved. There were no exceptions, although in all cases where the patient did not practice enough, it took much longer for a cure. Adults were also cured quickly when the directions for home treatment were faithfully carried out. Age made no difference.

A colored mammy, who was a faithful servant of one of our private patients, came regularly, three days a week for many months, and was treated for cataract. I have described her case in my book, "Stories from the Clinic." In the beginning of her treatment, she could not see the letters of the test card at five feet. As she explained it in her dialect: "Do you know, ma'am, ah can see nothin', no ma'am, nothin' at all at dis distance!"

Long periods of palming, early in the morning and late in the afternoon, when her work was done, helped her sight. In the clinic she was taught to sway her body slightly from side to side and to blink all the time. The swaying helped her to see things about the room moving opposite to the movement of her body. **The blinking prevented the stare, which is usually the cause of cataract.** The quickest way to obtain a cure is by palming, and I advise my private patients to practice it for several hours or many times each day. It would be impractical, however, to advise a clinic patient to use the same method, because they cannot spare the time from their work, nor can the employer spare them. If such advice were given them, their answer would surely be: "This treatment is only for those who can afford the time." Dr. Bates often tells them that it takes less time to use their eyes correctly than it does to use them incorrectly.

Clinic patients, as well as private ones, are advised to relax all day long. Mammy was to see things moving all day by watching her broom as she swept the floors; the washboard as she washed the clothes; the clothes-wringer as she turned the handle; and the dishes as she dried them and put them in the cupboard. We treated her many times, but occasionally she had a relapse. These were sad times for mammy, when she had tears in her eyes and a heavy heart. Frequently she would say: "Ma'am ah knows der is no hope for me. Ah has displeased de good Lord." A kind word or two always helped her, and I made sure that she received many of them.

As time went on, she obtained normal vision with the use of the test card, and became able to read very fine print and to thread a needle. We left the Harlem Hospital Clinic, never thinking that we would hear from her again. Six years had passed, and new patients were coming and going from our own clinic, when one day about three months ago, we received a letter from mammy. All through the letter were words of gratitude and praise for what we had done for her. **She is now seventy-eight years old, and can still read her newspaper and thread a needle**. She asked for permission to come to see us. She wanted the Doctor to look at her eyes to prove that her cataract had entirely disappeared. We, of course, were anxious to see her. When she came both of her eyes were examined and no sign of cataract was found in either eye. Her vision with various test cards was 10/10, and she read fine print without any difficulty, because she did as she was told. She was cured. It was not always easy for her as her work at times required good eyes. Her madam had patience with her for she, also, was under treatment. During mammy's last visit, she said: "Ah jest knowed dat ah was cured 'cause ah could see de crumbs on de carpet to brush up, an' ah could see de dust all ober de furniture an' ah cleans better. De sun is clear now an' not in de mist no mo'."

About a month ago, another patient came with a report of good vision. She is **over eighty years old**, and has a disposition just as cheery as she had when I first knew her, about eight or nine years ago. Perhaps our readers will remember an article I wrote about her. She is the patient who was employed in an orphanage. Her duties there were to see that all the buttons were sewed on the clothes of little ones at the Home. She said she was the only daisy in the country while she was there. From the very beginning she had infinite faith that Dr. Bates could cure her without an operation. During one of her early treatments, when she noticed a decided improvement in her sight while palming, she could not resist the temptation to peep through her fingers at me and say: "I'll fool them yet." I asked her what she meant and she answered: "Oh! The other doctors who want to operate on my eyes." Well, she kept her word. She fooled them and was entirely cured. She has never worn glasses since her first treatment and the only reason for her being cured is, that she practiced faithfully the methods of treatment that helped her most. When she looks at you, her young, blue eyes twinkle and she wears a smile that won't come off.

SUNLIGHT, LIGHT ENERGY TRAVELS INTO THE EYES, BRAIN, BODY, CHAKRAS

SUNLIGHT CONTROLS FUNCTION, HEALTH OF THE EYES, BRAIN, BODY AND KEEPS ENERGY IN THE BODY FLOWING, BALANCED, STRONG.

Full spectrum sunlight strengthens, balances the energy in the body and outside surrounding the body - the body's energy field, aura. Sunlight keeps the bodies energy flowing correct; see EFT, Acupressure Chapters 20-21.
Chakras # 7 - top center of the forehead and the chakra below it, centered between the eyebrows (See acupressure point GV24.5) connects to the visual system, eyes and the '3rd Eye' sprit center in the body.
Many chakras, acupressure points can be activated to improve vision.
The eyes, brain, body need sunlight to remain healthy, maintain clear vision.

Incoming light rays focus on the eyes retina.
The central light ray focuses on the fovea centralis in the back, center of the retina to produce clear central vision. Peripheral light rays focus on the peripheral areas of the retina for clear peripheral vision. See chapter 5.
The image of the object the eyes are looking at (tree) is inverted, upside down on the eyes retina.
The image travels to the brain, visual cortex.
The brain, visual cortex returns the image to its correct, upright position.
Sunlight, (light rays, waves, energy) enters the eyes, focuses on the retina, is converted to electricity, light energy messages that transmit through the nerve cells in the retina to the optic nerve, then travel along the optic nerve to the brain; hypothalamus organ, pineal gland, pituitary gland, and other areas of the brain, to/through the left and right hemispheres, optic chasm (where signals from the left and right sides of each eyes retina in the left and right eyes criss-cross into the left and right brain hemispheres) and then travel to the visual cortex in the back of the brain producing clear vision.



Sunlight, light energy travels into the eyes, brain, body, to organs, systems and chakras, (energy centers) along the spine and in all areas of the body.

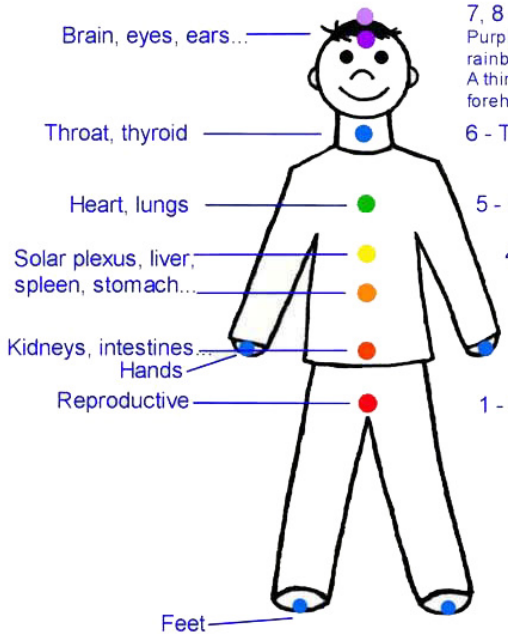


Sunlight is necessary to maintain normal function, communication, health of all areas/parts of the body, brain, eyes.
Light and darkness controls the production and balance of melatonin, serotonin, and all chemicals, hormones, energy, functions in the eyes, brain, body.
Sunlight, light energy travels into the eyes and to the brain, pituitary, hypothalamus, pineal, and other organs, glands, left and right hemispheres, visual cortex, all areas of the brain.
Light energy then travels down and up the spine to all areas of the body.

Sunlight, energy also travels in the brain and along the spine through energy centers, chakras (related to acupressure points).
The eight main chakras along the spine, head and on the hands, feet are shown in the diagram.
Many more chakras are located throughout the body connected by energy pathways similar to the circulatory system.
When energy flows correct, balanced in the body; normal health is maintained.
Full spectrum sunlight traveling in through the eyes and on the skin keeps energy strong, balanced for perfect health and clear vision.
Tai Chi, Qi gong, Karate, Meditation, breathing exercises strengthen, balance, control the bodies energies.

Organs, systems

Chakras



7, 8 - Top of head and above head.
Purple, light purple, white and all colors of the rainbow.
A third main chakra exists below the center of the forehead, between the eyebrows.

6 - Throat, neck - blue

5 - Chest - green

4 - Solar plexus - yellow

3 - Below solar plexus - orange

2 - Lower abdominal area - orange/red

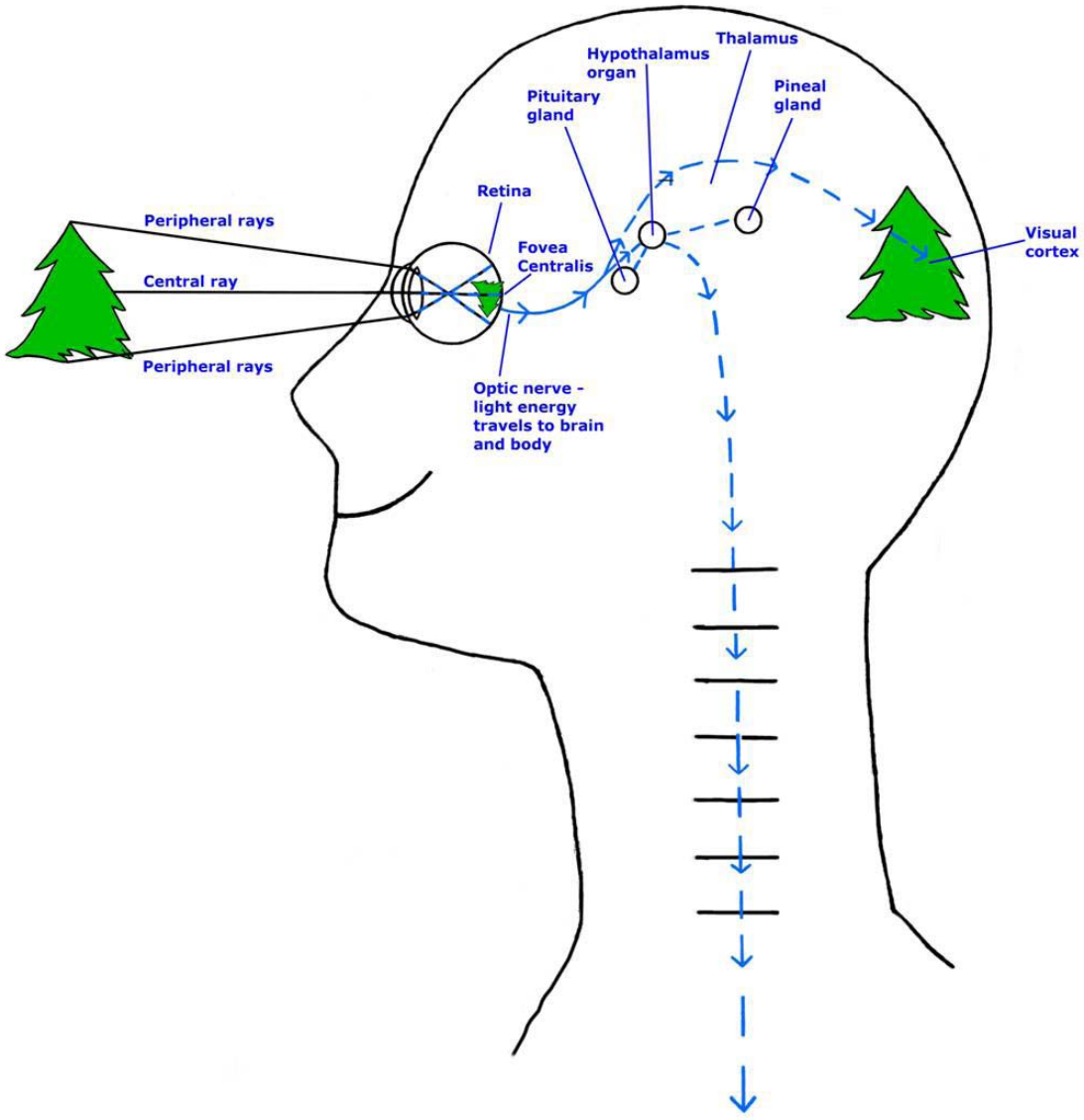
1 - Base of spine, tailbone area - red

Obtain full spectrum sunlight daily, no eyeglasses, contacts, sunglasses.
Take your hat off and let sunlight shine on the top of the head and strengthen charka energy.

The sun contains the 7 colors of the rainbow and all mixtures, levels of these colors.
Each color has its own light wave frequency and properties.

When looking at, visualizing each color, notice the feeling it generates in the eyes, mind and body; energy, relaxation, different types of positive feelings, mood.
Each color has a specific healthy energy.

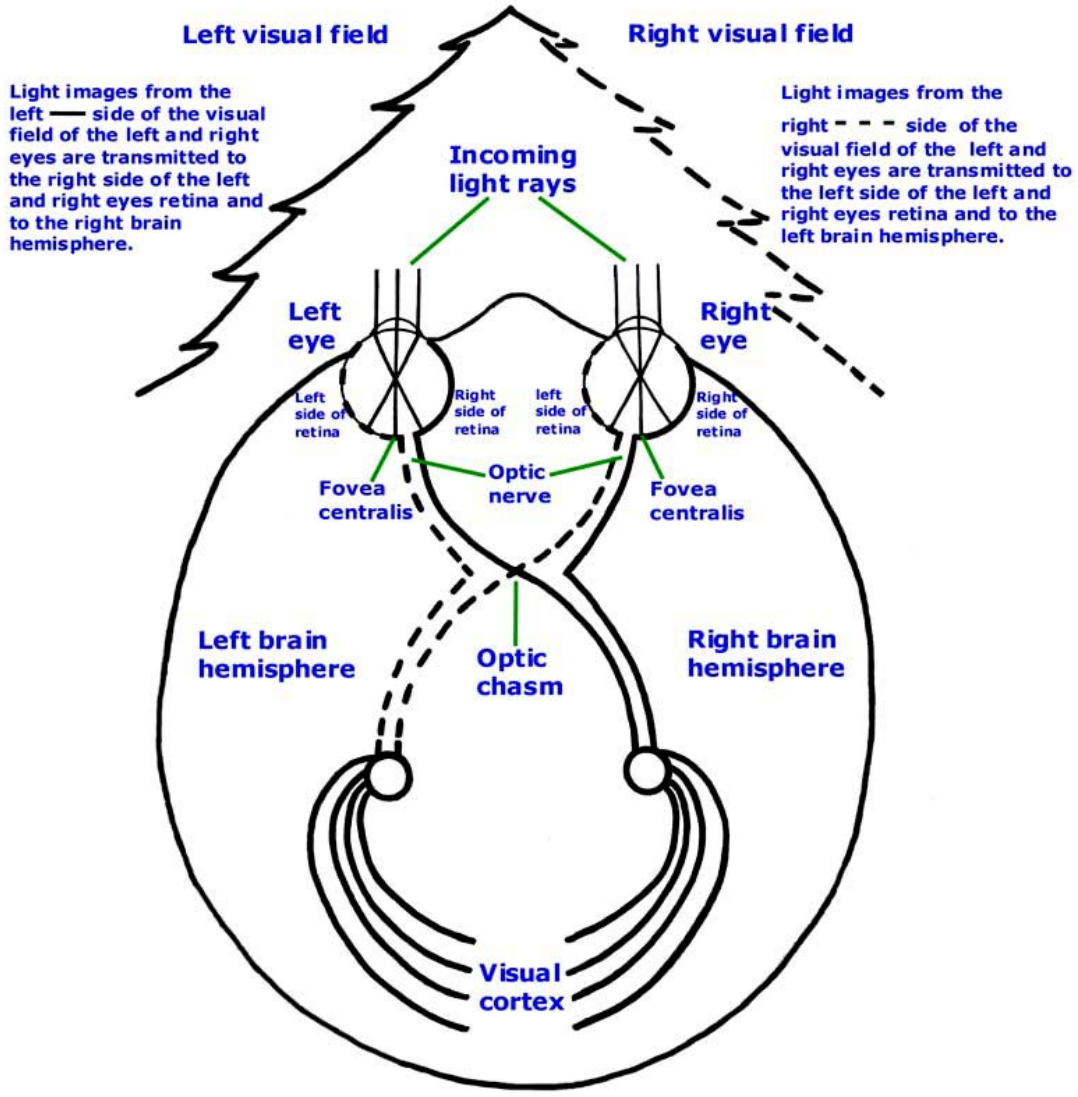
Sunlight, Light Energy Travels Into the Eyes, Brain, Body



The thalamus located on the top of the brainstem also controls function of many organs, glands, areas of the brain, body, eyes and visual systems.

Light energy signals travel from all areas of the brain, hypothalamus organ, down along the spinal cord to all organs, glands, systems, areas of the body; neck, thyroid, thymus, heart, lungs, stomach, liver, spleen, pancreas, kidneys, adrenals, reproductive system, nervous systems, circulatory and lymphatic, digestive systems, muscles, bones, all parts of the body keeping the eyes, brain, body communicating, functioning normally in perfect health.
Energy messages move up and down the spine, in and out the eyes; eyes to brain to body and body to brain to eyes.
Full spectrum sunlight keeps the eyes, brain, body healthy.
Eyeglasses, sunglasses, tinted, colored lenses, contacts, windows in the home, car, at work block full spectrum sunlight, and cause partial spectrum, unbalanced light, incorrect energy signals to enter the eyes, brain, body resulting in body, brain, eye dysfunction, health impairment and unclear vision.
Obtain full spectrum sunlight daily, not filtered through glasses, windows.

Sunlight, light energy enters the eyes, focuses on the retina, is converted to electricity, light energy, then travels along the optic nerve to the brain, crosses through the optic chasm, through the left and right brain hemispheres to the visual cortex in the back of the brain producing a clear visual image seen by the eyes, brain.

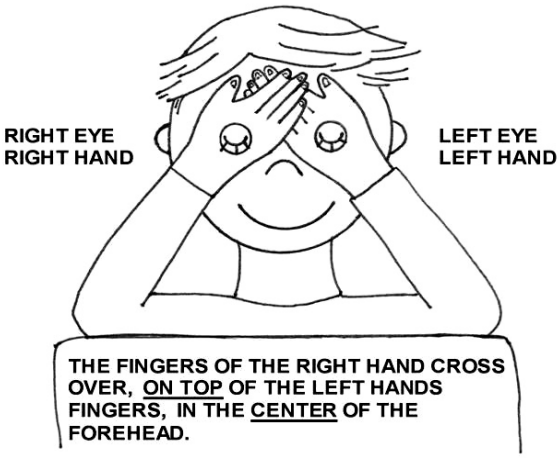


The visual fields of the left and right eyes combine, fuse together to form one visual field with one central field, one peripheral field.
The brain and eyes function together to produce clear vision.
Vision is mainly a function of the brain.
Relaxation of the mind/brain activates perfect function of the brain, eye muscles, nerves, retina, eyes and clear vision.
Natural eyesight improvement; shifting, central fixation, switching close, middle, far, relaxation, memory and imagination, left and right brain hemisphere activation and integration activities activate correct function of the brain, eyes, perfect left and right brain hemisphere activation and integration for equally clear 20/20 and better vision in the left and right eyes at all distances, close and far.

19 - RELAXATION METHODS - PALMING, COLOR VISUALIZATION, ABDOMINAL BREATHING, DEEP RELAXATION, ENERGY CIRCULATION CHART.

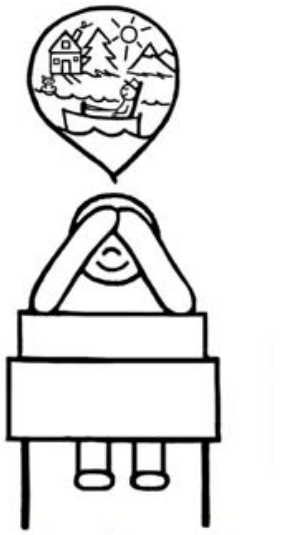
PALMING

TO COVER THE CLOSED EYES WITH THE PALMS OF THE HANDS WHILE RELAXING AND THINKING SOMETHING PLEASANT.



THIS PICTURE SHOWS THE LEFT AND RIGHT HANDS/EYES OF A PERSON FACING THE READER.
TO SEE HOW THE READERS HANDS ARE PLACED; VIEW THIS PICTURE IN A MIRROR OR PLACE THE PICTURE OUTWARD ON THE CHEST AND LOOK DOWN AT THE PICTURE FOR A SECOND.

PALMING RELAXES THE MIND, BODY, NECK, EYE MUSCLES, EYES, AND WHEN COMBINED WITH SUNNING IMPROVES THE EYES/RETINA, BRAIN AND BODY'S ACTIVATION/REACTION TO SUNLIGHT AND ABSORPTION, USE OF SUNLIGHT. THIS IMPROVES FUNCTION, HEALTH OF EYES, BRAIN, BODY.



Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear.

PALMING

The pictures show palming; to cover the closed eyes with the palms of the hands and relax.

Practice palming before and after sunning and at any time day or night to relax the mind, eyes, eye muscles and entire body. Palming relaxes the mind, brain, visual system. Relaxation of the mind is a main Natural Vision Improvement activity for clear vision.

Remembering, imagining pleasant thoughts, clear objects, clear vision, and practicing Correct Vision Habits; shifting, central-fixation, switching.., in the imagination while palming improves the memory, imagination and function of the eyes, brain, visual system with the eyes for clear vision.
Palming improves circulation of energy, blood in the head, eyes.

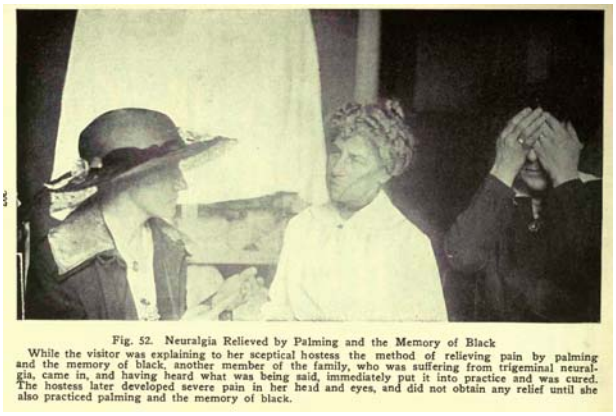


Fig. 52. Neuralgia Relieved by Palming and the Memory of Black
While the visitor was explaining to her sceptical hostess the method of relieving pain by palming and the memory of black, another member of the family, who was suffering from trigeminal neuralgia, came in, and having heard what was being said, immediately put it into practice and was cured. The hostess later developed severe pain in her head and eyes, and did not obtain any relief until she also practiced palming and the memory of black.

Palming also activates and integrates the left and right brain hemispheres when the mind relaxes, using the memory, imagination and by crossing the left and right hands fingers across the center of the forehead. Chakras, energy/acupressure points on the center of the forehead are activated by the light touch of the hands on the forehead. Energy from the chakras in the hands enters the eyes. Body, spiritual energy centers exist on the center of the forehead, top of the head and above the head.

Palming Video - http://www.youtube.com/watch?v=sEyQa60-h0E

Palm and imagine something happy; a scenery, sailing down the river... See objects clear, in color, motion.



Palm and imagine a colorful butterfly. See it land (at a close distance) on a apple in a tree. Shift on it. See small fine details. Watch it move its wings, antennas, walk around on the apple. Watch, follow it as it flies about through a field (see the blue line in the picture) stopping to land on the tall grass, flowers, trees, flies along the distant river. Imagine the objects in the scene clear, in color, action. Walk into the scene, move about, enjoy looking at objects.

DIRECTIONS

Sit and relax with good posture.
Rest the elbows on a pillow. Relax, loosen the shoulders, neck.

Place the palms of the hands over the eyes as shown in the picture.
+Place the left hand over the left eye first and place the fingers onto the center of the forehead.
+Then, place the right hand over the right eye with the right hands fingers on top of the left hands fingers and also over the center of the forehead.
The left and right hands fingers meet/cross on the center of the forehead.
The heel of the palms of the left and right hands rests on the cheekbones, without placing strong pressure on the cheekbones.
Cup the palms of the hands over the eyes. The hands are relaxed.
Do not press the hands on the eyes or eyelashes.
It is ok if a little light shines through the fingers.
Close the eyes.

Relax. Breathe slow, deep, comfortable. Abdominal breathing.
Daydream about something you like. Think something positive.
Forget about the eyes.
Let the mind drift from one pleasant thought to another.
Remember, imagine objects in the mind clear, in color-as in real life, like a movie, motion picture in the mind. See, hear, feel, smell, taste...
When looking at a object, scene in the mind, shift on it just as the eyes normally look at things. This keeps the mental images clear.
Look at objects, people at close, middle and far distances. Shift object to object, part to part on objects. Imagine, see and shift on small parts, tiny details of objects.
Move, walk around in the scene. Enjoy looking at the scenery.
Do this relaxed, no effort, enjoy the daydream, happy thoughts.
Then, let the mind, eyes shift on their own, just sit back and relax.

My friend likes to imagine he is laying back in his boat, floating down the Quaboag River in Brookfield, Massachusetts.
His fishing pole is in the water, he hears the birds, crickets, feels the sun shining and wind blowing, sees and hears the high grass and tree leaves moving in the wind, sees the sun sparkling, moving on the water, hears the water splashing. His friends boat is sailing farther down stream, kids are running flying a kite on the shore... A train moves along the tracks beside the river, birds fly about, a butterfly fly's along the river, fields, lands on flowers, tall grass, cattails, apple tree, apple. A bumble bee buzzes from flower to flower collecting pollen on its hind legs. He sees the peach trees and remembers stealing peaches, the day the farmer chased him and his gang for 2 miles through the fields, woods, along a old country road. The farmer's bull chasing the kids home. A fox drinks on the side of the river, a snapping turtle hangs out on the rocks then dives into the river, squirrels and chipmunks play in the trees, grass, secret caves... He sees the sparkling gems in the large rock that was broken open by dynamite and is now used as a reclining chair on the wild blueberry hill with a view of the river.
He imagines everything as in a motion picture; in action, color and clear. All objects in the imagination are seen clear. He drifts into deeper and deeper relaxation.

Moving colors may be seen under the closed eyelids when palming. Some teacher's state this is a sign that the eyes, brain needs relaxation. They state that "when perfect, dark black is seen, the eyes, mind are relaxed and vision is clear". Black can be seen by relaxation methods or remembering, imagining something perfect black. Modern teachers state that trying hard to see black interferes with relaxation and it is easier and more effective to obtain relaxation by daydreaming pleasant, happy thoughts.

Let black occur on its own, and if it does not occur, that is ok, relaxation is still obtained.

Do not worry about seeing the colors. This is also a normal effect of light and can be enjoyed when palming after sunning and looking at the bright sky. Other causes of the colors can be eye muscle tension pressing on the eyes and mind, visual system strain. When I was a child my cousins and I would play a game at night of; rubbing the closed eyes through the eyelids, then stop and watch a variety of moving colors on a black field on the closed eyes until they fade away. I definitely do not advise doing this, but it is placed here to show what pressure on the eyeball can do and how the eye, vision can return to normal.

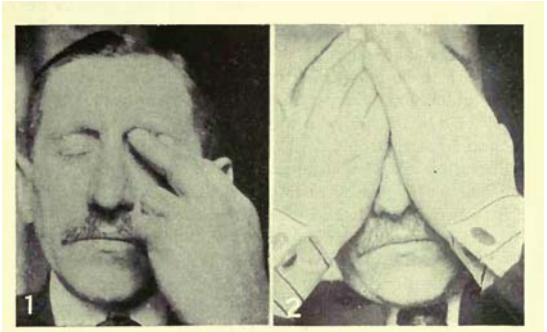


Fig 45

Fig. 1.—Patient with absolute glaucoma of the right eye. He had suffered agonizing pain for six months and had no perception of light. He was photographed when testing the tension of his eyeball, which he found to be perfectly hard.

Fig. 2.—The patient is palming and remembering a perfectly black period. After half an hour the eyeball became soft, the pain ceased, and the patient became able to see the light. After three years there was no return of the glaucoma.

Palm 10 minutes a few times a day, and/or 30+ minutes twice a day. No time limits-palm anytime. Palm morning and night before sleep. Palming can bring instant clear vision. A man in Better Eyesight Magazine cured his vision by palming for 24+ hours.

Palming is a relaxation, meditation method, healthy for the eyes, mind, body, relaxes the mind, body, neck, eye muscles, eyes.
Tai chi/chi gong teaches that energy from the hands enters the eyes, brain when palming. The energy is healing, balances the energy in the eyes, brain, visual system. (See the Color Chart in this chapter.)

Palming normalizes eye pressure

If you have glaucoma or other eye conditions causing abnormal high or low eye pressure, and are taking drugs to control eye pressure; check with your eye doctor before palming to be sure the pressure does not go too high or low. Shifting, central-fixation, all Natural Vision Improvement activities, treatments bring the eyes pressure to normal. Drug strength, prescription may need to be adjusted or eliminated.

Palming Examples from Ophthalmologist Bates
Better Eyesight Magazine

Palming

By W. H. BATES, M.D.

(Memory and Imagination while Palming)



Happy thoughts, mental pictures when palming.



Palming improves clarity of vision.

BY **palming** is meant that the eyes are covered with the palms of one or both hands with the eyes closed. The object of palming is to obtain relaxation or rest of the eyes and mind. With the eyes closed and covered, the patient does not see. When properly done, the field is black and the patient does not really see anything. Most patients when they palm however, imagine they see a great many things, especially different colored lights, red, green, shades of blue and white lights in a single or multiple form, for various periods of time. Some patients imagine they see these lights so vividly that it is difficult to convince them that they only imagine what they see.

When the patient palms successfully and obtains perfect relaxation, he imagines he sees a perfect black. The number of people who can do this is small, and it can only be accomplished by individuals who have perfect sight.

While palming, one does not obtain relaxation by any kind of an effort or a strain. When nothing is done, one does not do anything. It is well to realize that palming may be done properly, or it may be done wrong.

It has been demonstrated that all persons with imperfect sight have a conscious or unconscious strain when they try to see. Palming can only accomplish relaxation when the patient does not try to see while palming.

Some people realize that when their eyes are closed and covered with the palms of the hands, it is not possible to see anything, and so they do not try; but other people may strain their eyes to see while palming, although they know it is wrong. In such cases, it is very evident that mental control is lost. They do things that they do not plan to do. Some people can let their minds drift from one thing to another without much, if any effort. Some

cases become able to palm more successfully than others.

One of my patients discovered a very simple and efficient method to improve palming. While treating a friend who previously had never obtained any benefit from palming, she told him a story of a black ant. This black ant came out of the dark soil and climbed up the stem of a beautiful rose. It was slow work with the ant, but it kept on climbing, going on to the extremity of first one branch and then another, crawling to the extreme tip of every leaf until finally it located the flower. It crawled with great labor over the petals, until it found deep down in the center of the rose, a little white cup filled with honey. The patient could picture the ant carrying off some of the honey, crawling to the top of the flower, and then down back to the stem, finally meeting another ant on the ground, with whom he had a short talk with much gesticulating of heads and feet. Then the second ant started off on the same journey.

The patient, while palming, listened very attentively to this talk, which was drawn out for fifteen minutes or half an hour. He volunteered the information that at last he could see black, and when he removed his hands from his closed eyelids, and opened his eyes, his vision for the Snellen Test Card was unusually good. Before he palmed, he was unable to see a single letter and was practically blind. After palming and visualizing the story of the ant, he was able to see his way about the room without being led, and to read some of the letters of the Snellen Test Card.

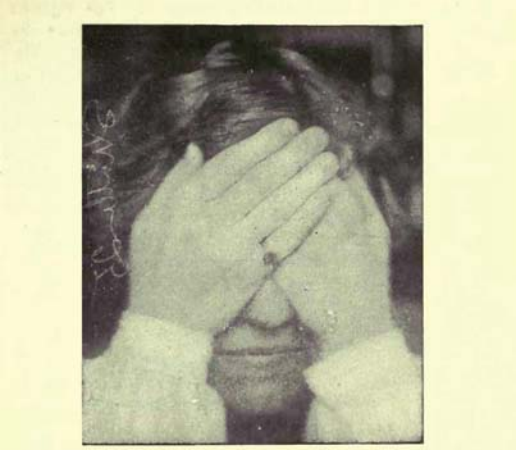


Fig. 42. Palming

This is one of the most effective methods of obtaining relaxation of all the sensory nerves.

The story of the ant with its successive mental pictures, suggests other stories of other things with other mental pictures. Some persons are able to let their minds drift while palming. It is normal for the mind to think of many things that come and go without any effort or strain being made. It is quite an art to let the mind drift and think of all sorts of things without any effort or without trying to see one thing in particular. As long as we are awake, it is perfectly normal to think of many things which come into the consciousness without any effort.

A school teacher who suffered from eyestrain with severe headaches, was able to obtain relief almost immediately by imagining herself in a boat which was drifting. She enjoyed drifting down some river of the north, with a scenery consisting mostly of ice and snow. For a change, she would select some tropical river with its tropical vegetation, birds and animals. She had seen a bird of paradise in captivity and enjoyed the memory of its brilliant feathers. Crocodiles seemed very interesting, and the play of the monkeys in the trees was also of interest and gave her mind much to think about. While drifting down these rivers, she became so interested in her imagination of the change in scenery, that she quite forgot her eyestrain and her headaches while palming. When she noticed or thought of her palming, she found that she was seeing a perfect black, which means that she saw nothing at all with her eyes closed and covered with the palms of her hands.

One patient who had great difficulty in palming successfully was very much disturbed by seeing different colored lights. When she tried to get rid of them by an effort, they became much worse, and her discomfort was increased by the palming, instead of being relieved.

I suggested to her that she think of some enjoyable trip she had made going to Europe. She replied that she was always seasick, and the trip did her no good. The only thing that she could remember without discomfort was a walk in the woods, making note of the names of the different birds she saw. She was much interested in Botany, and could tell the names of most of the wild flowers near her home.

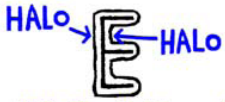
Some people while palming can remember the branches of trees or high grass moving in the wind. The running water of a brook can be remembered with benefit, provided no effort is made. A trip to the seashore becomes restful, enjoyable when one imagines the rollers or waves flowing in and out. When riding in a rapidly moving train, the scenery observed when looking out of a window appears to be moving and is usually restful to the eyes and mind. When riding in an automobile, the driver imagines the road moving toward the car without an effort and is more relaxed than a passenger who is interested in the moving scenery and strains to see it and tries consciously or unconsciously to stop the movement.

If one makes an effort to see things stationary, a headache, eye pain or some other discomfort may be felt. Palming becomes restful and beneficial when the memory of moving objects becomes perfect or when one can remember the imaginary movement of stationary objects.

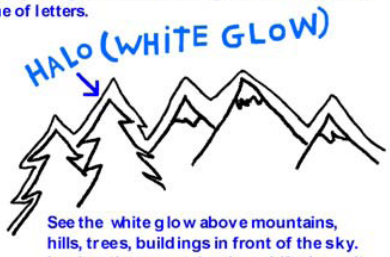
By remembering stationary objects apparently moving when palming as well as they can be imagined when riding in a car, one may obtain the desired relaxation.

The memory of **halos**, when palming as well as they can be imagined with the eyes open is also a great benefit. Alternating is a benefit to the sight as well as to the memory and palming becomes improved with a greater amount of relaxation.

Flashing or palming for a brief moment, alternating with the eyes open for a longer time, improves palming and the vision.



See a White Glow (Halo) around letters.
The glow appears on the white page next to the edge of the black ink of the letter.
Shift around on the paper and the black print to see the glow appear. The white glow also appears as a thin glowing white line directly under and above a line of letters.



See the white glow above mountains, hills, trees, buildings in front of the sky.
Look at the mountain, then shift above it to the sky and see the glow appear.
Explanation: Contrast between light and darker objects, energy in/around objects (aura, chi), photographic effect of eyes similar to camera.
Seeing the white glow indicates normal eye, brain function and improves the clarity of vision.

Kitty



Doll





Remembering, Imagining clear mental pictures improves the memory, imagination, relaxation and clarity of vision.
The girl palms and thinks of her doll, (a favorite thing), remembers, imagines, shifts part to part on her doll seeing one part best at a time (Central Fixation). Doll is imagined clear, in color. This improves the memory, imagination and clarity of vision for other objects.
Remembering mental pictures of a pleasant object, subject relaxes the mind, eyes, improves the vision.
She shifts on a clear mental image of her kitty cat.
Sees it in motion, playing.

Shift left and right on the E and see it move in the opposite direction.
+Shift to the dot on the left, The E moves right.
+Shift to the dot on the right, the E moves left.





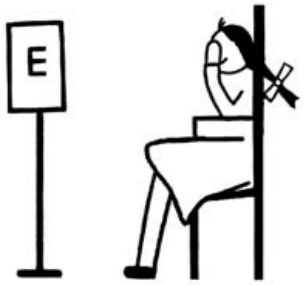


Palming

Palm and imagine black or any pleasant object, scene... Think happy thoughts.
Shift on objects in the mind, see them clear, in color, motion.

Girl palms and remembers her doll, color of its dress... Opens the eyes and Eyechart letters are seen clear.





Perfect mental pictures, relaxation=clear vision.



Sway, dancing to music improves clarity of vision and straightens the eyes, gets them moving together.



Palm and remember a sunset, blue sky, white cloud... and shift part to part on the objects and from object to object. Then, it is easy to remember a clear, black letter o. Place the o on the white cloud and shift on the o and see it move, 'swing' opposite the shift of the eyes. Open the eyes, vision is clear.



Remember pleasant objects, favorite scene, adventure, activity... Remember, imagine objects clear, in color, motion: Birds, butterflies flying about, wind blowing the tall grass, flowers, sun sparkling on the mountain tops, river. Shift on the objects. Shift on, see in the mind small fine details clear.



Sunlight and Sunning daily
Sit in the sun, eyes open looking at the bright sky, then eyes closed facing the sun and move the head side to side, up and down...



Palm and remember, shift on a favorite object: flower, colorful stone, jewelry, tree, land, old house... Improving the memory, imagination of clear mental pictures relaxes the mind, body, eyes and improves the vision.



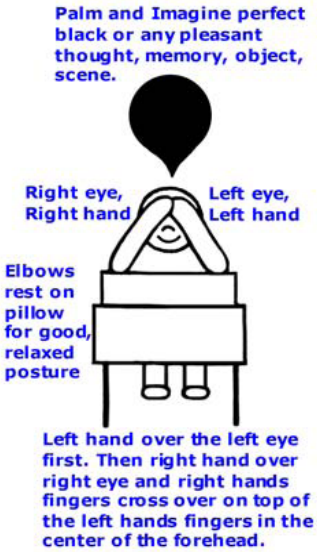
Palm and imagine drifting down a river. See objects in color, clear, motion. Movement of the boat, water, wind, birds flying, sun shining, sparkling on the river, animals walking on the shore, colorful dragonflies... Imagine all the senses; touch, warmth of sun, feel the breeze, hear the water, birds, wind, taste your favorite drink...



Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear.



Boy closes his eyes and imagines a clear image of a white cloud drifting across a blue sky. Then, opens his eyes, still remembering, imagining the mental picture - his mind, eyes stay relaxed, eyes straight. Imagining his dog is with him also relaxes the mind, eyes, keeps the eyes straight, vision clear.



Palm and Imagine perfect black or any pleasant thought, memory, object, scene.

Left hand over the left eye first. Then right hand over right eye and right hands fingers cross over on top of the left hands fingers in the center of the forehead.

Remembering, imagining black is an old method. If black cannot be remembered, imagined, it's easier to obtain relaxation by remembering, imagining a pleasant scene, object, memory, story or any color.

The Color Breathing, Relaxation, Visualization, Energy Chart can be used with or without palming to relax the mind, body, eye muscles, eyes, enter the Alpha, Theta, Delta brain wave states of deep relaxation and improve; the memory, imagination, energy circulation, strengthening, breathing and the clarity of vision.
Start at number 1- color red - bottom of the chart.

COLOR BREATHING RELAXATION CHART

START AT THE BOTTOM OF THE CHART; BETA # 1 WHITE, THEN RED.
RELAX AND PRACTICE SLOW ABDOMINAL BREATHING AND IMAGINE EACH COLOR, # 1 RED, BETA TO # 7 LIGHT PURPLE, ALPHA.
RELAX MORE, DEEPER ONE EACH NUMBER/COLOR AND ON EACH OUTWARD BREATH.
PERFECT, DEEP RELAXATION OF THE MIND/BRAIN, BODY, EYE MUSCLES, EYES OCCURS IN ALPHA AND DEEPER STATES OF THETA, DELTA.
BRAIN WAVE FREQUENCY, CYCLES PER SECOND (CPS) ARE SLOWER IN ALPHA, THETA AND DELTA. IN ALPHA, THETA, DELTA;

DELTA - DEEPEST STATE OF RELAXATION - ON THE BORDERLINE OF AND INTO DEEP SLEEP. BRAIN WAVES SLOWEST.	1 - 3 CPS
THETA - A DEEPER STATE OF RELAXATION - ON THE BORDERLINE OF BEING AWAKE AND FALLING ASLEEP.	4 - 6 CPS
ALPHA - A RELAXED STATE - BRAIN WAVE CYCLES ARE SLOWER THAN BETA..	7 - 13 CPS

THE EYE MUSCLES RELAX, THE EYE IS IN NORMAL HEALTHY SHAPE, EYES AND BRAIN FUNCTION CORRECT, LIGHT RAYS FOCUS CORRECT ON THE RETINA, MEMORY AND IMAGINATION ARE PERFECT AND EYESIGHT IS CLEAR.
AFTER RELAXING IN ALPHA; IMAGINE WHITE LIGHT AGAIN, THEN RELAX DEEPER INTO THE THETA AND DELTA BRAIN WAVE STATES AND LET THE MIND IMAGINE ANY COLORS, PLEASANT SCENES, THOUGHTS, OBJECTS, HAPPY DAYDREAMS.
REMEMBER, IMAGINE OBJECTS IN COLOR AND PERFECTLY CLEAR. IMAGINE, REMEMBER, SEE OBJECTS, PEOPLE... IN THE MIND IN MOTION AS IN REAL LIFE, LIKE A MOVIE PICTURE. HEAR THE WIND, BIRDS, FEEL THE WARM SUN...
REMEMBER, IMAGINE USING CORRECT VISION HABITS ON OBJECTS; SHIFTING, SWITCHING, CENTRAL FIXATION...
DRIFT OFF TO SLEEP OR, BRING THE MIND BACK TO ALPHA, OPEN THE EYES, WALK AROUND AND PRACTICE CORRECT VISION HABITS AND OTHER NATURAL EYESIGHT IMPROVEMENT ACTIVITIES IN PERFECT RELAXATION;
THE ROCK, LONG SWING, FIGURE EIGHT, CROSS CRAWL, SUNNING, SACCADIC SUNNING...
PALMING (CHAPTER --) IS OPTIONAL. IT CAN BE USED WHILE VISUALIZING THE COLORS. CHI ENERGY STRENGTHENING, CIRCULATION CAN BE PRACTICED WITH ABDOMINAL BREATHING AND COLOR ENERGY VISUALIZATION. SEE PAGE---

DEEP RELAXATION	BRAIN WAVE FREQUENCY, CYCLES PER SECOND	
ALPHA 7	7 - 13 CPS	RELAX - BREATHE SLOWLY AND IMAGINE SPARKELING LIGHT PURPLE LIGHT
		BREATHE OUT AND IMAGINE SPARKLING WHITE LIGHT
6		RELAX - BREATHE SLOWLY AND IMAGINE SPARKLING PURPLE LIGHT
		BREATHE OUT AND IMAGINE SPARKLING WHITE LIGHT
5		RELAX - BREATHE SLOWLY AND IMAGINE SPARKLING BLUE LIGHT
		BREATHE OUT AND IMAGINE SPARKLING WHITE LIGHT
4		RELAX - BREATHE SLOWLY AND IMAGINE SPARKLING GREEN LIGHT
		BREATHE OUT AND IMAGINE SPARKLING WHITE LIGHT
3		RELAX - BREATHE SLOWLY AND IMAGINE SPARKLING YELLOW LIGHT
		BREATHE OUT AND IMAGINE SPARKLING WHITE LIGHT
2		RELAX - BREATHE SLOWLY AND IMAGINE SPARKLING ORANGE LIGHT
		BREATHE OUT AND IMAGINE SPARKLING WHITE LIGHT
1		RELAX - BREATHE SLOWLY AND IMAGINE SPARKLING RED LIGHT
BETA	14+ CPS	ACTION, MENTAL AND PHYSICAL ACTIVITY. MIND/BODY ARE RELAXED WHILE ACTIVE; "DYNAMIC RELAXATION" BETA IS A HEALTHY STATE WHEN THE MIND, THOUGHTS ARE POSITIVE, HAPPY, CONSTRUCTIVE.

START HERE - RELAX, BREATHE ABDOMINALLY, SLOW, COMFORTABLY DEEP.
IMAGINE THAT YOU SEE AND FEEL SPARKLING WHITE LIGHT ENERGY IN THE ENTIRE BODY; EYES, BRAIN, BODY AND OUTSIDE, AROUND, SURROUNDING THE BODY.
THEN RELAX, BREATHE AND IMAGINE, FEEL EACH COLOR ON THE CHART, ONE COLOR AT A TIME, RED, ORANGE, YELLOW, GREEN, BLUE, PURPLE, LIGHT PURPLE.
SEE, REMEMBER, IMAGINE, FEEL EACH COLOR AS SPARKLING, HEALTHY, PROTECTIVE, COLORED, LIGHT ENERGY IN AND AROUND THE BODY.
BREATHE IN AND OUT SLOWLY A FEW TIMES WHILE IMAGINING A COLOR.
THEN, BREATHE OUT, IMAGINE WHITE LIGHT ENERGY, RELAX MORE AND MOVE TO THE NEXT COLOR.
LOOK AT THE COLORS ON THE CHART TO HELP THE MIND REMEMBER, IMAGINE A COLOR, THEN PRACTICE WITH THE EYES CLOSED,



Video - http://www.youtube.com/watch?v=txC1e8TOQfw&feature=mfu_in_order&list=UL

Relaxation of the mind, body, neck, eye muscles, eyes experienced in the alpha, theta, delta deep relaxed states while palming or using the color chart continues when fully awake, active in the alpha and beta states. 'Dynamic Relaxation'. Vision is clear.

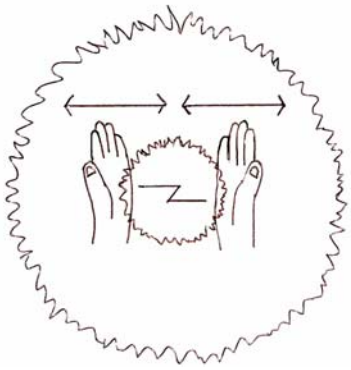
Create a Energy Field In/Around the Hands, Body Before Palming

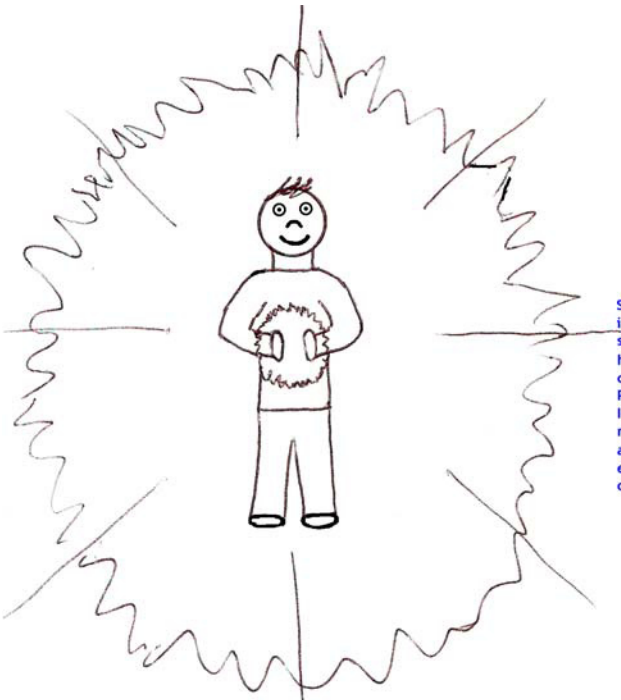
A Tai Chi, Qi Gong Exercise.

Practice deep, diaphragm breathing and energy circulation, strengthening;
Place the hands about a foot apart. Move the hands in and out; close together, then farther apart, then close, then apart, close... Spacing is about 1 Ft. apart to 1 inch close. Feel the energy in and around the hands. Feel a energy ball, electric, magnetic energy between the hands. Do not touch the hands together; it will shut off the energy flow, strength. Strengthen and circulate the energy;
Breathe in and out, comfortably deep, relax and move the hands in and out. Breathe in and pull energy up through the ground, feet, up the spine, throughout the body, up into the head, then breathe out and move the energy out the top of the head, like a water hose releasing the water (energy) up over the head, ('a energy halo, connected to heaven'). Relax deeper on out breaths. Then the energy moves down around the body. Straight down, then practice moving it in a clockwise spiral down, around the body. Repeat; pull the energy back up through the feet, body; (earth, outer energy and the energy you just circulated), then out the top of the head... Feel and strengthen it in and around the body. The in breath will also pull more energy into the body. This is Chi, Qi Gong and other body, sprit energies. A magnetic, electric feeling, energy-protective force-field around the body. The human Aura, energy field.
The energy in, around the body, hands can be imagined white, blue, purple and different colors as done with the Color Breathing Relaxation Chart. Imagine it as electric, magnetic, sparkling, moving, with life.
See the EFT and Acupressure chapters for more energy strengthening, control.

Chi Energy Field in and around the hands and Energy Ball between the hands.

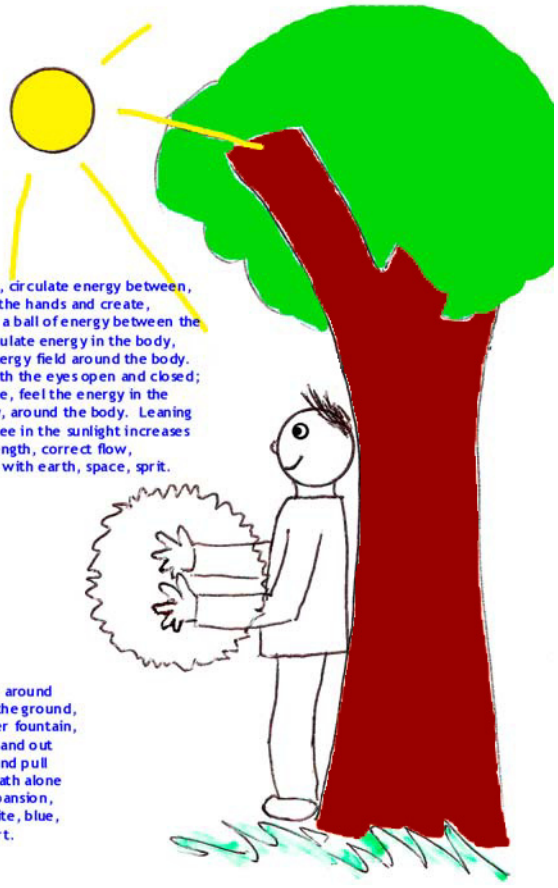
Palms of hands face in toward eachother
Move the hands in and out, close and farther apart. Breathe deep, relax and feel, strengthen the energy. Then circulate it throughout the body and around outside the body. Do not touch the hands together.





Activate, strengthen Chi Energy between, in and around the hands. Circulate it in the body and around the body as a Protective, Healthy Electric, Magnetic Force Field, Aura. Pull energy up through the ground, up through the body, along the spine, throughout the body, out the top of the head, like a water fountain, then send the energy down, all around the body and back up the feet, spine, through the body and out the top of the head again. Repeat. Practice diaphragm/abdominal breathing with the exercise and pull energy in, up the body on the in breath and out the top of the head on the out breath. The breath alone also brings energy into the body. Practice with the tree for increased grounding, centering, expansion, energy strength and correct flow. Imagine the energy different colors, one color at a time; white, blue, purple, green and other colors. Practice with directions for the Color Breathing Relaxation Chart.

Strengthen, circulate energy between, in, around the hands and create, strengthen a ball of energy between the hands. Circulate energy in the body, create a energy field around the body. Practice with the eyes open and closed; Imagine, see, feel the energy in the mind, body, around the body. Leaning against a tree in the sunlight increases energy strength, correct flow, connection with earth, space, sprit.





Print the Color Chart. A wallet size is provided here. Colored sparkles are glued to each color; red sparkles on the color red, orange sparkles on the color orange... to simulate live, moving energy.
Practice shifting on the colors, tiny sparkles outside in the sunlight with the sun shining, moving on the sparkling colors. Practice at night, in the moonlight before falling asleep. This is color treatment; different colors activate, integrate the left and right brain hemispheres, improves their function with the eyes, clarity of vision at close, middle, far distances.

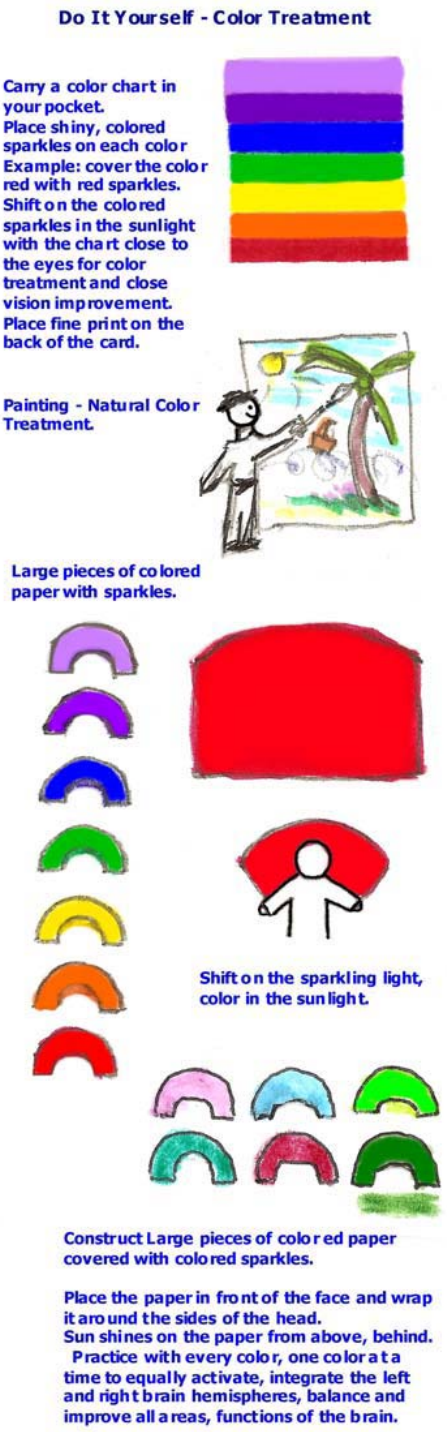
The mind/brain controls the function, clarity of the visual system/vision. Example; persons with unclear vision, (abnormally lengthened or shortened eye shape, incorrect focus of light rays in the eye producing unclear vision) when placed under hypnosis and told by the hypnotist that they have clear vision are able to see clear without glasses. The shape of their eyes and focus of light rays in the eyes also return to normal. The brain, personality, thoughts, emotions do this.

Persons with multiple personalities can have unclear vision, abnormal eye shape with incorrect focus of light rays in the eye and wear eyeglasses while in one personality, then, when in a different personality; the same person has clear vision, normal eye shape, correct focus of light rays and does not wear eyeglasses.

Relax the mind/brain, body, eyes. Release negative thoughts, emotions. Acquire positive thoughts, emotions and positive thoughts about vision. Remember, imagine clear vision and how the mind, body, eyes feel when the vision is clear and the vision will become clear.

Practice Natural Vision Improvement, Color Treatment to help the brain, eyes return to normal function. See pictures on the right and the colored glass Bottle, angel lamp - next pages.

For the pictures on the right: A large piece of colored sparkling, shiny paper is wrapped around the head, upper body about 1 foot - 4 inches from the eyes. Sunlight shines on the paper from above, behind the body. Shift on the sparkles. Practice with one color at a time. At night; place a light near the colored paper in a dark room. A light bulb, the same color as the paper is best. (Careful; do not get the sparkles or paper edges in the eyes. Laminate the paper after the sparkles are placed on the colored paper.)

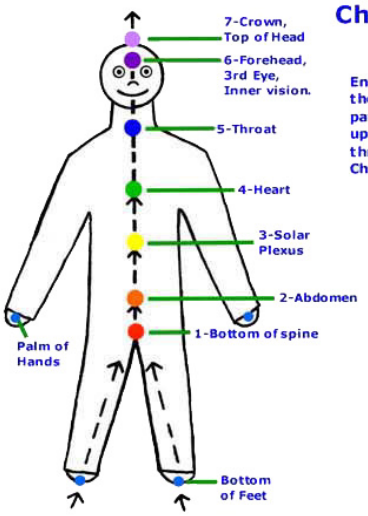


CD Recordings, Books by Robert Monroe (www.monroeinstitute.org)
To relax the mind, body, neck, eye muscles, eyes, provides a method to release negative thoughts, emotions, stress, and help the person to remember, imagine and circulate, strengthen colored light energy. Other memory, imagination exercises, Beta, Alpha, Theta, Delta brain wave activation, control and many other activities to strengthen the mind/brain, sprit. All improve the clarity of vision.
See this books introduction for their address in the USA.

Energy Flow Through the Body, Chakras with Color Breathing- Left and Right Brain Hemisphere Chart

		Alpha and into Theta, Delta deep relaxation brain wave states.	Chakra	Distance of Vision	Brain Hemisphere Activated
White					
Light PUrple	7		Crown-Top of head and above head. Higher sprit.	Distant Vision	Right Brain Hemisphere
Purple	6		Center of forehead, midbrain, 3rd eye, inner vision	Distant Vision	Right Brain Hemisphere
Blue	5		Throat	Distant Vision	Right Brain Hemisphere
Green	4		Heart	Close and Distant vision. All distances, close, middle, far. Green is a balancing color, very healthy, soothing for the eyes, improves vision at all distances.	Left and Right Brain Hemisphere activation/ integration. Center of the brain, body
Yellow	3		Solar Plexus	Close Vision	Left Brain Hemisphere
Orange	2		Abdominal area	Close Vision	Left Brain Hemisphere
Red	1		Bottom of spine, near tailbone	Close Vision	Left Brain Hemisphere
		Beta Brain Wave Alert, active.			

Chakras



Energy flows in the body, along pathways, and up the spine through the Chakras.

Energy flows throughout the body, though chakras, energy points, and pathways. This diagram shows main chakras. Many more chakras of varying size and energy pathways exist in the body.

Energy, Color Breathing Exercise:

+Breathe in deep, slow, relaxed as you pull white sparkling energy in from the earth, air through the feet and up the body to the head.

+Then breathe out, relax and let the energy flow out the top of the head.
The energy combines with external energy and then flows down all around the body, a sparkling, protective, white force field of energy.
Imagine the energy as moving, bright, shining light, electric.

+Then: breath in and pull the energy back up the body through the feet again. Repeat.

+Imagine each color #1 Red to 2, 3, 4, 5, 6, #7 Light Purple, in that order, one color at a time per each breathing/energy cycle in and around the body.
Imagine the energy color moving in and around the body.
+Change the color to white before moving to the next color. End the exercise with the color white.
Practice with other colors: sea blue/green, pink, magneta...

Next: move the energy down around the body in a clockwise spiral, circling around, down the body, then up through the feet again.

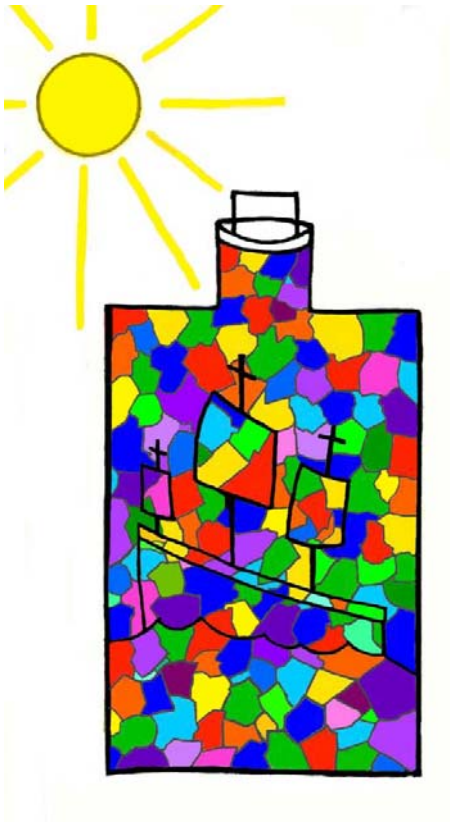
This is Chi, Qi Gong and other types of energy. Do not force it. Let it flow easy, on its own.
Energy flows up through the chakras. Chakras must be open, enabling energy to flow. If energy feels stuck; learn how to open the chakras naturally. No force. Read the section on EFT.

Another type of energy that flows when practicing advanced breathing, energy, Yoga exercises is Kundalini.
Many people prefer safer Ritual, religious practices for spiritual development and energy control.
Other energy control, movement is practiced by Karate Teachers. Energy can be directed in/out the hands, feet and other areas of the body.

The Chakra Chart is used with the Color Breathing Relaxation Chart.
Practice outside at night in the moonlight and in sunlight during the day.
Sitting under a tree, back against the tree improves energy flow.
After practicing deep breathing and relaxation with the chart, go outside in the sunlight and practice shifting, central fixation- Natural Eyesight Improvement.
The relaxed and energy balanced mind, body, eyes will absorb correct eye function, activate clear vision easily.

Stand or sit under, against the tree in the sunlight; entire spine along the tree. The eyes, body will absorb full spectrum sunlight which contain all colors, energy wavelengths, frequencies and connect with balanced energy from the earth, tree, atmosphere.

COLOR, COLORED LIGHT TREATMENT



Looking at, remembering, imagining colors improves the memory, imagination, activates and integrates the left and right brain hemispheres, improves energy flow, relaxes the mind, body, eyes and improves the clarity of vision to 20/20 and clearer in the left and right eyes at all distances..

RED, ORANGE, YELLOW activates the left brain hemisphere and clear close vision.

BLUE, PURPLE, LIGHT PURPLE activates the right brain hemisphere and clear distant vision.

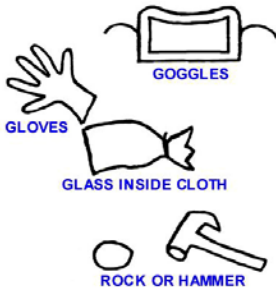
GREEN activates and integrates both left and right hemispheres and clear close and distant vision.

Mixtures of these colors activate and integrate the left and right brain hemispheres and clear close and distant vision.
Example; maroon - a mixture of red and purple/blue activates the left and right hemispheres.
Green/blue activates and integrates the left and right hemispheres with more activation of the right.
A person with unclear distant vision might have a less active right brain hemisphere and need relaxation. Activating the right hemisphere produces relaxation and clear distant vision.
Looking at green, blue, purple colors activates the right brain hemisphere, relaxation and clear distant vision.
(When looking at a color-shift on it.)

Sunlight, the suns light energy spectrum contains all colors of the rainbow and mixtures of these colors. Sunning, going outside daily and obtaining full spectrum sunlight improves the clarity of vision and activates, integrates the left and right brain hemispheres.

Painting, coloring, playing with color, looking at clear colored gemstones, colored glass improves the clarity of vision.





The Colored Glass Bottle

Practice color treatment by looking through a colored glass bottle at the bright sky outside in the sunlight. A clear glass bottle is filled with small pieces of colored transparent glass and water.
The person looks through the colored glass in the bottle in the sunlight, sun shining through the colored glass. A rainbow of mixed colors is seen.
The bottle is placed at close and far distances from the eyes; close; 1/2 to 3, 4, 5, 6 inches from the eyes and far; 1 foot and farther into the distance.
(Do not look directly at the sun through the bottle (or any type of glass including eyeglasses. Certain waves, cuts, shapes in glass can act as a magnifier. Direct sunlight through a magnifier can burn the eyes and cause eye injury.
Just use the colored bottle as you would when looking through a stained glass window in a church, looking through the window at the sunny sky but not looking directly at the sun.)

See the picture; clear glass bottle with picture of a ship engraved in the glass, colored glass fills the inside of the bottle. Place the colored glass bottle in an open window as a decoration. The sun shines through the window and colored glass as is seen in a church through stained glass windows.
Colored glass can be placed inside any clear glass shape; a glass ship, train, church, angel, small perfume bottle.

Ladies in our neighborhood used to make a colored glass candle by placing a smaller clear glass drinking glass in side a larger one. Glasses are heat resistant, do not break in contact with heat. The space between the 2 glasses is filled with colored glass pieces. Then fill the space with water. A candle is placed in the middle of the inner glass for colored light effect at night. The candle is placed on a clockwise and counter clockwise rotating stand. The movement causes the light from the candle to sparkle though the moving pieces of colored glass. The glass is placed in a window in the sun during the day.



FRONT VIEW



SIDE VIEW
FRONT TO BACK 1/2 TO 3/4 INCHES WIDTH, SPACE INSIDE BOTTLE

When we were kids the 6 of us would go digging up the ground in the woods for old antique bottles.
We found old clear and colored cork top bottles with pictures engraved in the glass.
Example; bottle with ship engraved on the front.
We would also find a lot of broken colored glass.

The colored glass bottle was invented by my younger cousin Michelle when she was about 5 years old.
She was playing in the woods, sitting on a rock and smashing colored glass inside a cloth with a small rock.
She then placed the broken pieces of glass into a old antique bottle.
The mixture of colored glass in the bottle created a rainbow, kaleidoscope effect.
This became a favorite hobby for us kids.
We sold the colored glass bottles to neighbors to earn money for airplane gliders, kites and candy!

COLORED GLASS BOTTLE ASSEMBLY

+ Goggles for eye protection.
+ Gloves to protect hands.
+ Scarf, hat and full clothing to protect skin.
+ Thick double strength cloth to place around the colored glass to keep the glass from flying into the eyes, face when hammering the glass into small pieces. + Rock or hammer.
+ Eye protection Goggles to protect the eyes and gloves, clothing are worn when digging in the ground for old bottles, colored glass and when making the bottle, smashing the glass into pieces.

My Teacher, MR. Bish in Warren elementary school, 5th grade had a severe eye injury (luckily only on the outer sclera, large piece torn out) from a piece of glass that flew into his eye when he was antique bottle digging. The eye healed with good treatment form his Ophthalmologist.

+ Old fashioned corktop clear glass bottle.
The thickness of the bottle from front to back is thin, about 1/2 - 3/4 inches.
The thin width allows enough glass to fill the bottle while allowing a bright amount of sunlight to shine through the bottle, colored glass.
Thin bottles can be found in the grocery store; vanilla extract, maple syrup bottles.
+ Cork
+ Clear water
+ Colored glass - red, orange, yellow, green, blue, dark purple, light purple, light blue, forest green, lime green, aquamarine, sea-green, pink, maroon , magenta and other colors.
The colored glass is transparent allowing light to shine through it.

ASSEMBLY

1 - Goggles, gloves and other protective clothing on. Place pieces of colored glass inside a cloth and wrap the cloth completely around the glass. Double the thickness of the cloth first.
Smash the colored glass (through the cloth) into small pieces using a small rock or hammer.
Do not hammer too hard or the pieces will be too small. Size of the glass is not too large, not too small. The pictures show a good variety of sizes.
Place the pieces of glass into a container filled with water to remove dirt and tiny dust like pieces of glass.



LOOK THROUGH THE BOTTLE AT THE SUNNY SKY, MOVE THE BOTTLE AROUND IN THE HAND AND SEE COLORED, MOVING, SPARKLING LIGHT.
SHIFT FROM COLOR TO COLOR.

2 - Place the pieces of colored glass into the bottle. Shake the bottle occasionally to distribute the colors evenly. Fill the colored glass to the top of the bottle, including the neck of the bottle.

3 - Fill the bottle with clear water, shake it, pour the water out, fill it with water again.
The water causes the colors to merge together and increases the shining, sparkling colored light, light rays effect of the glass.

Place a cork in the bottle top. Place the cork securely so it does not come out and allow glass to spill outside the bottle. Rinse the outside of the bottle well with water to remove stray pieces of glass, dirt. The eyes look through the bottle so there must not be any pieces of glass on the outside of the bottle or eye injury can occur.
Remove, shake out and wash all clothing, hair... to be sure there is not any glass on the body/cloths, hair.



LOOK THROUGH THE BOTTLE AT THE SUNNY SKY THROUGH TREE BRANCHES.
MOVE SIDE TO SIDE AND SEE THE COLORED LIGHT MOVE, SPARKLE.
IF THE WIND IS BLOWING THE BRANCHES YOU DO NOT NEED TO MOVE SIDE TO SIDE. THE MOVING BRANCHES WILL CAUSE THE LIGHT TO SPARKLE.

PRACTICE COLOR TREATMENT WITH THE BOTTLE

Place the colored glass bottle in a open window at eye level with the sun shining through the window and bottle. The moon shines through the bottle at night. Look at the colors in the bottle at close and far distances. Shift the eyes (visual attention) from one colored piece of glass to another; Shift part to part on a red piece, then on a green piece, then blue, light blue, maroon, yellow, purple, pink, orange... Shift on the sparkles of colored light in the pieces.

Bring the bottle outside in the sunlight.
Look at the bright sky through the bottle, letting the sunlight shine through the colored glass.
(Do not look directly at the sun through the bottle.)

Place the bottle close to the eyes; 1/2 to 1 inch from the eyes, then at 2, 3, to 10 inches away then 1,2, 3...10 , 20, 30 ft away and see the colors sparkle.
When looking through the bottle (especially at close distances 1/2 to 3 inches from the eyes) the sunlight through the colored glass produces sparkling, shiny colored light, colored light rays.
Move the bottle around in the hand to produce moving sparkling colored light.

Look through the bottle at a bright area of the sky and do the rock; relax and move side to side; left, right, left, right.

The bottle, eyes, head/face, body move together left and right.
See the light move across the bottle.
Hold the bottle sideways for a longer view of the bottle.

Try this under a tree;
Stand under the tree, look at the sunny sky shining through the tree branches and bottle and move, rock left and right. The movement of the branches, shadow and light across, through the bottle as the person and bottle moves left and right causes a effect of moving, sparkling colored light. This activates saccadic eye movements.

Practice Chi Energy Strengthening, Circulation

Use the memory and imagination; remember, imagine, see and feel each color the eyes look at is sparkling, bright, moving, colored light energy inside the mind, body, eyes and outside surrounding the body. A protective field of colored light energy. Practice this with the eyes open, closed in the imagination, and open again. (see the Color Chart - chapter 19).

Improve the clarity of close vision by looking at the colored glass bottle at close distances;
Move the bottle around in the hand. Blink, breathe abdominally, relax.
Shift on the colored glass pieces. Shift part to part on small tiny details, sparkles.
Shift from one color to the next moving the eyes (visual attention, center of the visual field) continually, relaxed, easy from color to color, sparkle to sparkle; red to blue to green to yellow, to purple, to orange...
Practice central-fixation; shift on fine details, tiny sparkles of color.
Experience clear microscopic close vision.
Relax deeper and deeper. Daydream something happy.
The sparkling colors are relaxing, fun to look at, soothing to the mind and eyes, activates a relaxed, positive state of mind.
This relaxes the eye muscles, eyes and improves clarity of vision.

Looking at the different colors activates and integrates the left and right brain hemispheres.
Activation and integration of the left and right hemispheres produces equally clear, balanced vision in the left and right eyes at all distances.

Spend some time shifting on one color, then another, then another until every color has been seen.
(Practice closing the eyes and remembering, imagining and shifting in the mind on each color.)
This keeps a balanced amount of color exposure into the eyes, brain for equally activated and integrated left and right brain hemispheres.
Practice shifting on the colors in the bottle at close, middle, and far distances.

Bottles containing one color of glass can be used to expose the eyes, brain to one color at a time.
Place the bottles in an open window.
Look through the bottles, one at a time and absorb the colors into the eyes, brain body.



Remember, imagine, see each color, one at a time in the eyes, brain, body and outside surrounding the body, a protective field of energy.
Practice with the eyes open, closed, open.
Practice chi energy strengthening, circulation as described in the color chart chapter;
Feel the energy of each color. Move it up through the feet, through the body, out the top of the head, around the body and up through the body again... Build a strong field of energy.
Notice that each color has its own vibration, frequency type of healthy energy.
Some colors are energizing, others activate relaxation. Notice different positive moods, feelings each color activates.
Practice with every color to equally activate and integrate the left and right brain hemispheres for clear

vision at all distances.
Specific colors activate, strengthen functions of the left and/or right hemispheres.
Practice with all colors to improve all brain functions; memory, imagination, creativity, art, music, math, science, speech and other skills, positive emotions, thoughts. Natural Vision Improvement teachers apply extra use of a specific color, colors when a certain area of the brain needs activation, specific type of vision improvement is needed.

Full spectrum sunlight (sunlight not filtered through glass, plastic, colored, tinted lenses) contains all colors. Full spectrum sunlight travels into the eyes, brain, body and equally activates, integrates the left and right brain hemispheres and improves all eye, brain, body functions, health.
Practice sunning, saccadic sunning before and after using the colored glass bottle to increase absorption of all colors and keep a balanced amount of full spectrum light exposure.

Do not look through the colored glass bottle all day long.
The bottle is made of glass and all glass blocks full spectrum sunlight.
The eyes need full spectrum sunlight not filtered through glass.
The mixture of all colors in the glass bottle is what makes it a healthy activity to practice but using it all the time would a bit like wearing sunglasses or tinted eyeglass lenses.

Obtain full spectrum sunlight daily outside in the sunlight without wearing eyeglasses, sunglasses, tinted, colored lenses.

All eyeglasses; plain lenses without a prescription in them, plain glass with a prescription, tinted, colored, UV blocking eyeglass lenses, sunglasses block out part of the suns light spectrum and cause unbalanced, unhealthy partial spectrum light to enter the eyes, brain, body resulting in unclear vision, other eye problems, impaired function of the brain/left and right hemispheres, depression, impaired memory, imagination, impaired sleep, lowered health of eyes, brain, body.
Avoid all eyeglasses.



AVOID COLORED, TINTED EYEGLASS LENSES

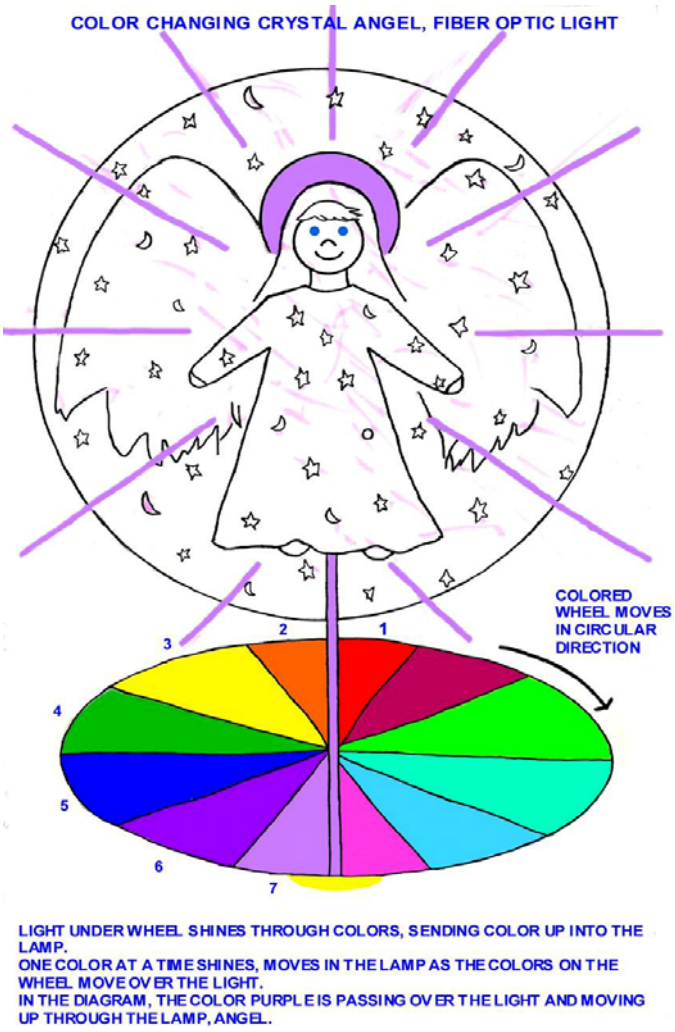
See Chapters 3 - 4 for more information on health, vision impairment caused by sunglasses, eyeglasses, and the health, vision benefits of full spectrum sunlight.

Practice Color Treatment at Night with the Color Changing Angel Lamp

Natural Vision Improvement teachers use colored light treatment to activate and integrate the left and right brain hemispheres for equally clear perfect vision in the left and right eyes at all distances, close and far.

The person sits in a dark room and looks at colored light.
Practice 'Do it Yourself' colored light treatment with a color changing crystal fiber optic light lamp. See picture >.
Sit in a dark room and watch the lamp change colors.

The lamp has a clear plastic color wheel that consists of all the colors in the rainbow; red - orange - yellow - green - blue - purple - light purple and mixtures of these colors; pink, maroon, light blue, lime green, sea green, aquamarine and other colors.
The wheel turns by electricity.
A light bulb under the wheel shines through the colors and sends one color at a time up into the lamp through fiber optic cables.
The colored light shines in the clear fiber optic material and clear crystal glass in the lamp. The lamp glows with colored light.
The light moves, sparkles in the lamp.
The lamp and designs in the lamp are made of clear glass crystal. All glass, designs in the lamp fill with the color.



In the picture on the right a clear glass crystal lamp with stars, moons and a clear crystal glass angel inside it glows with purple light while the color light purple on the wheel is passing over the light bulb under the lamp.
The dark room glows with purple light.
A timer can be attached to the lamp to control the amount of time a color stays in the lamp.
Single color wheels can also be used for longer exposure to a color.
A round lamp in the shape of a globe improves eye and eye muscle movement in all directions, areas of the visual field; left and right, up, down, diagonally, middle and close, middle, far areas throughout the inside, outside of the globe.
The eyes must move freely, easily in any direction for optimum eye/eye muscle function and clear vision.

Convergence, un-convergence, accommodation, un-accommodation also improve as the eyes shift/switch when looking a objects, light sparkles on the front of the clear glass globe, middle/inside, and the back.
Shifting on round globe shaped objects helps to bring the eye/cornea to normal shape, a round eye and a cornea with a smooth even curve.
This removes astigmatism and helps correct wandering/crossed eyes.

Looking at the 7 and other different colors moving through the lamp activates and integrates the left and right brain hemispheres. After using the lamp practice the long swing, cross crawl and other activities to increase activation and integration of the left and right brain hemispheres and clear vision.

The moving, sparkling, colored light relaxes the mind, body, eyes.
The movement of the sparkling colored light activates eye movement, shifting.
The tiny sparkles activate central-fixation.

Looking at the colors improves the memory and imagination.
Improving the memory and imagination, ability to remember, imagine, store clear pictures of objects in the brain/mind activates perfect relaxation and clear vision.
Use the memory and imagination with the colors; see full directions for use of the Color Breathing Relaxation Chart in the Palming chapter and use that visualization activity when looking at the colors in the lamp;
Example; look at the color light purple shining in the lamp.
Remember, imagine, see and feel the light purple color as sparkling, shining, moving colored light energy inside the eyes, brain, body and outside surrounding the body, a protective energy field.
Practice chi energy strengthening, circulation; feel the color as energy.
Repeat this for every color, one color at a time.
Blink, breathe abdominally, yawn and stretch.
Relax deeper and deeper into the Alpha, Theta, Delta brain wave frequency states.

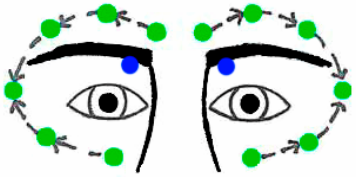
When buying a lamp, obtain one from a good merchant. Some lamps made of shaped, cut glass and other substances have acted as a magnifying glass causing the light shining from inside the lamp, through the globe to be concentrated and set objects in the room on fire.

There are many ways to practice color treatment;
I know a man that built a large clear glass crystal angel and placed it in his garden. He built a large waterfall with a swimming pool in the garden. He placed a colored light wheel under the water fall and the angel. (Electric wheel... placed in a dry area)
He relaxes and looks at the colors at night.
Our old house had a window on the stairs containing stain colored glass sections around the clear glass window.
A string of colored Christmas tree lights can be used at night to practice switching as shown for the Bead String in the Switching Close, Middle, Far chapters 10 - 11.
Gardening, looking at colorful flowers is a form of color treatment.
The person also receives healthy full spectrum sunlight and exercise.
The flowers also provide scents that scientists state acts as a type of Hormone, Pheromone that activates healthy chemical and other reactions in the brain, body.
Carry colored gemstones, rings, bracelets in your pocket and look at the colors at close and far distances. Diamonds, rhinestones contain miniature rainbows containing many colors.
Looking at, shifting on the colors and tiny details in the stones, jewelry, placing them up close to the eyes improves clarity of close vision.
Practice with both eyes together, then one eye at a time, then both eyes together again.
Read fine print in the sunlight for extra close and distant vision improvement.

Do not do this in the sun with any type of magnifying glass stones, pieces.., plastic. Sunlight through magnifying glass, plastic can burn the eyes.

20 - ACUPRESSURE POINTS

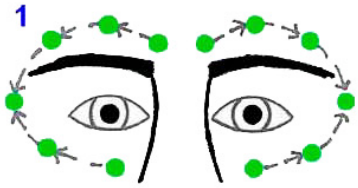
Pictures in this chapter show acupressure points to improve, blood, oxygen, energy circulation in the eyes, relax the eye muscles, eyes, neck, shoulders, back and body.
Neck, shoulder muscle tension, immobility is a main cause of eye muscle tension causing abnormal eye shape, incorrect focus of light rays on the retina and reduced, rigid eye movement.
These conditions cause headaches and unclear vision.
Neck muscle tension also places pressure on the vertebrae, nerves, blood, lymph vessels in the neck impairing blood, nerve signal flow to brain, eyes, eye muscles, optic and eye muscles nerves, lens, retina resulting in unclear vision and impaired health of the eyes.
Cataracts, macula degeneration, wandering eyes and other eye problems can occur when vertebrae misalignment, pressure on nerves, blood and lymph vessels is increased due to accidents, injury or by lack of movement, poor diet, resulting in reduced blood, lymph, nerve flow, signals to the brain, eyes.



Main Acupressure points for healthy eyes, good circulation in the eyes, relaxed eye muscles and clear vision.

ACUPRESSURE POINTS

1



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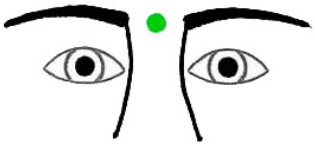

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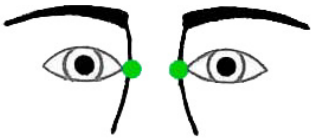

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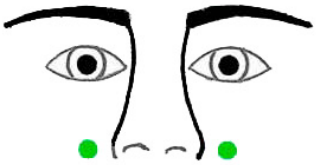


6



Activating acupressure points shown in diagrams #1 to #13 on these pages relaxes the eyes, eye muscles, muscles in the head/face, neck, shoulders, back and body.
neck muscle relaxation travels directly to the eye muscles.
Relaxation of the neck also improves blood, oxygen, nutrient, lymph, energy flow and nerve signals to the brain, ears and eyes.
When the body, neck... and eye muscles relax the mind relaxes.
Relaxation of the mind increases relaxation of the eye muscles, neck, all body muscles and improves function of the brain/visual system with the eyes resulting in clear eyesight.
When the eye muscles relax, the eyes move easy and shifting, central fixation, all correct vision habits and convergence/accommodation, unconvergence, unaccommodation are perfect, the eye is in normal shape with correct focus of light rays on the retina and eyesight is clear.

The acupressure points prevent eyestrain, discomfort, fatigue, headaches, sinus congestion.
Headaches are a major cause of unclear visio

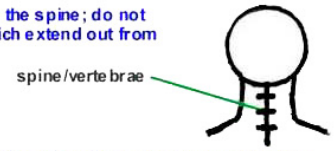
Many points are on chakras; energy centers in the body.
Activating these acupressure point ts improves energy flow in the chakras. (See Color Chart, chapter_.

Activating acupressure points #1 to #13 also improves blood, oxygen, lymph, energy flow and nerve signals in the eyes, eye muscles, retina, lens.., brain, visual system, neck, along the spine and in the entire body. This also improves the clarity of vision and health of the eyes.

DIRECTIONS

When applying pressure to acupressure points near the eyes;
Do not press on/touch the eyeball.
Fingernails must be very short.
Do not press eye points and any other points with the fingernails.
Close the eyes when applying pressure to a point near the eyes.

When applying pressure to points on the neck and back near the spine; do not press on the spine/vertebrae or the ends of the vertebrae which extend out from the spine.
A professional massage therapist or chiropractor knows how much pressure can be safely applied to these areas without causing injury or vertebrae disalignment.



When activating points around the eyes, on the face; support/rest the elbows on a padded table or pillow to prevent tension, fatigue in the arms, hands, neck and to maintain straight posture.
Some points cannot be used during pregnancy.
Do not apply pressure to points before or after a large meal.

Relax the body, neck when applying pressure to points on the face, around the eyes, on the head, neck, and any area of the body.
Press with the fingertips.
Apply pressure at a 90 degree angle without pulling on the skin.
Pressure is applied slow, steady while increasing the pressure.
Avoid extreme pressure.
Apply pressure for 2 - 3 minutes.
Breathe abdominally, slow, comfortably deep and relax when pressing on a point.
Abdominal breathing relaxes the mind, body, eyes, eye muscles, all body muscles, nervous system and circulates oxygen, blood and energy in the body, brain, eyes and to the acupressure points.
When a pulse is felt when pressing on a point, circulation in the point/that area of the body is improved.
Pressure is withdrawn slowly, gradually.
A little muscle massage can then be applied to the area for a few seconds after the point is released.

When pressing a point it is normal for the point to sometimes feel a bit of pain, but the pain is not uncomfortable or strong.
The feeling indicates that the point is being activated enabling circulation, energy flow.
When pressing on a point a light pain may be felt in a different area of the body.
This means that the point is activating other points/parts of the body associated/connected with the point being activated.
Example; when pressing point GB20 on the back right side of the neck, a light pain may be felt in the forehead above the right eyebrow.
This indicates that impaired circulation, energy blocks, tension, headaches in this area are being removed.

Chinese medicine states; Acupressure points exist throughout the body and are connected by meridians/pathways that energy (chi) flows along.
Pressing a acupressure point in one area of the body activates energy flow/healing in that point/area and in other points/areas connected to that point.

Practice activating acupressure points to prevent eye muscle tension, eyestrain and blur when working with a computer, and doing other visual tasks.

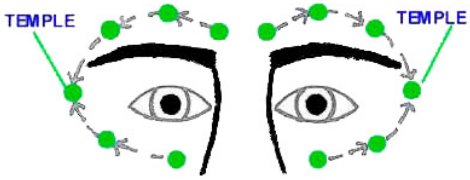
Practice palming (chapter__), the rock, long swing, cross crawl (chapter__) and sunning (chapter __) before and/or after using acupressure points to increase relaxation and clear eyesight.

EFT - Emotional Freedom Technique - Next Chapter -
Practice this before and after Acupressure Points for increased energy flow correction, strengthening, clear vision, healthy eyes, brain, body.
Also see Chapter 19-Relaxation Methods

ACUPRESSURE POINTS FOR EYE MUSCLE RELAXATION AND CLEAR EYESIGHT

Breathe abdominally, relax the eyes, head, face, neck and body.
Avoid being immobile, rigid when pressing a point; relax and allow a little body, neck movement.
Activate the points in diagram # 1.
Massage the left and right temples with the thumbs;
Left thumb on left temple.
Right thumb on right temple.
Then, gently press, release, press, release the temple points.
Press the left and right temples at the same time.

1 - POINTS AROUND TOP, SIDES, BOTTOM OF EYES AND TEMPLES



Next; keep the thumbs on the temples and press/move the first or second knuckles of the index fingers (pointer finger next to thumb) of the left and right hands on/along the top pressure points on the bone above the left and right eyebrows.
Rub the knuckles from above the inner area of the eyebrows outward to the temples in the direction of the arrows in diagram #1.

Next; Keep the thumbs on the temples and press/move/rub the index finger knuckles of the left and right hands across the bottom points on the top of the cheekbone below the left and right eyes.
Rub/Move the knuckles from the inner points outward to the temples as shown by the arrows.

The temple points relax and improve function of the recti outer eye muscles.
When the recti muscles are tense they pull the eye into a abnormal shortened shape which impairs focus of light rays in the eye and impairs convergence, accommodation and unconvergence, unaccommodation resulting in unclear close and distant vision and wandering, crossed eyes.
When the recti muscles relax they function correct, the eye returns to normal shape, light rays focus correct on the retina, the eyes move/shift perfect, and eyesight is clear.
Relaxed recti muscles cause relaxation to resonate into the oblique and other eye muscles improving function of all eye muscles.

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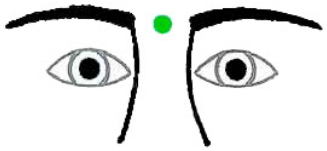
2 - GV24.5



Point # 2 - GV24.5 - The third eye point is located on a chakra, energy center.
This point is located between the eyebrows in the center of the indentation where the bridge of the nose meets the forehead.
Apply light pressure with the 3rd finger of the left or right hand and look straight ahead, or;
face the palms of the left and right hands toward each other and lightly touch the point with the index and 3rd fingers of both left and right hands with the head tilted down a little bit.
Avoid touching the palms of the hands together.
Breathe and relax.
This point prevents eyestrain, discomfort, headaches, sinus congestion and activates/improves function of the pituitary gland in the brain, the endocrine system, relaxes the central nervous system, removes emotional tension and improves many functions of the brain, body.
These conditions improve eyesight.

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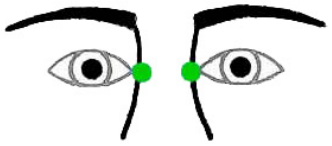
3 - B2



Point # 3 - B2 is in the small dent in the upper bone of the outer area of the eye socket under the eyebrows, out from the bridge of the nose.
Press with the thumbs up into the points and; press, release, press, release... massage.
Left thumb to left side
Right thumb to right side
Press left and right sides at the same time.
This point relaxes and improves function of the superior (top) oblique outer eye muscle.
The oblique muscles move the eyes and produce accommodation and unaccommodation.
Tense oblique muscles place pressure on/in the eye causing abnormal eye shape, a abnormal lengthening of the eye resulting in incorrect focus of light rays in the eye, impaired accommodation, unaccomodation and impaired eye movement.
These conditions result in unclear distant vision and in advanced cases also unclear close vision. Impaired convergence, unconvergence can also occur.
When the oblique muscles relax, they function correct, the eye returns to a normal round shape for unaccommodation/ clear distant vision and lengthens slightly for accommodation/clear close vision. light rays focus correct on the retina, the eyes move/shift perfect, eyesight is clear.
When the top oblique muscle relaxes, relaxation resonates into the bottom oblique muscle, the recti and other eye muscles.
Function of all eye muscles improve.
B2 also prevents eyestrain, fatigue, red eyes, headaches and sinus congestion.

4



The points in diagram #4 are on the inner sides of the bridge of the nose, even with the inner corners of the eyes.
Use the thumbs or index fingers of the left and right hands to press both points at the same time;
left hands finger, left side of nose
right hands finger, right side of nose
One hand can be used; index finger on one side of nose and thumb on the other side.
Press in and massage down and up and then; press, release, press, release... massage again.
Do not press into the eye or into the eye socket.
These points relax all the eye muscles and brings clear eyesight.

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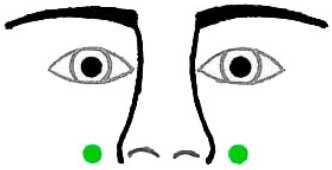
5 - ST3



Points # 5 - ST3 are located on the bottom of the cheekbone, under/directly in line with the eyes pupils, outward from the nostrils.
Press the points at the same time with the index fingers;
left hands finger - left side
right hands finger - right side
The points prevent eyestrain, fatigue, pressure, sinus congestion in the head, and activates clear eyesight.

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6 - LI20



Point #6 - LI20 are on the left and right sides of the nostrils.
Press both points at the same time with the index fingers.
left hands finger - left side
right hands finger - right side
These points prevent sinus pain, nasal congestion, facial swelling.
Headaches, sinus congestion cause unclear vision.
Preventing headaches, congestion keeps eyesight clear.

After activating all points near the eyes and on the face; massage the muscles in the forehead with all the fingers of the left and right hands.
Relaxed muscles in the forehead resonates relaxation into all the facial and eye muscles.
This relaxation travels into the neck muscles.
Neck muscle relaxation then travels to the eye muscles, increasing eye muscle relaxation and clear eyesight.

Acupressure points #1 to # 13 relax the muscles in the eyes, face, head, neck, shoulders, back and body.
Muscle relaxation in these areas, especially the shoulders, neck, head, face resonates/travels directly into the eye muscles resulting in clear eyesight.
Neck, shoulder muscle tension, limited movement is a main cause of eye muscle tension, reduced eye movement, headaches, imperfect balance, coordination and unclear eyesight.
When the neck and shoulder muscles relax, relaxation travels into the body, head/face and eyes.
Neck, body, head, face, eye movement(shifting, saccadic shifts) and balance, coordination improves which then increases relaxation and clear eyesight.
Relaxed eye muscles return the eye to normal shape with correct focus of light rays on the retina resulting in more vision improvement.

7

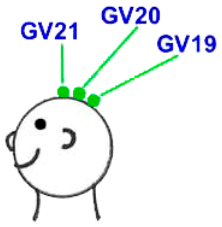


DIAGRAM # 7

GV20 IS LOCATED IN THE INDENTATION ON THE TOP CENTER AREA OF THE HEAD, A LITTLE BACKWARDS, IN LINE WITH THE BACK OF THE EARS.
GV21 IS IN A SMALL INDENTATION IN FRONT OF GV20.
GV19 IS IN A SMALL INDENTATION IN BACK OF GV20.
ACTIVATING THESE 3 POINTS PREVENTS HEADACHES AND RELAXES THE MUSCLES IN THE HEAD, NECK, IMPROVES ENERGY FLOW IN THE HEAD, BRAIN, EYES, CLEARS THE MIND, BALANCES THE EMOTIONS, IMPROVES MEMORY, IMAGINATION, CONCENTRATION, RELAXATION, BALANCE AND COORDINATION.
GV20 CLEARS THE SINUSES.

APPLY PRESSURE TO GV20, 21, 19 WITH THE FINGERTIPS;
CENTER FINGERTIP ON GV20, RING FINGER ON GV21, POINTER FINGER ON GV19.
THEN, MASSAGE OVER THE POINTS WITH THE FINGERTIPS OF BOTH HANDS, THEN MASSAGE THE ENTIRE SCALP.
THERE ARE MANY PRESSURE POINTS ON THE HEAD.

8

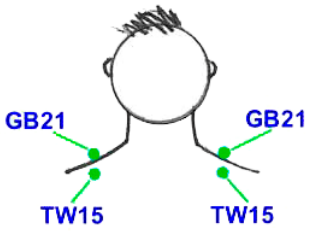
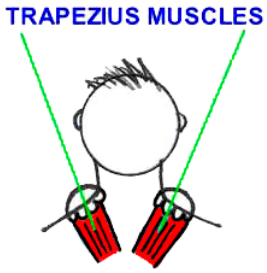


DIAGRAM # 8

GB21, TW15 AND THE TRAPEZIUS MUSCLES
(PREGNANT WOMEN PRESS THESE POINTS LIGHTLY).
APPLY PRESSURE AND MASSAGE TO THESE POINTS/MUSCLES AS SHOWN IN DIAGRAMS 9A, B, C, D.
START BY WORKING ON ONE SHOULDER AT A TIME;
REACH AROUND THE FRONT OF THE BODY WITH THE HAND AND PRESS/MASSAGE THE SHOULDER POINTS/MUSCLES.
EXAMPLE; + LEFT HAND/FINGERS PRESS AND MASSAGE THE RIGHT SHOULDER.
(RIGHT HAND SUPPORTS LEFT ARMS ELBOW).
THEN; + RIGHT HAND/FINGERS PRESS AND MASSAGE THE LEFT SHOULDER.
(LEFT HAND SUPPORTS RIGHT ARMS ELBOW).
LET THE SHOULDERS RELAX AND DROP DOWN.

9A



THE LEFT AND RIGHT HANDS CAN PRESS/MASSAGE THE POINTS AND TRAPEZIUS MUSCLES ON THE LEFT AND RIGHT SHOULDERS AT THE SAME TIME; SEE DIAGRAM 9A
LEFT HAND TO LEFT SIDE.
RIGHT HAND TO RIGHT SIDE.
SUPPORT THE LEFT AND RIGHT ELBOWS WITH A PILLOW TO PREVENT FATIGUE/MUSCLE TENSION IN THE ARMS.

GB21 IS LOCATED IN THE MUSCLE ON THE TOP CENTER OF THE SHOULDER, ON THE HIGH AREA OF THE MUSCLE, 1 - 2 INCHES OUT FROM THE SIDE/BOTTOM OF THE NECK.
LOCATE A STIFF/TIGHT AREA AND/OR KNOT IN THE MUSCLE AND APPLY PRESSURE TO IT WITH THE FINGERS.
GB21 RELAXES THE SHOULDER MUSCLES AND CAUSES RELAXATION TO TRAVEL INTO THE BODY, BACK, NECK, HEAD/FACE AND EYE MUSCLES RESULTING IN CLEAR EYESIGHT.

TW15 IS LOCATED BELOW GB21 ON THE BACK OF THE SHOULDER ABOUT 1/2 TO 1 INCH BELOW THE TOP OF THE SHOULDER, ABOVE THE TOP OF THE SHOULDER BLADE.
LOCATE A TIGHT AREA/KNOT IN THE MUSCLE AND PRESS.
TW15 RELAXES THE SHOULDERS, BODY, BACK, NECK, HEAD/FACE AND EYE MUSCLES.

9B



9C

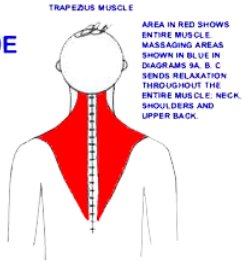


TRAPEZIUS MUSCLE - DIAGRAMS 9A, B, C, D, E
THE TRAPEZIUS MUSCLE SHOWN IN RED IN DIAGRAM 9E COVERS A LARGE AREA OF THE NECK, SHOULDERS, UPPER BACK.
MASSAGING THE AREA OF THE MUSCLE SHOWN IN BLUE IN DIAGRAM 9A RELAXES ALL AREAS OF THE MUSCLE.
IT IS EASIEST TO MASSAGE THESE MUSCLES, ONE SHOULDER AT A TIME AS SHOWN IN DIAGRAMS 9B, C, D.
+ 9B - THE RIGHT HAND REACHES OVER AND BEHIND THE LEFT SHOULDER TO MASSAGE THE LEFT TRAPEZIUS MUSCLE.
(THE LEFT HAND SUPPORTS THE ELBOW OF THE RIGHT ARM. SEE DIAGRAM D).
+ 9C - THEN, THE LEFT HAND REACHES OVER AND BEHIND THE RIGHT SHOULDER TO MASSAGE THE RIGHT TRAPEZIUS MUSCLE.
(THE RIGHT HAND SUPPORTS THE ELBOW OF THE LEFT HAND).
ELBOW IS SUPPORTED TO PREVENT FATIGUE, MUSCLE TENSION IN THE ARM.
PLACE THE HAND/FINGERS ON THE MUSCLE, DOWN BEHIND THE SHOULDER AND PRESS ON, PULL, MASSAGE THE MUSCLE WITH THE FINGERS, THEN PRESS, PULL, STRETCH THE MUSCLE WHILE MOVING THE HAND/FINGERS AWAY FROM THE SPINE, UP AND OVER/ON TOP OF THE SHOULDER AND INWARD TOWARD THE NECK.
PRESS, KNEAD, MASSAGE TO BREAK UP KNOTS IN THE MUSCLE.
SEE BLUE AREA IN DIAGRAM 9A FOR AREA OF MUSCLE TO PRESS, KNEAD, MASSAGE. LAST; MASSAGE ALONG THE TOP OF THE SHOULDER FROM INNER BOTTOM OF NECK TO OUTER END OF SHOULDER.

9D



9E



TENSION IN THE TRAPEZIUS MUSCLES CAUSE TENSION TO TRAVEL INTO THE UPPER BACK, SHOULDERS, NECK, HEAD, FACE AND EYE MUSCLES RESULTING IN UNCLEAR VISION.
MASSAGING THE TRAPEZIUS MUSCLES RELAXES ALL THESE MUSCLES, PREVENTS HEADACHES AND BRINGS CLEAR EYESIGHT.

Do not press, massage areas on the neck from the back end of the ear to the front of the neck. Glands, arteries, veins, sensitive parts in the front and some side areas of the throat, neck, below the jaw... must be avoided. Massage the back neck muscles only from behind the back end of the ears. See the picture on last page, this chapter. Do not massage, press on the spine, vertebrae.
Collarbone and other muscles can be massaged by a professional.



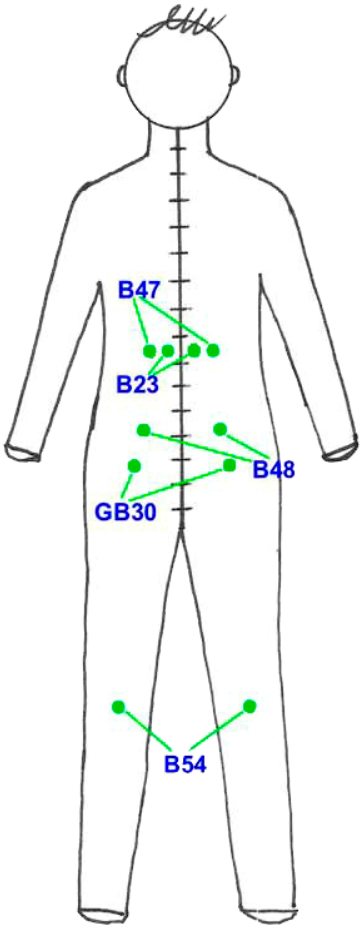
JAW MUSCLE TENSION CAN TRAVEL INTO THE NECK, SHOULDERS, HEAD, FACE, EYES CAUSING HEADACHES, PAIN PRESSURE BEHIND THE EYES, EYE MUSCLE TENSION, RED EYES, EAR PAIN, RINGING IN THE EARS, DIZZINESS, SINUS CONGESTION.
THESE CONDITIONS CAUSE UNCLEAR EYESIGHT.
JAW MUSCLE TENSION IS CAUSED BY; STRESS IN THE MIND, TEETH CLENCHING, GRINDING WHILE ASLEEP/AWAKE, SLEEPING ON THE STOMACH, SLEEPING WITH THE HEAD/NECK TWISTED, CHEWING ON ONLY ONE SIDE OF THE MOUTH, UNEVEN DENTAL FILLINGS, USUALLY FILLINGS THAT ARE TOO HIGH, MISALIGNED JAW JOINT/BONES.

POINT ST6 RELAXES THE JAW MUSCLE.
DO NOT PRESS THIS POINT WITHOUT A DOCTORS PERMISSION IF THE JAW JOINT OR BONES ARE INJURED, OUT OF ALIGNMENT.

ST6 IS LOCATED BETWEEN THE UPPER AND LOWER JAW, ON THE JAW MUSCLE THAT RISES WHEN THE BACK TEETH ARE PLACED TOGETHER.
LOCATE THE POINT, THEN, KEEP THE TEETH SLIGHTLY APART, MOUTH PARTLY OPEN, RELAXED JAW.
PRESS ON THE POINTS WITH THE HEELS OF THE HANDS;
LEFT HAND TO LEFT JAW.
RIGHT HAND TO RIGHT JAW. PRESS LEFT AND RIGHT JAW MUSCLES AT THE SAME TIME.
APPLY SLOW, STEADY, GRADUAL PRESSURE 30 SECONDS TO 1 MINUTE.
BREATHE ABDOMINALLY, COMFORTABLY DEEP AND RELAX.
REMOVE THE PRESSURE GRADUALLY.
MOVE THE JAW LEFT AND RIGHT.
NEXT; APPLY PRESSURE WITH 3 FINGERTIPS, THIRD/ MIDDLE FINGER IN THE CENTER OF THE MUSCLE. LEFT HANDS FINGERS, LEFT SIDE. RIGHT HANDS FINGERS, RIGHT SIDE.
THEN, RELEASE PRESSURE SLOWLY, THIRD FINGER FIRST THEN THE OTHER TWO.
MASSAGE THE MUSCLE.

EAR POINTS; TW21, SI19, GB2 AND JAW POINT ST6 RELAXES THE JAW MUSCLE, IMPROVES JAW JOINT FUNCTION, PREVENTS HEADACHES, NORMALIZES EAR PRESSURE, IMPROVES BALANCE, RELAXES THE MUSCLES IN THE NECK, SHOULDERS, HEAD, FACE AND EYES.

BACK VIEW OF BODY



RELAXED BACK MUSCLES KEEPS THE BACK VERTEBRAE IN CORRECT ALIGNMENT, KEEPS GOOD BALANCE, COORDINATION, MOVEMENT. WHEN THE BACK MUSCLES RELAX, MUSCLE RELAXATION RESONATES INTO THE BODY, SHOULDERS, NECK, HEAD, FACE AND EYES FOR CLEAR EYESIGHT.
GOOD BALANCE, COORDINATION AND BODY MOVEMENT WITH THE EYES IMPROVES EYE SHIFTING AND CLARITY OF EYESIGHT.

THE POINTS ON THE BACK OF THE BODY RELAX THE BACK MUSCLES AND IMPROVE VERTEBRAE ALIGNMENT.
(DO NOT PRESS B23, B47 IF THE VERTABRAE/CARTLIAGE IN THAT AREA ARE INJURED.

WHEN PRESSING THE POINTS; DO NOT PRESS ON THE VERTEBRAE.
PRESS ONLY ON THE MUSCLES ON THE LEFT AND RIGHT SIDES OF THE SPINE/ VERTEBRAE.

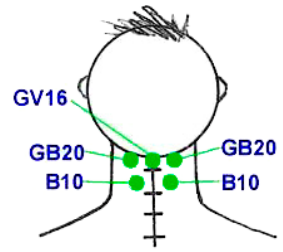
B47 AND B23 - LOCATED ON THE MUSCLES ON THE LOWER BACK BETWEEN THE LUMBAR VERTEBRAE # L2 AND L3, LEVEL WITH THE WAIST.
B23 - ABOUT 2 FINGER WIDTHS AWAY FROM THE SPINE.
B47 - ABOUT 3-4 FINGER WIDTHS AWAY FROM THE SPINE.
(LOCATION OF POINTS ON BODY VARY DEPENDING ON SIZE OF THE BODY AND FINGERS.)
START BY MASSAGING THE LOWER BACK WITH THE KNUCKLES OF THE LEFT AND RIGHT HANDS; RUB THE KNUCKLES UP AND DOWN THE LOWER BACK.
THEN, PRESS THE OUTER (B47) POINTS; REST THE HANDS/FINGERS ON THE WAIST/HIPS AND EXTEND THE THUMBS ONTO THE BACK.
PRESS THE POINTS ON THE LEFT AND RIGHT SIDES OF THE SPINE AT THE SAME TIME WITH THE THUMBS OF THE LEFT AND RIGHT HANDS.
LEFT THUMB, LEFT SIDE.
RIGHT THUMB, RIGHT SIDE.
PRESS LIGHTLY IF THE MUSCLES ARE SOAR, THEN INCREASE PRESSURE BUT NOT TOO HARD. PRESS ONE MINUTE.
BREATHE COMFORTABLY DEEP AND RELAX.
B47 AND B23 RELAXES THE BACK MUSCLES AND PREVENTS BACK AND SCIATICA PAIN.

B48 - ON THE LEFT AND RIGHT SIDES OF THE BUTTOCKS, 1 - 2 FINGER WIDTHS OUTWARD FROM THE SACRUM BONE, BOTTOM OF THE SPINE. PRESS LEFT AND RIGHT SIDES AT THE SAME TIME.
GB30 - ABOUT 1 AND 1/2 TO 2 INCHES BELOW AND 1 INCH OUT FROM B48.
PRESS WITH THUMBS OR FINGERS. PRESS LEFT AND RIGHT SIDES AT THE SAME TIME.
PREVENTS LOWER BACK AND SCIATIC TENSION, PAIN, IMPROVES JOINT MOVEMENT, RELAXES BODY.

B54 - CENTER, BACK OF KNEE
PREVENTS BACK PAIN, SCIATICA, TREATS ARTHRITIS IN KNEE.

PRESSURE POINTS ON THE BACK OF THE NECK

10

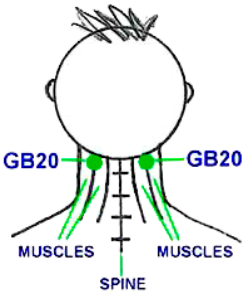


GB20 AND B10 ARE LOCATED ON THE BACK OF THE NECK.
ACTIVATING THESE POINTS RELAXES THE NECK, SHOULDER, HEAD/FACE AND EYE MUSCLES, IMPROVES BALANCE, COORDINATION AND CLARITY OF VISION AND PREVENTS HEADACHES, NECK PAIN, EYESTRAIN, TENSION, FATIGUE, SINUS CONGESTION.
PRESSING B10 AND GB20 CAN CORRECT MINOR NECK VERTEBRAE DISALIGNMENT.
THE POINTS ACTIVATE CHI ENERGY UP AND DOWN THE SPINE, BODY; NECK, HEAD, TO FEET.
SEE CHI ENERGY CHART PAGE--.

WHEN PRESSING GB20, B10, GV16 ON THE NECK AND POINTS ON THE BACK; DO NOT PRESS ON THE SPINE/VERTEBRAE.
PRESS ONLY ON THE MUSCLES ON THE LEFT AND RIGHT SIDES OF THE SPINE, OUTWARD, AWAY FROM THE VERTEBRAE.
DO NOT PRESS ON POINTS ON THE NECK, BACK IF A FRACTURED, INJURED VERTEBRAE, CARTILAGE EXISTS NEAR THE POINT.
CHECK WITH A DOCTOR FIRST.
FOR HEALTHY VERTEBRAE THAT ARE A LITTLE OUT OF ALIGNMENT DUE TO MUSCLE TENSION IN THE NECK, BACK; A EXPERIENCED MASSAGE THERAPIST CAN MASSAGE, RUB THE MUSCLES ON THE LEFT AND RIGHT SIDES OF THE NECK/BACK VERTEBRAE/SPINE AND APPLY THE CORRECT SAFE AMOUNT OF PRESSURE, MOVEMENT DIRECTLY ON THE VERTEBRAE RESULTING IN SAFE VERTEBRAE ALIGNMENT WHICH WILL IMPROVE MUSCLE RELAXATION.

ACTIVATION OF PRESSURE POINTS IS IMPROVED WHEN THE NECK, BACK MUSCLES ARE RELAXED.
YAWNING BEFORE, DURING AND AFTER PRESSING ACUPRESSURE POINTS STRETCHES AND RELAXES THE MUSCLES IN THE NECK, BACK, BODY, SHOULDERS, HEAD/FACE AND EYES AND IMPROVES ACTIVATION OF THE POINT AND CIRCULATION OF BLOOD, OXYGEN, ENERGY TO THE POINT.
BREATHE SLOW AND ABDOMINALLY WHEN ACTIVATING THE POINTS.
DO NOT TWIST/BEND THE HEAD, NECK, BACK WHEN PRESSING THE POINTS.
THE HEAD IS TILTED BACK A LITTLE WHEN PRESSING GB20 AND GV16.

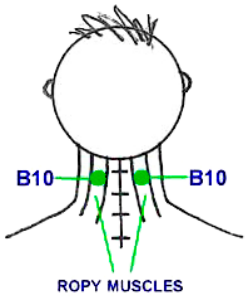
11



GV16 - THIS POINT IS LOCATED IN THE INDENTATION DIRECTLY UNDER THE BOTTOM OF THE SKULL, BACK OF THE HEAD, ABOVE THE TOP CENTER OF THE NECK.
THIS POINT RELAXES THE NECK, HEAD AND EYE MUSCLES.
(THE POINTS ON THE TOP OF THE NECK ARE CLOSE TO THE UPPER NECK VERTEBRAE WHICH EXTEND UP INTO THE BASE OF THE SKULL AND CONTAIN THE NERVES, BLOOD VESSELS PASSING THROUGH THESE VERTEBRAE WHICH HAVE A DIRECT CONNECTION TO THE BRAIN, EYES AND CLARITY OF VISION.
DISALIGNED VERTEBRAE CAN CAUSE BLINDNESS.
DO NOT PRESS ON THE VERTEBRAE.
GV16 USED CORRECT IMPROVES EYESIGHT.

PRESS UPWARD AND INTO THE POINT WITH THE 3RD FINGERS OF THE LEFT AND RIGHT HANDS AND TILT THE HEAD BACK A LITTLE, SLOWLY.
PRESS INTO THE MUSCLE, NOT ON THE VERTEBRAE.
AVOID PRESSING HARD.
BREATHE ABDOMINALLY, COMFORTABLY DEEP, RELAX. 1 - 2 MINUTES.

12

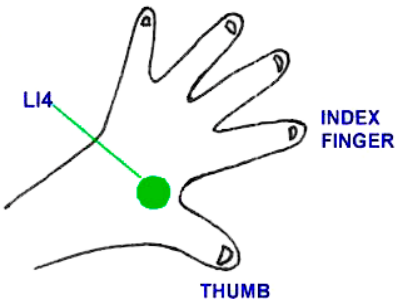


GB20 - LOCATED IN THE INDENTATION BETWEEN THE TWO LARGE NECK MUSCLES ON THE LEFT AND RIGHT SIDES OF THE SPINE, BELOW THE BOTTOM OF THE SKULL.
PRESS INTO THE POINTS, UP AND UNDER THE BOTTOM OF THE SKULL WITH THE THUMBS OF THE LEFT AND RIGHT HANDS. (THE HANDS FINGERS CAN REST ON THE HEAD.)
PRESS LEFT AND RIGHT POINTS AT THE SAME TIME;
LEFT THUMB, LEFT SIDE
RIGHT THUMB, RIGHT SIDE
TILT THE HEAD BACK SLOWLY.
BREATHE ABDOMINALLY, COMFORTABLY DEEP AND RELAX.1 - 2 MINUTES.

B10 - LOCATED ABOUT 1/2 TO 1 INCH BELOW THE BOTTOM OF THE SKULL, ON THE UPPER NECK, ON THE ROPY MUSCLES THAT RUN ALONG THE LEFT AND RIGHT SIDES OF THE SPINE.
PRESS LEFT AND RIGHT POINTS AT THE SAME TIME;
LEFT FINGERTIP , LEFT MUSCLE
RIGHT FINGERTIP, RIGHT MUSCLE. BREATHE ABDOMINALLY AND RELAX.

TOP OF LEFT HAND

13



LI4 - LOCATED BETWEEN THE THUMB AND INDEX FINGER ON THE LEFT AND RIGHT HANDS.
(PREGNANT WOMEN - DO NOT PRESS THIS POINT, IT CAN CAUSE UTERUS CONTRACTIONS.)
ACTIVATE THE LEFT HANDS POINT FIRST;
+ THE RIGHT HANDS THUMB IS PLACED ON THE TOP OF THE LEFT HAND, ON THE SKIN/WEBBING BETWEEN THE THUMB AND INDEX (POINTER) FINGER. (SEE BLUE DOT IN DIAGRAM 13.)
+ THE RIGHT HANDS INDEX FINGER IS PLACED UNDER THE RIGHT HANDS THUMB, UNDER THE BLUE DOT ON THE BOTTOM/PALM SIDE OF THE LEFT HAND.

LI4 IS ON THE HIGHEST AREA OF THE MUSCLE THAT RISES UP WHEN THE THUMB AND INDEX FINGER OF THE LEFT HAND ARE PLACED TOGETHER.
AFTER FINDING THE POINT, RELEASE THE THUMB AND INDEX FINGER OF THE LEFT HAND AND OPEN THE HAND.
KEEP THE HAND/FINGERS AND THUMB APART, LOOSE, RELAXED.
DO NOT STRETCH THEM APART.
ACTIVATE THE POINT; PRESS THE RIGHT HANDS THUMB (TOP OF LEFT HAND) AND INDEX FINGER (BOTTOM OF LEFT HAND) TOGETHER AND SQUEEZE THE MUSCLE IN THE WEBBING OF THE LEFT HAND.

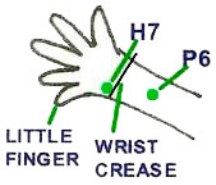
PRESS TOGETHER AND INWARD TOWARD THE BONE THAT IS CONNECTED TO THE LEFT HANDS INDEX FINGER.
PRESS ONE MINUTE. BREATHE ABDOMINALLY AND RELAX.
NEXT; REPEAT ON LI4 ON THE RIGHT HAND USING THE LEFT HANDS THUMB AND INDEX FINGER.
LI4 PREVENTS HEADACHES, SINUS CONGESTION, PAIN IN THE SHOULDERS AND MOST ANY AREA OF THE BODY, HELPS RELIEVE TOOTHACHES AND IMPROVES THE CLARITY OF VISION.

MANY ACUPRESSURE POINTS RELAX THE MIND AND BODY.
WHEN THE MIND AND BODY MUSCLES RELAX, RELAXATION TRAVELS TO THE EYE MUSCLES AND CLARITY OF EYESIGHT IMPROVES.



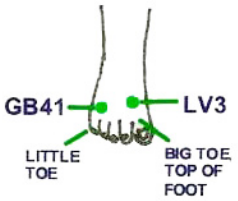
CV17 IS LOCATED ON THE CENTER OF THE BREASTBONE ABOUT 2 AND 1/2 INCHES UP FROM THE BOTTOM OF THE BONE.
PRESS, BREATHE ABDOMINALLY AND RELAX.
CV17 RELAXES THE MIND, BODY, CHEST MUSCLES AND BRINGS THOUGHTS AND EMOTIONS TO A POSITIVE STATE.

RIGHT HAND
PALM UP



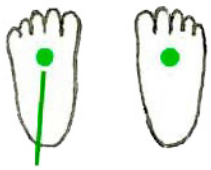
P6 IS LOCATED IN THE MIDDLE OF THE INNER WRIST, BETWEEN THE TWO BONES, 2 AND 1/2 FINGER WIDTHS UP THE ARM AWAY FROM THE CREASE IN THE WRIST.
P6 RELAXES THE MIND AND BODY, PREVENTS NAUSEA, STOMACHACHES.

H7 IS LOCATED ON THE HAND/PALM SIDE OF THE WRIST CREASE IN LINE WITH THE LITTLE FINGER.
H7 INDUCES RELAXATION.

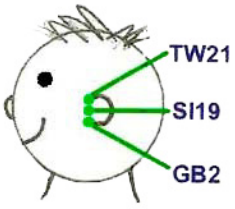


LV3 IS LOCATED ON THE TOP OF THE FOOT IN THE WEBBING/ INDENTATION BETWEEN THE BONES OF THE BIG AND SECOND TOE, UP IN THE AREA BEFORE THE TWO BONES JOIN IN A V.

PRESS AND RUB UP AND DOWN ON THE POINTS ON BOTH LEFT AND RIGHT FEET AT THE SAME TIME.
LV3 PREVENTS HEADACHES, EYESTRAIN, ALLERGIES, FOOT CRAMPS.
GB41 - THE TOP OF THE FOOT, ONE INCH ABOVE THE WEBBING IN THE INDENTATION BETWEEN THE BONES OF THE 4TH AND FIFTH LITTLE TOES.
GB41 PREVENTS HEADACHES, TREATS SYMPTOMS OF ARTHRITIS, SCIATICA AND RELAXES THE SHOULDERS AND HIPS.



THERE ARE MANY ACUPRESSURE AND REFLEX POINTS ON THE TOP AND BOTTOM OF THE FEET.
K1 ON THE BOTTOM OF THE FOOT IN THE CENTER OF THE TWO PADS RELIEVES FATIGUE, CHEST/LUNGCONJESTION, COUGHING, ANXIETY, DEPRESSION.



KEEP THE MOUTH PARTLY OPEN, TEETH APART WHEN PRESSING POINTS TW21, SI19, GB2.
PRESS ALL 3 POINTS ON BOTH LEFT AND RIGHT EARS AT THE SAME TIME;
LEFT 3 FINGERS TO LEFT 3 EAR POINTS.
RIGHT 3 FINGERS TO RIGHT 3 EAR POINTS.

TW21 - 1/2 INCH ABOVE SI19
PLACE THE RING FINGER IN THIS POINT.
PRESS INTO THE INDENTATION FELT BETWEEN THE BONES.

SI19 - IN THE INDENTATION THAT IS FELT IN FRONT OF THE EAR OPENING WHEN OPENING THE MOUTH.
PLACE THE 3RD FINGER INTO THIS POINT AND APPLY PRESSURE.

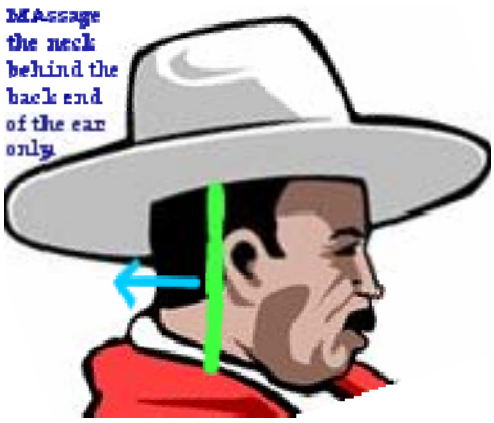
GB2 - 1/2 INCH BELOW SI19.
PLACE THE INDEX (POINTER) FINGER INTO THIS POINT AND PRESS INTO THE INDENTATION FELT BETWEEN THE BONES.
APPLY PRESSURE 1 - 2 MINUTES TO ALL 3 POINTS BOTH LEFT AND RIGHT EARS.
WHEN A PULSE IS FELT, THIS INDICATES BLOOD AND ENERGY FLOW IN THE POINT/EARS IS IMPROVED. RELEASE THE PRESSURE GRADUALLY.

There are points on the foot that affect the Visual Cortex in the brain and improve the vision.

A Natural Eyesight Improvement Student was seeing her eye doctor for a retina condition (fluid, holes in the eyes retina, partial blindness) used Acupuncture Treatment on her shoulders, other areas of the upper body to release extreme shoulder, neck tension. (eyeglasses cause this tension.) She also stopped wearing her close vision eyeglasses which she had worn for many years since childhood. She practiced the Bates Method. In a few months time the retina healed 90%, continues to heal and her close and distant vision has returned. Eyeglasses impair the eyes circulation, health, places tension, pressure, pulling on the retina, capillaries, cells, nerves in the retina, the lens, eye muscles, all parts of the eye causing progressive vision impairment.

Acupressure pictures with blue color points can be downloaded free on www.cleareyesight.info Green is a balancing color, relaxing to the eyes, mind. Blue is also a good color-it is a energy, spiritual color. Purple also... Imagine different colors, one at a time as colored light energy moving in the mind, eyes, body while relaxing, breathing deep and pressing a acupressure point.

Massage the back neck muscles only from behind the back end of the ears, back of the neck. See the green line, blue arrow in picture. Do not massage, press on the spine, vertebrae. Massaging the muscles on the skull bone is ok. Do not press in the indentations on the bottom left and right sides of the skull where the outer ends of the top neck vertebrae C-1, C-2 exist.





Pictures are provided by Microsoft Free Clipart.

Natural, Drug Free Anxiety, Depression Cure & Muscle Relaxation

The Midwest Center for Stress and Anxiety, Inc.
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Lucinda Bassett, CEO - http://www.stresscenter.com/mwc/ support@stresscenter.com
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Oak Harbor, OH 43449
1-866-955-6027

Notice that when the vision is clear, the mind is in a positive, happy state.
Worry, a tense mind/brain=lowered function of the brain with the eyes, retina, lens, eye muscles, nerves in the eyes, tense neck, eye muscles=unclear vision.
When the mind/brain is relaxed, positive, it functions correct with the eyes, retina, lens, nerves, muscles... The neck, body, eye muscles relax and vision is clear.
+Notice what you are thinking, feeling when the vision is unclear.
+Notice what you are thinking, feeling when the vision is clear.
Dr. Bates emphasizes that the state of the mind can create clear and unclear vision.

Self-Hypnosis is another helpful Tool.
Also, Read – Psycho-Cybernetics by Maxwell Maltz, M. D.
Books, CD's by Robert Monroe.

Natural, Drug Free, AA Alternative for Alcohol, Drug and other Addictions

Jack Trimpey – Rational Recovery
Addictive Voice Recognition Technique® (AVRT®) Rational Emotive Therapy - Cognitive-Behavioral Therapy – Teaches independence, how to be strong, avoid alchole by using your own brain, thoughts and proper nutrition to heal the brain/body chemistry, sugar levels, nerves, rebuild the coating on, around the nerves… Vitamin B-1, B-12, Niacin, Potassium…
(Albert Ellis - American Psychologist developed Rational Emotive Behavior Therapy)
https://rational.org/index.php?id=1
Box 800 - Lotus, CA 95651 - 530-621-2667
Books;
+The Small Book: A Revolutionary New Alternative for Overcoming Alcohol and Drug Dependence (Rational Recovery)
+Rational Recovery: The New Cure for Substance Addiction

The public is realizing that AA, Alcoholics Anonymous is Religion/Cult based, does not teach nutrition to heal the body, nerves, brain chemistry, correct healthy thinking to correct the brains chemistry, strengthen the persons mind. AA teaches harmful psychological tactics to keep the person believing he/she is weak, powerless, dependent on AA and other addicts for life. Very low success rate.

http://www.youtube.com/watch?v=uCMTqaz9Ghg&feature=related

21 - EFT – Emotional Freedom Technique

EFT is a new exercise for using Karate… energy, acupressure points on the body to release negative thoughts, emotions, stress. Stressful thoughts, emotions block energy flow, cause tension, strain in the mind, body, eyes, eye muscles, neck and unclear vision. Blocked energy is the initial cause of the negative emotions. Negative emotions increase energy blocks, tension… Tapping end points of nerve channels, energy centers to clear blocked energy removes the negative, stressful thoughts, emotions, feelings. Energy then flows correct, health of mind, body, eyes return to normal perfect health with clear vision. Thoughts, emotions, feelings are positive, happy, constructive. This further improves the health and vision.

EFT

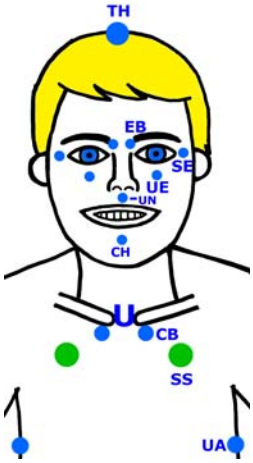
Emotional Freedom Technique

& Acupressure, Color Breathing, Visualization

For Healthy Mind, Body & Clear Eyesight

Natural Eyesight Improvement & EFT

EFT is an Easy Type of Chinese Acupressure/Puncture without Needles or Hard Pressure



EFT is applied by 'TAPPING', activating energy points, meridians on/in the body with the fingertips. Tapping removes energy blocks, (stuck, stagnant energy), orients, 'polarizes', corrects, balances and strengthens the energy flow in the body, through the Meridians/Energy Pathways, Energy Points, Chakras, Nervous System. (Electric, Chi and other Energies, Physical and Spiritual.) Tai Chi, Qi Gong, Karate Energy Control Methods are related to EFT.

EFT removes negative, destructive emotions, thoughts, feelings, stress from the mind/brain, system by correcting energy flow. The body's energies flow correct and strengthen. EFT balances and improves function of the left and right brain hemispheres. This produces good health, clear vision.

Neck, chest, shoulder, eye muscle tension, stiff, infrequent eye 'shifting' movements, headaches, strain in the mind/brain, negative, unhappy past/present thoughts, emotions, experiences, blocked energy flow, lowered liver/kidney health, staring, squinting cause unclear vision.

Negative, destructive thoughts, emotions, worry are a common cause of mental strain, back, chest, shoulder, neck, eye muscle tension and unclear vision. Lowered vision increases worry, mental strain, which then increases the body.., neck, eye muscle tension. Eye function is impaired. Light rays focus incorrect in the eye. Circulation to/in the eye lowers. Vision is more unclear.

EFT, Nutrition, Natural Vision Improvement corrects these conditions;

Blocked energy (experienced during a stressful event) happens first, before the negative emotions occur and locks them into the mind/body. Negative thoughts, emotions maintain blocked energy flow.

Removing blocked energy first results in removal of the negative emotions, thoughts, feelings and often brings instant clear vision. As EFT Tapping removes energy blocks, corrects the energy flow, resulting in removal of negative emotions, thoughts, feelings; the person can then place positive, constructive thoughts into the mind, system; think, feel in a positive, constructive way about the past or present stressful event. Positive thoughts, emotions help to correct and strengthen the body's energy flow. Correct energy flow is now maintained. Mental and physical health improve, eye function returns to normal, vision is 20/20 and clearer at all distances, close and far. Health of body organs, systems improve as energy flows correct throughout the body.

EFT improves the function of the brain, visual cortex, left and right brain hemisphere activation, integration. This improves function of the brain with the eyes, retina, eye muscles and body. Vision and mental, physical health improve. Memory, imagination, math, science, speech, learning, creativity, art, music.., skills - all functions of the brain, left and right hemispheres even the oldest, deep survival areas of the brain improve. This is a main treatment of Natural Vision Improvement. See; The Long Swing, Cross Crawl in this Book. Use the Color Breathing Relaxation Chart, Acupressure points, Shifting, Central-Fixation… in this book to increase benefits of EFT.

EFT is powerful, it works! Study EFT first before applying it to be sure it is done correct!

Karate and other methods work with the body's energy, acupressure points and meridians. A karate Master can send energy out of the body. Example; Direct energy out of the hands and throw/direct it at an opponent through space and knock the opponent down without physical contact. A true master does not abuse this power. It is used only when absolutely necessary in self-defense. Energy control is used in creative, constructive ways.

EFT is similar to Tai Chi and Chi Gong..; They all can be dangerous if applied incorrectly!

This energy is magnetic, it attracts back to the sender the thing it is used for twice as strong. It is more than just physical energy, it has spiritual aspects.

EFT removes negative, destructive emotions, thoughts, feelings from the brain/system;
The energy blocks are removed first enabling the energy to flow correct, strengthen. Then the negative emotions, thoughts are removed. This also results in removal of specific health problems in various areas of the body connected with areas where the energy was stuck, blocked/moving backward/incorrect. Mental, Physical health are improved, return to normal. Energy in the body, spine, neck, head and eyes moves correct. All these healthy conditions produce relaxation and clear vision.

Energy points, meridians, 'energy flow' exist throughout the body and are connected with body organs, parts, systems. The energy flow affects their function. Energy flowing in, near a certain body part or energy in another area of the body that connects to energy in that part affects that body parts function, health. Energy flows incorrect, blocked=lowered health. Flows correct=good health. Example;
Neck, chest muscle tension, headache, unclear vision – Remove the energy blocks in the mind, body, chest, neck=energy flows correct=negative emotions, thoughts are removed and replaced with positive ones=strain/tension in the mind, neck, chest, body and eye muscles is removed, the mind and body relax, headaches are prevented, health improves, the eyes move, function correct and vision is clear.

Blocked energy in another area of the body can also cause the neck tension. Removing blocked energy in all areas of the body by tapping all EFT points ensures relaxation of the neck and eye muscles.

Good Nutrition and correcting energy flow in the liver, kidneys has a direct connection to improvement in the health of the eyes and clarity of vision. Tap EFT points on the body for the liver, kidneys, eyes. The liver, kidney, eye energy points and other points near the eyes, on the head, face and throughout the body improve the health of the liver, kidneys, eyes and clarity of vision.

Tap through all the EFT points to correct energy flow in and health of all areas of the body, brain, eyes for clear vision.

Practice Natural Eyesight (Vision) Improvement & EFT

Natural Vision Improvement students practicing the Bates Method may experience a sudden awareness of old forgotten, unhappy events, emotions, thoughts. They are then acknowledged, released, replaced with positive thoughts, ways of thinking about the experience (past or present) and are followed by a return to clear vision.

EFT, Palming, The long Swing and other Left and Right Brain Hemisphere Activation/Integration Exercises, Correct, Relaxed Vision Habits and other Natural Vision Improvement activities help to remove blocked energy, negative thoughts, emotions, mental strain resulting in clear vision. Function of the brain with the eye muscles, retina, eyes is improved.

Books, CD's and in person training from Robert Monroe, The Monroe Institute provides a similar but different method for obtaining deep relaxation, left and right brain hemisphere activation, integration, correct energy flow and removal of destructive, negative thoughts, emotions. Many students report vision improvement after taking the course. http://www.monroeinstitute.org/

EFT Founder Gary Craig describes how a negative emotion gets stuck in the brain/system;
The negative emotion is caused by the energy disruption that can occur during a unpleasant experience. The energy disruption causes the negative emotion to occur-after the energy is blocked, flow disrupted.

Example; A Army soldier experiences a friend's loss of life or injury on the battlefield. He/she reacts in a way that disrupts the body's energy flow. The energy is blocked and may even reverse its flow and stays that way. This causes a negative, unpleasant emotion related to the event to occur and the energy block maintains it. Negative emotions, stress can maintain, increase the disruption in the energy flow, pattern.
The energy block and negative emotion impair the function/health of the mind/body and can affect the visual system, clarity of vision. People have become blind from extremely strong unhappy experiences, emotions.

If the initial reaction to the event was different and did not cause a energy disruption in the mind/body, the negative emotion would not have formed.

When I was in the Military in Fort Gordon, Georgia, USA, on a 1 day leave, I was attacked by two civilian men. Assaulted in a most unpleasant way and punched so hard that my feet left the ground and I flew through the air. My head crashed into a tree. I escaped, ran, was caught and hit again. The man went back to get a gun. I ran and hid in the woods, buried myself under the leaves and stayed quiet, imagining I was in another place. (This is an old trick based on the idea that people can sense another person, like when you feel someone behind you staring at you or how a animal senses fear. You hide and think completely of something else, imagine that you are in a different place, think and feel you are in that other place and the enemy will pick up on that thought, feeling and think you have left the area.) They came back and could not find me, gave up quickly and left. I then hitch-hiked home to the Army Base without cloths. (They stole my cloths) A nice older man gave me a ride to the base and then I went to the hospital. Severe bruises on head. The police told me that the two men had used my coat and cloths as a mask/disguise when they robbed a store 30 minutes later. They were traveling the highways robbing people, violent.

I was trained well by the U.S. Army. As a soldier I expected danger and my only thoughts were that I escaped and conquered the situation by being alive and returning to base camp! Never had a mental or physical health problem from the experience. There was not any fear, nervousness… during the experience. Only thoughts later that day were about what fun I was to have with friends on the next vacation. Maybe because I had about 20 beers and white lightning that night. No bad reactions=no energy disruption=no negative emotions.

EFT Tapping removes energy blocks, corrects the energy flow, resulting in removal of negative emotions, thoughts, feelings. The person can then place positive, constructive thoughts into the mind, system, feel, think in a positive, constructive way about the past or present unpleasant, stressful event. Mental and physical health improve, eye function returns to normal, vision is 20/20 and clearer at all distances, close and far.

EFT was discovered, created by Gary Craig – Website, Free Training Videos and Booklets at;

Gary Craig EFT, PO Box 269 Coulterville, CA 95311
36808 Greencroft Close, The Sea Ranch, CA 95497

EFT Videos, Websites, Chart

Gary Craig website; https://www.emofree.com
https://www.emofree.com/unseen-therapist/read-this-first.html

EFT Video for This Book - http://www.youtube.com/watch?v=BXDdMjFoeug

Main Instructions

+ Tap with the fingertips, not the fingernails. **+** Tap firm but with gentle pressure.
+ Tap with 2 fingers - the index (pointer) and middle finger when tapping around the eyes, face… on small areas. Be careful; do not tap into/on the eyes or eyelids.
+ Tap with 4 fingers on larger areas; top of the head, under arm…
+ It is easiest to tap with the dominant hand – Example: if you are right handed, tap with the fingers of the right hand. (See pictures.)
Left and right hands can be used- alternating tapping with the left and right hands fingers to activate and integrate the left and right brain hemispheres. (Dexterity)

+ There are some **Double Points**; two points, on the left and right sides of the body;
EB has two points, **SE, UE, CB, UA, BN…**
These can be tapped by tapping only one point on one side of the body, with one hands fingers, or;
by tapping with both left and right hands fingers at the same time; Example, CB - left hands fingers tap CB point on the left side of body and right hands fingers tap CB point on the right side of body.
Also; When tapping with one hand on any double points its ok to alternate the side of the body to tap a point on; Example; Tap the eyebrow point (EB) on the right side of the face with the right hands fingers, then tap the side eye (SE) point on the left side of the face with right hands fingertips, (or left hands fingertips) then as you move down the body tapping points and reach the CB (below collar bone) point; alternate back to the right side of the body to tap that point on the right side with right or left hands fingertips…
Alternating tapping on the left and right sides, using left and right hands activates and integrates the left and right brain hemispheres and good dexterity. This improves vision in the left and right eyes at all distances, close, middle and far. Crossing over the center of the body with the left and right hands also activates/integrates the left and right brain hemispheres;
+Tap the left side of the body with the left hand and sometimes tap it with the right hand crossing over the body.
+Tap the right side of the body with the right hand and sometimes tap it with the left hand crossing over the body.
This improves the brains process of working with EFT and improves the brains function with the eyes, eye muscles, clarity of vision. I was trained as a cook in California by a retired Army Sergeant, Carl Tatem to use the left and right hands equally. It improved my brain function, math skills, personality.

Tapping on a point does not have to perfect, exactly on the point; all points are interconnected by the meridians, so relax, the point, energy center will be activated even when the tap is not directly on the point.

EFT Instructions – Basic Method

#1A - Analyze the Problem

Think of the problem and negative feeling that you want to resolve, remove.
(Start with a small, easy problem to cure.)
Examples;

+ A destructive unpleasant emotion, thought, feeling caused by a past or present event, experience, situation, person…
+ A bad habit; sugar, caffeine, alcohol craving… A Incorrect Vision Habit: squinting, staring.
+ Fear of something, anger, guilt, anxiety...
+ A physical condition; neck muscle tension, headache, unclear vision...
+ Think how you feel about this problem right now, in the present.
+ Where is it located in the body? Locate uncomfortable sensations the negative emotion, thought, feeling creates in the body.
+ What type of feeling is it? How does it feel?
+ How strong is it, its intensity on a scale of #1-10? 10 being the highest, 1 lowest, 0 none.

In the example below I will use neck muscle tension as the problem I want to cure, since neck muscle tension is a main cause of eye muscle tension, limited eye movement, unclear vision and, I have neck tension from a bad treatment by a dishonest chiropractor. I will also be tapping away the fear, sadness, frustration, anger, helplessness I feel from being purposely harmed by this criminal type of doctor.

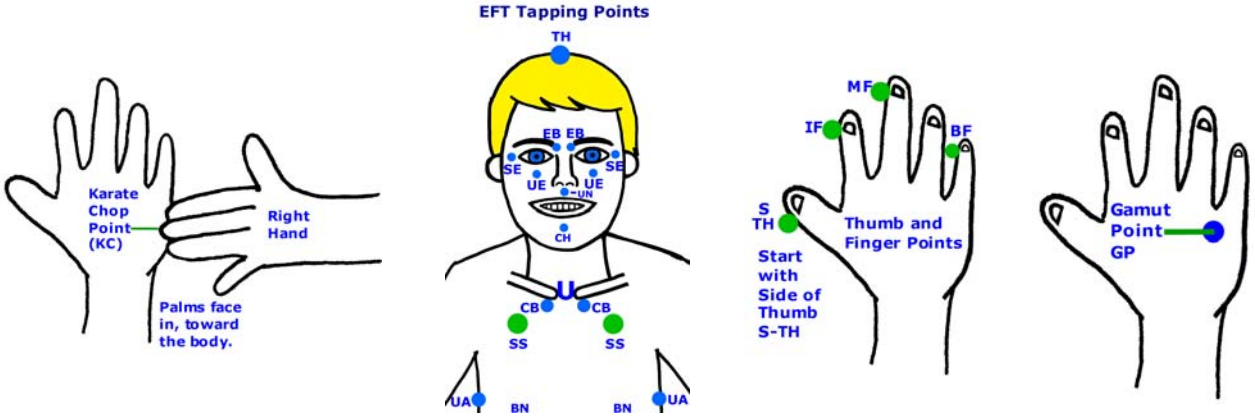
Create Your Affirmation

State the Problem with a Positive, Constructive Statement About Yourself;

"Even though I have this Neck Muscle Tension, I deeply and completely accept myself".

(Neck muscle tension can be replaced by; unclear vision, fear, anxiety, stomachache, craving for sugar… any problem, negative feeling, condition you want to remove.) Don't dwell on the unpleasant experience. Just state it into the affirmation, then you will tap it away with the positive affirmation.

Tap the points shown below in the order listed in the pictures and directions



#1- Setup-KC **#2 - Sequence-Points on Head, Face, Body, Fingers** **#3 - Gamut - 9 Steps**

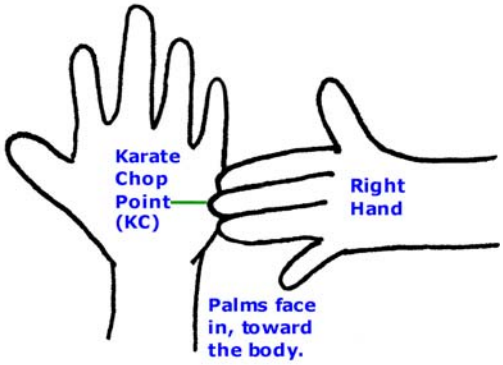
Large pictures with complete directions for each step are on the last page of this chapter.

#1B – The Setup

KC – Karate Chop Point - Tap KC <u>continuously</u> (Tap, Tap, Tap, Tap…) as you state your affirmation out loud (3) three times:

"Even though I have this <u>Neck Muscle Tension</u>, I deeply and completely accept myself".
"Even though I have this <u>Neck Muscle Tension</u>, I deeply and completely accept myself".
"Even though I have this <u>Neck Muscle Tension</u>, I deeply and completely accept myself".

Say it with <u>feeling</u>, think where it is felt, how it feels and be <u>positive</u> about yourself. Let the mind/body know the difference between the negative feeling and a good/positive feeling/state.



Tap with 2-3 fingers, firm but gentle pressure. You can use the left or right hands fingers to Tap. It is easiest to Tap with the dominant hands fingers onto the non-dominate hands KC Point.
Example: if you are right handed, tap with the right hands fingers onto the left hands KC Point. See picture.

Breathe deep and relax.

The Soar Spot (SS) can be used in place of KC for the Setup #1. KC is used often because it is quicker.
The Soar Spot is more effective especially when energy blocks are stubborn.
Do not tap the Soar Spot. Rub the Soar Spot as you state the affirmation.
See directions in the large picture for locating the Soar Spot.
Rubbing the Soar Spot also improves lymph flow in this area & relaxes muscle tension in the chest. Rub both left and right Soar Spots with left and right hands or rub only one side with one hand. At first it feels soar but continue to rub the spot and lymph and energy will flow correct and the soreness will stop.

The Setup #1 (KC or Soar Spot) is <u>done first</u> to Polarize, orient the body's energy correct to enable the energy to unblock and flow normally, in the correct direction when tapping the other points and to place the mind in a positive, constructive state. Negative emotions can cause the body's energy flow, polarity (like a battery) to reverse – a unhealthy state which prevents normal energy flow and lowers the health. This must be corrected first with the Setup–Step #1.

#2A - The Sequence – Part A – Head, Face, Body Points

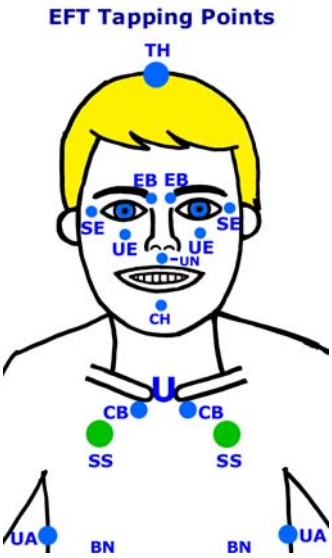
Begin by **creating a shorter 2 word 'reminder' phrase for the affirmation; Example: "Neck Tension"**.

This will be repeated as you tap the remaining points on the head, face, body and fingers. Tap down the body, from the head down, each point following the previous point. (This is easy to memorize.)
It is easiest to Tap with the dominant hands fingertips. Tap with the index and middle fingers firmly but with gentle pressure. More than 2 fingers can be used on larger areas. Two fingers are used on small areas such as the eyes… (Be careful not to tap into/on the eyes or eyelids. Cut fingernails short.)
Tap with fingertips only near the eyes, no fingernails.
(Tap about 7 times on each point. Do not count or focus on the taps. Its ok if the taps are 5-8… times.
Keep the mind on the feeling you are tapping away, the affirmation.)

Tap 7 times (7x) on each point and **state the Short Affirmation once on each point as it is being Tapped**;

TH – Top of the Head – Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap with both left and right hands fingertips, 4 fingers per hand, total 8. Tap Lightly.
This is a group of points, many meridians/energy pathways connect here.
It is a major Chakra, Crown Chakra, large energy point, wheel. Clears the mind, brings the thoughts, emotions to a positive state, awakens entire energy system.



EB – Eyebrow Point - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap with 2 fingers. Careful, do not tap on/into the eye or eyelids.

SE – Side of the Eye - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap with 2 fingers. Careful, do not tap on/into the eye or eyelids.

UE – Under Eye - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap with 2 fingers.

UN – Under Nose - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap with 2 fingers

CH – Chin - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap with 2 fingers

CB – Collar Bone - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap with the flat of the hand, 4 fingers. Improves adrenal gland and kidney function.

UA – Under Arm - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

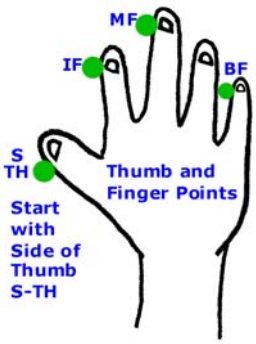
Tap with 4 fingers.

BN – Below Nipple - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap with 2 fingers. On lower area of upper chest.
Improves liver health. A Liver meridian. Healthy liver, kidneys=Clear Vision.

More eye points are in the acupressure chapter. They improve the clarity of vision. All points/meridians connect.
Tap all the EFT points to improve health in every body organ, system, part of the body, visual system.
Use the Acupressure points 15 minutes - 1 hour... after practicing EFT.

#2B - The Sequence – Part B – Finger Points



S-TH – Side of Thumb - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Tap S-TH and all finger points with 2 fingers

IF – Index (Pointer) Finger - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

MF – Middle Finger - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

(Skip the Ring Finger)

BF – Baby (Little) Finger - Tap 7x while stating the short affirmation once out loud: **"Neck Tension".**

Breathe Deep and Relax.
Check the strength/level of the negative feeling on a scale of 1-10.
How does it feel? Has it moved, changed?

#3 – The Gamut Point with 9 Steps



(Steps 1-9 take about 10 seconds. They must be done in this order.)

Tap the Gamut Point continuously as you perform Steps 1-9:

1 – Close the eyes

2 – Open the eyes

3 – Look all the way down and to the right. (Hard without force.)

(Keep the head straight, still, the head does not move with the eyes in steps #3, 4, 5, 6)
In steps 3-4, EFT Teachers state to look down hard. Be sure to avoid force, eye muscle tension. The natural eye function is to move the head/face with the eyes and to look easy, not hard, but it's ok to do it as described for this EFT exercise. The head, neck are relaxed, no tension.

4 - **Look all the way down and to the left. (Hard without force.)**

5 – Roll the eyes all the way around clockwise > in a complete circle.

Pretend the nose is the center of a clock and the eyes are looking at the numbers around the edge of the clock. The head does not move around with the eyes in steps # 5, 6 but do allow a relaxed head, neck. A small movement is ok. Avoid muscle tension.

6 - Roll the eyes all the way around counter-clockwise < in a complete circle.

Looking down left and right, rolling the eyes around clockwise and counter-clockwise activates and integrates the Left and Right Brain Hemispheres and activates many areas, functions of the brain.

7 – Hum a favorite song – 2 seconds

Activates the Right Brain Hemisphere – Creativity, art, music, intuition, feeling…

8 – Count out loud, quickly 1, 2, 3, 4, 5

Activates the Left Brain Hemisphere – Math, Calculating, digital, formulas, details, analytical…

9 – Hum a favorite song again – 2 seconds

+Then, Breathe deep and relax.

The Gamut Point with 9 steps fine tunes the brain, activates many areas of the brain and activates, integrates the left and right brain hemispheres maximizing all the brains functions, increases ease and effectiveness of EFT, improves the brains absorption and process of the EFT Tapping exercise, brings a pleasant feeling, relaxation, correct energy flow and removes negative/destructive thoughts, emotions.

The Gamut Point/9 steps, Tapping KC and all the EFT points removes energy blocks, gets energy flowing correct, like a battery that has been positioned correct in a device, improves health, removes negative, unhappy thoughts, emotions, enables the person to place positive thoughts, emotions into the brain, system, removes muscle tension in the body, neck, head, eye muscles.

Tapping points on the body, KC, Fingers and the Gamut point and doing the eye movements, counting, humming in the 9 Gamut steps activates and integrates the left and right brain hemispheres, activates/improves function of all parts of the brain, visual system, memory, imagination, math, science, skills… and other brain functions. All of these positive conditions improve the clarity of vision. (See the Left and Right Hemisphere chart in this book.)
Tapping points that improve energy flow/meridians connected to the liver/kidneys, eyes improves eye health and clarity of vision. Chinese medicine states a direct link to the liver, kidneys, eyes, vision.

#4 – Check for Improvement

Check the level of the feeling on a scale of 1-10.

Is it gone or has it reduced in strength? Has it moved to another part of the body? Does it feel different?
The feeling may be stronger now because the 9 Gamut steps activate areas of the brain, left and right hemispheres and this improves the brains ability to focus upon and work on the feeling.

+ If the feeling is stronger or is still there but reduced in strength or changed or if it is gone but a new negative, unpleasant feeling, thought, emotion takes its place:

+ **First change your affirmation to fit the new feeling; Examples:**
"Even though I still have this feeling (neck tension…), I deeply and completely accept myself"
or:
"Even though I have this (state the new feeling if a new negative feeling, thought took the place of the old one or it has moved…) I deeply and completely accept myself."

Also; make a new 'short two word phrase' for your affirmation.

#5 - Repeat all steps again, Tapping the points listed below starting at #2 (The Sequence) with the new short affirmation.

Head-TH,
Face -EB, SE, UE, UN, CH
Body – CB, UA, BN
Fingers – S-TH, IF, MF, BF (No 9 Gamut Point on this step)

[The affirmation is changed each time the 'Feeling' changes as you Tap through a round of EFT.]

#6 - Check the feeling again as described in step #4.

If the feeling remains at any level – **Redo Step #4 and #5 again.**
(TH is not mandatory on every repeat cycle – Start with TH or EB).

Head-TH,
Face -EB, SE, UE, UN, CH
Body – CB, UA, BN
Fingers – S-TH, IF, MF, BF (No 9 Gamut Point on this step)

#7 – Check the feeling again. It should be reduced. If any of the feeling remains:

Redo Step#4 and then;

Repeat the entire routine again; Number #1A, 1B, 2, 3, and 4. Go thorough all the steps, points. The Gamut Point 9 steps are included this time; go directly into the Gamut #3 after # 2 without rechecking the feeling.

KC-Karate Point
Head-TH,
Face -EB, SE, UE, UN, CH
Body – CB, UA, BN
Fingers – S-TH, IF, MF, BF
Gamut Point-GP - with 9 steps

After the Gamut, repeat Number # 2A, 2B without the Gamut Point.

Head-TH,
Face -EB, SE, UE, UN, CH
Body – CB, UA, BN
Fingers – S-TH, IF, MF, BF (No Gamut)

Check the feeling – (Repeat #4 – Check for Improvement.)
The feeling should be greatly reduced or completely gone.
If any bit of the feeling remains: Revise the affirmation as needed.
Redo the entire routine From KC to the Gamut Point again:

KC-Karate Point
Head-TH,
Face -EB, SE, UE, UN, CH
Body – CB, UA, BN
Fingers – S-TH, IF, MF, BF
Gamut Point-GP - with 9 steps

Breathe deep and relax

Last – Repeat until the feeling and all negative feelings, thoughts, emotions are removed;

Head-TH,
Face -EB, SE, UE, UN, CH
Body – CB, UA, BN
Fingers – S-TH, IF, MF, BF (No Gamut)

End with TH-Top of the Head Point – Tap with 8 fingers: 4 left hand, 4 right hand.

+ Breathe deep and relax – drink some water. Then;
+ Do the Figure Eight, Long Swing, Rock, Cross Crawl to further activate and integrate the left and right brain hemispheres and assimilate the EFT effects into the brain, body, system.

There are two versions of EFT – The Basic (Full) Version and the Short Quick Version.
The full version covers all areas of blocked energy, all the major Tapping points, meridians and is especially effective in stubborn cases, where blocked energy takes a while to locate and correct.
This book provides directions for the full Basic Version.
Directions and EFT Tapping Points on the head/face, body, hands are shown in the pictures.
New shorter EFT versions are often just as effective.
See the website links for more points and the Short EFT Version.

The Basic Routine is easy to memorize;

+Think of the problem and create an affirmation. (Create the long and short two word affirmations.)
+The Setup - KC or SS with the long affirmation.
+The Sequence – Points on the head, face, body with short affirmation.
Tap the Points *down the body* from the head downward. Each point is below the last one.
+The Finger Points with short affirmation.
+The Gamut Point with 9 steps.
+ Check the feeling. Adjust affirmation.
+Repeat.

There are more points on other areas of the body.
Check the websites for free booklets, and list of body organs, systems each point is connected to, and negative emotions, thoughts each point removes and positive ones they activate.

+ When the negative feelings, thoughts, emotions are Tapped away you can now tap all the points again while thinking positive, constructive thoughts. Tap positive thoughts, emotions, feelings, energy into your brain, body, system. Create a new positive phrase to state as you tap.
These positive thoughts, emotions, and correct energy flow creates positive, healthy energy in the body, mind, sprit and this connects with, attracts positive energy. This is the 'Law of Attraction'; You attract the same type of energy, thoughts, deeds you create, maintain.
Radiate positive thoughts, energy and it comes back to you twice as strong.

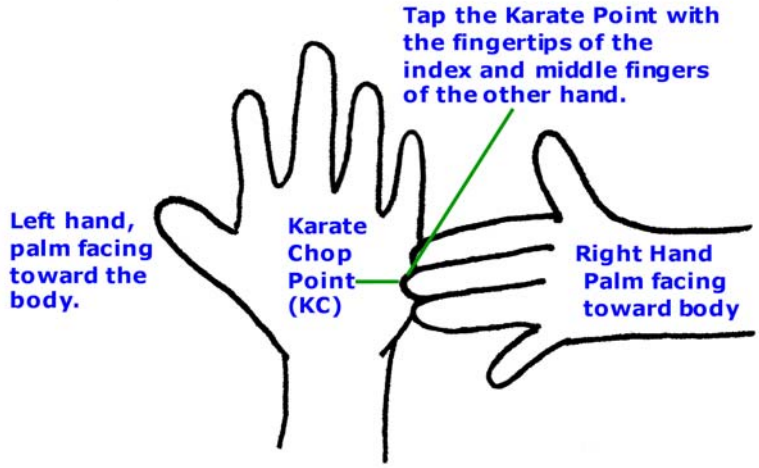
Certain Yoga eye exercises, meditation such as; staring at a candle with the eyes forced upward and immobile, kept in that position for a long time causes; eye muscle tension and vision impairment.
There are some Yoga eye exercises on YouTube teaching to look to the left, right, up, down while keeping the head/face straight, not in the same direction the eyes move to and to force, stretch the eyes as far to the side, up, down... as possible. This is against Bates teaching of Natural Vision Improvement is the opposite of central-fixation and prevents easy, relaxed eye movement, shifting, blinking and this causes eye muscle tension and unclear vision.
The true, natural eye function is to move the eyes and head together, in the same direction, easy, relaxed with no force, no effort. The eyes normally move continually, automatically, shifting from point to point. Some Yoga eye exercises are helpful when done without force, no strain. The 9 Gamut EFT steps is the best version I have seen, it will not tense the eyes, eye muscles. Do as a exercise for a few seconds. Do not do it all the time as a habit. (It is normal for the eyes to move up, down, left, right... with or without moving the head/face when remembering something, figuring a task... This occurs when certain areas of the brain are activated by thought, emotion, creating mental pictures...) Detectives observe this to determine if a person is lying.
Moving the eyes only (without moving the head/face with the eyes) up, down, left, right, circular... is a EFT (Emotional Freedom Technique) exercise that activates/improves function of many areas of the brain, activates, integrates the left and right brain hemispheres and this does improve function of the visual system and the clarity of vision.

Always return to normal eye function; Bates Method, Correct, Relaxed, Natural Vision Habits-Shifting, Central-Fixation, Moving head/face with the eyes when looking at objects.

The 3 Pictures show the EFT steps in correct order;

Karate Chop Point (KC) - First Tapping Point

To align, orient, 'polarize' the body's energy correct to enable energy to unblock, flow normally when tapping the other EFT points. (The 'Soar Spot' Point can be used in place of KC.)



Tap KC continuously while stating the long affirmation out loud three (3) times;
"Even though I have this feeling: (state the thing you want to remove: Neck tension, unclear vision, anxiety, anger, guilt, stress, craving for sugar, caffeine...) I deeply and completely accept myself."

Karate Chop Point (KC) is located on the left and right hands, in the center of the outer side/edge of the hand between the base of the little finger and top of the wrist. It is easiest to tap with the dominant hand onto KC of the non-dominant hand.

Example: If you are right handed; the right hand's fingertips tap the Karate Point on the left hand. See diagram.

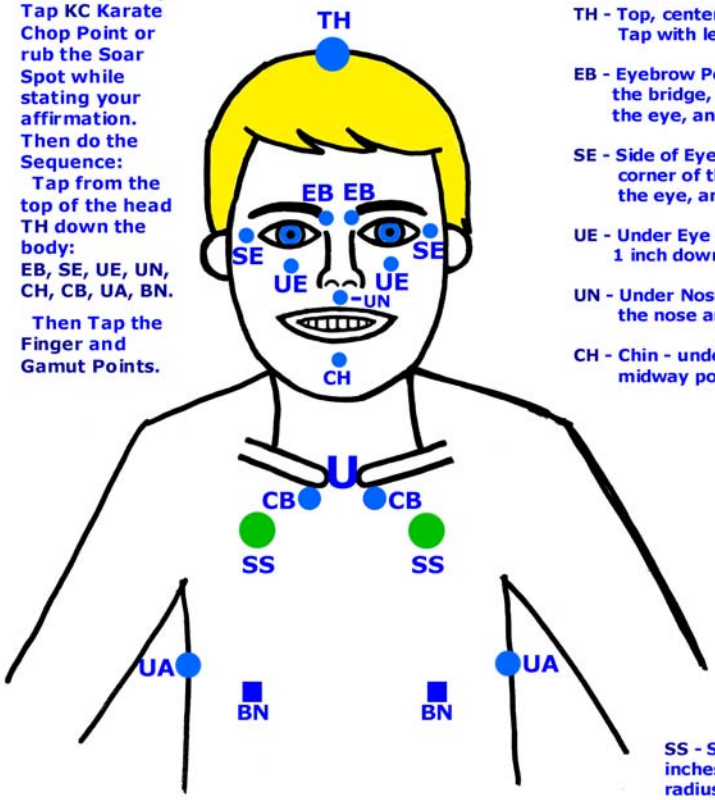
It's ok if more than two fingers tap the point. More fingers are used on larger points/areas and 2 fingers on smaller points on the face, near the eyes...

KC is the starting point, first point that is tapped while stating your affirmation: emotion, problem... to be removed, cured.

EFT Tapping Points

Start-#1 Setup:
Tap KC Karate Chop Point or rub the Soar Spot while stating your affirmation.
Then do the Sequence:
Tap from the top of the head TH down the body:
EB, SE, UE, UN, CH, CB, UA, BN.

Then Tap the Finger and Gamut Points.



#2 - The Sequence

TH - Top, center of the head - a group of points.
Tap with left and right hands, 8 fingertips. Tap gentle, lightly.

EB - Eyebrow Point - inner edge of eyebrow, just above and close to the bridge, side of the nose. Tap with 2 fingers. Do not tap on/into the eye, and not on the eyelids.

SE - Side of Eye - End of eyebrow, on the bone bordering on outside corner of the eye. Tap with 2 fingers. Do not tap on/into the eye, and not on the eyelids.

UE - Under Eye - On the bone under the eye directly under and about 1 inch down from the eyes pupil.

UN - Under Nose - under the nose in the crevice between the bottom of the nose and top of the upper lip.

CH - Chin - under the bottom lip, between the bottom lip and chin, midway point of chin and bottom of lower lip.

CB - Collarbone - (<u>not</u> on the collarbone). Below the inner end of the collarbone and over a bit: Place your finger in the U indentation between the collarbone ends, center/base of the neck and move the finger down 1 inch and out to the left or right 1 inch. Tap with the flat of the hand, 4 fingers.

UA - Under arm - 4 inches down from the armpit on side of body. Tap with 4 fingertips.

BN - Below Nipple - Bottom of upper chest. Improves liver health.

Next: Tap the Finger Points, then the Gamut Point with 9 steps. See other directions, diagrams.

SS - Soar Spot - Place the finger in the U. Move it down 3 inches and out left or right 3 inches and press/rub in a 2 inch radius to find a soar area/spot. Rub the spot, do not tap it. The Soar Spot is done in place of KC in the Setup. Use either.

Tapping Points on Left and Right Hands Fingers and Gamut Point.

S-TH - Side of Thumb - On the outside edge of the thumb, side facing the other hand, even with the base of the thumbnail.

IF - Index/Pointer Finger - On the side of the index finger, side facing the thumb, even with the base of the fingernail.

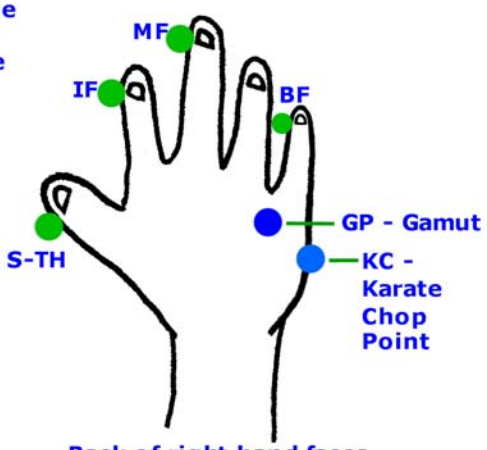
MF - Middle finger - On the side of the middle finger, side facing the thumb, even with the base of the fingernail.

(Skip the Ring Finger.)

BF - Baby/Little Finger - On the side of the little finger, side facing the thumb, even with the base of the fingernail.

GP - Gamut Point - On the back of the hand. Start between the base/ knuckles of the ring and little fingers and move back 1/2 inch toward the wrist into the valley between the finger bones.

Right hand, back of the hand is shown in the picture. This person is left handed and is tapping the points on the right hand with the dominant hand: the left hands fingertips.



Back of right hand faces the body when Tapping the Finger Points. Palm of hand faces body when Tap the Gamut Point.

Tap each Finger Point about 7x while stating the short 2 word affirmation once on each point.

Then tap the Gamut Point continuously while doing doing the 9 Gamut steps:

1 –Close the eyes
2 –Open the eyes
3 –Look all the way down and to the right. Head still.
4 -Look all the way down and to the left. Head still.
5 –Roll the eyes all the way around clockwise in a complete circle.
6 -Roll the eyes all the way around counter-clockwise in a complete circle.
7 –Hum a favorite song – 2 seconds.
8 –Count out loud, quickly 1, 2, 3, 4, 5.
9 –Hum a favorite song again – 2 seconds.

+ Breathe deep and relax .

The Gamut Point and 9 steps activates and integrates the left and right brain hemispheres, activates many areas/functions of the brain, visual system, greatly improves the brains function/process of EFT Tapping.

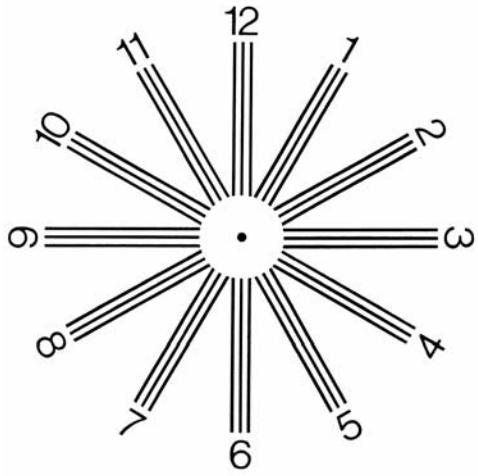
22 - ASTIGMATISM REMOVAL

All Correct Natural Vision Habits; shifting, central-fixation, relaxation.., and Natural Vision Improvement activities remove astigmatism.

The Standard Astigmatism Wheel on the right > is used by eye doctors to determine if the eyes contain astigmatism. The patient is told to look at the dot in the center of the wheel while at the same time trying to see all the lines around the wheel with the peripheral vision to determine if any of the lines are less clear than other lines, wavy, light... The standard astigmatism wheel is not an accurate test for astigmatism. Many people that do not have astigmatism experience temporary astigmatism when looking at the wheel in this way.

Trying to see all the lines in the peripheral field equally clear at the same time and; looking at the dot in the center of the wheel while trying to see all the lines in the peripheral field is incorrect eye function, prevents central-fixation, shifting, relaxation, movement and causes staring, diffusion, eccentric-fixation, mental strain, eyestrain, eye muscle tension, blur and astigmatism.

Astigmatism wheel



Look at the lines on the wheel, one line at a time.
Shift, trace along the lines; left and right, up and down, diagonally.
Remember, imagine and see the line the eyes are looking at dark black, clear, straight.
Practice with the eyes open, closed, open.
Practice with both eyes together, then one eye at a time; left, right, left, right, then both eyes together again.

The correct way to see the lines clear on the standard and Natural Vision Improvement astigmatism wheel charts is;

+ Look directly at the lines, one line at a time to see the lines clear; eyes, head/face, directed at the line.
+ Look at one line at a time and place the part of the line the eyes are looking at in the center of the visual field. See one line, one small part of a line clearest at a time in the center of the visual field and move the eyes, central field on/along the line, moving over parts of the line;
Shift on the line; move the eyes, center of the visual field from part to part on the line by tracing back and forth along the line or by shifting from point to point on the line; part to part in any direction.
+ Do not try to see other lines in the peripheral field as clear as the line that the eyes are looking directly at in the center of the visual field.
+ Shift from line to line; look at one line, then a different line, then another.
The clear center of the visual field moves with the eyes from line to line, part to part keeping each line, each part the eyes look at in the center of the visual field and perfectly clear.
Move the head/face, body with the eyes as the eyes move on the lines.
Blink, breathe abdominally, relax, think thoughts.

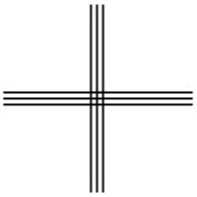
The Natural Eyesight Improvement Astigmatism Wheel does not have a dot in the center.
This allows the eyes to move completely along the lines, across the wheel, through the center of the wheel; left and right, up and down, diagonally...
The eyes can also shift about to any area of the wheel, from line to line in any direction.

Shifting on round objects; a ball, globe, circle keeps the eye and cornea in its normal healthy, round, even shape for correct focus of light rays onto the eyes retina and clear vision.
The astigmatism wheel tests for astigmatism.
Shifting, tracing on/along the lines, circles on the wheels helps to remove astigmatism.
See wheel pictures on the next pages.
+Print the astigmatism wheels large on 8 x 11 or larger paper for practice at far and middle distances.
+Print a small copy for practice at close and reading distances up to 3, 2 inches from the eyes.

Place the wheel at eye level. Stand and look at the wheel.
Shift, trace on the lines and circles on the circle charts.
Shift, trace on one line or circle at a time.

Use Correct Vision Habits; Relax, blink, shift, central-fixation, memory, imagination. Breathe.

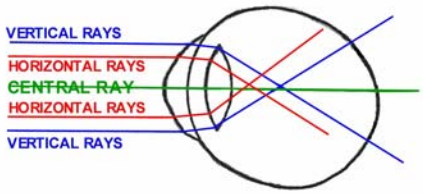
Example; shift on the horizontal line; 9-3.
Move the eyes, center of the visual field left and right along the line.
Move the head/face and body with the eyes together; at the same time, in the same direction.
Relaxed, synchronized movement.
Remember, imagine the line dark black, straight and clear.
Do this with the eyes; open, then closed, using the memory, imagination, then open again.
Practice with; both eyes together, then one eye at a time, only left, then only right, then with both eyes together again. If vision is less clear in one eye: practice extra time with that eye to remove astigmatism in the left and right eyes, get the vision equal, perfect in both eyes.



Next; practice on a vertical or diagonal line; 12-6, 8-2, 10-4, 7-1...
Practice on all the lines, one line at a time.
Remember to use central-fixation; see one small part of the line darkest black and clearest at a time in the center of the visual field. The center of the visual field moves with the eyes, visual attention as the eyes move, shift/trace from part to part on/along the line.
See page 260 for more directions for the astigmatism wheel, and videos.

Now; practice on the circles, one circle at a time. Page 268+
Trace (move the center of the visual field) on the black ink around a circle counter-clockwise and clockwise.
Shift on a circle; top and bottom, left and right, diagonally...
Move the head/face, body with the eyes; same time, same direction.
Shift, trace a circle and remember, imagine the circle dark black, clear and perfectly round.
Practice with the eyes; open, closed, open.
Practice with; both eyes together, one eye at a time, then both eyes together again.
(Extra time with less clear vision eye.)

OBJECTS EMIT HORIZONTAL—— AND VERTICAL | LIGHT RAYS.
A IRREGULAR CORNEA, EYE, LENS SHAPE DISRUPTS THE FOCUS OF LIGHT RAYS IN THE EYE AND CAUSES VERTICAL AND/OR HORIZONTAL LIGHT RAYS TO FOCUS INCORRECT BEFORE AND/OR BEYOND THE RETINA RESULTING IN DISTORTION/BLUR IN VARIOUS AREAS OF THE VISUAL FIELD.
IN THE DIAGRAM BELOW; THE IRREGULAR CORNEA AND EYE SHAPE CAUSES HORIZONTAL RAYS TO FOCUS BEFORE THE RETINA AND VERTICAL RAYS TO FOCUS BEYOND THE RETINA RESULTING IN A SPECIFIC TYPE OF ASTIGMATISM.
OTHER VARIATIONS OF THIS CONDITION CAN OCCUR CAUSING DIFFERENT TYPES OF ASTIGMATISM ; HORIZONTAL RAYS MAY FOCUS CORRECT ON THE RETINA WHILE VERTICAL RAYS FOCUS INCORRECT BEYOND OR BEFORE THE RETINA.
ALL LIGHT RAYS MIGHT FOCUS INCORRECT BEYOND THE RETINA. ANY VARIATION OF INCORRECT AND CORRECT FOCUS OF LIGHT RAYS MAY OCCUR.



(The circle may appear oval; the width or the height too long if the eyes contain astigmatism and/or it may appear uneven, wavy, some areas clear, some areas blurry, double, triple...)
Imagining the circle round, dark black, clear and single removes the astigmatism and the circle will be seen round, single and clear.
Use central-fixation; see one small part of the circle darkest black and clearest at a time in the center of the visual field.
Shift or trace continually, relaxed from part to part on the circle.
The clear center of the visual field moves with the eyes from part to part.

When the vision is unclear, contains astigmatism, other conditions, the person might tend to avoid moving the eyes in specific directions or tend to place objects of visual attention in the peripheral field, use the peripheral field of the retina to see.
This causes eye muscle tension, more astigmatism, blur and other abnormal eye conditions.
Shifting, tracing on the circles, and on the lines horizontally, vertical, diagonally gets the eyes moving easily in every direction, relaxes the eye muscles, improves eye muscle function and brings the eye, cornea to its correct round, smooth, even shape for removal of astigmatism and, also improves convergence, divergence, accommodation, un-accommodation. All this brings clear vision.

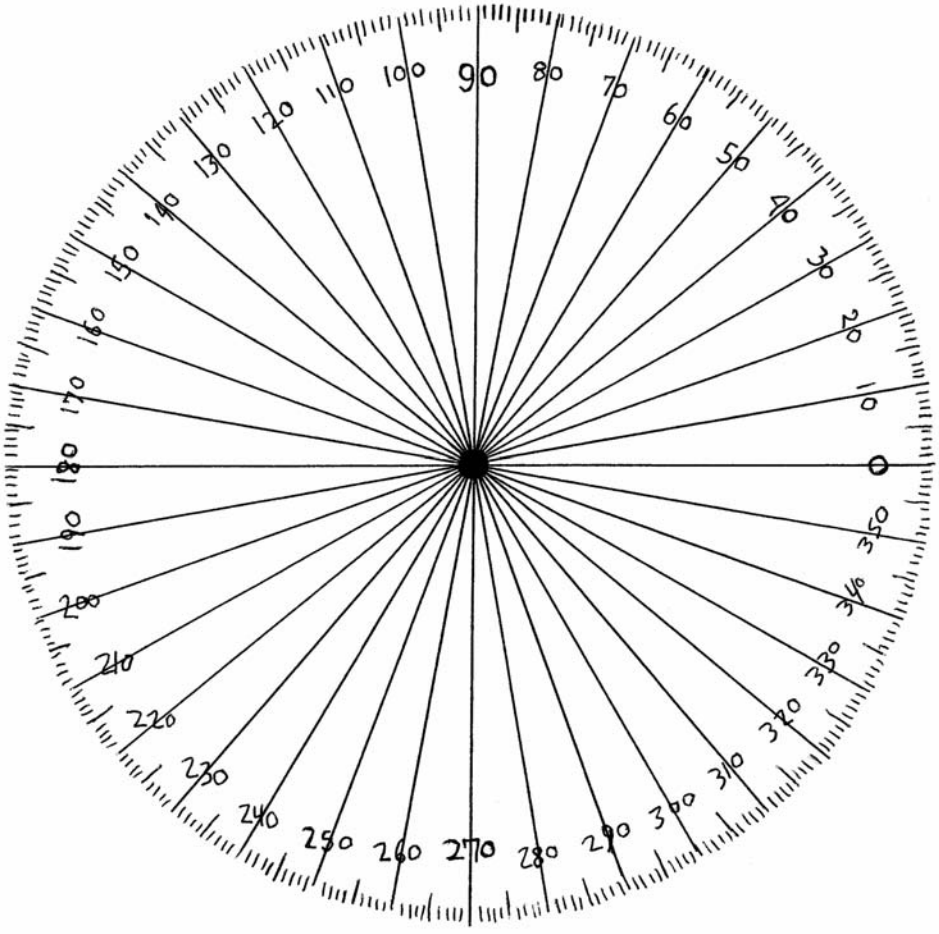
Keep the astigmatism wheel charts on a wall at home, work and glance at them occasionally and shift on the lines, circles, remember, imagine it dark black, clear, correct shape to keep the vision clear.

It is harmless for the eye to experience a tiny bit of temporary astigmatism occasionally.
The shape of the eye, cornea can change frequently, causing a little astigmatism, blur temporarily due to stress, diet, squinting, staring...

Find the Exact Angle of Astigmatism with This Chart

Blurry, distorted, double, triple... lines in the circle can be caused by a area of the eye, cornea that has a wave, uneven curve, shape that is causing a angle of astigmatism.
Place the black dot in the middle of the circle at eye level, between the left and right eyes. Look at, move the eyes, visual attention (center of the visual field) along the lines, one line at a time.
Practice Shifting, Tracing, Central Fixation on the chart lines to remove the astigmatism, return clear vision. Practice with both eyes together, one eye at a time, then, both eyes again.

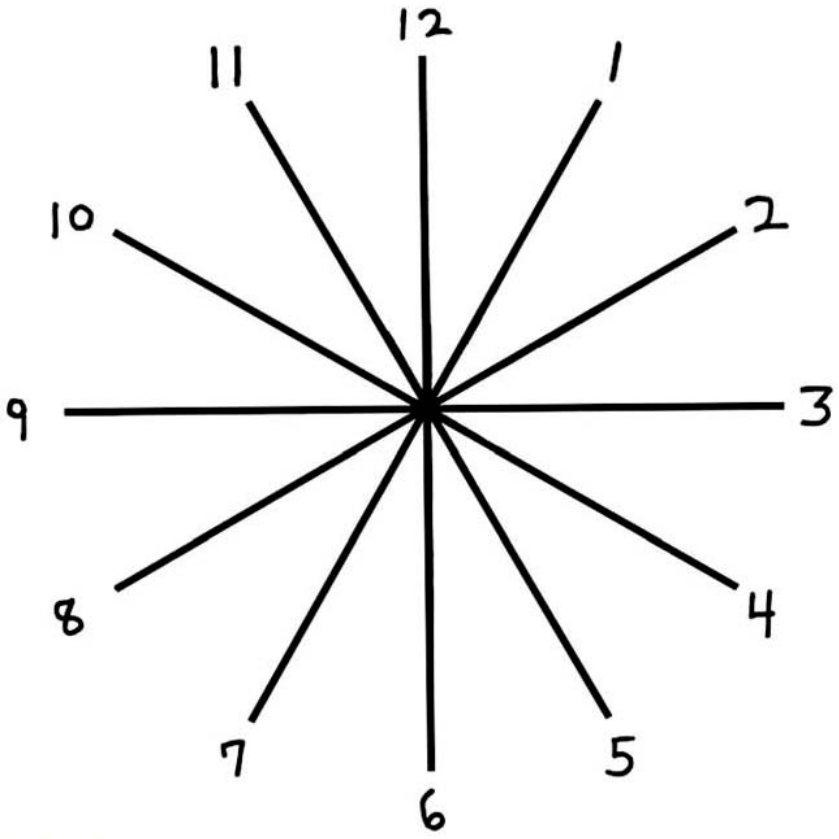
Top



Look at one line at a time as the eyes move about the chart. Blink, relax, take your time. If a line appears blurred, wavy, distorted, double, grey... it may indicate Astigmatism. Astigmatism fluctuates, changes often and can remove itself. Test on a different day and it may not appear, the eye, visual system corrected itself. This test is not always an indication of astigmatism. Dry eyes, dirt on the cornea, stress and other conditions can cause temporary astigmatism.
A uneven area in the lens (rare) can also cause astigmatism.

Astigmatism Removal
Natural Eyesight Improvement for Clear Vision

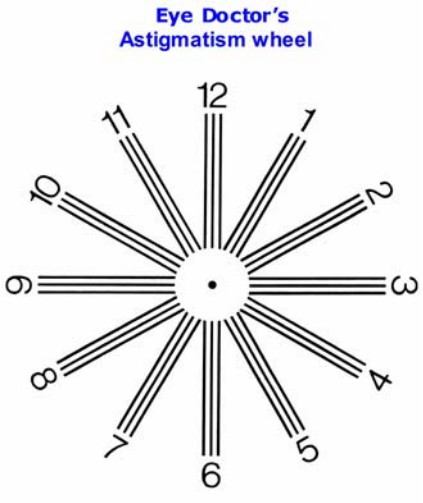
Natural Eyesight Improvement astigmatism removal wheel



Shift on the lines;
Left and right - 9 to 3, 3 to 9
Up and down - 12 to 6, 6 to 12
Diagonally - 8 to 2, 2 to 8, 10 to 4, 4 to 10, 5 to 11, 7 to 1
Shift, trace on the lines in any direction; center to left or right, up, down, diagonally... and back to center.
Move the eyes/center of the visual field along the lines and remember, imagine, see the lines dark black and perfectly clear.
Central fixation; see one small part of a line clearest at a time in the center of the visual field and move the eyes/center of the visual field continually, easy, relaxed along the line from part ot part.
Blink. breathe slow, abdominally, relax.

Astigmatism Videos for this next training Lesson:
http://www.youtube.com/watch?v=W6YLe-Wgpv8
http://www.youtube.com/watch?v=UUF02OdGFCg

Astigmatism Test and Treatments



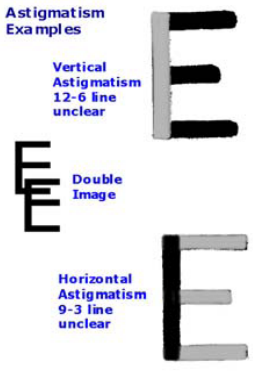
Many of the conditions that cause unclear distant and close vision also cause astigmatism; Outer eye muscle tension, staring, mental strain, neck, head, chest, collarbone, shoulder muscle tension, sinus pressure...

One or more outer eye muscles become tense and place pressure on the eye, pull the eye, cornea into a irregular, uneven shape causing a distortion, wave in the cornea. This disrupts the focus of light rays in the eye. Objects, parts of objects in the area of the visual field affected by the wave in the cornea appear unclear, distorted, wavy, grey, double, triple... Objects in the central and peripheral field may appear to move as the wave in the cornea passes over the object when the eyes, head move. Dizziness, headache, eyes may feel tight, tired, soar, itchy.

Natural Vision Improvement relaxes the mind, body, eye muscles, eyes, returns the eye, cornea to normal shape with correct focus of light rays in the eye, on the retina with clear vision and removal of the astigmatism.

The Astigmatism Chart used by Optometrists is shown on the top of this page.
The eye doctor has the patient keep the eyes immobile, looking at the dot in the middle of the chart, while 'at the same time' trying to see all the lines on the wheel in the peripheral field of vision, looking for unclear, distorted lines. This is not a good test for astigmatism because: it prevents shifting, eye movement, central fixation: does not allow the person to look directly at a line and move the eyes/visual attention on the line. Trying to see all the lines and the center of the wheel at the same time, not moving the eyes, prevents central fixation, causes diffusion, eccentric fixation, strain, eye muscle tension, blur and astigmatism during the test. Machines for testing astigmatism block normal eye functions, eye, head movement, relaxation, give incorrect readings.
An incorrect prescription for astigmatism results.

The Eye Doctor's Astigmatism Chart, Machine Test and Even the Natural Eyesight Improvement Astigmatism Chart are not a definite test for astigmatism: Patients may experience astigmatism only when looking at the charts, during the exam. The placement, angle, type of astigmatism in the eye changes, fluctuates often: hour, day, week... It can move, increase, lessen and disappear on its own.
Many people have a slight astigmatism occasionally and it is not noticed and does not interfere with vision. It removes itself. Astigmatism often increases temporarily during the eye exam due to stress, pressure to hurry, machine tests, incorrect use of the chart resulting in a too strong prescription along with the incorrect prescription. For this reason <u>it is impossible to prescribe a correct eyeglass prescription for astigmatism.</u>



Eyeglasses with astigmatism corrections maintain and increase the astigmatism in the eye, cornea, cause new types, angles of astigmatism and blur to occur at all distances and prevents the eyes, visual systems natural function of reversing, removing the astigmatism from the eyes.

No astigmatism correction in the eyeglasses is best. If some is necessary to see for driving, work, safety: get the correction reduced, weaker and weaker as is done for reduced 20/40 eyeglasses, described in chapter 4.



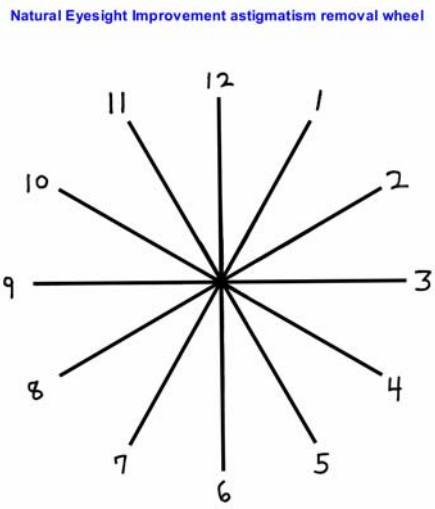
Astigmatism causes certain areas of the visual field, objects to be unclear, lighter grey, distorted, double, triple.
Example: See the letters E, Z in the picture.
+Vertical Astigmatism= Vertical lines the E are unclear.
(The grey line on the black E indicates that line is lighter, blurry.)
+Horizontal Astigmatism=Horizontal lines on the E are unclear
+Diagonal Astigmatism= Diagonal lines on the Z appear unclear.

The Natural Eyesight Improvement Astigmatism Wheel is best to Test for Astigmatism:
See the charts below. The patient looks at this wheel with normal eye function using shifting, central fixation; Do not stay on the center. Let the eyes move about on the wheel. Avoid trying to see all lines equally, perfectly clear at the same time. Look at one line at a time, look directly at the line and shift on it, part to part. Trace the line: move the eyes, visual attention, (center of the visual field) back and forth on/along the line. Then move to another line. Shift, trace on/along that line. Do this on each line, one line at a time. If some lines are blurry, practice more on those lines. Blink, Relax.

1- Shift, Trace Along the Lines on the Astigmatism Wheel Chart:
Print the Natural Eyesight Improvement Astigmatism Wheel Charts: Large charts for long eye, head, body movements & clear vision at close and far distances. Small charts for short, small eye, head, body movements & clear vision at close and far distances.
(Carry a small chart in a pocket and practice anytime).
Draw over the lines with a black marker to make the black lines thicker, to see the lines easier if vision is very unclear. As the clarity of vision improves, return to the original thin lines for more perfect central fixation, increased vision improvement.

2 - Test the Eyes for Astigmatism: Look at the Lines on the Wheel, one Line at a Time:
Place the chart on a wall, tree (outside in the sunlight is best) with the center of the wheel at eye level, between the left and right eyes, center of the visual field. Start in the center, then:
Move the eyes, visual attention, (center of the visual field) on/along the lines:

- Look at, shift, trace along the horizontal line - 9-3.
- Then, Look at, shift, trace along the vertical line - 12-6.
- Look at, shift, trace along a diagonal line 8-2, then 10-4, 7-1, 11-5.
- Move the head/faced with the eyes. Blink, Relax.
- Move around the wheel and shift, trace on any lines. Blink, relax.
- Notice if any lines appear blurry, wavy, distorted, double, triple...



Look at the lines with both eyes together and one eye at a time: to test for different types, angles of astigmatism when both eyes are used together and in each individual eye separately.
Test the eyes and practice at: a variety of close, middle, far distances to remove astigmatism from the eyes at all distances.

Look at the lines with:
+Both eyes together - write down the angle, number of lines that are blurry, distorted, double...
This is the placement of astigmatism in the eyes when using the left and right eyes together.
This is the angle, line on the Astigmatism Chart that will be practiced on the most to remove the astigmatism in the eyes.

Look at the lines with:
+One eye at a time - write down the angle, number of lines that are blurry, distorted, double... for each individual eye. This is the placement of astigmatism in the left and right eyes. This is the angle, line on the Astigmatism Chart that will be practiced on the most with each individual eye to remove the astigmatism in the left and right eyes.

3 - Practice Shifting, Tracing, (Natural Vision Improvement) on the Astigmatism Wheel Lines to Remove the Astigmatism From the Eyes and Return to Clear Vision.
Repeat step #2 - Shift part to part on the lines, Trace back and forth on the lines:
Move the eyes, visual attention, (center of the visual field) on/along the lines:

Look at, shift part to part on and trace back and forth on/along the horizontal line - 9-3.
Then, Look at, shift part to part on and trace back and forth on/along the vertical line - 12-6.
Look at, shift part to part on and trace back and forth on/along a diagonal line 8-2, then the 10-4 line, then 7-1, then 11-5.
Practice on other lines shown on the complete 360 degree chart.
Move around the wheel and shift, trace on any lines, in any direction.
Blink, Breathe comfortably deep, Relax.
No effort to see. If the lines are blurry: shift, trace on the blur. Avoid squinting.

Use all Bates Method Natural, Correct Vision Habits: Shift, Trace, Central Fixation, Blink, Breathe, Relax. Movement: Move the head/face and body with the eyes, at the same time, in the same direction as the eyes/visual attention move along the line. Memory and Imagination: Remember, imagine the line the eyes are looking at is dark black and clear: one straight, dark black clear line.

Use the Imaginary Nosefeather to help the eyes shift, trace on a line. The end of the Nosefeather moves with the eyes, center of the visual field directly on/along the line. The eyes, (visual attention) center of the visual field, nose-feather, head/face and body move together, in synchronization, back and forth along the line. The nose-feather can be imagined as white, other colors or invisible. A imaginary Nosepencil, crayon, paintbrush, laser beam can be used. Practice with the Thin Feather and Big Fluffy Feather.

Practice switching, shifting, tracing on 3 identical Astigmatism charts placed at close, middle and far distances. Then practice on any objects at different distances.

The head/face moves with the eyes. Do not tilt, twist, angle the head, neck to the side (ear down toward the shoulder...) because this will move the angle of astigmatism on the chart: as the eyes, head tilt, this moves the angle to another line on the wheel.
Keep the head level, straight so the eyes, head movement and angle of astigmatism in the eyes stays with the line on the chart you are working on and to get the eyes shifting, moving at the correct angle that is needed to remove the angle of astigmatism in the eye and to get the tense eye muscle causing the astigmatism relaxed and moving correct. The head can turn, move left, right, up, down, diagonally with the eyes as the eyes, visual attention move along a line. Move the entire head with the eyes, visual attention. See full directions on the charts.

4 - Practice extra time on the lines that are blurry, distorted: that are the eyes angle of astigmatism.
Repeat step #3 with these additions:
Practice on blurry lines that appear when using both eyes together.
Shift, trace on the blurry lines, one line at a time. Blink, Relax.
Move the head/face, body with the eyes, shifting, tracing along a blurry line and remember, imagine it is dark black and clear, one, straight line.
Do this with the eyes open, then in the imagination with the eyes closed, then with the eyes open again.
(Eyes, head/face, body continue to move when the eyes are closed)

Practice on blurry lines that appear when using one eye at a time.
Start with either eye and patch the eye not in use.
Keep the eye under the patch open when the eye in use is open.
Example: Left Eye: (Right eye patched)
Shift, trace on lines that appear blurry, distorted when using the left eye.
Move the head/face, body with the eye, shifting, tracing along a blurry line and remember, imagine it is dark black and clear, one, straight line.
Do this with the eyes open, then in the imagination with the eyes closed, then with the eyes open again.
(Eyes, head/face, body continue to move when the eyes are closed)

Repeat this with the Right Eye: (Left eye patched)

Shift, trace on lines that appear blurry, distorted when using the right eye.
Move the head/face, body with the eye, shifting, tracing along a blurry line and remember, imagine it is dark black and clear, one, straight line.
Do this with the eyes open, then in the imagination with the eyes closed, then with the eyes open again.
(Eyes, head/face, body continue to move when the eyes are closed)
If there is more astigmatism in one eye, a certain line, or lines appear more unclear: practice extra time with that eye, line, lines. When the clarity of the lines and clarity of vision in each eye improves, is equal: practice equal time with each eye, lines. More vision improvement=less practice needed with the less clear vision eye, line.
End the practice by shifting, tracing on, along the blurry lines with both eyes together again.

5 - Then, practice on all the lines again: one line at a time, with; both eyes together, one eye at a time, both eyes together again for a perfect round, even eye/cornea shape, smooth curvature with clear vision, removal of astigmatism from all areas of the eye, cornea.
Practice all steps at a variety of close, middle, far distances for clear vision at all distances.

Extend both ends of the lines on the chart off the chart to infinity using the imagination: Trace, 'Swing' back and forth along the lines, (angles) and off the chart; a long movement along a endless line.
Do a full, long body swing with the eyes, head/face, body moving along the endless line. Look far to the left, right sides, look far into the sky, imagine looking far into and through the ground, earth while looking, moving: left, right, up, down, diagonally along the infinity lines.
Do this with the eyes open, then in the imagination with the eyes closed, then eyes open again.

When working with a blurry line, the eyes angle of astigmatism: it may at first feel uncomfortable if the astigmatism is strong and the eye and neck muscles are very tense. Past negative emotions that originally caused the astigmatism may be felt temporarily as the emotion is released and the astigmatism is removed.
Practice with the eyes closed, in the imagination first to help avoid this tension, discomfort.
Palm while doing the Astigmatism Swings, shifting tracing on the lines in the imagination.
EFT, Acupressure can help correct energy flow and release negative thoughts, emotions. See Booklet.

Practice the 'Astigmatism Swings' shown in the Astigmatism Charts. Create your own pictures to place on all the lines for the Astigmatism Swings with Pictures Chart.
The swings can be done without the chart-Use a scenery outside in the sunlight.
Move, swing at the line/angle of astigmatism. Eyes, head/face, body (nose-feather is optional) across the valley, mountains, trees, sky. Similar to the Long Swing or Rock.
Then swing on all lines, angles.
Extend the lines to infinity: swing back and forth along the line, angle all the way to infinity: a long endless line.
Then look at objects along all the angles, lines in the visual field and shift, trace on the objects without swinging: Flowers, Trees, Mountains...

Do the Long Swing and Rock and notice oppositional movement of the scenery without staying along any lines, angels, just relax and swing: eyes open, then closed using the imagination (keep swinging), eyes open again.
Swing left, right, up, down, diagonally. Get the eyes, head, neck, body moving in all directions, all muscles relaxed.



Neck muscle tension can cause eye muscle tension, blur, astigmatism:
Move the head/face, body with the eyes along the Astigmatism Chart lines. Notice if certain neck muscles are tight, soar when moving the head in certain directions along a line. This neck tension may be a main cause of the eye muscle tension and astigmatism. Notice if the eyes feel tight in this or other directions. Move the head, neck gently through the neck muscle tension.
(Later: Massage, the Long Swing, Figure Eight... can help to further relax the neck muscle.)
Relaxation will resonate into the eye muscles.

Shifting, Central Fixation, Blinking, Relaxation... all Natural Vision Improvement Activities remove astigmatism. Practice all 8 Natural, Correct Vision Habits, (Central Fixation, Shifting gets the left and right eyes moving, working together, looking at, moving on the same point (object, parts of object, one at a time) in the center of the visual field. This brings the eye, cornea to a perfect curve, round shape for clear vision.) Shift, trace objects with the eyes, nosefeather. Practice: Left and Right Brain Hemisphere
Activation and Integration, Long Swing and Rock with the nose-feather: with the eyes open, closed, open, Cross Crawl, Figure Eight, Switching, Shifting on objects at close middle, far distances with: both eyes together, one eye at a time, both eyes together, Reading Fine and Microscopic Print and seeing the
White Glow, Blink, Breathe Abdominally, from the Diaphragm, Yawn, Palming, Sunning, Emotional Healing (EFT, Color Chart...), Neck, Shoulder Relaxation, Nutrition, Exercise.

Neck Muscle Tension, squinting, staring, bifocals, astigmatism corrections in eyeglasses, cornea ulcer, injury, scar, even a tiny object, dirt... in the cornea, cornea eye surgery, can cause astigmatism.
Extreme neck muscle tension, vertebrae mis-alignment pressing, pulling on the nerves, blood, lymph vessels in the neck, brain stem, (optic and eye muscle, nerves travel and/or connect from the brain stem), muscle tension, pressure on nerves in the neck, head, collarbones, arms, sinus inflammation, congestion, infection placing pressure on the eyes, eye muscles, eye nerves. (Muscle tension, vertebrae out of alignment, pressure on nerves in the neck can impair sinus, ear, eye function. All these conditions cause unclear vision, astigmatism. Notice your diet, neck tension, stress level, correct or incorrect use of the eyes, looking at the computer=one distance/location all day especially with stiff arms, incorrect posture.

Suppressed emotional pain, anger, fear, worry, past or present mental, emotional, physical stress, strain, unpleasant experiences, can cause tension, strain in the mind/brain, body, eyes, cause neck and eye muscle tension. Blocked energy flow, left and right brain hemisphere imbalance can cause astigmatism and strabismus (imperfect eye movement, fusion).

Notice if there was a stressful event 1-12 months before the vision first became unclear, prior to a first eyeglass prescription?

Many of these conditions can also affect the eyes movement, convergence, divergence, fusion.

Remove stress, strain, negative thoughts, emotions from the mind with Emotional Healing: Palming, EFT, Color Chart, Cognitive Behavioral Rational Emotive Therapy, Robert Monroe, Monroe Institute Training... Relaxation of the mind, body, eyes, eye muscles, neck muscle massage, relaxation, Shifting, Central Fixation, Blinking... The Long Swing, Rock, Figure Eight, Cross Crawl to relax, move the body, eyes and activate and integrate the left and right brain hemispheres, and other Natural Vision
Improvement practices will remove the mental strain, eye muscle tension and astigmatism from the eyes.

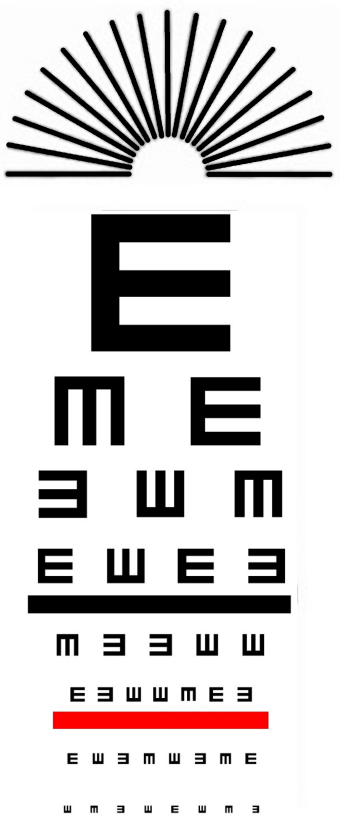
When the eye muscles relax, the eye, cornea returns to a normal smooth round shape, even curve, light rays focus on the retina perfect, vision is clear.

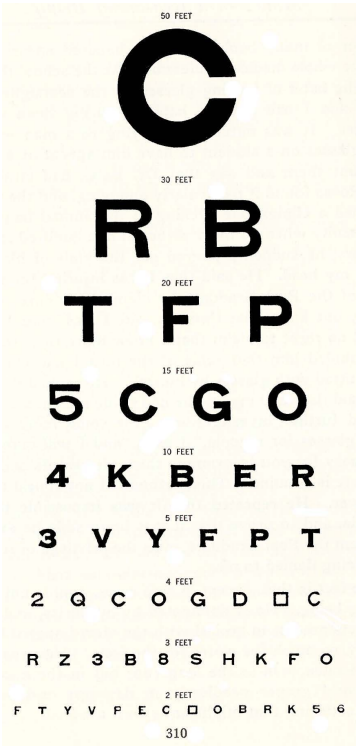
Activities for removing blurry vision, astigmatism also help correct strabismus, eye movement, fusion. Removing astigmatism improves central fixation, eye movement, convergence, divergence, accommodation, un-accommodation and the clarity of vision.

A uneven area in the eyes lens can also cause astigmatism. This is a rare condition. Relaxing the eye muscles helps the lens return to normal shape.
The pictures below show the old-fashioned eye test for visual clarity and astigmatism being given by a Bates Method Ophthalmologist. Notice the eye doctor does not wear or need eyeglasses.
The eye doctor uses only an eyechart to test the clarity of vision with both eyes together and each eye separately. He gives the boy plenty of time to read the chart, encourages relaxation, shifting, blinking, central fixation, happy thoughts. He teaches the boy Natural Vision Improvement if needed to avoid prescribing eyeglasses. The doctor knows eyeglasses will cause, increase visual blur and a lifelong addiction to stronger and stronger eyeglass lenses.





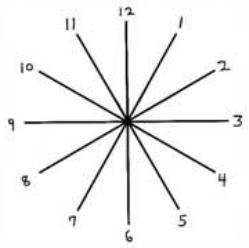




An eye exam from a Natural Eyesight Improvement eye doctor that performs exams without constant use of eye drops, without drugs, machines and time limits for reading eyecharts is healthy for the eyes and will result in the best, accurate prescription, not over prescribed/ too strong. Often no eyeglass prescription, no glasses will be needed. Picture; Old-fashioned honest Bates Method Eye Doctor testing the boy's eyesight naturally with a plain paper eyechart hung on the wall. Full Spectrum Sunlight is shining into the office onto the chart through an open window. Eyesight is tested when the mind, eyes are relaxed, no pressure to hurry when reading the chart. The boy is allowed to stand, walk around, move the body, head and eyes. Shifting, central-fixation, memory, imagination... are taught. This is the best way to test for the true level of visual clarity, along with the old time retinoscope and other harmless instruments to look into, inspect the eyes. Chances of passing the eye test, avoiding addictive glasses that lead to advanced eye, vision impairment is greatly improved.

Some Optician Stores in shopping malls provide the old fashioned paper eyechart on the wall at 20 feet for far vision and small paper chart at closer distances reading vision tests.

Practice Astigmatism Chart Tracing, Swings on the lines in the Sunlight, while Sunning, Facing the Sun with the Eyes Closed.

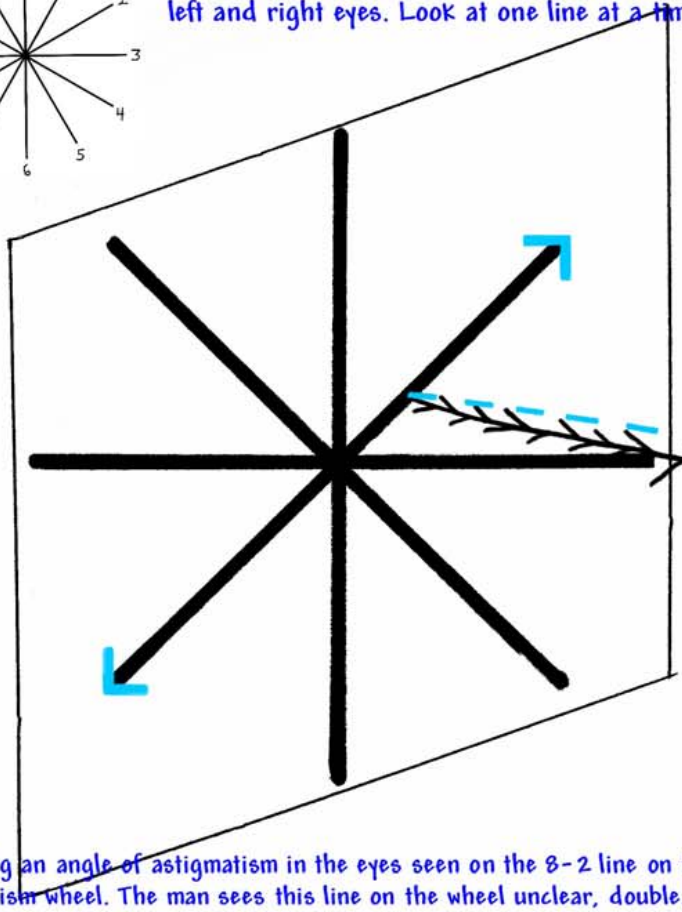


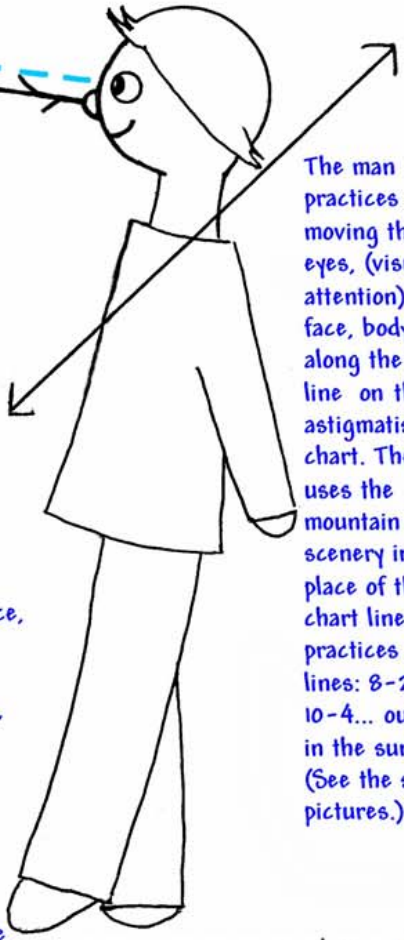
Stand and face the Astigmatism Chart Wheel.
Start with the center of the wheel at eye level between the left and right eyes. Look at one line at a time. Blink, Relax.



8-2 Line

Practice tracing, moving along all angles, lines: 8-2, 9-3, 12-6, 10-4, 7-1, 5-11...





The man practices moving the eyes, (visual attention) head, face, body along the 8-2 line on the astigmatism chart. Then: he uses the mountain scenery in place of the chart lines and practices on all lines: 8-2, 10-4... outside in the sunlight. (See the small pictures.)

Removing an angle of astigmatism in the eyes seen on the 8-2 line on the astigmatism wheel. The man sees this line on the wheel unclear, double.
This is his angle, placement of astigmatism, uneven area in his eyes cornea.
Shift, Trace on/along the line:
Move the eyes, (visual attention, center of the visual field), nosefeather, head/face, body along the 8-2 diagonal astigmatism wheel line.
Trace, move the eyes, visual attention back and forth along the line.
Shift part to part on the line. Blink, Relax. Central Fixation: shift on small parts, tiny details. Imagine the line is dark black, clear, straight, one single clear line.

Practice all these steps with: the eyes open, then in the imagination with the eyes closed, then with the eyes open again.
The eyes (visual attention), end of the nosefeather, head/face and body move together, at the same time, in the same direction along the line.
Blink, breathe abdominally, comfortably deep, slow, easy, relax.

Do not tilt/twist/bend the head/neck to the side. Tilting the head will move the angle of astigmatism to a different line on the chart, preventing removal of the true angle of astigmatism in the eyes. The head is straight and relaxed as it moves along the line with the eyes. The head can turn left and right, up and down, move diagonally... with the eyes, body. (nosefeather is optional.)

Practice on blurry, distorted lines that appear using: both eyes together, one eye at a time, then both eyes together again.

Then practice on all lines, one line at a time, for a perfect round, smooth eye, cornea with clear vision, removal of astigmatism in all areas of the eyes, cornea.

Do this with both eyes together, one eye at a time, both eyes together again.
If vision is less clear for some lines: practice a little more on those lines.

See full instructions on the following page and listen to the audio lesson.
Read 'The Method Explained' at: http://www.iblindness.org/intro/method.html and practice shifting, central fixation: looking for small details on the blurry lines.

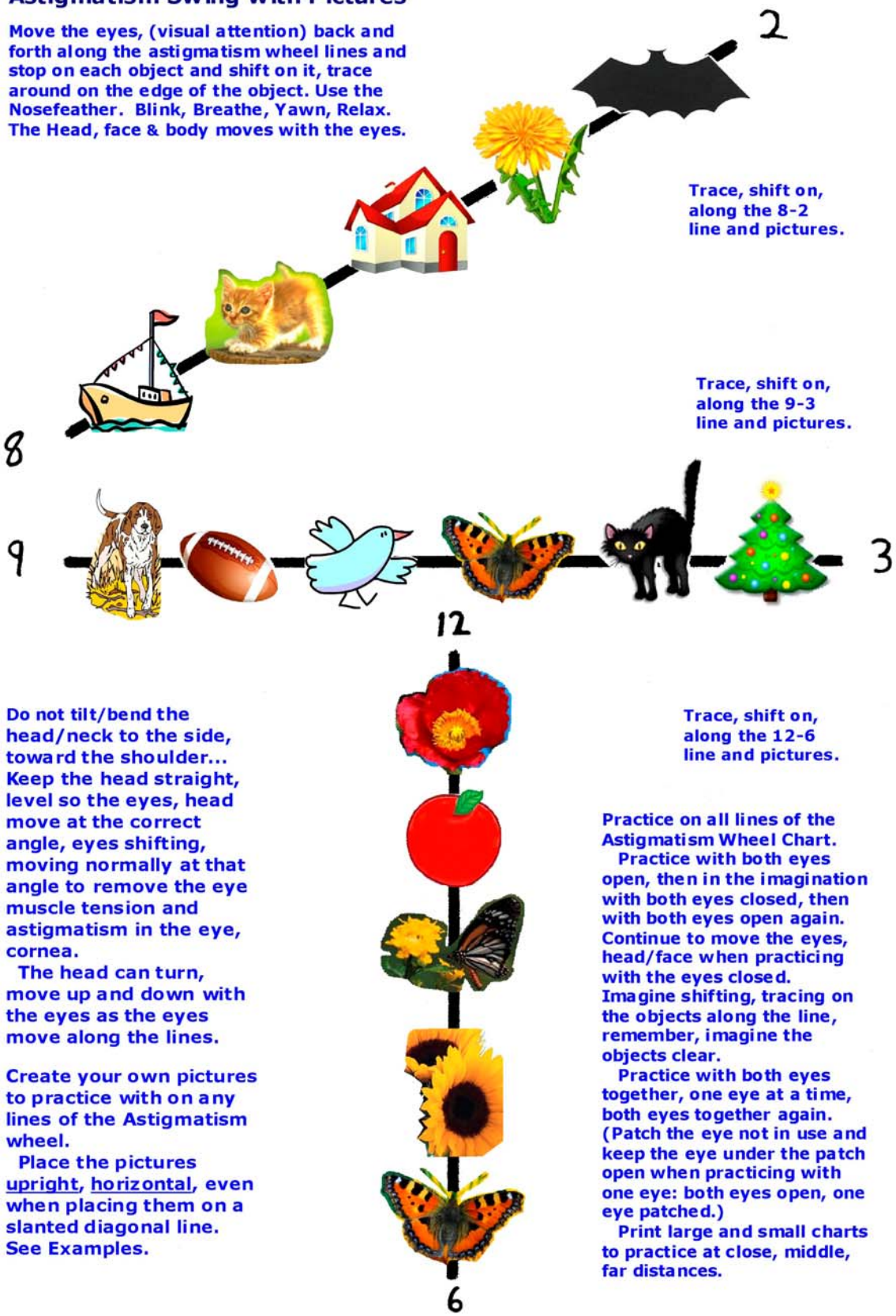


10-4 Line

The man is moving the eyes, (center of the visual field), nosefeather, head/face, body along the 10-4 diagonal astigmatism wheel line using the mountain scenery outside in the sunlight. An Astigmatism Removal 'Swing' similar to the Rock, Sway.

Astigmatism Swing with Pictures

Move the eyes, (visual attention) back and forth along the astigmatism wheel lines and stop on each object and shift on it, trace around on the edge of the object. Use the Nosefeather. Blink, Breathe, Yawn, Relax. The Head, face & body moves with the eyes.



Trace, shift on, along the 8-2 line and pictures.

Trace, shift on, along the 9-3 line and pictures.

Trace, shift on, along the 12-6 line and pictures.

Do not tilt/bend the head/neck to the side, toward the shoulder... Keep the head straight, level so the eyes, head move at the correct angle, eyes shifting, moving normally at that angle to remove the eye muscle tension and astigmatism in the eye, cornea.

The head can turn, move up and down with the eyes as the eyes move along the lines.

Create your own pictures to practice with on any lines of the Astigmatism wheel.

Place the pictures upright, horizontal, even when placing them on a slanted diagonal line. See Examples.

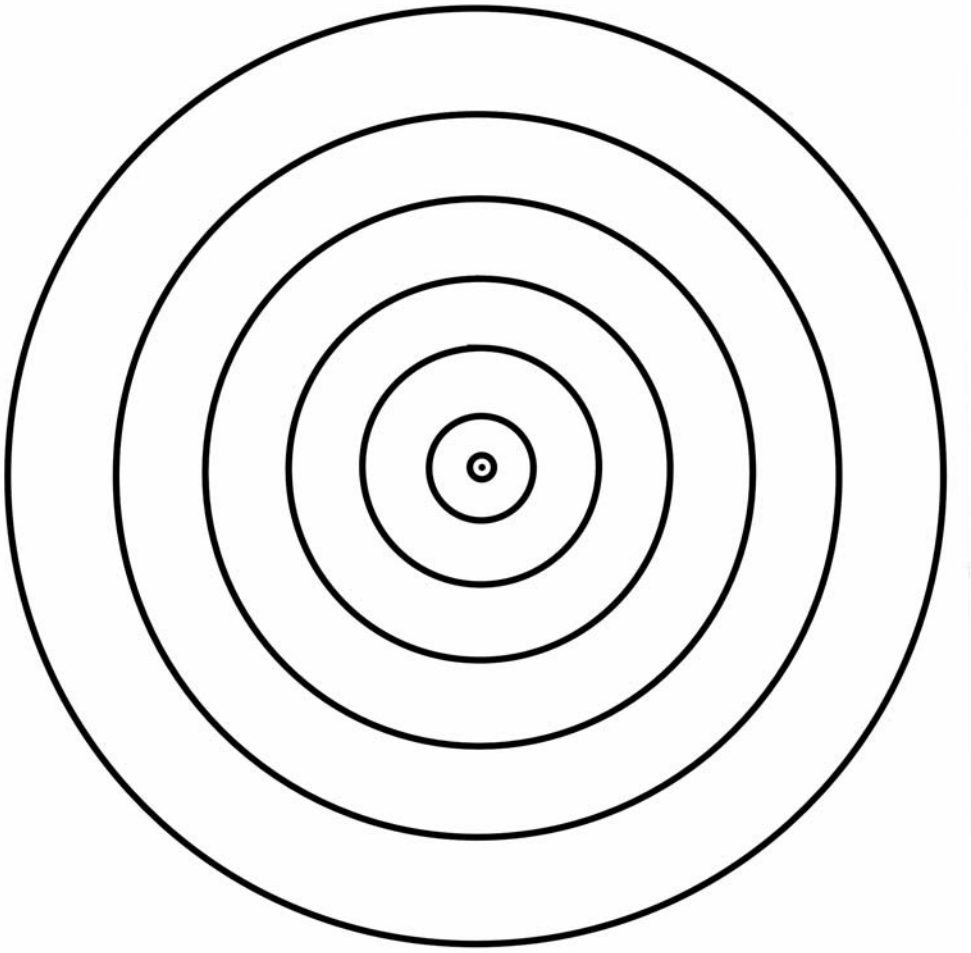
Practice on all lines of the Astigmatism Wheel Chart.

Practice with both eyes open, then in the imagination with both eyes closed, then with both eyes open again. Continue to move the eyes, head/face when practicing with the eyes closed. Imagine shifting, tracing on the objects along the line, remember, imagine the objects clear.

Practice with both eyes together, one eye at a time, both eyes together again. (Patch the eye not in use and keep the eye under the patch open when practicing with one eye: both eyes open, one eye patched.)

Print large and small charts to practice at close, middle, far distances.

Astigmatism removal circles



Trace on the circles counterclockwise and clockwise.
Shift on the circles left and right, top and bottom, diagonally and in any direction.
Remember, imagine and see the circle the eyes are looking at; dark black, clear and perfectly round.
Use central fixation; see one small part a t a time darkest black and clearest in the center of the visual field.
Blink and relax.

Tracing on the circles, spirals counter-clockwise, clockwise, shifting on the spirals, circles and doing the Astigmatism Swings activates, integrates the left and right brain hemispheres, brain functions, corrects eye, eye muscle movement and returns the eyes, cornea to perfect round shape for removal of astigmatism, blur, helps to heal, remove conical cornea and produce clear vision.

The Imaginary Nosefeather can be used to trace on/along the lines, trace counter-clockwise, clockwise on the circles, and to shift point to point on the lines and circles. Remember; point to point actually means part to part: point to point is the true way the eyes function, using the center of the fovea centralis, exact, very clear center of the visual field, seeing small fine details clear. Practice, then let this occur automatically.

The long swing and other activities also remove astigmatism.

Trace large, medium, small circles

Print the diagram on the right, place it on a wall at eye level.
Trace the circles with the eyes and nosefeather.
Move the eyes (visual attention) and end of the feather around the circles.
Trace one circle at a time.
Move the head/face, body with the eyes.

+Trace inward, counterclockwise, large to small circles.

+Trace outward, clockwise small to large circles.

+Trace inward, clockwise.

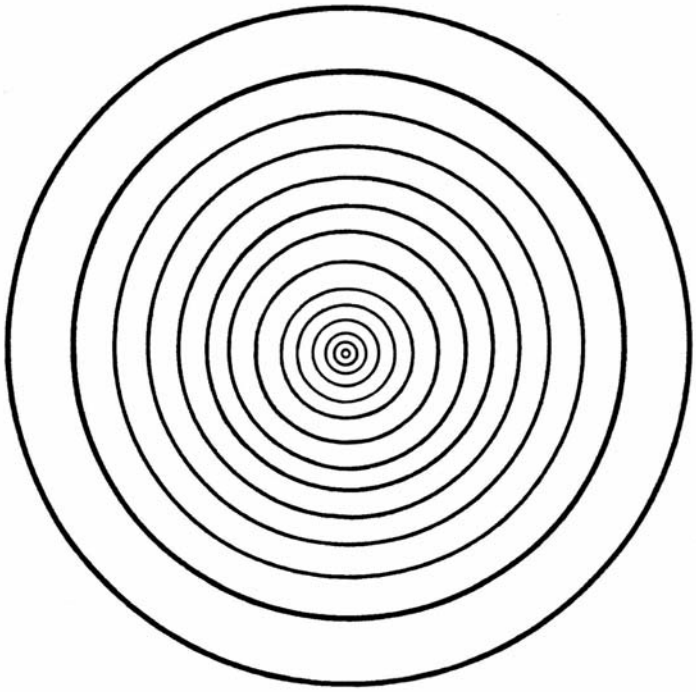
+Trace outward, counterclockwise.

Tracing from the large outer circles to the small inner circles, and from the small inner circles to the large outer circles in clockwise and counter-clockwise directions relaxes, balances, clears, centers and expands the mind/brain.
The mind, thoughts, emotions are brought to a positive state.
The mind/brain, eye muscles, eyes, body, nervous system is relaxed.

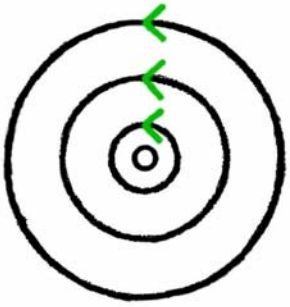
Energy flow in the brain, eyes, body, sprit is improved, equalized.

Left and right brain hemispheres are activated and integrated.

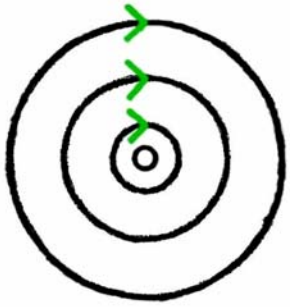
This diagram is a basic mandala . Mandalas activate saccadic eye shifting and other positive mind, eye, body states.



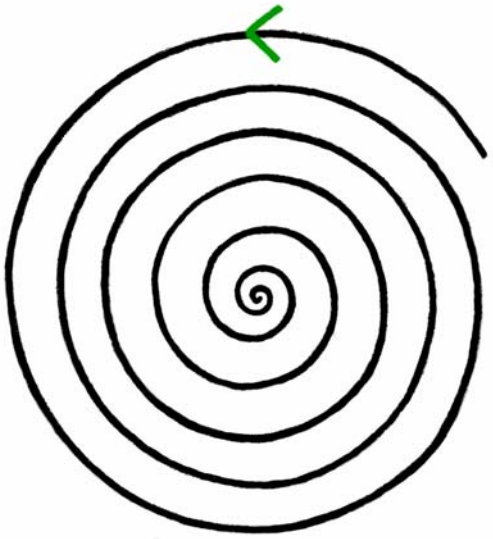
Trace inward, counterclockwise, large to small circles.



Trace outward, clockwise, small to large circles.

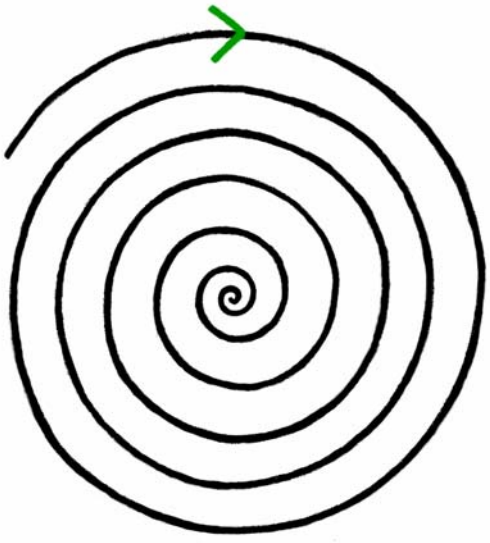


Trace the spiral



Trace inward counterclockwise
and outward clockwise

Trace the spiral



Trace inward, clockwise and
outward counterclockwise.

Trace the spirals

Trace the spirals by moving the eyes (visual attention) on/around the black coils of the spirals.
Use the nosefeather to help the eyes trace on the coils;
The end of the feather moves on/along the spiral with the eyes.
A finger or the end of a paper clip can also be used; move the finger or paperclip along the spiral with the eyes.
Move the head/face, body with the eyes when tracing around the spiral.
Blink, breathe, relax.

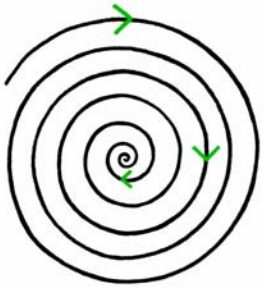
1 - Trace inward, clockwise,
outer spiral to inner spiral.

2 - Trace outward, counterclockwise
inner to outer.

3 - Trace inward, counterclockwise,
outer to inner.

4 - Trace outward, clockwise,
inner to outer.

1



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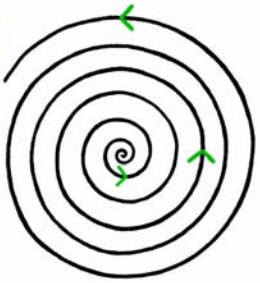
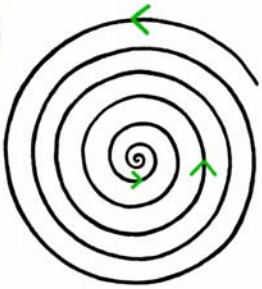


Practice tracing the spirals with the eyes open, then in the imagination with the eyes closed, then with the eyes open again.

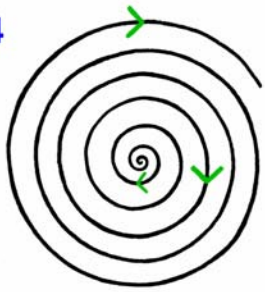
Tracing circles, spirals counterclockwise, clockwise, inward, outward activates and integrates the left and right brain hemispheres, and activates, improves many brain, brain hemisphere functions; memory, imagination, relaxation, math, science, art, dexterity, sports, language... and improves the clarity of vision.

3



When certain areas/functions of the brain are suppressed, infrequently activated, the function of the brain, eyes, eye muscles, retina, optic nerve and ability to form, remember, imagine clear mental pictures is impaired resulting in unclear vision.
Activating and integrating the left and right brain hemispheres improves all functions of the brain, eyes, eye muscles... resulting in clear vision.

4



23 - STRABISMUS - Crossed/Wandering Eyes

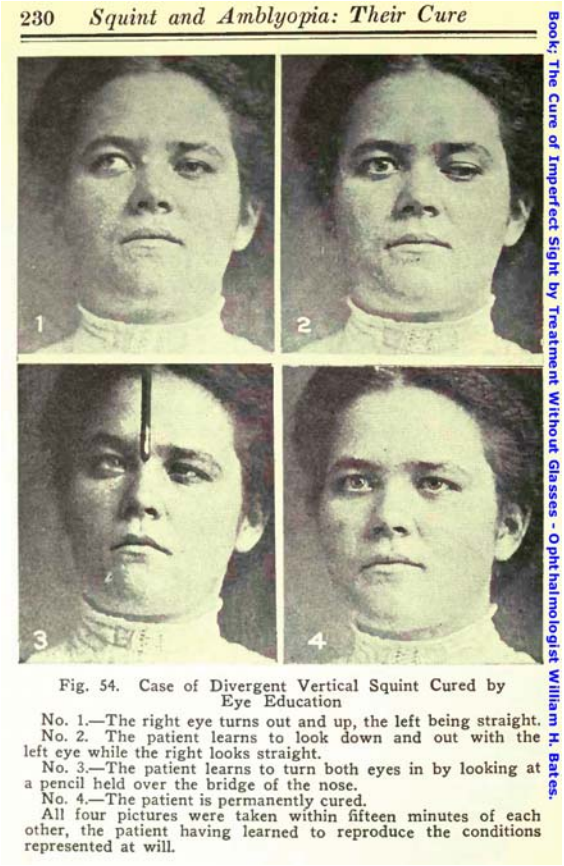
The Bates Method, Natural Vision Improvement treatments, activities for removing unclear vision; close and distant blur, astigmatism also correct wandering, crossed eyes.
Practice Palming, relaxation, shifting, central-fixation, switching, memory and imagination, positive, happy thoughts/emotions, pens in a row, bead string, bead string with eye movement swings, all Correct Vision Habits, long swing, cross crawl, central-fixation stick, switching, shifting, central-fixation on close and far objects with both eyes together, one eye at a time, then both eyes together again, wearing a eye patch on the normally functioning eye and walking around/using the wandering eye alone for a short time to increase clarity of vision in that eye and the eyes movement.

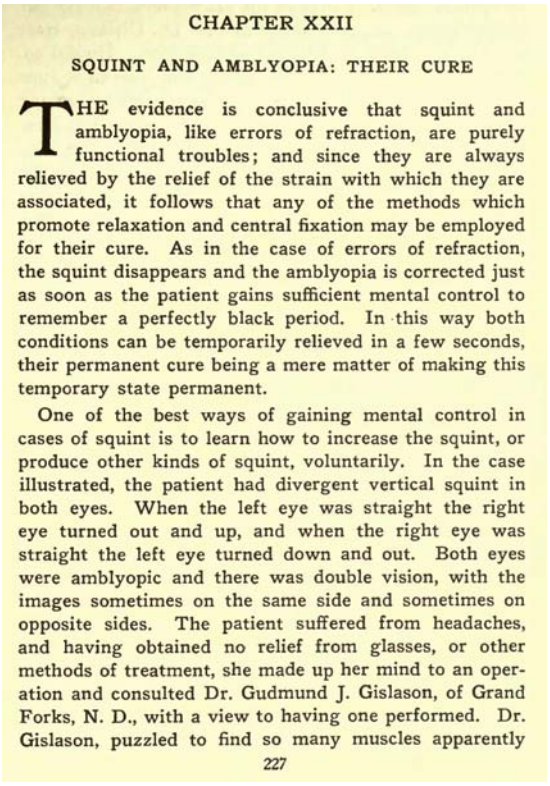
If the wandering eye needs vision improvement; practice extra time; shifting, central-fixation, switching close and far, memory/imagination of clear objects... with that eye to return clear vision in the eye. Do this in a relaxed manner, no effort, no strain. This will improve the eyes function and enable it to move correct, work with the other eye.

Read Dr. Bates book; 'The Cure of Imperfect Sight By Treatment Without Glasses' and 'Better Eyesight Magazine' for strabismus treatments.
See the picture, pages from the book on the right >.
Dr. Bates and his assistant Emily Bates cured many cases of strabismus, crossed, wandering eyes.
He uses the word 'Squint' to describe the condition.

There is a specific treatment Dr. Bates applies that teaches the patient how to make the eyes wander, cross in order to learn how uncomfortable, straining it feels and what causes the eyes to strain, turn in a incorrect direction. In this way the person learns to avoid the strain, the cause of the blur, wandering eye condition and the eyes remain straight.

A method similar to this is used to cure blurry vision; Dr. Bates has the patient stare hard at a object, (letter on a eyechart) try hard to see it clear without shifting, without moving the eyes, to stare at one part or stare by trying to see all parts of the object clear at the same time without shifting the eyes to a new part, without central-fixation.
In a few seconds the eyes feel strain, uncomfortable, the vision becomes more unclear. (See the picture of the boy; with and without strain on the next page.
The only relief is to blink, move, shift the eyes to a new part of the object or to a new object.
This 'shifting' is normal eye function.
The person learns to avoid staring, eye immobility.
The person shifts part to part on the object, then to another object, then back to the original object and the





CHAPTER XXII

SQUINT AND AMBLYOPIA: THEIR CURE

THE evidence is conclusive that squint and amblyopia, like errors of refraction, are purely functional troubles; and since they are always relieved by the relief of the strain with which they are associated, it follows that any of the methods which promote relaxation and central fixation may be employed for their cure. As in the case of errors of refraction, the squint disappears and the amblyopia is corrected just as soon as the patient gains sufficient mental control to remember a perfectly black period. In this way both conditions can be temporarily relieved in a few seconds, their permanent cure being a mere matter of making this temporary state permanent.

One of the best ways of gaining mental control in cases of squint is to learn how to increase the squint, or produce other kinds of squint, voluntarily. In the case illustrated, the patient had divergent vertical squint in both eyes. When the left eye was straight the right eye turned out and up, and when the right eye was straight the left eye turned down and out. Both eyes were amblyopic and there was double vision, with the images sometimes on the same side and sometimes on opposite sides. The patient suffered from headaches, and having obtained no relief from glasses, or other methods of treatment, she made up her mind to an operation and consulted Dr. Gudmund J. Gislason, of Grand Forks, N. D., with a view to having one performed. Dr. Gislason, puzzled to find so many muscles apparently

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This Chapter in Dr. Bates Book-Click Here

eyes remain relaxed, strain free and vision is clear.

Some people can move their eyes in opposite directions using mental control and then return the eyes to normal, straight position.
A Young boy did this to Dr. Bates as a joke. After a eye exam, Dr. Bates realized the boy was playing a prank and his eyes were normal, move together, straight.
These true stories are in Ophthalmologist Bates Better Eyesight Magazines and book.

Relaxation and gently coaxing the wandering or crossed eye into correct position and left and right brain hemisphere activation, integration corrects the eyes movement. See the 'Eye Movement Direction Swing' with 'The Bead String' at the end of this chapter
Relaxation of the mind/brain and eyes is most effective.
Avoid trying hard to keep the eye/eyes straight.
Avoid trying to see clear.
Relax, shift, blink, use Correct, Relaxed, Natural Vision Habits in a easy, effortless manner and the eye will move easy, normally, in the correct direction.
These methods relax the eye muscles, mind and return them to normal function. See picture of the boy remembering, imagining, shifting on a period in his mind to relax the mind (brain), eyes and straighten his eyes.

Misaligned neck vertebrae and skull bones, (The eye muscles attach in the back of the eye socket and nerves from the neck, brain stem connect into the eye muscles.) can also cause strabismus.
This condition is often caused by forceps used on the baby's head during birth delivery or by birth injury to the head, neck, collarbones, spine.
Doctors like to sell unneeded cesareans to make more money by performing surgery. Natural birth (without forceps) aligns the skull bones as the baby's head passes through the birth canal. Cesarean birth prevents this natural alignment.
Accidents, head/neck injury anytime in life, inactivity of one brain hemisphere or areas of one or both hemispheres, one hemisphere overly dominant, hemispheres not working together, not integrated also cause strabismus.
Baby walkers interfere with the natural crawling, learning to walk stage, impairing, preventing normal left and right brain hemisphere development, integration. This also affects the eyes development, eye muscle, eye function with the brain.
I know a man that developed a wandering eye condition after having an operation on specific body organs. The doctor said the stress he went through, medication, surgery caused the eye problem and it will correct itself.
A Natural Vision Improvement student developed a wandering eye after his hips, lower back were injured, thrown out of alignment.



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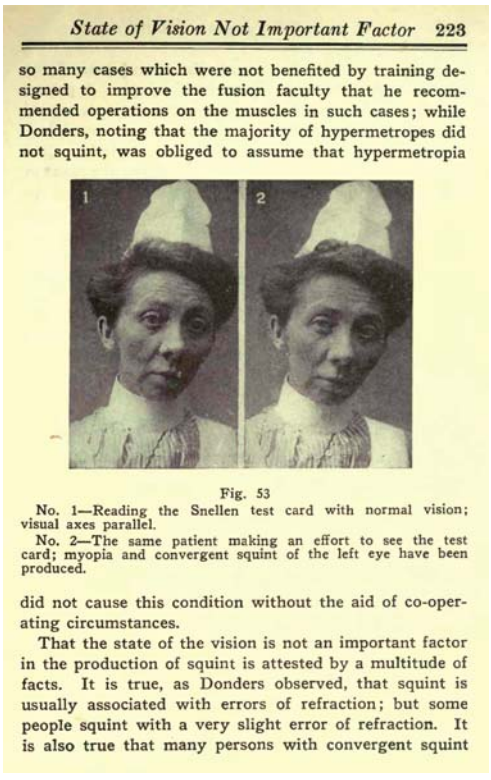
eyes. At the beginning of the treatment she could not count here fingers at three feet with the poorer eye, and in three weeks, including all the time that she wasted, she had perfect sight. When told that she was cured her

Fig. 55

No. 1.—Convergent squint of the right eye.
No. 2.—The patient is temporarily cured by the memory of a black period.

main concern seemed to be to know whether she would have to wear the ground glass any more. She was assured that she would not have to do so unless there was a relapse, but there never was any relapse.[1]

[1] Bates: L'éducation de l'oeil dans l'amblyopie ex anopsia, Clin. Opht., Dec. 10, 1912.



State of Vision Not Important Factor 223

so many cases which were not benefited by training designed to improve the fusion faculty that he recommended operations on the muscles in such cases; while Donders, noting that the majority of hypermetropes did not squint, was obliged to assume that hypermetropia

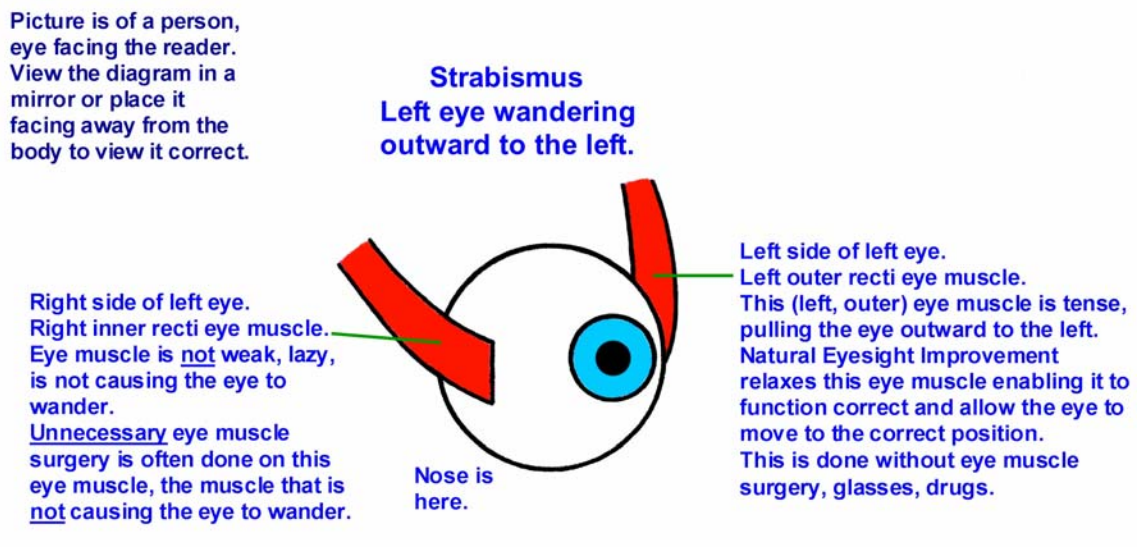
Fig. 53

No. 1—Reading the Snellen test card with normal vision; visual axes parallel.
No. 2—The same patient making an effort to see the test card; myopia and convergent squint of the left eye have been produced.

did not cause this condition without the aid of co-operating circumstances.

That the state of the vision is not an important factor in the production of squint is attested by a multitude of facts. It is true, as Donders observed, that squint is usually associated with errors of refraction; but some people squint with a very slight error of refraction. It is also true that many persons with convergent squint

Most of the time the cause of strabismus is only strain, tension in the mind, visual system, eye muscles, eyes. Eyeglasses, prisms increase the strain, and maintain, increase eye muscle tension, dysfunction, crossed/wandering eye/eyes, blur, dim/low vision in the eye, amblyopia.
(See all pages of Dr. Bates book pages shown here, Squint; Cause and Cure on the following pages.)



Strabismus = Eye muscle tension - the tense muscle pulls the eye out, in, up, down, diagonally in a incorrect direction.
The left and right eyes are not focused on the same object/point.
About 100% of the time, a tense eye muscle, pulling the eye in a incorrect direction is the cause of strabismus.
The muscle on the same side of the eye that the eye is turning incorrectly toward is the muscle that is tense, pulling the eye in the incorrect direction.
In this example, if the right inner recti muscle is not functioning with the brain, Natural Eyesight Improvement can also correct this.
Here's another example; If the muscle on the top of the eye were tense, constantly contracted, the eye would be turned, pulled upward.
Different types of strabismus occur due to eye muscle tension/dysfunction in one or more of the 4 recti muscles; (left, right, top, bottom) on the sides of the eyes and/or the two oblique muscles that circle around the eye.

Eye muscle surgery causes tension, abnormal, incorrect function of the eye muscle. This tension, malfunction travels into other eye muscles resulting in other forms of strabismus, pressure on the eye, astigmatism, blur and other eye problems. Most eye muscle surgeries are unsuccessful.

Some eye doctors state that the cut, surgically altered eye muscle can repair, grow back to normal state if more surgeries are avoided. Natural Vision Improvement can help the muscle/muscles heal, function correct and keep the eye in normal position.

The author of this book corrected a slight convergence/divergence condition in her own eyes. Then in 2009 a chiropractor injured my neck and this resulted in eye divergence impairment. It is 95% corrected with use of the Bates Method, physical therapy. See chapter 25.

Most Ophthalmologists, Optometrists state that the eye wanders due to a lazy, weak eye muscle. This is incorrect. Eye surgeons often operate on the wrong eye muscle. They state that the eye muscle on the side of the eye opposite the side that the eye turns incorrectly toward is weak, lazy and cannot keep the eye straight, in correct placement, so they cut the muscle, shorten it;
Eye doctors cut out part of the 'so-called' lazy eye muscle and sew it back together making it shorter, tighter so it pulls the eye straight.
This causes more eye muscle impairment, does not correct the function of the brain with the muscle, eyes. It causes more tension, strain in the brain, muscle, eyes and causes tension, impaired function of other eye muscles. Eye muscle surgery is most always unsuccessful. The eye returns to the incorrect position after surgery.

The muscle may not be activated by, functioning with the brain due to incorrect brain, eye muscle, eye function, strain, left and right brain hemisphere imbalance, but it is not lazy, weak. Usually the cause is; the eye muscle on the side that the eye is wandering, crossing, moving incorrectly toward is tense.
Ophthalmologist Bates, Natural Vision Improvement Teachers state that the eye muscle is not lazy, weak. They state that the muscle on the side of the eye, the side that the eye turns incorrectly toward, is tense, pulls the eye in the incorrect direction.

Dr. Bates applies natural treatments to cure strabismus; Relaxation of the mind/brain, body, eyes, eye muscles, activating correct function of the brain, left and right hemispheres with the muscle/muscles, eyes, and using the eyes correct with the Bates Method. This removes the tension, dysfunction in the brain, eye muscles, eyes, enabling the eye, eyes to return back to normal position without the use of eye muscle surgery, eye drops, glasses, prisms, drugs.

The Bates method corrects function of the brain, left and right hemispheres with the eye muscles, nerves, eyes. If a muscle is not being activated by the, brain not moving the eye correct, the Bates method will correct this; The long swing, rock, cross crawl and other left and right brain hemisphere activation, integration exercises and relaxation of the brain, visual system, eye muscles, eyes return the brain, eye muscles, eyes to normal function. See chapter 19 for Palming and other relaxation methods.

(Another cause of crossed, wandering eyes, impaired eye movement is using Artificial 3-D fusion pictures. See the warning and complete explanation on the following pages. A behavioral Optometrist knows how to use these pictures, cards the correct way. The Bates Method does not apply this method and is successful without it. If needed, only a Behavioral Optometrist, Ophthalmologist should teach/apply the 3-D pictures Fusion Method. Try the Bates method first to correct strabismus.

Ophthalmologist Bates Better Eyesight Magazines, Stories from the clinic (Lierman), and his original book; The cure of imperfect sight by treatment without glasses contain pictures and treatment to cure strabismus and other conditions.

Thomas Quackenbush's book 'Relearning to See - Improve Your Eyesight Naturally', chapter; Stereoscopic Vision provides pictures, activities for correcting all forms of strabismus, amblyopia, blur. See the 'Phoria Swings', 'Bead String'.

Here are 2 websites, Yahoo Group for Strabismus information, cures:

http://eradicatelazyeye.org/
http://www.amblyopiakids.com/
A few businesses posting on these links might try to sell medical treatments: surgery, eyedrops, drugs... for Strabismus. They also sell some harmful Artificial 3-D Fusion pictures, books.
Avoid these. Use the Bates Method, Patching, Games.., Natural Methods only.

See chapters in this book for natural Bates Method and safe Behavioral Optometry activities for correcting crossed, wandering eyes:

+ Switching, Pens in a row, Bead String - chapter 10-11
+ Steps for practicing Correct Relaxed, Natural Vision Habits with Both Eyes & One Eye at a time.
+ Eye Movement, Direction Swings with moving colored light, pictures... in this chapter
+ Left and Right Brain Hemisphere Activation, Integration - chapter 16
+ Palming chapter 19.
+ Central fixation, shifting, all Correct Vision Habits, Activities in this book correct strabismus.

Articles from Dr. Bates Better Eyesight Magazine for correction of Strabismus 'Squint';

Squint Number

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

November, 1920

MAKE YOUR SQUINT WORSE

This will help you to cure it

Crossed, Wandering Eyes, Strabismus Cures

There is no better way of curing squint than by making it worse, or by producing other kinds of squint. This can be done as follows:

+ To produce convergent squint, strain to see a point about three inches from the eyes, such as the end of the nose.
To produce divergent squint, fix a point at the distance to one side of any object, and strain to see it as well as when directly regarded.

+ To produce a vertical squint, look at a point below an object at the distance, and at the same time strain to see the latter.

+ To produce an oblique divergent squint, look at a point below and to one side of an object at the distance while straining to see the latter.

When successful two images will be seen arranged horizontally, vertically, or obliquely, according to the direction of the strain. The production of convergent squint is usually easier than that of the other varieties, and most patients succeed better with a light as the object of vision than with a letter, or other non-luminous object.

SQUINT AND AMBLYOPIA: THEIR CURE

By W. H. BATES, M. D.

Squint, or strabismus, is that condition of the eyes in which both are not directed to the same point at the same time. One eye may turn out more or less persistently while the other is normal (divergent squint), or it may turn in (convergent squint), or it may look too high or too low while deviating at the same time in an outward or inward direction (vertical squint). Sometimes these conditions change from one eye to another (alternating squint), and sometimes the character of the squint changes in the same eye, divergent squint becoming convergent and vice versa. Sometimes the patient is conscious of seeing two images of the object regarded, and sometimes he is not. Usually there is a lowering of vision in the deviating eye which cannot be improved by glasses, and for which no apparent or sufficient cause can be found. This condition is known as ***amblyopia***, literally ***dim-sightedness***, and is supposed to be incurable after a very early age, even though the squint may be corrected.

Operations, which are now seldom advised, are admitted to be a gamble. According to Fuchs,[1] "their results are as a rule simply cosmetic. The sight of the squinting eye is not influenced by the operation, and only in a few instances is even binocular vision restored." This is an understatement rather than the reverse, for a desirable cosmetic effect cannot be counted upon, and in not a few cases the **condition is made worse**. Sometimes the affected eye becomes straight and remains straight permanently, but often, after it has remained straight for a shorter or a longer time, it suddenly turns, in the opposite direction.

I myself have had both failures and successes from operations. In one case the eyes not only became straight, but binocular single vision—that is, the power of fusing the two visual images into one—was restored, and when I last saw the patient, thirty years after the operation, there had been no change in these conditions. Yet when I reported to the ophthalmological section of the New York Academy of Medicine that I had cut away a quarter of an inch from the tendon of the internal rectus of each eye, the members were unanimous in their opinion that the eyes would certainly turn in the opposite direction in a very short time. In other cases the eyes, after remaining straight for a time, have reverted to their old condition, or turned in the opposite direction. The latter happened once after an apparently perfect result, including the restoration of binocular single vision, which had been permanent for five years. The consequent deformity was terrible. Sometimes I tried to undo the harm resulting from operations, my own and those of others, but invariably I failed.

Glasses, prescribed on the theory that the existence of errors of refraction is responsible for the failure of the two eyes to act together, sometimes appear to do good; but exceptions are numerous, and in many cases they fail even to prevent the condition from becoming steadily worse.

The fusion training of Worth is not believed to be of much use after the age of five or six, and often fails even then, in which case Worth recommends operations.

Fortunately for the victims of this distressing condition, their **eyes often become straight spontaneously, regardless of what is or is not done to them**. More rarely the vision of the squinting eye is restored. If the sight of the good eye is destroyed, the amblyopic eye is very likely to recover normal vision, often in an incredibly short space of time. In spite of the fact that the textbooks agree in assuring us that amblyopia is incurable, many cases of the latter class are on record.

The fact is that both **squint and amblyopia, like errors of refraction, are functional troubles, originating entirely in the mind**. **Both can be produced in normal eyes by a strain to see, and both are immediately relieved when the patient looks at a blank surface and remembers something perfectly.** A permanent cure is a mere matter of making this temporary relaxation permanent. **Permanent relaxation** can be obtained by any of the methods used in the cure of errors of refraction, but in the case of young children who do not know their letters these methods have to be modified. Such children can be cured by encouraging them to **use their eyes on any small objects that interest them**. There are many ways in which this can be done, and it is important to devise a variety of exercises so that the child will not weary of them. For the same reason the presence

of other children is at times desirable. **There must be no compulsion and no harshness, for as soon as any exercise ceases to be pleasant it ceases to be beneficial.**
The needle, the brush, the pencil, kindergarten and Montessori material, picture books, playing cards, etc., may all be utilized for purposes of eye training. At first it will be necessary to use rather large objects and forms, but as the sight improves the size must be reduced. A child may begin to sew, for instance, with a coarse needle and thread, and will naturally take large stitches. As its sight improves a finer needle should be provided, and the stitches will naturally be smaller. Painting the openings of letters in different colors is an excellent practice, and as the sight improves the size of the letters can be reduced. Map drawing and the study of maps is a good thing, and can be easily adapted to the state of the vision. With a map of the United States a child can begin by picking out all the states of a particular color, and as its sight improves it can pick out the rivers and cities. In drawing maps it can proceed in the same way, beginning with the outlines of countries or states, and with improved vision putting in the details. A paper covered with spots in various colors is another useful thing, as the child gets much amusement and benefit from picking out all the spots of the same color. With improved vision the size of the spots can be reduced and their number increased.
Many interesting games can be devised with playing cards. "**Slap Jack**" is a good one, as it awakens intense interest and great quickness of vision is required to slap the Jack with the hand the moment its face appears on the table.
These ideas are only suggestions, and any intelligent parent will be able to add to them.
Both children and adults are greatly benefited by making their squint worse or producing new kinds of squint (see page 2). The voluntary production of squint is a favorite amusement with children, and if they show an inclination to indulge in it, they should be encouraged. Most parents fear that the temporary squint will become permanent, but the fact is just the contrary. Anyone who can squint voluntarily will never squint involuntarily.
Avoid using effort, force to keep a squint eye straight. This leads to more strain, eye muscle tension, abnormal eye movement. Use relaxation.

HOW I CURED MY CHILD OF SQUINT

By Mrs. B. F. Glienke

The following remarkable story is published in the hope that it may help other parents in the treatment of squinting children. The patient was first seen on April 24, 1920, her age being four years. When her sight was tested with pothooks her eyes were straight and her vision normal. When tested with the letters of the Snellen test card, which she could not read, or with figures, which she did not know, her eyes turned, and the retinoscope showed that she had compound myopic astigmatism. When she looked at a blank wall without trying to see, her eyes were again straight and her vision normal.

When my little daughter was quite young I noticed that her eyes were crossed at times, while at others they were perfectly straight. Later the squint became more continuous, and when she was four years old she was taken to Dr. Bates. **He said the trouble was entirely a nervous one**, and called my attention to the fact that **when the child was comfortable and happy her eyes were straight, and when she was nervous they turned.** He said that she should be **encouraged to use her eyes as much as possible on objects that interested her**, and that she **must never be scolded or punished**. He also recommended a cold sponge bath and **massage** first thing in the morning, for the purpose of quieting and strengthening her nerves and improving her general health.
As I had been a teacher of drawing before my marriage and understood something of kindergarten methods, I did not find it difficult to follow his instructions. I drew pictures of animals, and asked Marie to tell me if they were running, walking, or standing still, whether they were looking at her, or facing in some other direction, whether they had four legs or two. I showed her a picture of the moon, and asked her to tell me whether the horns were pointing upward, downward, or sideways. We played that the moon was full of water and had to be held right side up so that the water would not run out. She became very much interested in these pictures, and as long as the interest lasted her eyes were straight. When they ceased to interest her the squint returned.
Sometimes I would ask her to look at the windows and tell me whether they were open at the top or bottom, whether the shades were partly down, or all the way down. Then we would look at the windows across the street and do the same thing. We also watched the passing motors, and I asked her to tell me how many people there were in them and whether these people were men, women or children. We studied the patterns of the wall paper, and when visitors came I asked her after they had gone to tell me what kind of clothes they had on. **I taught her to sew and paint, to match colors, and braid mats, to thread beads, and do things with building blocks. Her father, who is a printer, showed her specimens of diamond type, and of minion which is even smaller than diamond. She enjoyed picking out the smallest letters, and when she did so her eyes were straight.**
Threading beads was the most beneficial work undertaken, its tediousness being overcome by the fact that the child's doll and all her stuffed animals, Teddy bear, bunny, dog, etc., each received its own particular necklace of beads. The cold baths and massage were also a great help.
The combined results of the treatment were wonderful. Her eyes began to be straight all the time. Her nervous condition and her appetite improved, and she slept better. Then we had some set-backs. First she had an attack of grippe with cough, headaches and fever. The squint came back and stayed with her for several weeks, until she was well. Then her eyes became straight again.
Later on when she was playing with her little brother they disagreed about something, and Marie got so nervous that her eyes became worse than on any previous occasion since she had been under treatment. The squint alternated from one eye to the other, the left eye being the worse, and next day we were very much worried when we found that the left eye was practically blind. But we went on encouraging her to use her eyes, and in ten days she was as well as ever.

STORIES FROM THE CLINIC - Three Cases of Squint

By EMILY C. LIERMAN

One day as I entered the clinic I saw two mothers standing side by side, each holding a little boy by the hand. The children were both about the same age, five years, and both were cross-eyed; but there the resemblance ceased. One seemed happy and contented, and it was quite evident that he was much loved and well cared for. Although cheap and plain, the clothes of both mother and child were clean and neat, and often the boy would look at the mother for a smile, which was always there. The other boy was plainly unhappy and neglected. I could read the mind of the mother, who was anything but clean, as she stood there grasping his hand a little too tightly, and even without her frequent whispered threats of dire things to happen if the child did not keep still, I would have known that she considered him a nuisance, and not a precious possession as boy No. 1 plainly was to his mother.

I was at a loss to know which child to treat first, but decided upon Nathan, the clean one, and tried to keep the other interested while he waited. Nathan had beautiful black curls, and should have been pretty, but for the convergent squint of his right eye, which gave him a very peculiar appearance. His vision was very poor. With both eyes together he could read at ten feet only the fifty line of the test card, and with the squinting eye he read only the seventy line. I showed him how to palm, and while he was doing so I had time to talk to his mother. She said that his right eye had turned in since he was two years old and that all the doctors she had taken him to had prescribed glasses. These, however, had not helped him. I now asked Nathan to read the card again, and was delighted to find that the vision of the bad eye had become equal to that of the good one, namely 10/50. I had difficulty in keeping his head straight while I was testing him, for **like most children with squint, he tried to improve his sight by looking at the object of vision from all sorts of angles. After he had palmed for a sufficient length of time, however, he became able to correct this habit.** The extraordinary sympathy which existed between mother and child came out again during the treatment, for no matter what I said or did, the child would not smile until the mother did.

Nathan came to the clinic very regularly for a year, and for the first six months he always wore a **black patch** over his better eye, the left, while atropine was also used in this eye to prevent its use in case the patch was not worn constantly. Nathan did not like the patch, and his mother had to promise all sorts of things to keep it on. After it was removed the atropine was continued. Dr. Bates had told me what to expect when the patch was removed, and so I was not shocked to see the eye turn in. I knew the condition would be temporary, and that in time both eyes would be straight. Treatment was continued for six months, and now the boy reads at times 10/15 with both eyes, and always with a smile.

The dirty little boy, to whom we must now go back, was called George, and his condition was worse than that of Nathan, for he had squint in both eyes. At ten feet he read the fifty line, but complained that he saw double. I showed him how to palm, and while he was doing so his mother told me how very bad he was, adding that I must spank him if he did not mind me.

"I think he gets enough of that already," I said, but I was careful to say it with a smile, fearing that she might lose her temper and say more than I would like. George had now been palming five minutes, and I asked him to uncover his eyes and look at the card. He was much surprised to find that he could read the forty line without seeing the letters double. I asked his mother very quietly to be a little patient with him and help him at home, and I gave her a test card for him to practice with.

"Madam," she replied, "I am the mother of six, and I haven't time to fuss with him."

"No wonder the kiddy is cross-eyed," I thought, and seeing I could get no help in that quarter, I appealed to George.

When I revealed to him the possibility of a Christmas present if he came to the clinic regularly and did what I told him he became interested. I did not know how much could be done for his eyes in the eight weeks that remained before the holidays, but I felt sure that with his co-operation we could at least make a good start. This he gave me in full measure. Never did I have a more enthusiastic patient. He came to the clinic regularly three days a week, and often when I came late I would find him waiting for me on the hospital steps and yelling: "Here she is. I saw her first." After he had been practicing faithfully for two weeks—**palming six times a day**, and perhaps more, according to his own report—he was able to keep his eyes straight while he read the test card at twelve feet. After he had done this I asked him to spell a word with four letters, and instantly his eyes turned. I had him palm again, and then I asked him to count up to twenty. **His eyes remained straight, because he could do this without strain.**

Two days before. Christmas I brought my bundle of presents for the children. George was there bright and early, and with him had come three of his brothers, to get their share too, "if there was any," as George explained. Fortunately a little fairy had prepared me for this, and I had gifts for everyone. That day George was able to keep his eyes straight both before and after his treatment, and to read 15/10 with each eye separately. I have never seen him since, and can only hope that he kept up the treatment until permanently cured.

When little Ruth, aged three, first came to us Dr. Bates suggested to her mother, who was nearsighted, that she should have her own eyes cured, because her condition had a bad effect on the child. She consented, and now has nearly normal vision. Ruth had squint and was so tiny that I had to put her on a table to treat her. As she could not, of course, read the letters on the test card, I held before her a card covered with E's of various sizes turned in different directions. Her mother was quite positive that she couldn't understand what I wanted her to do, but Ruth, as often happens in such cases, had more intelligence than her mother gave her credit for. I asked her to tell me whether a certain E pointed upward, or to the right or left, by merely indicating the direction with her finger, and it did not take an instant for her to show Mother how bright she was. I showed her how to palm, and in a little while she indicated correctly the direction of the letters on several lines. When the letters became indistinct, as I moved the card further away, she became excited and wanted to cry, and her left eye turned in markedly. She palmed again and while she was doing so, I asked her all about her dolly, whether her eyes were blue, or some other color, what kind of clothes she wore, and so on. When she removed her hands from her eyes both were straight. Her mother was instructed to practice with her many times a day at short intervals, so that she would not tire of it, and in three months her eyes were straight every time I tested her sight. I was much interested to learn from her mother that if Ruth's daddy raised his voice in the slightest degree when he spoke to her, her eyes were sure to turn in. This merely confirmed my own experience that it is necessary to treat children who have defects of vision with the utmost gentleness if one wants to cure them. Ruth is not cured yet, but she hopes to be before Christmas, because Santa Claus is sure to visit Room 6, Harlem Hospital Clinic, and he does not like to see children squinting.

SQUINT AND AMBLYOPIA: THEIR CAUSE

By Ophthalmologist William H. Bates
(Wandering, Crossed eyes)

SINCE we have two eyes, it is obvious that in the act of sight two pictures must be formed; and in order that these two pictures shall be fused into one by the mind, it is necessary that there shall be perfect harmony of action between the two organs of vision. In looking at a distant object the two visual axes must be parallel, and in looking at an object at a less distance than infinity, which for practical purposes is less than twenty feet, they must converge to exactly the same degree. The absence of this harmony of action is known as 'squint,' or 'strabismus,' and is one of the most distressing of eye defects, not only because of the lowering of vision involved, but because the want of symmetry in the most expressive feature of the face which results from it has a most unpleasant effect upon the personal appearance. The condition is one which has long baffled ophthalmological science. While the theories as to its cause advanced in the text-books seem to fit some cases, they leave others unexplained, and all methods of treatment are admitted to be very uncertain in their results.

The idea that a lack of harmony in the movements of the eye is due to a corresponding lack of harmony in the strength of the muscles that turn them in their sockets seem such a natural one that this theory was almost universally accepted at one time. Operations based upon it once had a great vogue; but to-day they are advised, by most authorities, only as a last resort. It is true that many persons have been benefited by them ; but, at best, the correction of the squint is only approximate, and in many cases the condition has been made worse, while a restoration of binocular vision - the power of fusing the two visual images into one - is scarcely even hoped for.1

The muscle theory fitted the facts so badly that when Donders advanced the idea that squint was a condition growing out of refractive errors - hypermetropia being held responsible for the production of convergent and myopia for divergent squint - it was universally accepted. This theory, too, proved unsatisfactory, and now medical opinion is divided between various theories. Hansen-Grut attributed the condition, in the great majority of cases, to a defect, not of the muscles, but of the nerve supply; and this idea has had many supporters. Worth and his disciples lay stress on the lack of a so-called fusion faculty, and have recommended the use of prisms, or other measures, to develop it. Stevens believes that the anomaly results from a wrong shape of the orbit, and as it is impossible to alter this condition, advocates operations for the purpose of neutralizing its influence.

In order to make any of these theories appear consistent it is necessary to explain away a great many troublesome facts. The uncertain result of operations upon the eye muscles is sufficient to cast suspicion on the theory that the condition is due to any abnormality of the muscles, and many cases of marked paralysis of one or more muscles have been observed in which there was no squint. Relief of paralysis, moreover, may not relieve the squint, nor the relief of the squint the paralysis. Worth found

1 The result obtained by the operation is, as a rule, simply cosmetic. The sight of the squinting eye is not influenced by the operation, and in only a few instances is even binocular vision restored. Fuchs: Text-book of Ophthalmology, p. 795. The result of even the most successful squint operation, in long-standing strabismus, is merely cosmetic in the vast majority of cases. Eversbusch: The Diseases of Children, edited by Pfaunder and Schlossman. English translation by Shaw and La Fetra, second edition, 1912-1914, vol. vii, p. 316.

State of Vision Not Important Factor

so many cases which were not benefited by training designed to improve the fusion faculty that he recommended operations on the muscles in such cases; while Donders, noting that the majority of hypermetropes did not squint, was obliged to assume that hypermetropia did not cause this condition without the aid of co-operating circumstances.

That the state of the vision is not an important factor in the production of squint is attested by a multitude of facts. It is true, as Donders observed, that squint is usually associated with errors of refraction; but some people squint with a very slight error of refraction. It is also true that many persons with convergent squint have hypermetropia ; but many others have not. Some persons with convergent squint have myopia. A person may also have convergent squint with one eye normal and one hypermetropic or myopic, or with one eye blind. Usually the vision of the eye that turns in is less than that of the eye which is straight; yet there are cases in which the eye with the poorer vision is straight and the eye with the better vision turned in. With two blind eyes, both eyes may be straight, or one may turn in. With one good eye and one blind eye, both eyes may be straight. The blinder the eye, as a rule, the more marked the squint ; but exceptions are frequent, and in rare cases an eye with nearly normal vision may turn in persistently. A squint may disappear and return again, while convergent squint will change into divergent squint and back again. With the same error of refraction, one person will have squint and the other not. A third will squint with a different eye. A fourth will squint first with one eye and then with the other. In a fifth the amount of the squint will vary. One will get well without glasses, or other treatment, and another with these things. These cures may be temporary, or permanent, and the relapses may occur either with or without glasses.

However slight the error of refraction, the vision of many squinting eyes is inferior to that of the straight eye, and for this condition, usually, no apparent or sufficient cause can be found in the constitution of the eye. There is a difference of opinion as to whether this curious defect of vision is the result of the squint, or the squint the result of the defect of vision ; but the predominating opinion that it is, at least, aggravated by the squint has been crystallized in the name given to the condition, namely, "amblyopia ex anopsia," literally "dim-sighted

Facts Versus Theory

ness from non-use" for in order to avoid the annoyance of double vision the mind is believed to suppress the image of the deviating eye. There are, however, many squinting eyes without amblyopia, while such a condition has been found in eyes that have never squinted.

The literature of the subject is full of the impossibility of curing amblyopia, and in popular writings persons having the care of children are urged to have cases of squint treated early, so that the vision of the squinting eye may not be lost. According to Worth, not much improvement can ordinarily be obtained in amblyopic eyes after the age of six, while Fuchs says, 1 "The function of the retina never again becomes perfectly normal, even if the cause of the visual disturbance is done away with." Yet it is well known, as

the translator of Fuchs points out in an editorial comment upon the above statement,2 that if the sight of the good eye is lost at any period of life, the vision of the amblyopic eye will often become normal. Furthermore, an eye may be amblyopic at one time and not at another. When the good eye is covered, a squinting eye may be so amblyopic that it can scarcely distinguish daylight from darkness; but when both eyes are open, the vision of the squinting eye may be found to be as good as that of the straight eye, if not better. In many cases, too, the amblyopia will change from one eye to the other.

Double vision occurs very seldom in squint, and when it does, it often assumes very curious forms. When the eyes turn in the image seen by the right eye should, according to all the laws of optics, be to the right, and the image seen by the left eye to the left. When the

1 Text-book of Ophthalmology, p. 633. 2 Cases have been reported, some surely authentic, in which an amblyopic squinting eye has acquired good vision, either through correction of the refraction, or because loss of sight in the good eye has compelled the use of the amblyopic eye. Ibid.

eyes turn out, the opposite should be the case. But often the position of the images is reversed, the image of the right eye in convergent squint being seen to the left and that of the left eye to the right, while in divergent squint the opposite is the case. This condition is known as "paradoxical diplopia." Furthermore, persons with almost normal vision and both eyes perfectly straight may have both kinds of double vision.

All the theories heretofore suggested fail to explain the foregoing facts; but it is a fact that in all cases of squint a strain can be demonstrated, and that the relief of the strain is in all cases followed by the cure of the squint, as well as of the amblyopia and the error of refraction. It is also a fact that all persons with normal eyes can produce squint by a strain to see. It is not a difficult thing to do, and many children derive much amusement from the practice, while it gives their elders unnecessary concern, for fear the temporary squint may become permanent. To produce convergent squint is comparatively easy. Children usually do it by straining to see the end of the nose. The production of divergent squint is more difficult, but with practice persons with normal eyes become able to turn out either eye, or both, at will. They also become able to turn either eye upward and inward, or upward and outward, at any desired angle. Any kind of squint can, in fact, be produced at will by the appropriate kind of strain. Some persons retain the power to produce voluntary squint more or less permanently. Others quickly lose it if they do not keep in practice. There is usually a lowering of the vision when voluntary squint is produced, and accepted methods of measuring the strength of the muscles seem to show deficiencies corresponding to the nature of the squint.

CHAPTER XXII
SQUINT AND AMBLYOPIA: THEIR CURE

THE evidence is conclusive that squint and amblyopia, like errors of refraction, are purely functional troubles; and since they are always relieved by the relief of the strain with which they are associated, it follows that any of the methods which promote relaxation and central fixation may be employed for their cure. As in the case of errors of refraction, the squint disappears and the amblyopia is corrected just as soon as the patient gains sufficient mental control to remember a perfectly black period. In this way both conditions can be temporarily relieved in a few seconds, their permanent cure being a mere matter of making this temporary state permanent.

Strabismus Cure

One of the best ways of gaining mental control in cases of squint is to learn how to increase the squint, or produce other kinds of squint, voluntarily. In the case illustrated, the patient had divergent vertical squint in both eyes. When the left eye was straight the right eye turned out and up, and when the right eye was straight the left eye turned down and out. Both eyes were amblyopic and there was double vision, with the images sometimes on the same side and sometimes on opposite sides. The patient suffered from headaches, and having obtained no relief from glasses, or other methods of treatment, she made up her mind to an operation and consulted Dr. Gudmund J. Gislason, of Grand Forks, N. D., with a view to having one performed. Dr. Gislason, puzzled to find so many muscles apparently at fault, asked my opinion as to which of them should be operated upon. I showed the patient how to make her squint worse, and recommended that Dr. Gislason treat her by eye education without an operation. He did so, and in less than a month the patient had learned to turn both eyes in voluntarily. At first she did this by looking at a pencil held over the bridge of the nose; but later she became able to do it without the pencil, and ultimately she became able to produce every kind of squint at will. The treatment was not pleasant for her, because the production of new kinds of squint, or the making worse of the existing condition, gave her pain; but it effected a complete and permanent cure both of the squint and of the amblyopia. The same method has proved successful with other patients.

Some patients do not know whether they are looking straight at an object or not. These may be helped by watching the deviating eye and directing them to look more nearly in the proper direction. When the deviating eye looks directly at an object, the strain to see is less, and the vision is consequently improved. Covering the good eye with an opaque screen, or with ground glass, encourages a more proper use of the squinting eye, especially if the vision of that eye is imperfect.

Children of six years, or younger, can usually be cured of squint by the use of atropine, a one per cent solution being instilled into one or both eyes twice a day, for many months, a year, or longer. The atropine makes it more difficult for the child to see, and makes the sunlight disagreeable. In order to overcome this handicap it has to relax, and the relaxation cures the squint.
(Dr. Bates and Modern Teachers use relaxation methods without atropine.)

The improvement resulting from eye education in cases of squint and amblyopia is sometimes so rapid as to be

Learning to See Worse

almost incredible. The following are a few of many other examples that might be quoted :

A girl of eleven had convergent vertical squint of the left eye. The vision of this eye at the distance was 3/200, while at the near-point it was so imperfect that she was unable to read. The vision of the right eye was normal both for the near-point and the distance. She was wearing glasses when she came to the office convex 4.00 D. S. combined with convex 0.50 D. C., axis 90, for the right eye; and convex 5.50 D. S. for the left eye but had obtained no benefit from them. When she looked three feet away from the big C with the left eye, she saw it better than when she looked directly at it; but when asked to count my fingers held three feet

away from the card, they so attracted her attention that she was able to see the large letter worse. The fact was impressed upon her that she could see the card better when she looked away from it, or she could see it worse, at will; and she was also asked to note that when she saw it worse her vision improved, and when she saw it better her vision declined. After shifting from the card to a point three feet away from it, and seeing the former worse a few times, her vision improved to 10/200. The ability to shift and see worse improved by practice so rapidly that in less than ten days her vision was normal in both eyes, and in less than two weeks it had improved to 20/10, while diamond type was read with each eye at from three inches to twenty inches. In less than three weeks her vision for the distance was 20/5, by artificial light, and she read photographic type reductions at two inches, the tests being made with both eyes together and with each eye separately. She also read strange test cards as readily as the familiar ones. She

Cured in Three Weeks

was advised to continue the treatment at home to prevent a relapse, and at the end of three years none had occurred. During the treatment at the office and practice at home the good eye was covered with an opaque screen, but this was not worn at other times.

(Seeing the letter worse when looking away from it=the letter is then in the peripheral field of vision and it should be worse, less clear. When the letter is placed in the central field, eyes looking directly at it, the letter is seen best, clear due to central fixation, the center of the visual field is clearest.)

A very remarkable case was that of a girl of fourteen who had squinted from childhood. The internal rectus of the right eye had been cut when she was two years old, but still pulled the eye inward. The patient objected to wearing a ground glass over her good eye, because her friends teased her about it and she thought it made her more conspicuous than the squint. One day she lost her glasses in the snow; but her father, who was a man of strong character, immediately provided another pair. Then she announced that she was ill, and couldn't go to school. I told the father that his daughter was hysterical, and simply imagined she was ill to avoid treatment. He insisted that she continue, and as she did not consider herself well enough to come to see me, I called upon her. With the assistance of her father she was made to understand that she would have to continue the treatment until she was cured, and she at once went to work with such energy and intelligence that in half an hour the vision of the squinting and amblyopic eye had improved from 3/200 to 20/30. She also became able to read fine print at twelve inches. She went back to school wearing the ground glass over the good eye; but whenever she wanted to see she looked over the top of it. Her father followed her to school, and insisted that she use the poorer eye instead of the better one. She became convinced that the simplest way out of her troubles would be to follow my instructions, and in less than a week the squint was corrected and she had perfect vision in both eyes. At the beginning of the treatment she could not count here fingers at three feet with the poorer eye, and in three weeks, including all the time that she wasted, she had perfect sight. When told that she was cured her main concern seemed to be to know whether she would have to wear the ground glass any more. She was assured that she would not have to do so unless there was a relapse, but there never was any relapse[1].

1Bates; L'education de l'oeil l'amblyopie ex anopsia, Clin. Opht., Dec.10, 1912.

Cured in Two Weeks

A girl of eight had had amblyopia and squint since childhood. The vision of the right eye was 10/40, while that of the left was 20/30. Glasses did not improve either eye. The patient was seated twenty feet from a Snellen test card and the right, or poorer eye, was covered with an opaque screen. She was directed to look with her better eye at the large letter on the card and to note its clearness. Next she was told to look at a point three feet to one side of the card, and her attention was called to the fact that she did not then see the large letter so well. The point of fixation was brought closer and closer to the letter, until she appreciated the fact that her vision was lowered when she looked only a few inches to one side of it. When she looked at a small letter she readily recognized that an eccentric fixation of less than an inch lowered the vision.

After she had learned to increase the amblyopia of the better eye, this eye was covered while she was taught how to lower the vision of the other, or poorer eye, by increasing its eccentric fixation. This was accomplished in a few minutes. She was told that the cause of her defective sight was her habit of looking at objects with a part of the retina to one side of the true center of sight. She was advised to see by looking straight at the Snellen card. In less than half an hour the vision of the left eye became normal, while the right improved from 10/40 to 10/10. The cure was complete in two weeks.

The following case was unusually prolonged, because as soon as one eye had been cured, the defect for which it had been treated appeared in the other eye. The patient, a child of ten, had imperfect sight in both eyes, but worse in the right than in the left. The vision of the right eye was restored after some weeks by eye education, when the left eye turned in and became amblyopic. The right eye was then covered, and after a few weeks of eye education the left became normal. The right eye then turned in and the vision became defective. It was necessary to educate the eyes alternately, for about a year, before both became normal at the same time. This patient had congenital paralysis of the external rectus muscle in both eyes, a condition which was apparently not relieved when the squint and amblyopia were cured.

In the following case the patient had an attack of infantile paralysis after her cure, resulting in a relapse, with new and more serious developments, which were, however quickly cured. The patient, a girl of six, seen first on December 11, 1914, had had divergent squint of the left eye for three years, and had worn glasses for two years without benefit convex 2.50 D. S. for the right eye, and convex 6.00 D. S. combined with convex 1.00 D. C., axis 90, for the left. The vision of the right eye with glasses was 12/15 and of the left 12/200. Atropine was prescribed for the right eye for the purpose of partially blinding it and thus encouraging a more nearly proper use of the squinting eye, and the usual methods of securing relaxation, such as shifting, palming, the exercise of the memory, etc., were used. On January 13, 1915, the vision without glasses had improved to 10/70 for the right eye, and 10/50 for the left. On February 6, the vision of the right eye was 10/40 and of the left 10/30. The eyes were apparently straight, and scientific tests showed that both were used at the same time (binocular single vision). On April 17, after about four months' treatment, the vision of the left eye was normal, and there was binocular single vision at six inches. On May 1 the vision of the left

eye was still normal, and whereas at the beginning the patient had been unable to read with it at all, even with glasses, she now read diamond type without glasses at six inches.

Accommodation Unaffected by Atropine

On August 16, 1916, the patient had an attack of infantile paralysis which was then epidemic. The sight of both eyes failed, the muscles that turned the eyes in and out were paralyzed, the eyelids twitched, and there was double vision. Various muscles of the head, the left leg and the left arm were also paralzyed. When she left the hospital after five weeks the left eye was turned in, and the vision of both eyes was so poor that she was unable to recognize her mother. Later she developed alternate convergent squint. On November 2 the paralysis in the right eye subsided, and four weeks later that of the left eye began to improve. On November 9 she returned for treatment without any conspicuous squint, but still suffering from double vision, with the images sometimes on the same side and sometimes on opposite sides. On November 23 the eyes were straight and the vision normal.

On July 11, 1918, the eyes were still straight and the vision normal, and there was binocular single vision at six inches. Although atropine had been used in the right eye every day for more than a year, and intermittently for a much longer time, and the pupil was dilated to the maximum, it read fine print without difficulty at six inches, central fixation overcoming the paralyzing effect of the drug. According to the current theory the accommodation should have been completely paralyzed, making near vision quite impossible. The patient also read fine print with the left eye as well as, or better than, with the right eye.

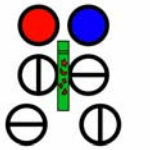
WARNING - Avoid Artificial 3-D Image Fusion Repetitive Eye Exercises

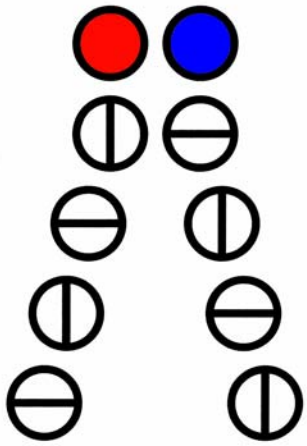
Avoid Artificial 3-D Image Fusion Eye Exercises. This is not a normal, natural Bates Method Switching Close & Far Activity. The author of this website and other people have experienced double vision, convergence, divergence impairment from trying these eye exercises which are popular on the Internet and in some vision improvement books.
Practicing the 3-D image activity as a repetitive eye exercise seems to cause the most vision impairment.
Some Behavioral Optometrists and Natural Vision Improvement Teachers use these Fusion Images as Games, a Test with specific directions and it has helped some people regain clear vision, but:
It is best to avoid these and to stay only with the True Bates Method.
If an extreme vision problem exists and the student is not gaining clear vision, strabismus removal from practicing the Bates Method (which is rare): seek a Bates Method Teacher and/or Bates Method Behavioral Optometrist, Ophthalmologist for in person Bates Training and if necessary, optional short term, temporary, advanced training with the Artificial 3-D Image Fusion Test.
The Bates Method can correct eye problems, including strabismus, crossed, wandering eyes without using these Artificial 3-D Image Tests. I place this here so students know the difference between healthy Bates Method Switching and These 3-D Images which are not true, safe methods of switching close and far and can produce side effects for some people.

See Example, directions, warnings in the Fusion pictures below in the Eyecharts attached to this book.

Eye, Brain Artificial 3-D Image Fusion Test

This is another version of the Fusion Chart and 3-Cups 3-D Image test.
Place the red and blue circles at eye level, the space between the circles between the left and right eyes, center of the visual field, 12-20 inches away.
Place a pen below and between the two top circles, between the left and right eyes. (See picture below.) Look at and shift on the pen while moving it close and far from the eyes. Merge the 2 circles into a 3rd circle in the middle of the 2 circles. The circles are merged evenly, in perfect alignment.
Then: while looking at the pen directly below the 3rd circle: Think red and the red circle appears. Think blue and the blue circle appears. If these images are seen, this indicates that the eyes are even, balanced, the brain and eyes are working together, communicating correct.
Now practice on the circles with the vertical and horizontal lines. Do 1 line at a time. Practice with the chart at various distances. Practice on each line only for 1-3 seconds and only once. Relax, no strain.
If any strain, tension is felt, do only 1 line or none. Circles close together on the top line are easiest to merge.
Same directions and precautions as for the 3-Cups Test; Do not do this as a eye exercise. Do it only once. Bates Teachers do not advise this test. It can impair the eyes convergence, divergence, fusion if done as a repeating eye exercise or if there is a fusion, convergence, divergence or other imperfection in the eyes, visual system. See the other charts for more directions. A Bates Method Behavioral Optometrists, Ophthalmologists guidance is necessary for further use of the test.





When the 3rd, middle image of the circle is seen: It is a Artificial 3-D (3-Dimensional) image. It is not true normal 3-D vision. Maintaining this artificial 3-D image by staring into space before the distance the image is at strains, tenses, confuses the visual system. It is not the normal function of the brain, eye muscles, eyes.
Placing a pen between, before, below the two circles and looking at, shifting on the pen while merging the two circles to produce the 3rd circle beyond the pen helps to prevent some of the strain, tension this test produces.
See picture on the right with the green pen placed in the middle of, below the circles.

Notice that when doing this exercise without looking at the pen that the eyes, (visual attention) is not truly placed, focused, fused directly on a object, distance the object is at. It is focused in space before or beyond the object (circles) to produce the merged 3rd 3-D illusion of the circle created by combining two circles from the left and right peripheral field. This is against The Bates Method because it prevents normal fusion, central fixation, shifting, binocular vision directly on the object and distance the object is at. This results in: confusion, diffusion, eccentric fixation, tension, strain in the brain, eye muscles, eyes, double vision at close and far distances, strabismus and other visual disturbances due to disrupting the eyes, brains function of convergence, divergence, binocular vision, fusion, left and right brain hemisphere function...

Old Fusion Game

Place a pen in front of and between the eyes, between and a little below the cat and tree stump. Look at the pen, move it close and far from the eyes and see the kitty in the distance move onto the tree stump. Do it once only.

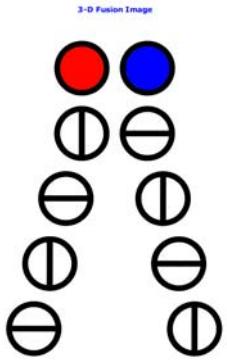




A simple Fusion Test done with the Pen, Kitty & Tree Stump is a old method and (for most people that do not have fusion… impairment) will not disrupt the vision if it is done only once, 1-3 seconds as a test to see if the eyes, eye muscles, brain: left and right brain hemispheres, visual cortex, optic nerve… are communicating, balanced, working together correct.
If the images do not fuse, it is not necessarily a indication of vision impairment. The Bates Method, without further use of this test will correct the vision.

This entire section on artificial 3-D will be re-written in the final book upgrade. Do not practice the Fusion Exercises here and on the next pages. They are placed here only so people are familiar with the Method a Behavioral Optometrist might apply if more than the Bates Method is needed to correct a Wandering, Crossed eye condition. These pictures do not teach the complete method. Practicing without a Eye Doctor can cause Strabismus. Do the Bates Method only. The fusion test with the cat and tree stump can be done only once, for a few seconds to test, see if the brain and eyes are working together.

Avoid Artificial 3-D Image Fusion Repetitive Eye Exercises



This activity is only for treating crossed, wandering eyes-Strabismus and only if The Bates Method of Natural Eyesight Improvement has not correct the condition. It must be done with the direction of a Bates Method Behavioral Optometrist, Ophthalmologist. This Artificial 3-D activity is not a normal, natural Bates Method Switching Close & Far Activity.

The author of this book and other people have experienced double vision, convergence, divergence impairment from trying these eye exercises (activities) which are popular on the Internet and in some vision improvement books. The activity affects the way the brain works with the eyes, eye muscles, eye muscle function and eye movement. Practicing the 3-D image activity as a repetitive eye exercise and with incorrect directions seems to cause the most vision impairment.

A few Natural Eyesight Improvement Teachers are now warning students not to practice artificial 3-D image exercises if there is any eye condition especially with the eyes movement, or any eye, medical condition.

If an extreme vision problem exists and the student is not gaining correct eye movement from practicing the Bates Method (which is rare); seek a Bates Method Teacher and Bates Method Behavioral Optometrist, Ophthalmologist for in person Bates Training and if necessary, optional short term, temporary, advanced training with the Artificial 3-D Image Fusion activity.

Behavioral Optometrists teach 3-D Fusion Image activities with specific directions and it has helped some people obtain straight eyes, corrects crossed, wandering eyes, convergence, divergence, (Strabismus, Fusion) when applied correct. *It must be done correct, a specific way or vision impairment can occur!* Practiced with the Guidance of a Natural Vision Improvement, Bates Method Behavioral Optometrist, Ophthalmologist. Follow your eye doctors directions.

The Eye Doctor will teach the student which activities, activities are to be done for specific conditions, distances that the students eyes movement, convergence, divergence, fusion... need improvement. The doctor may have the student practice with the 3-D image card placed at a variety of close, middle, far distances, fusing the two images into a 3rd image by looking at a variety of, and/or only 1, 2... different close distances/objects before the card (example; red pen) and/or a variety of and/or only 1, 2... different far distances/objects beyond the card. Objects are placed between the two images and between the left and right eyes.

A clear see through card or card with a window cut in the card below the two images to be merged is used for looking to the distance beyond the card for divergence.

Spacing between the two images may be at a variety of lengths. (1-4... inches apart.) Merging, fusing images that are further apart being accomplished with advanced fusion training, if needed. Type of activities, distances to practice at, length of time each or only some of the activities, routines are practiced is determined by the student's condition; divergence or convergence impairment, type of strabismus; cross, wandering eyes, eye movement impaired up, down, left, right, diagonally.., degree of impairment and other eye conditions. Only a professional can prescribe a safe, correct, precise routine. Practicing too much; at one distance, one activity, for the wrong distance, wrong activity or practicing when the eyes do not need it, practicing incorrect... can impair divergence, convergence. Accommodation, un-accommodation work, occur with the eyes fusion, divergence, convergence. All are affected, improved or impaired, when the activities are done correct or incorrect. It can cause, increase strabismus in a eye that has certain conditions, body, brain medical conditions, even in normal eyes and eyes that have a very slight strabismus that is not realized.

These activities do produce a natural 3-D effect created by the eyes, brain. Seeing the correct double images and fused 3rd image indicates the brain, eyes are working together normally. I call these Artificial 3-D because it is not the normal way the person uses the eyes to see an object clear.

True completely natural 3-D vision for healthy eyes, brain function occurs when looking directly at the object of visual attention, at the distance the object is at, with mind, eyes on/at that object, distance.

Try the Bates Method first; relaxation, central fixation, shifting may be all that is needed. Central fixation merges the left and right eyes central fields together, both eyes looking at the same object, point in the center of the visual field. It is best to avoid the artificial 3-D activities. They can impair central-fixation, shifting. Try to stay only with the True Bates Method.

The Bates Method corrects eye problems, including strabismus, crossed, wandering eyes without using the Artificial 3-D Image Tests. Dr. Bates did not use this type of treatment. He did teach a similar one; seeing two candle flames… Read his Better Eyesight Magazines and search for the word Squint, Crossed, wandering eyes, strabismus treatments; Squint - Feb., 1929. Pictures of the candle flame activity are in the Better Eyesight Magazine with 500 pictures Free E-Book.

The natural, safe way to test and improve convergence, divergence, eye movement clarity of vision at close, middle, far, all distances is; the Pens in a Row, Bead (Brock) String in the Switching chapter and switching, shifting on objects at close, middle, far distances. The Phoria eye direction swings. Place one p[en between the eyes, eye level, center of the visual field. Look to the distance. The pen appears double in the peripheral field; See if the images are even height, clear… Then look at the pen; the two images move, fuse together into one perfect clear image. See that chapter to test distant, middle… vision.

I place the Artificial 3-D image activity here so students know the difference between healthy Bates Method Switching and These 3-D Images which are not true, safe methods of switching close and far and can produce side effects.

See the fusion examples in the pictures, directions. To be done only if needed and with complete directions for your specific eye condition, supervision by a Behavioral Optometrist, Ophthalmologist .

Eye, Brain, Fusion Artificial 3-D Image Test, Activity - Examples and Warning

Due to Clark Night and a few other Natural Vision Improvement students experiencing double vision, convergence, divergence impairment after practicing the 3-Cups and other Artificial Fusion 3-D Image Eye Activities taught by some Vision Improvement Teachers and Behavioral Optometrists; I have added these advanced instructions and warning to the Fusion Eyecharts:

In 2009 I was practicing the 3-Cups Fusion Activity. For the next 2 days my close vision was double; when I looked at my desk to write, my eyes, visual focus was 'stuck' converged in space before the desk causing double vision. The problem cleared up in 2 days after stopping the activity.
In Sept., 2010 I was doing a similar Fusion 3-D Image eye activity on and off for 3 days. I found it in a Natural Vision Improvement book by a well known teacher. I developed eye divergence impairment with double distant vision and slow, skipping images and other visual disturbances for 10 days and continued to have some vision impairment for a few months. Astigmatism also developed. The vision impairment cleared up after discontinuing the activity and then staying only with the Bates Method.

I may have had an abnormal or exaggerated reaction to the activity due to a neck injury, tension on the nerves, muscles in my neck from a bad chiropractic treatment 12 months ago, but last year when I experienced the problem after doing the 3-Cups activity my neck was ok.
Maybe I got the reaction of double vision, divergence problem because my neck muscles, nerves were injured, and I had a sinus headache, inflammation & working 6-10 hours a day on the computer without the best posture. If so; the 3-D Image Test alerted me to these conditions or: doing the 3-D activities impaired the vision during a time of lowered health.
Back in 1996, before I had progressed neck tension, nerve injury, vertebrae mis-alignment caused by the chiropractor, I could do these activities as a quick test with no problems and I enjoyed it. I could do it longer, 20-30 seconds without vision impairment. The eyes convergence, divergence was perfect.

Because these activities are taught by some Natural Vision Improvement Teachers and Behavioral Optometrists and there are people that claim the 3-D Image activities (when done correct) have improved their eye movement, convergence, divergence; I am placing the 3-D Fusion Image Eyecharts in this book. I place the Eye, Brain Fusion Test in this book so students can know what 3-D Eye Fusion Tests are. It is best to practice this only with a Bates Method Optometrists, Ophthalmologists guidance.

I was trained by a strict True Bates Method Natural Vision Improvement Teacher to never do 3-D Image Eye Activities. I am placing a warning that the activities, even when not done as a repetitive eye exercise can disrupt the eyes function, cause eye muscle tension, dysfunction. It's best to stay with the Bates Method only and avoid these Artificial 3-D Fusion Image activities. As a Bates Student, Teacher; I do not advise doing the activities. True Bates Method, Natural Vision Improvement Teachers do not teach 3-D Fusion Image activities and do not allow students to practice with 3-D Eye Images as a test, game or exercise. This includes staring, unfocused at those 3-D posters to see hidden images.

If a student decides to try this activity; Do it as a quick test only! Only one time for a few seconds to see if the brain and eyes are communicating, working together. Do only one level on the chart and once. The close together, easy to merge circles.
Do not do this repeatedly as an eye exercise. Doing this as a exercise can cause double vision at close and far distances, convergence, divergence dysfunction especially if there is any type of slight or advanced fusion, convergence/divergence imperfection, strabismus or similar condition in the eyes, brain, visual system, impaired or different brain function, pinched nerves in the neck, mis-aligned neck vertebrae, chronically tense muscles in the neck, arms, shoulders, eyes. A medical condition, body, eye surgery... can cause temporary strabismus. The 3-D activity can cause more, prolonged eye impairment. Do not practice the Artificial 3-D activity if the eyes have any amount of imperfect convergence, divergence. It is to be done only under guidance by a Bates Method Behavioral Optometrist, Ophthalmologist.

Placing a pen (or other object) to look at in front of the 3-D image, eyes looking directly at, shifting part to part on the pen helps to prevent strain, tension, vision impairment when practicing the 3-D Image as a test. Using a red (or any color) pen placed in front of the 3-D image lowers the strain, tension (see directions on the 3-D chart pictures) but, tension, strain can still occur because the eyes, brain are still noticing, (bringing attention to without looking directly at) the circles in the distance while looking at the close pen-the eyes, brains attention is now on 2 different objects at the same time-the pen and 3-D image. This also causes tension, strain.
True normal relaxed vision occurs when the eyes, brains attention is on one object, one distance at a time. The eyes shift, switch around, back and forth from object to object, distance to distance, looking directly at the object, distance of visual attention, seeing one object at a time.

Behavioral Optometrists, Ophthalmologists perform other variations of the 3-D Activity;
The 3-D Image card has a horizontal hole cut in the card along under the bottom of the circles, a window to look through to the distance. The person looks at the pen placed behind the card or other object behind/beyond the card in the distance to merge the circles on the card. This tests fusion at a variety of other distances. See a Bates Method Behavioral Optometrist, Ophthalmologist for doing these tests.
Some Behavioral Optometrists use these artificial 3-D Image eye activities for students that have extreme blurred vision and the eye muscles are so tense, rigid, 'frozen in place' for years that the eyes have difficulty converging , diverging, moving. These activities, if not overdone, and if done correct, may break this tension and get the eyes moving. Then the student stops the activities and stays with only completely normal, natural eye function, The Bates Method of Natural Eyesight Improvement.

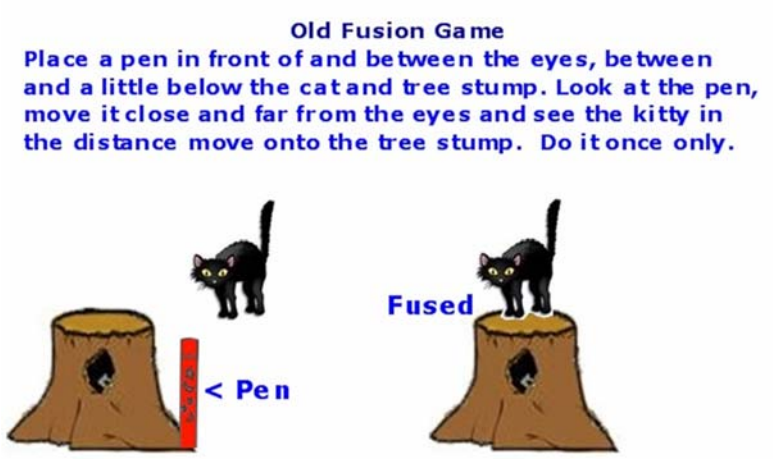
Try the True Bates Method first: Plain old fashioned relaxed switching, shifting & central fixation on objects at close, middle, far distances, looking directly at the object of visual attention. This has kept my vision clear and convergence, divergence at close and far distances perfect for 40+ years.
I never had a convergence, divergence vision impairment (double close and distant vision, images slow to merge...) until after using the Artificial 3-D Image Fusion activity repeatedly as an eye exercise for a few days. I still suspect my neck injury by the chiropractor has weakened the nerves, muscles in the neck and these do branch out to, affect the function of the nerves, eye muscles in the head, eyes. This may be one reason that these fusion activities disrupted my vision. The body has its own way of healing, adapting. Many people may have a little mis-alignment of the spine, neck vertebrae without any health problems occurring from the condition; the body, nerves, muscles adapt, can align the bones naturally without chiropractic treatment and create a good state of health even with some imperfect alignments. The nerves, muscles that connect, travel to the eyes create a workable balance that ensures clear vision, healthy eyes.

Artificial 3-D Image Fusion Activities Activate Abnormal Eye/Brain Function

See the pictures below. Notice that when doing the 3-D test that the eyes, (visual attention) is not truly placed, focused, fused on the 3-D object & and distance the object is at. It is focused in space before or beyond the object. The 3-D image of the object that appears is normal for the eyes, brain to produce, but; making that image your point of visual and mental attention without looking directly at it, not looking at the object/distance it is truly at is abnormal eye, brain function and strains the visual system.

This activity is against The Bates Method because it prevents fusion, central fixation, shifting, binocular vision directly on the object and distance the object is at. Shifting, eye movement is also restricted and the eyes shift in space, not on the object and the eyes are really looking at two images in the peripheral field that are merged into one, only 'appearing' to be in the central field. This results in; eccentric fixation, confusion, diffusion, tension, strain in the brain, eye muscles, eyes and can cause double vision and blur at close and far distances, strabismus and other visual disturbances due to disrupting the eyes/brains function of convergence, divergence, fusion. This also impairs accommodation, un-accommodation (which functions with convergence, divergence) lowering the clarity of vision further. The eyes converge, accommodate, un-converge, un-accommodate a specific amount for the distance the eyes are looking at. This is programmed into the brain. The 3-D exercise, activity confuses, impairs this brain, eye function.
3-D Images on paper, computer, television screens... are not true 3-D vision. It is a illusion of 3-D. 3-D Computer games and televisions cause eyestrain, headaches, left and right brain hemisphere imbalance impairs the brains function, growth, development and the clarity of vision.

It is best to practice the True Bates Method; shifting, central fixation, tracing, switching directly on objects at close, middle, far and infinity distances as described in this book in the switching chapter. Look directly at the object of visual attention, at its true distance and shift on it. Then switch to a object at another distance and shift on it, use central-fixation... This is normal Fusion.
It is normal to see a double image of objects in the distance when looking at a close object and a double image of close objects when looking to the distance. When the eyes, brains visual attention switches to the double object; the two objects move together and merge, fuse into one object; the object the eyes are looking directly at, directly at the distance the object is at. This is the normal process of fusion, normal images, vision and is healthy for the eyes, clarity of vision. This is true 3-D (Three Dimensional) vision with true depth, distance, perception. It relaxes the eyes, visual system. See the chapter and videos on Switching Close, Middle, Far. Practice Palming, Relaxation, Shifting, Blinking, Movement, all Bates Method activities. I have used the True Bates Method for 40+ years and it has always given me perfect clear vision, close and far, perfect, fast convergence, divergence.
Dr Bates did teach a practice of seeing a candle flame double to correct crossed, wandering eyes.
See Better Eyesight Magazine Illustrated with 500 pictures, Squint by W.H. Bates M.D. Feb., 1929
The picture below is a old fashioned Behavioral Optometry fusion eye/brain test.

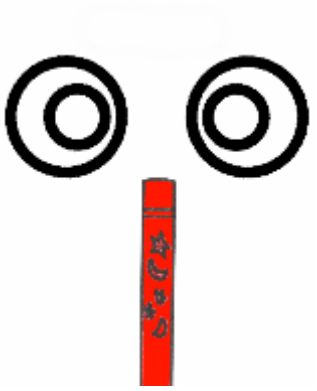


A simple Fusion Test done with the Pen, Kitty & Tree Stump is a old method and (for most people that do not have fusion... impairment) will not disrupt the vision if it is done only once, 1-3 seconds as a test to see if the left and right eyes, eye muscles, brain; left and right brain hemispheres, visual cortex, optic nerve... are communicating, balanced, working together correct.
If the images do not fuse, it is not necessarily an indication of vision impairment.
The Bates Method, without further use of this test will correct the vision.

See more Example, directions, warnings in the Fusion pictures;

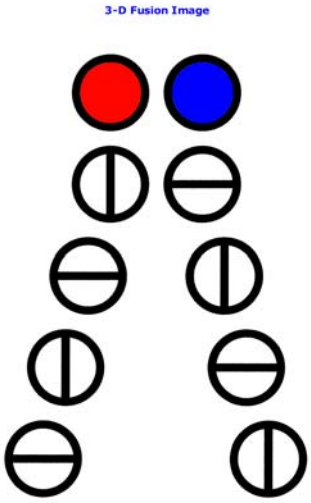
Eye, Brain, Fusion Artificial 3-D Image Test - Examples and Warning

Due to Clark Night and a few other Natural Vision Improvement students experiencing double vision, convergence, divergence impairment after practicing the 3-Cups and other Artificial Fusion 3-D Image Eye Exercises taught by some Vision Improvement Teachers and Behavioral Optometrists; I have added these advanced instructions and warning to the Fusion Eye charts:
See picture examples of Artificial 3-D Illusion Fusion Images on the right >



In 2009 I was practicing the 3-Cups Fusion Exercise. For the next 2 days my close vision was double: when I looked at my desk to write, my eyes, visual focus was 'stuck' converged in space before the desk causing double vision. The problem cleared up in 2 days after stopping the exercise.

This year, Sept. 2010 I was doing a similar Fusion 3-D Image eye exercise on and off for 3 days. I found it in a Natural Vision Improvement book by a well known teacher.
I developed eye divergence impairment with double distant vision and slow, skipping images and other visual disturbances for 10 days and continue to have some vision impairment from this but so far is getting back to normal vision after discontinuing the exercise.



I may have had an abnormal or exaggerated reaction to the exercise due to a neck injury, tension on the nerves, muscles in my neck from a bad chiropractic treatment 12 months ago, but last year when I experienced the problem after doing the 3-Cups exercise I presumed my neck was ok.
Maybe I got the reaction of double vision, divergence problem because my neck muscles, nerves are still injured, and I had a migraine, sinus headache, inflammation & working 6-10 hours a day on the computer without the best posture.
If so: the 3-D Image Test alerted me to these conditions or: doing the 3-D exercises impaired the vision during a time of lowered health.

Because these exercises are taught by some Natural Vision Improvement Teachers and Behavioral Optometrists and there are people that claim the 3-D Image exercises (when done correct) have improved their vision, convergence, divergence: I am leaving the 3-D Fusion Image Eyecharts in this book. I place the Eye, Brain Fusion Test in this book so students can know what 3-D Eye Fusion Tests are. <u>It is best to practice this only with a Bates Method Optometrists, Ophthalmologists guidance.</u>

Because I was trained by a strict True Bates Method Natural Vision Improvement Teacher to <u>never do 3-D Image Eye Exercises</u>, I am placing a warning that the exercises can disrupt the eyes function, cause eye muscle tension, dysfunction and its best to stay with the Bates Method only and avoid these Fusion Artificial 3-D Image exercises.
As a Bates Student, Teacher; I do not advise doing the exercises.
True Bates Method Natural Vision Improvement Teachers do not teach 3-D Fusion Image methods and will not allow students to practice with 3-D Eye Images as a test or exercise.

If a student decides to try this exercise;
Do it as a quick test only! <u>Only one time</u> for a few seconds to see if the brain and eyes are communicating, working together. Do not do this repeatedly as an eye exercise. Doing this as a exercise can cause double vision at close and far distances, convergence, divergence dysfunction especially if there is any type of slight or advanced fusion, convergence/divergence imperfection, strabismus or similar condition in the eyes, brain, visual system, impaired or different brain function, pinched nerves in the neck, mis-aligned neck vertebrae, chronically tense muscles in the neck, arms, shoulders, eyes...
Do not practice the exercise if the eyes have any amount of imperfect convergence, divergence.
This is to be done only under guidance by a Bates Method Behavioral Optometrist, Ophthalmologist.

Before I had neck tension, nerve injury, vertebrae mis-alignment caused by the chiropractor, I could do these exercises as a quick test with no problems and I enjoyed it. I could do it longer, 20-30 seconds without vision impairment.
I remember doing fusion exercises like these in the past in 1996 when studying 'The Program for Better Vision' Book by The Cambridge Institute for Better Vision and it improved my vision and the eyes convergence, divergence was perfect.
Cambridge Institute provides <u>specific</u> training, directions, precautions.

Placing a pen (or other object) to look at in front of the 3-D image, eyes looking directly at, shifting part to part on the pen helps to prevent strain, tension, vision impairment when practicing the 3-D Image as a test.
Using a red (or any color) pen placed in front of the 3-D image lowers the strain, tension (see directions on the 3-D chart pictures) but, tension, strain can still occur because the eyes, brain are still noticing, (bringing attention to without looking directly at) the circles in the distance while looking at the pen and the eyes, brains attention is now on 2 different objects at the same time-the pen and 3-D image. This also causes tension, strain.
True normal relaxed vision occurs when the eyes, brains attention is on one object, one distance at a time. The eyes shift, switch around, back and forth from object to object, distance to distance, looking directly at the object, distance of visual attention, seeing one object at a time.

An advanced method to this test: the 3-D Image card has a horizontal hole cut in the card along under the bottom of the circles, a window to look through to the distance. The person looks at the pen placed behind the card or other object behind/beyond the card in the distance to merge the circles on the card.
This tests fusion at a variety of other distances.
See a Bates Method Behavioral Optometrist, Ophthalmologist for doing these advanced tests.
I speculate that Behavioral Optometrists use these artificial 3-D Image eye exercises for students that have extreme blurred vision and the eye muscles are so tense, rigid, 'frozen in place' for years that the eyes cannot converge, diverge, move. These exercises, if not overdone, and if done correct, may break this tension and get the eyes moving. Then the student can stop the exercises and stay with only completely normal eye function: The Bates Method.

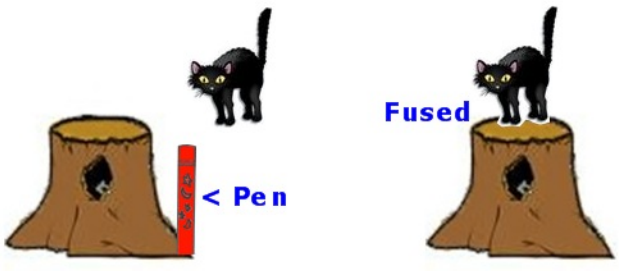
Try the True Bates Method first: Plain old fashioned relaxed switching, shifting & central fixation on objects at close, middle, far distances, looking directly at the object of visual attention. This has kept my vision clear and convergence, divergence at close and far distances perfect for 40 years.
I never had a convergence, divergence impairment (double close and distant vision, images slow to merge…) until after using the 3-cups and other 3-D image fusion tests repeatedly as an eye exercise for a few days.
I still suspect my neck injury by the chiropractor has weakened the nerves, muscles in the neck and these do branch out to, affect the function of the nerves, eye muscles in the head, eyes. This may be the reason that these fusion exercises disrupted my vision. The body has its own way of healing, adapting. Many people may have a little mis-alignment of the spine, neck vertebrae without any health problems occurring from the condition: the body, nerves, muscles adapt, can align the bones naturally without chiropractic treatment and create a good state of health even with some imperfect alignments. The nerves, muscles that connect, travel to the eyes create a workable balance that ensures clear vision, healthy eyes.

Artificial 3-D Image Fusion Exercises Activate Abnormal Eye/Brain Function

Notice that when doing the 3-D test that the eyes, (visual attention) is not truly placed, focused, fused on the 3-D object & and distance the object is at. It is focused in space before or beyond the object. The 3-D image of the object that appears is normal for the eyes, brain to produce, but: making that image your point of visual attention without looking directly at it, not looking at the object/distance it is truly at is abnormal eye, brain function and strains the visual system.
This exercise is against The Bates Method because it prevents fusion, central fixation, shifting, binocular vision directly on the object and distance the object is at. This results in: eccentric fixation, confusion, diffusion, tension, strain in the brain, eye muscles, eyes and can cause double vision and blur at close and far distances, strabismus and other visual disturbances due to disrupting the eyes/brains function of convergence, divergence, fusion. This then impairs accommodation, un-accommodation (which functions with convergence, divergence) lowering the clarity of vision further.
3-D Images on paper, computer, television screens… are not true 3-D vision. It is a illusion of 3-D.
3-D Computer games and televisions cause eyestrain, headaches, fast vision impairment.

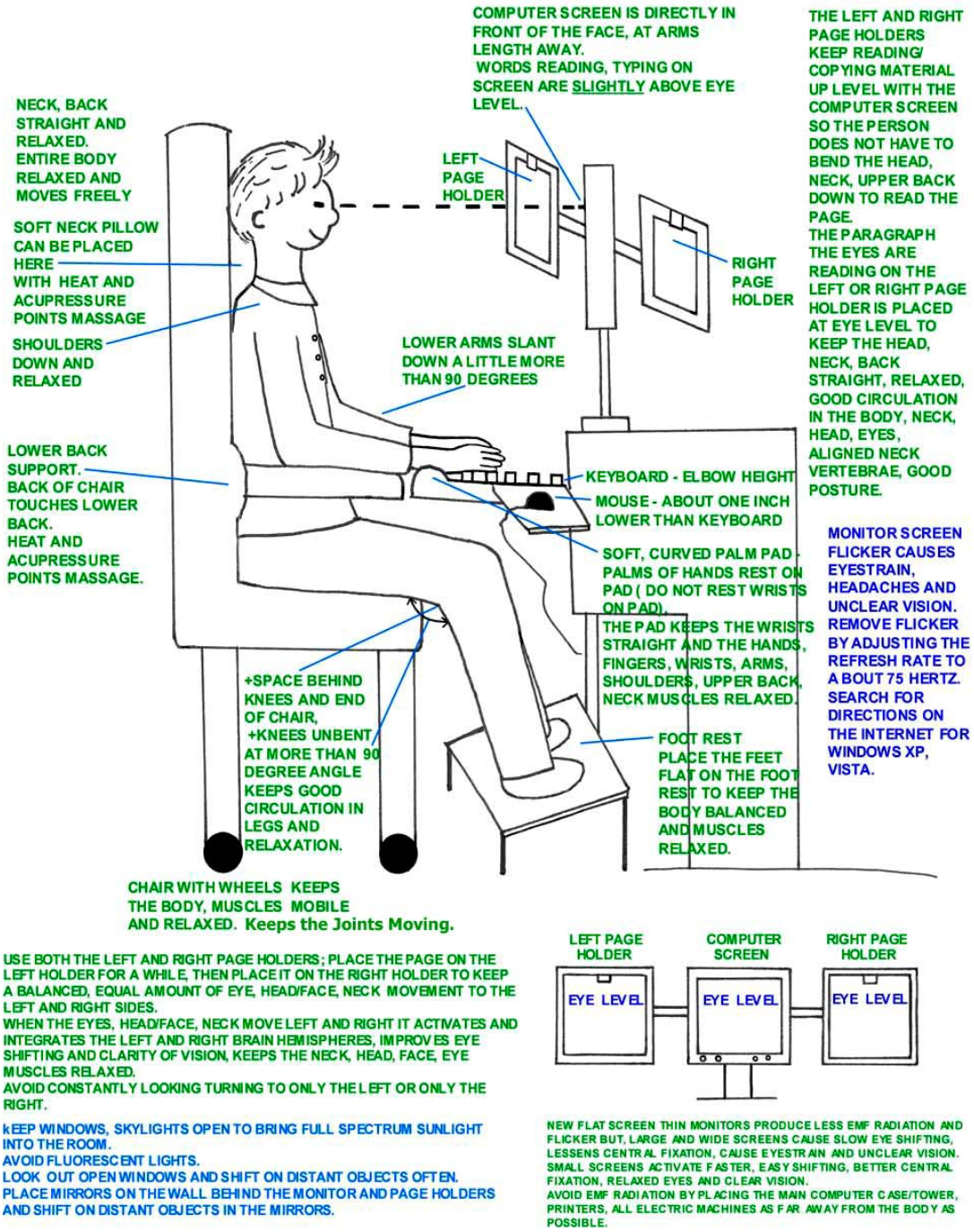
This test using 3-D Images is not necessary. The Bates Method has better & safe ways to test the visual system.
It is best to practice the True Bates Method: shifting, central fixation, tracing, switching directly on objects at close, middle, far and infinity distances as described in this book in the switching chapter. Look directly at the object of visual attention, at its true distance and shift on it. Then switch to a object at another distance and shift on it… This is normal Fusion.
It is normal to see a double image of objects in the distance when looking at a close object
and a double image of close objects when looking to the distance. When the eyes, brains visual attention switches to the double object: the two objects move together and merge, fuse into one object: the object the eyes are looking directly at, directly at the distance the object is at. This is the normal process of fusion, normal images, vision and is healthy for the eyes, clarity of vision. This is true 3-D (Three Dimensional) vision with true depth, distance, perception. It relaxes the eyes, visual system. See the chapter and videos on Switching Close, Middle, Far. Practice Palming, Relaxation, Shifting, Blinking, Movement, all Bates activities. I have used the True Bates Method for 40 years and it has always given me perfect clear vision, close and far, perfect, fast convergence, divergence.
The picture below is a old fashioned Behavioral Optometry fusion eye/brain test.

Old Fusion Game
Place a pen in front of and between the eyes, between and a little below the cat and tree stump. Look at the pen, move it close and far from the eyes and see the kitty in the distance move onto the tree stump. Do it once only.



24 - GOOD POSTURE FOR RELAXED NECK, BODY, EYE MUSCLES AND CLEAR EYESIGHT

CORRECT POSTURE FOR COMPUTER, TYPING, READING



USE BOTH THE LEFT AND RIGHT PAGE HOLDERS; PLACE THE PAGE ON THE LEFT HOLDER FOR A WHILE, THEN PLACE IT ON THE RIGHT HOLDER TO KEEP A BALANCED, EQUAL AMOUNT OF EYE, HEAD/FACE, NECK MOVEMENT TO THE LEFT AND RIGHT SIDES.
WHEN THE EYES, HEAD/FACE, NECK MOVE LEFT AND RIGHT IT ACTIVATES AND INTEGRATES THE LEFT AND RIGHT BRAIN HEMISPHERES, IMPROVES EYE SHIFTING AND CLARITY OF VISION, KEEPS THE NECK, HEAD, FACE, EYE MUSCLES RELAXED.
AVOID CONSTANTLY LOOKING TURNING TO ONLY THE LEFT OR ONLY THE RIGHT.

KEEP WINDOWS, SKYLIGHTS OPEN TO BRING FULL SPECTRUM SUNLIGHT INTO THE ROOM.
AVOID FLUORESCENT LIGHTS.
LOOK OUT OPEN WINDOWS AND SHIFT ON DISTANT OBJECTS OFTEN.
PLACE MIRRORS ON THE WALL BEHIND THE MONITOR AND PAGE HOLDERS AND SHIFT ON DISTANT OBJECTS IN THE MIRRORS.

NEW FLAT SCREEN THIN MONITORS PRODUCE LESS EMF RADIATION AND FLICKER BUT, LARGE AND WIDE SCREENS CAUSE SLOW EYE SHIFTING, LESSENS CENTRAL FIXATION, CAUSE EYESTRAIN AND UNCLEAR VISION. SMALL SCREENS ACTIVATE FASTER, EASY SHIFTING, BETTER CENTRAL FIXATION, RELAXED EYES AND CLEAR VISION.
AVOID EMF RADIATION BY PLACING THE MAIN COMPUTER CASE/TOWER, PRINTERS, ALL ELECTRIC MACHINES AS FAR AWAY FROM THE BODY AS POSSIBLE.

Neck, shoulder, collarbone muscle tension, limited neck movement is a main cause of eye muscle tension, limited, rigid eye movement; impaired eye shifting, headaches and unclear vision.
When the neck... is stiff, tense, immobile; head/face and eye movement is also limited. Infrequent and rigid eye movement causes eye muscle tension, abnormal eye shape, incorrect focus of light rays in the eye and unclear vision. Tension in the shoulders travels to the neck, head/face, eye muscles.
Neck muscle tension resonates/travels directly into the head/face, and eye muscles.

Incorrect posture causes muscle tension, misaligned back, neck vertebrae. Correct posture allows the vertebrae to move back to correct alignment.

Many nerves, including the eye muscle nerves and optic nerve are interconnected with the spinal cord, other nerves, brain stem. Nerves travel from the brain stem to the brain, eye muscles, eyes. (The brain stem connects with/in the brain and the optic nerve, which travels from the eyes to the visual cortex in the back of the brain passes around, near the brain stem. Any tension on the nerves in the spine, neck, brain stem can cause some pulling, tension on the brain and optic nerve.) Tension on the spinal cord, nerves, blood, lymph vessels in the neck, travels to, affects nerves in the brain, eye muscles, eyes. Circulation of blood, oxygen, nutrients, lymph, energy in the brain, eyes is also impaired by neck muscle tension, mis-aligned neck vertebrae. Cerebro-spinal fluid flows along the spinal cord and around the brain. Neck muscle tension and mis-aligned neck, back vertebrae can impair spinal fluid flow in the spine, brain.

See pictures in chapter 25.

Incorrect posture
Head/neck tilted, bent, twisted to the left or right side. Shoulder on one side is also up, tense.



All Correct Vision Habits; shifting, moving the head/face and body in synchronization with the eyes, central-fixation, blinking.., relaxation and movement activities; the rock, long swing, figure eight, cross crawl... relax the mind, body, shoulders, neck, eye muscles and eyes.
Massage of the neck, shoulder, body muscles is beneficial, resonates into the eye muscles but, be sure it's done by a professional.

Incorrect posture
Shoulders pulled up, tense

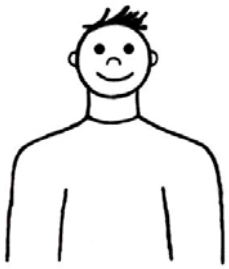


Good, correct posture keeps the body, neck, shoulders and eye muscles relaxed and vision clear.

The pictures in this chapter show correct posture and computer station setup. Sit up straight and relaxed. The back is straight and relaxed. Head, neck over the shoulders. Neck straight, aligned with the body and head. Neck is relaxed and moves freely. Avoid pushing, pulling the head, neck forward out of alignment with the shoulders and body. Avoid becoming stiff, rigid; let the body, shoulders, neck, head/face and eyes relax and move.
Look to the distance frequently and shift, switch on objects.
Go outside in the sunlight or look out an open window and get sunlight on the face. Stretch, move, walk around, practice sunning.

These incorrect postures cause muscle tension, impaired movement in the eyes, head/face, neck, shoulders, upper and lower back, legs, impaired circulation to the brain, head, eyes, ears, unclear vision, astigmatism.

Correct posture
Head, neck straight, relaxed. Shoulders down, relaxed.



The head/face eyes look directly ahead at the object of visual attention. The head/face, eyes should not be tilted up or down. Do not twist, angle the head/face to the side. Keep relaxed, straight posture.
The words the person is reading, typing are placed at eye level. This keeps the head/neck from bending down, up, becoming stiff. The eyes look directly at the words being typed, read=central-fixation. If the words are placed above eye level, it tends to tilt the head up, back, if placed below eye level, the head tilts down. These postures cause neck tension. Head, neck straight and relaxed. Notice when tension is felt and learn good posture to avoid it. If you feel neck, head, eye tension, pulling; the posture needs to be changed.
Move the print up to eye level as needed as you read down the page.
Its normal if the eyes slant down a bit. This is due to the pull of gravity and normal function/structure of the eye.

Eyes, head/face, neck, shoulders, upper and lower back, legs, body relaxed, move freely, circulation normal, vision clear.

Monitor too high, too low, to the left, right=constantly looking up, down, only left, only right causes neck, shoulder, chest muscle tension, pulling on muscles, vertebrae, brain stem, misaligns the vertebrae causes unclear vision, fatigue, dizziness.

Take a break away from the computer, get up and walk around every 20 minutes! Look away from the computer, to the distance every 5-10 minutes.

Practice the Bates Method; Shift on Distant objects, Long Swing, Rock, Deep, Abdominal Breathing.

Avoid incorrect posture; avoid bending the upper body, head/face, neck downward, pushing the head/face neck forward, upward, holding the hands/arms up high for a long time when reading, typing, writing…

Holding the arms/hands up all day fighting the pull of gravity or pushing the hand/arm down on the computer mouse, keyboard… causes muscle tension in the hand, arm, back, shoulders, neck, chest, collarbone muscles, muscles in the head, face, eyes and causes back, neck vertebrae misalignment. Extreme muscle tension in the neck can temporarily tilt/pull neck vertebrae out of alignment.

Pressing down with one hand twists, pulls the hips, back, neck vertebrae out of alignment. This and looking only left or right all day moves C-1,2 and other neck, back vertebrae out of alignment from the spine, skull. This impairs balance, hearing, vision. Pinched nerves, impaired blood flow, muscle knots, fibrous tissue, spasms in these areas can occur. Dizziness, neck pain, backache, headache, unclear vision occurs.

Avoid tilting, twisting, angling the head/face to one side or resting the head on one shoulder. Avoid keeping one shoulder higher than the other when talking on the phone, using the computer. Avoid pulling tensing the shoulders upward. Let the shoulders drop down and relax.

Avoid sitting on a wallet in the back pocket causing one hip to be higher that the other side. Look in a mirror when working to check the posture.

All these incorrect postures cause back, shoulder, neck, head/face and eye muscle tension, vertebrae misalignment, unclear vision and astigmatism.

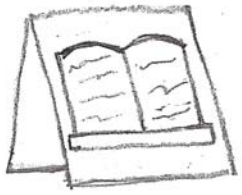
Years of using the computer mouse with the right hand can cause the muscles in the right arm, shoulder, neck, collarbones, chest and back to become tense, in spasm, sprained, cause fibrous like knots of muscles. Dizziness, unclear vision, ear ringing, and other visual disturbances can occur. Misaligned neck, back vertebrae, unbalanced body posture, muscles, joints can occur.

Learn to alternate use of the mouse with the left and right hands. Hold, move the mouse gently without tension. A wireless mouse, walking, moving while using the mouse can help prevent immobility and tension. Speech recognition software can help reduce typing and use of the mouse.

The left and right hands should be at an even height and even position.
If one hand is higher than the other or one hand is closer to the computer than the other: the body, back, spine, neck, shoulders will be uneven, twisted, tilted resulting in muscle tension, vertebrae being pulled out of alignment. C-1, 2, 3, any vertebrae can be pulled out of alignment from the head/spine. Pinched nerves, impaired balance, headaches, fatigue, unclear vision result. Correcting the posture relaxes the muscles, enables the vertebrae to move back to normal alignment.

(Good posture removes muscle tension, pulling on the vertebrae: C1, 2, 3, 4, 5, 6, 7… and the brain stem. Nerves travel from the spinal cord, brain stem through the vertebrae to the brain, optic and eye muscle nerves, retina, all parts of the eyes, visual system. Correct posture, Correct Vision Habits, shifting, movement, abdominal breathing, central-fixation, palming, sunning, relaxation, the sway, long swing, figure eight relax the body, neck muscles, keeps the vertebrae aligned.)

A BOOK HOLDER IS PLACED ON A PILLOW TO BRING THE BOOK UP TO EYE LEVEL.
THIS KEEPS THE NECK STRAIGHT AND RELAXED; GOOD POSTURE. THE EYE MUSCLES ARE RELAXED AND EYESIGHT IS CLEAR.
THE BOOK HOLDER ALSO PREVENTS THE NEED TO HOLD THE BOOK UP TO THE EYES WITH THE HANDS. THE PERSON AVOIDS TENSION IN THE HANDS, ARMS, SHOULDERS, NECK, HEAD/FACE AND EYES. GOOD POSTURE IMPROVES CIRCULATION TO THE HEAD, EYES.



BOOK HOLDER

IN THIS DIAGRAM THE BOOK HOLDER APPEARS TO BE PLACED TO THE RIGHT SIDE OF THE PERSONS LAP.
THIS IS DONE TO ENABLE THE PERSON LOOKING AT THIS DIAGRAM A GOOD VIEW OF THE HOLDER.
WHEN READING THE BOOK IT IS PLACED DIRECTLY IN FRONT OF THE FACE, BODY, CENTER OF THE BODY; THE EYES, HEAD, FACE, BODY ALL FACING IN THE SAME DIRECTION, AT THE BOOK.



Page holders are attached to the left and right sides of the computer monitor, at eye level. This keeps the posture, neck straight, relaxed and prevents the need to look down when copying information from paper into the computer. Adjustable clips allow the paper to be moved up, down to keep words at eye level.
When reading words on a page holder – turn the eyes, head/face and look directly at the page.

When looking at the computer screen – turn the eyes, head and look directly at it - central-fixation. Trying to look at both the page and screen, keeping the eyes, head/face in opposite directions, looking out of the side of the eyes/face with the head in the opposite direction causes diffusion, eccentric fixation, tension, strain in the neck, shoulders, eye muscles results in unclear vision and headaches. Looking up with the head down or looking down with the head up when reading writing, typing is another version of this incorrect straining habit.
Look at one object at a time and look directly at the object - eyes, head/face in the same direction = central-fixation, relaxation.
Avoid always looking to one side to read a page.
Place the page on the left, then move it to the right for a while.
This keeps the head/face and body moving left and right, not only left or only right all day.
Looking down at the keys to type causes neck tension. Learn to type with the head up straight ahead looking at the computer screen.
The neck pillow on the chair is not too big and can be removed. Do not overuse neck pillows. Let the neck muscles support the neck without a pillow.
A chair with wheels and springs keeps the body in movement, prevents muscle, joint tension.
Good posture occurs with relaxation and movement. Move the muscles, joints to keep blood, oxygen, lymph flowing to prevent stiffness.
(More posture info. in the Physical Therapy chapter)

The new flat, thin LCD computer monitors, televisions produce artificial, extreme and abnormal looking, unnatural 3-D images. Objects at different distances do not appear as in real life. These and other effects cause eyestrain, pain, blur. People in line at the cable company watching this type of television complained of eye pain, headache.
The thin, flat screen (LCD - liquid crystal display) monitors and televisions produce less EMF radiation which is healthy but some people notice they cause eyestrain, eye pain, tension in the eyes and unclear vision. I have experienced this when using a new 19 inch thin, flat screen LCD monitor; Burning eyelids, eye pain and blurry vision occurred after only a few minutes looking at the screen. I could not do any work on the computer. This may be due to the increased artificial 3-D effect. Artificial 3-D images confuse, strain the brain, left and right hemispheres, eyes. There are warnings on 3-D computer games stating the artificial 3-D can block, impair children's vision, visual system, brain, brain hemisphere development resulting in learning disabilities, unclear vision, crossed, wandering eyes. Adults vision, brain function can also be affected.

Buy a small screen.
Large TV and monitor screens cause eyestrain as the eyes tend to diffuse, trying to move over the screen and see all areas quickly when working. It takes longer to shift over a large screen so diffusion, lack of central-fixation, lack of small, saccadic eye shifting occurs.
Smaller screens give the eyes less distance to travel over to see the objects on the screen. Shifting is faster, shorter, central-fixation occurs and it is easy to work at a steady pace. Smaller screens = better central-fixation = no eyestrain, no blur. Smaller print on the computer monitor also improves central-fixation.
Diffusion, trying to see all parts of a large object equally clear at the same time causes eyestrain and blur. Central-fixation relaxes the eyes and keeps the vision clear.
(Same principles as large and small print. See chapter 14 - Close Vision, Reading.)

I went back to the old fashioned monitor, the kind that looks like the old televisions, (CRT - cathode ray tube) 13 inch screen, slightly curved glass screen, and the vision problems were immediately removed; eyes not burning, no pain and vision clear.
I can work using the old monitor for 10+ hours a day without pain, blur, fatigue.
The old Glass screens produce a more natural 3-D.
I place a reflection of a distant light bulb and window on the glass screen. The screen acts as a mirror and I can use the reflection as a distant image to look at right on the screen. This prevents the eyes, eye muscles from being frozen, stiff looking, converging at only one close distance all day.

Flicker on a monitor screen can cause eyestrain, blur and headaches.
Reduce flicker by entering the computers control panel, advanced settings... and adjust the refresh rate to 75 hertz for old monitors.

New monitors; experiment with this. A Gauss Meter can test for EMF radiation and distance to sit from the monitor and other electronic equipment to avoid exposure to EMF.
For EMF Protection, keep the body's energy flowing correct and strong;
http://www.clarus.com/home.htm http://www.energpolarit.com/
Use diodes… as directed, only if needed.
EFT, Tai Chi, Qi Gong are effective.

Correct Posture, Correct Vision Habits relax the body, back, shoulders, neck, head, face, eye muscles, eyes, align the neck vertebrae and produce clear vision.
A main cause of incorrect posture, neck, eye… muscle tension, misaligned neck vertebrae and unclear vision is the use of eyeglasses.
See Chapter 3, 4 Eyeglasses, pictures of correct and incorrect body, eye postures.

Incorrect Postures, Incorrect Vision Habits that cause: back, shoulder, neck, chest, head and eye muscle tension, limited movement, misaligned neck vertebrae, tension, pressure, pulling on the spinal cord, brain stem, optic and eye muscle nerves, blood, lymph vessels, nerves in the neck, eyes resulting in headaches, impaired: hearing, balance, coordination, movement, eye health and unclear vision.

Typing, writing, reading, drawing



Incorrect
Head, neck, back pushed, pulled forward.



Incorrect
Head, neck, back pushed, pulled forward and bent down. Monitor too low.



Incorrect
Head, neck, back pulled, bent down.



Incorrect
Head, neck bent up and back. Arms, hands monitor and keyboard too high.

Incorrect
Head, neck, upper back and body pushed, pulled forward.



Incorrect
Head, neck, chin, nose, pulled back, up.





The height and angle of the writing board can be adjusted. Slanting the board backward helps prevent tension in the arm.

The blue bar is a adjustable arm, elbow rest to prevent tension, fatigue in the hand, arm, shoulders, neck.

Correct
Head, neck, back straight, relaxed. Person takes frequent breaks to bring the hand/arm down to the side, do the 'Rock', look to the distance.



Incorrect
Leaning forward, head, neck, body slightly pulled forward. Leads to tension, fatigue.

Correct
Head, neck, back straight, aligned, relaxed.





Incorrect
Head, neck, body pushed, pulled forward. Extreme tension, fatigue.



Incorrect
Head, neck, back pushed, pulled, bent forward and down.



Incorrect
One shoulder up, head, neck bent to one side onto shoulder, neck twisted. Muscle tension, vertebrae misaligned.



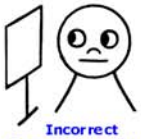
Incorrect
Shoulders tense, up.



Correct
Shoulders down and relaxed. Head, neck, back straight.



Incorrect
Board too high and too straight. Head, neck, back bent up, backward, arm up too high.



Incorrect
Eyes constantly look to the right to read with the head/face in the opposite direction. Eye muscle tension, blur.



Incorrect
Eyes constantly looking down with head/face in the opposite direction.



Incorrect
Eyes constantly looking up with head/face in the opposite direction.

To prevent eye muscle tension; place the object in front of the face, eye level; eyes, head/face directed at the object, in the same direction. If the object must be placed on the left or right side of the computer.., turn the head/face, body with the eyes and face directly at the object when looking at it.

1 Correct



Person looks directly at the object, eyes look through the center of the eyeglasses. Head, neck are straight. Because eye, neck movement is restricted when wearing glasses: no eyeglasses is best.

2 Incorrect



Looking up over the top of eyeglasses. Eyes up. Head, face, neck bent down. Eye, neck, head, shoulder muscle tension, increased vision impairment.

3 Incorrect



Looking down under the bottom of eyeglasses. Eyes down. Head, face, neck bent up. Eye, neck, head, shoulder muscle tension, increased vision impairment.

4 Incorrect - Bifocals



Bifocals and other multi-section eyeglass lenses are most harmful, cause fast vision impairment at all distances, astigmatism, cataracts, detached retina and other eye problems. Looking through the top of bifocals results in the same incorrect posture, tension as described in #2.

5 Incorrect - Bifocals



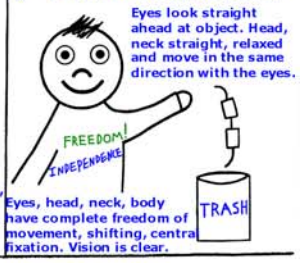
Looking through the bottom of bifocals results in the same incorrect posture, tension as described in #3. Astigmatism lenses also cause these problems.
Bifocals impair use of correct vision habits: central fixation, shifting, movement...

6 Incorrect Squinting



Causes muscle tension in the eyes, face, head, neck, jaw, shoulders, chest, headaches, wrinkles, unclear vision.

7 Correct - No eyeglasses.

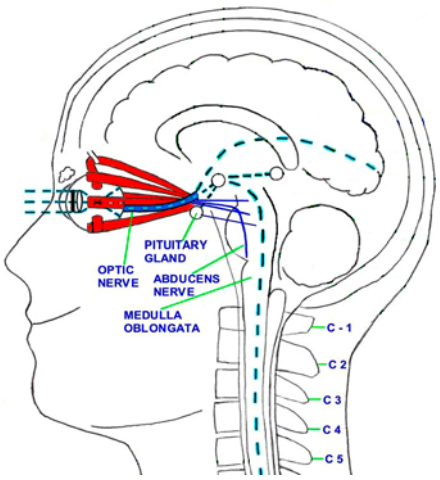


Eyes look straight ahead at object. Head, neck straight, relaxed and move in the same direction with the eyes.

Eyes, head, neck, body have complete freedom of movement, shifting, central fixation. Vision is clear.

Looking over the top or bottom of eyeglasses to see at a different distance, close or far, is a incorrect vision habit that causes strain, tension in the eyes, eye muscles, head, neck, shoulders, chest, unclear vision and other eye problems. Bifocals activate this destructive habit. Avoid these 'Incorrect Vision Habits' when wearing glasses and when not wearing glasses.
If you must wear eyeglasses for both close and far distances; wear two separate pairs; one for close and one for distant. Use reduced lenses and try to use them as little as possible. If looking at a distance the glasses are not prescribed for; take the glasses off. Wear glasses for the correct distance.
Avoid bifocals, trifocals, mono vision, astigmatism and other multi-section lenses. These are very straining, confusing to the visual system, brain, eye muscles, eyes, cause neck muscle tension, vertebrae misalignment, fast vision impairment and are the cause of many automobile, train, airplane, machinery... accidents.
Improving the posture, avoiding incorrect vision habits, eyeglasses results in healthy eyes and clear vision.

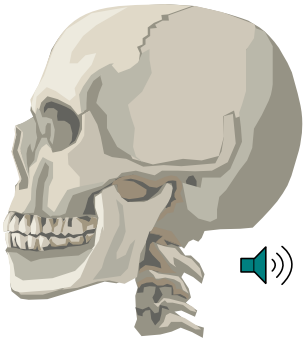
25 - PATH OF LIGHT RAYS & EYE MUSCLES, NERVES IN THE EYES, BRAIN, BODY
Chiropractic Cures/Causes Injury - Chiropractic Verses Physical Therapy/Massage



The pictures in this chapter show the outer eye muscles, recti and oblique. Tension in these muscles places pressure on the eye causing abnormal eye shape which disrupts the focus of light rays in the eye resulting in unclear vision. Relaxing the eye muscles with Natural Vision Improvement, (Correct, Natural Vision Habits...) returns the eye and focus of light rays to normal resulting in clear vision.

The eye muscles attach to the skull bones through the entrance in the back of the eye socket. Nerves that connect/travel from the brain, brain stem and through the neck vertebrae travel to, connect to; the brain, head, ears, eye muscles, eyes, retina. Eye muscle nerves and other nerves travel from the brain stem to the eyes. The optic nerve travels from the eyes retina, through the brain, left and right hemispheres, to the visual cortex in the back of the brain. The optic nerve passes near, around the brain stem. The optic nerve also passes through the eye socket bone entrance, near eye muscle nerves that attach to the eye muscles that are attached to the eye socket bone entrance. The brain stem is connected to the brain. The eye muscle nerves and the optic nerve can be affected by tension, pulling on the spine, neck, (muscles, vertebrae... in neck), brain stem, brain, other eye, head muscles, nerves.

Injury to the head/eye, neck (being hit in the head/eye, difficult birth, use of forceps, vacuum during birth, caesarean birth, backward birth ...) can cause misalignment of the bones of the skull, eye socket and neck vertebrae.
(A natural birth aligns the baby's skull bones as the babys head passes through the birth canal.) The eye is also set in the eye socket which is composed of bones grown together.
When the skull bones are aligned, the bones do not pull on the eye muscles, nerves, blood vessels, the bones, muscles do not press on the eyes. The eye muscles are relaxed and function correct, the eye is in normal shape with correct focus of light rays; eyes move corect, vision is clear.



When the skull bones are misaligned, the eye muscles and nerves attached to, passing through the bones can become tense, malfunction, cause pressure, pulling on/in the eye resulting in; unclear vision, astigmatism, wandering, crossed eyes, cataracts, macula degeneration, detached retina, dim, low vision in one or both eyes and other eye problems.
Misaligned skull bones can impair function of the brain, visual cortex, left and right brain hemispheres resulting in unclear vision, crossed, wandering eyes, other eye problems, low vision or blindness in one or both eyes. Blindness does not always occur. The brain, eyes have great ability to heal, adapt to conditions.

Misaligned neck vertebrae also impairs nerve signals, blood flow to the head, eyes, eye muscles, retina, lens, can impair eye muscle function, cause eye muscle tension, pressure, pulling on/in the eye, unclear vision and other eye problems.

Network Chiropractors work with improving function of the spinal cord – Network Spinal Analysis. Interesting subject but avoid being pressured to have MRI's, X-rays unless necessary.

A Chiropractor specializing in Cranio-Sacral Therapy can align the neck vertebrae and the bones of the skull to return normal nerve signals and blood flow to the brain, eyes, relax the eye muscles and return them to normal function, relieve abnormal pressure, pulling, stretching on/in the eye, eye muscles, retina, lens, cornea, return clear vision and reverse, remove cataracts and other eye problems.

The Bates Method can bring clear vision without chiropractic when the neck and/or skull bones are not greatly misaligned. The Bates Method can improve the vision to perfect clarity even when slight bone, vertebrae misalignments exist. The body has its own way of adjusting to and correcting certain conditions. Bones, vertebrae can correct their placement naturally. Eyeglasses should be avoided.

LIGHT ENERGY (FULL SPECTRUM SUNLIGHT) TRAVELS INTO THE EYES, BRAIN, ALONG THE SPINAL CORD TO ALL ORGANS, GLANDS, SYSTEMS, PARTS OF THE BODY MAINTAINING GOOD HEALTH AND CLEAR VISION. (SEE DASHED BLUE LINE - - - - IN DIAGRAM).
NERVE SIGNALS ALSO TRAVEL ALONG THE SPINE AND THROUGHOUT THE BODY, BRAIN, EYES.
NERVES TRAVEL FROM THE BRAINSTEM TO THE BRAIN, EYES, OTHER AREAS OF THE HEAD. NERVES ALSO TRAVEL FROM THE SPINAL CORD THROUGH THE VERTEBRAE ALONG THE SPINE TO ALL AREAS OF THE BODY, NECK, BRAIN, EARS, EYES...
BLOOD VESSELS TRAVEL FROM THE HEART AND ALONG THE SPINE THROUGH AND NEAR THE VERTEBRAE TO ALL AREAS OF THE BODY, NECK, BRAIN, EARS, EYES...
LYMPH VESSELS ALSO TRAVEL THROUGHOUT THE BODY, NECK, BRAIN, EARS, EYES..
THE 24 VERTEBRAE ALONG THE SPINE AND THE BOTTOM AREA OF THE SPINE DISTRIBUTE NERVES FROM THE SPINAL CORD TO THE BODY.
NERVES, BLOOD VESSELS AND LYMPH VESSELS TRAVEL ALONG, IN AND OUT OF AND /OR NEAR THE VERTEBRAE AND OUT TO ALL AREAS OF THE BODY, HEAD/BRAIN, EARS, EYES. CORRECT ALIGNMENT OF THE VERTEBRAE ALONG THE SPINE, NECK KEEPS THE BACK, BODY, NECK, EYE MUSCLES RELAXED AND THE NERVES, BLOOD, LYMPH VESSELS FUNCTIONING CORRECT, GOOD BLOOD, OXYGEN, NUTRIENT, ENERGY, NERVE , LYMPH FLOW IN EYES, BRAIN, BODY RESULTING IN CLEAR VISION, HEALTHY EYES, BRAIN, BODY.

THE DIAGRAM ON THE RIGHT SHOWS THE ORGANS, BODY PARTS THAT NERVES, BLOOD VESSELS FROM SPECIFIC VERTEBRAE TRAVEL TO/CONTROL.
(THIS IS A BASIC DIAGRAM.. ALL NERVES, BLOOD VESSELS AND BODY PARTS/FUNCTIONS ARE NOT LISTED.)

C1 - EYES, EARS, BRAIN, PITUITARY GLAND, HEAD, SYMPATHETIC NERVOUS SYSTEM.
C2 - EYES, OPTIC NERVE, EARS, SINUS, TEAR GLAND, TONGUE, HEART,
C3 - EYES, EARS, FACE, TEETH, LUNGS.
C1, 2, 3, CONNECT WITH THE SYMPATHETIC NERVE CHAIN TO THE EYES, EARS, SENSE ORGANS, GLANDS, BLOOD VESSELS IN THE BRAIN, IMMUNE SYSTEM, GROWTH OF BONES AND OTHER FUNCTIONS OF THE BRAIN, BODY AND FOR RELAXATION AND CORRECT REACTIONS TO STRESS.
C4 - EAR ESTUATION TUBE, LUNGS, NOSE, MOUTH,
C5 - VOCAL CORDS, PHARYNX, GLANDS NECK
C6 - NECK MUSCLES, SHOULDERS, TONSILS.
RELAXED NECK MUSCLES ACTIVATE EYE MUSCLE RELAXATION, EASY NECK AND EYE MOVEMENT AND CLEAR VISION.
WHEN THE VERTEBRAE IN THE NECK AND ALONG THE SPINE ARE ALIGNED; THE BACK, BODY, SHOULDER, NECK, HEAD/FACE AND EYE MUSCLES ARE RELAXED AND VISION IS CLEAR.
THE OPTIC NERVE AND NERVES FOR THE EYE MUSCLES, TEAR GLAND...TRAVEL FROM THE BRAIN, BRAIN STEM, AND ARE ALSO AFFECTED BY THE FUNCTION OF THE NERVES IN THE NECK PASSING THROUGH THE 7 NECK VERTEBRAE, ESPECIALLY C1, 2, 3, 4.
C7 - THYROID GLAND, SHOULDERS (BURSA).

T1 - HEART, ARMS, HANDS, FINGERS, ESOPHAGUS, TRACHEA.
T2 - HEART, HEARTS CORONARY ARTERIES AND VALVES, LUNGS.
T3 - HEART, LUNGS, CHEST.
T4 - HEART, LUNGS, GALLBLADDER.
T5, 6, 7 - HEART, STOMACH, LIVER, SOLAR PLEXUS, GALLBLADDER, SPLEEN, PANCREAS.
T8, 9, 10, 11, 12 - STOMACH, GALLBLADDER, LIVER, SPLEEN, PANCREAS, ADRENALS, SMALL INTESTINE, LARGE INTESTINE, KIDNEYS, URINARY/BLADDER, APPENDIX, UTERUS, OVARIES, TESTES, LYMPH CIRCULATION, ABDOMEN.

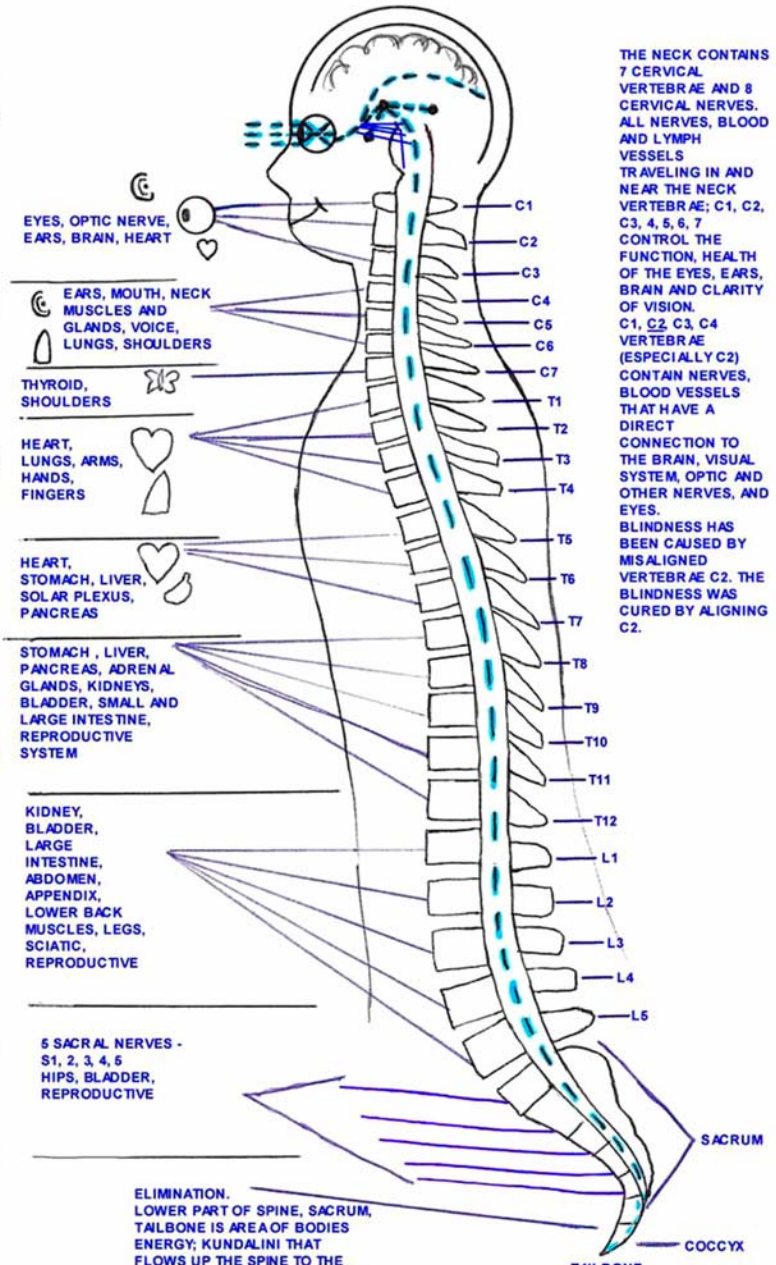
L1, 2, 3, 4, 5 - LARGE INTESTINE, ABDOMEN, KIDNEY, URINARY/BLADDER, APPENDIX, UTERUS, PROSTATE, SEX ORGANS, UPPER LEG, KNEES.
L4 - LOWER BACK MUSCLES, SCIATIC NERVE, PROSTATE
L5 - LOWER LEGS, FEET, PROSTATE.

SACRUM - HIPS, URINARY/BLADDER, SEX ORGANS, PROSTATE.

COCCYX - SYSTEMS OF ELIMINATION

THE NERVOUS SYSTEM CONSISTS OF ; THE SYMPATHETIC, PARASYMPATHETIC, AUTOMATIC, CENTRAL AND PERIPHERAL....SYSTEMS, FUNCTIONS.
ONE SYSTEMS/NERVES CAUSE MUSCLES TO CONTRACT.
A DIFFERENT SYSTEM/NERVES CAUSE MUSCLES TO UNCONTRACT.
EXAMPLE; EYE MUSCLE CONTRACTION FOR ACCOMMODATION, CONVERGENCE AND UNCONTRACTION FOR UNACCOMMODATION, UNCONVERGENCE FOR CLEAR CLOSE AND DISTANT VISION.
RELAXATION OF THE MIND, BODY, GOOD NUTRITION AND VERTEBRAE ALIGNMENT KEEPS THE NERVOUS SYSTEM, ALL NERVES, BLOOD VESSELS FUNCTIONING CORRECT.

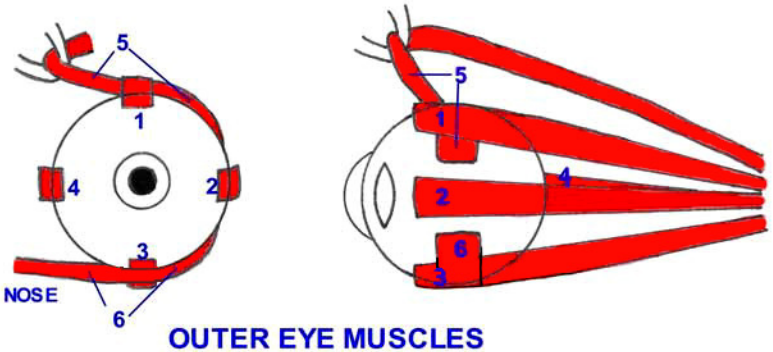
NERVES, BLOOD VESSELS IN ONE AREA OF THE BODY OFTEN CONNECT TO OTHER NERVES, VESSELS IN OTHER AREAS.
NOTICE THAT NERVES, BLOOD VESSELS THAT CONTROL THE HEART EMIT FROM; T1, 2, 3, 4, 5, 6, 7 AND ALSO FROM C2.



THE NECK CONTAINS 7 CERVICAL VERTEBRAE AND 8 CERVICAL NERVES. ALL NERVES, BLOOD AND LYMPH VESSELS TRAVELING IN AND NEAR THE NECK VERTEBRAE; C1, C2, C3, 4, 5, 6, 7 CONTROL THE FUNCTION, HEALTH OF THE EYES, EARS, BRAIN AND CLARITY OF VISION.
C1, C2, C3, C4 VERTEBRAE (ESPECIALLY C2) CONTAIN NERVES, BLOOD VESSELS THAT HAVE A DIRECT CONNECTION TO THE BRAIN, VISUAL SYSTEM, OPTIC AND OTHER NERVES, AND EYES.
BLINDNESS HAS BEEN CAUSED BY MISALIGNED VERTEBRAE C2. THE BLINDNESS WAS CURED BY ALIGNING C2.

ELIMINATION.
LOWER PART OF SPINE, SACRUM, TAILBONE IS AREA OF BODIES ENERGY; KUNDALINI THAT FLOWS UP THE SPINE TO THE HEAD AND OUT THE TOP OF THE HEAD.
ENERGIES ALSO FLOW THROUGHOUT THE BODY; LEGS, ARMS...
SEE COLOR CHART CHAPTER __.

Nerves in/from the neck, brainstem travel to the brain, eye muscles, eyes, ears, all parts of the head. The brain stem connects to the brain. The optic nerve travels from the left and right eyes and travels through passes near, around the brain stem to the visual; cortex in the back of the brain. Mis-aligned neck vertebrae, incorrect posture causing pulling, tension on the neck, brain stem can cause pulling, tension on the nerves in the head, ears, sinus, brain, eyes, eye muscles and the optic nerve. Circulation of blood, fluids, lymph, and cerebro-spinal fluid in the spine, brain can be affected. See posture chapter.



OUTER EYE MUSCLES
RECTI - # 1, 2, 3, 4
OBLIQUE - 5, 6

LIGHT RAYS, ENERGY TRAVELS INTO THE EYES, RETINA, ALONG THE OPTIC NERVE TO THE BRAIN, PITUITARY GLAND, HYPOTHALAMUS ORGAN, PINEAL GLAND, OPTIC CHASM, LEFT AND RIGHT HEMISPHERES, VISUAL CORTEX, ALL AREAS OF THE BRAIN, AND DOWN THE BRAINSTEM, SPINAL CORD TO ALL AREAS OF THE BODY. (SEE DASHED LIGHT BLUE LINES IN DIAGRAM.)

FULL SPECTRUM SUNLIGHT KEEPS THE EYES, BRAIN, BODY HEALTHY.
PRACTICE OF SHIFTING, A CORRECT VISION HABIT IMPROVES SACCADIC SHIFTING; TINY, FAST AUTOMATIC EYE MOVEMENTS, VIBRATIONS THAT PULL LIGHT INTO THE EYES, IMPROVES ALL EYE FUNCTIONS AND PRODUCE PERFECT CLEAR VISION.

THE SIX OUTER EYE MUSCLES SHOWN IN THE DIAGRAM ABOVE AND ON T
MOVEMENT.
OPHTHALMOLOGIST BATES STATES THAT THE OBLIQUE OUTER EYE MUS
ACCOMMODATION FOR CLEAR CLOSE VISION BY CONTRACTING TO SLIG
UNACCOMMODATION FOR CLEAR DISTANT VISION IS PRODUCED BY THE
RETURNING THE EYE TO A ROUND SHAPE.
THE TROCHLEAR NERVE CONTROLS THE SUPERIOR OBLIQUE MUSCLE..
DR. BATES EXPERIMENTS ON THE EYE PROVED THAT THE TROCHLEAR N
MUSCLE (# 5) PRODUCES ACCOMMODATION AND CLEAR CLOSE VISION.

DR. BATES EXPERIMENTS PROVED THAT TENSION IN ANY OF THE 6 OUTE
PLACES PRESSURE, TENSION, PULLING ON/IN THE EYE CAUSING ABNORM
SHAPE AND FUNCTION, INCORRECT FOCUS OF LIGHT RAYS IN THE EYE RI
ASTIGMATISM, AND OTHER ABNORMAL CONDITIONS.
DR. BATES PROVED THAT RELAXATION OF THE OUTER EYE MUSCLES RE
FUNCTION, RETURNS THE EYE TO NORMAL SHAPE WITH CORRECT FOCU
RESULTING IN CLEAR VISION AND HEALTHY EYES.

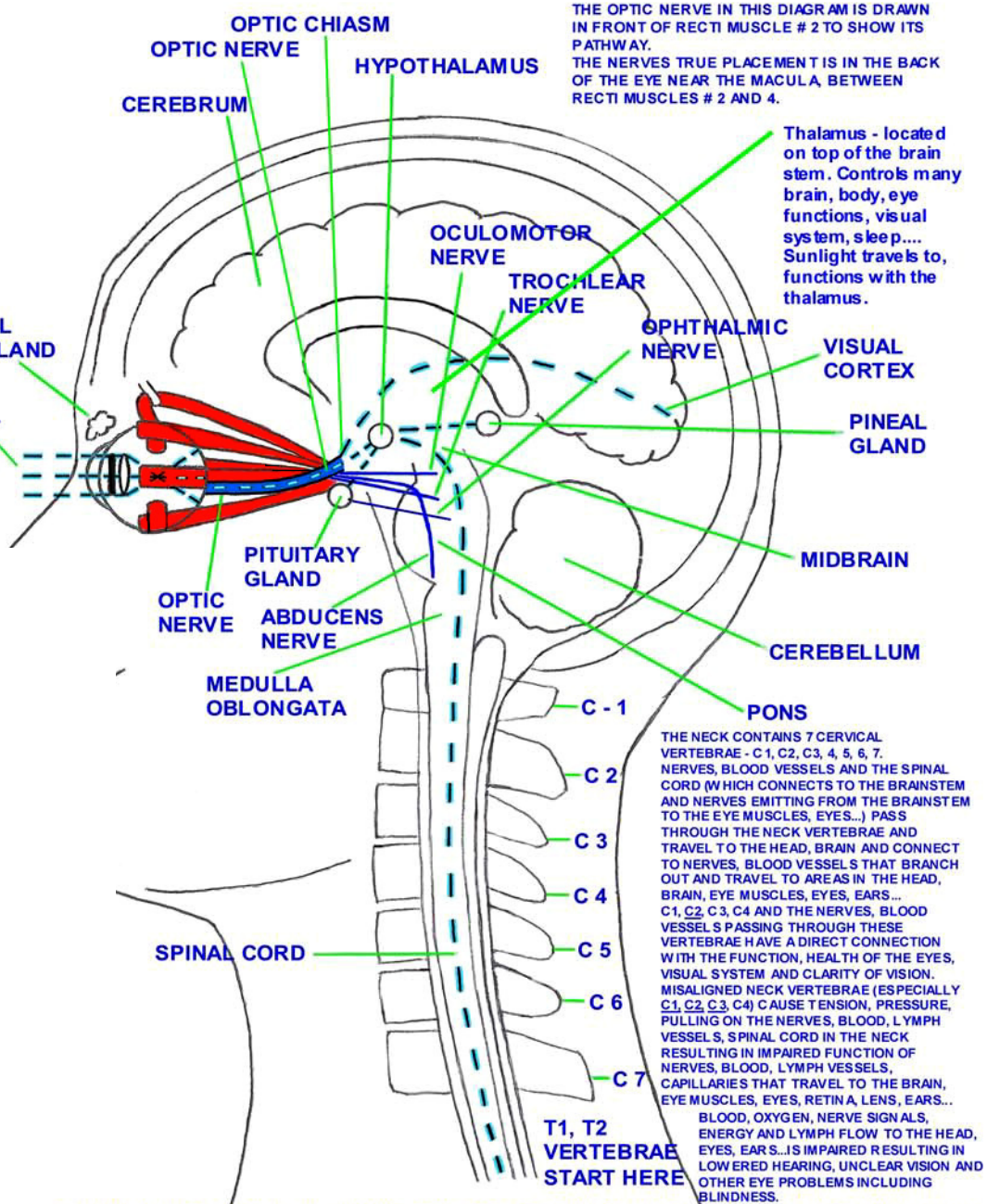
THE CILIARY MUSCLE IS A INNER EYE MUSCLE. THE CILIARY IS ATTACHE
PUMPS AQUEOUS HUMOR INTO THE POSTERIOR CHAMBER OF THE EYE.
+MOST EYE DOCTORS STATE THAT THE CILIARY MUSCLE ALSO CHANGES
TO PRODUCE ACCOMMODATION AND UNACCOMMODATION.
+SOME EYE DOCTORS AND BATES TEACHERS STATE THAT ONLY THE SH
PRODUCE THIS FUNCTION, NOT THE LENS.
+SOME EYE DOCTORS, BATES TEACHERS STATE THAT THE LENS AND EY
THE BATES METHOD OF NATURAL EYESIGHT IMPROVEMENT RELAXES AL
INNER; OBLIQUE, RECTI, CILIARY.., RESULTING IN CORRECT EYE MUSCLE
CLEAR VISION.

THE CRANIAL NERVES TRAVEL FROM THE BRAIN, BRAINSTEM TO THE EYE
THE OPTIC NERVE AND EYE MUSCLE NERVES ARE SHOWN IN DARK BLUE
THE BRAINSTEM CONSISTS OF THE; MIDBRAIN, PONS, MEDULLA OBLONG
THE BRAINSTEM CONNECTS THE BRAIN WITH THE SPINAL CORD.
THE SPINAL CORD AND ITS MANY NERVES TRAVEL THROUGH THE VERTE

keep this extra so got big pic

THE OPTIC NERVE CONNECTS TO THE EYES RETINA, NERVES, GANGLION CELLS, FIBERS, CONES, RODS... IN THE RETINA AND RECEIVES, TRANSMITS LIGHT ENERGY SIGNALS, VISUAL PICTURES, FROM THE EYES, RETINA TO THE BRAIN, SPINE, BODY. (SEE DASHED LIGHT BLUE LINES IN DIAGRAM.)

OTHER CRANIAL NERVES; THE OCULOMOTOR, TROCHLEAR, OPHTHALMIC, ABDUCENS, TRIGEMINAL NERVE WITH OPHTHALMIC NERVE BRANCH AND OTHER NERVES AND BRANCHES OF NERVES CONTROL MOVEMENT, CONTRACTION, UNCONTRACTION OF THE OUTER AND INNER EYE MUSCLES.
+OUTER; OBLIQUE, RECTI FOR EYE MOVEMENT, OBLIQUE FOR ACCOMMODATION, UNACCOMODATION, MUSCLES FOR BLINKING, KEEPING THE EYES OPEN, TEAR PRODUCTION, FACIAL MUSCLES...
+INNER MUSCLES; CILIARY, IRIS/PUPIL. OTHER NERVES FOR SENSATION IN EYES, FACE, MOUTH...

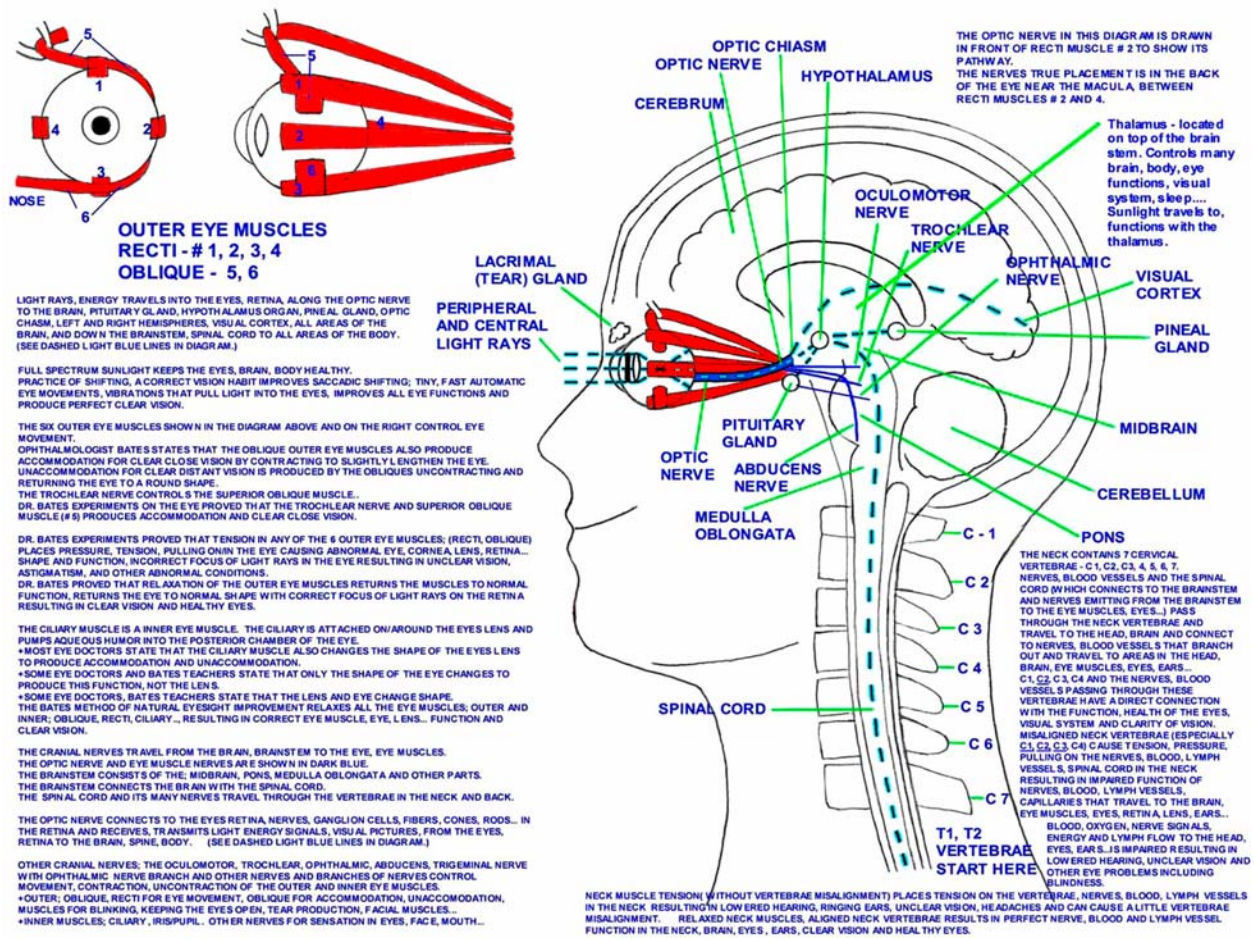


THE OPTIC NERVE IN THIS DIAGRAM IS DRAWN IN FRONT OF RECTI MUSCLE # 2 TO SHOW ITS PATHWAY.
THE NERVES TRUE PLACEMENT IS IN THE BACK OF THE EYE NEAR THE MACULA, BETWEEN RECTI MUSCLES # 2 AND 4.

Thalamus - located on top of the brain stem. Controls many brain, body, eye functions, visual system, sleep.... Sunlight travels to, functions with the thalamus.

THE NECK CONTAINS 7 CERVICAL VERTEBRAE - C1, C2, C3, 4, 5, 6, 7. NERVES, BLOOD VESSELS AND THE SPINAL CORD (WHICH CONNECTS TO THE BRAINSTEM AND NERVES EMITTING FROM THE BRAINSTEM TO THE EYE MUSCLES, EYES...) PASS THROUGH THE NECK VERTEBRAE AND TRAVEL TO THE HEAD, BRAIN AND CONNECT TO NERVES, BLOOD VESSELS THAT BRANCH OUT AND TRAVEL TO AREAS IN THE HEAD, BRAIN, EYE MUSCLES, EYES, EARS... C1, C2, C3, C4 AND THE NERVES, BLOOD VESSELS PASSING THROUGH THESE VERTEBRAE HAVE A DIRECT CONNECTION WITH THE FUNCTION, HEALTH OF THE EYES, VISUAL SYSTEM AND CLARITY OF VISION. MISALIGNED NECK VERTEBRAE (ESPECIALLY C1, C2, C3, C4) CAUSE TENSION, PRESSURE, PULLING ON THE NERVES, BLOOD, LYMPH VESSELS, SPINAL CORD IN THE NECK RESULTING IN IMPAIRED FUNCTION OF NERVES, BLOOD, LYMPH VESSELS, CAPILLARIES THAT TRAVEL TO THE BRAIN, EYE MUSCLES, EYES, RETINA, LENS, EARS... BLOOD, OXYGEN, NERVE SIGNALS, ENERGY AND LYMPH FLOW TO THE HEAD, EYES, EARS...IS IMPAIRED RESULTING IN LOWERED HEARING, UNCLEAR VISION AND OTHER EYE PROBLEMS INCLUDING BLINDNESS.

NECK MUSCLE TENSION(WITHOUT VERTEBRAE MISALIGNMENT) PLACES TENSION ON THE VERTEBRAE, NERVES, BLOOD, LYMPH VESSELS IN THE NECK RESULTING IN LOWERED HEARING, RINGING EARS, UNCLEAR VISION, HEADACHES AND CAN CAUSE A LITTLE VERTEBRAE MISALIGNMENT. RELAXED NECK MUSCLES, ALIGNED NECK VERTEBRAE RESULTS IN PERFECT NERVE, BLOOD AND LYMPH VESSEL FUNCTION IN THE NECK, BRAIN, EYES, EARS, CLEAR VISION AND HEALTHY EYES.



If the patient must seek chiropractic treatment: Choose a chiropractor carefully. Work together with a neurologist, medical doctor, not just a chiropractor. Chiropractic can be dangerous.

A honest, experienced chiropractor can improve a person's health and clarity of vision, but a inexperienced and/or dishonest chiropractor can cause injury to the body and eyes; stroke, blindness, unclear vision, impaired hearing, balance and other health problems. Skull bones may be hard to align after they have grown together, as the person grows older.

(All medical professions have their good and bad doctors and even a good doctor's treatment can result in injury if a accident during treatment occurs or a underlining condition exists that chiropractic treatment may make worse.) Chiropractic can cure, but, it's not worth the chance of injury!

Example; A honest, Experienced Chiropractor Cures Blindness;



A lady on a television news program described how a chiropractor cured her blindness; the lady had a black, blind spot in the center of her visual field. It kept growing larger, blocking out more of her vision. Eye doctors could not find the cause of the blind spot and told her she would become completely blind. The lady heard of a treatment through the Edgar Cayce Library of Natural Cures in Virginia, USA. www.edgarcayce.org See Cayce's picture on the right >.

She was referred to a chiropractor. The chiropractor told her that vertebrae in her neck had become misaligned due to a neck injury. The vertebrae were out of alignment and placing pressure on the nerves and blood vessels in the neck that travel to the brain and eyes. Nerves, blood vessels travel through the neck and brain stem, brain to the eyes. The chiropractor aligned the vertebrae; C1, C2, C3, C4 and all vertebrae in the neck. C1, C2, C3 on the top of the neck are directly linked to the health/function of the eyes.

Immediately after the chiropractor aligned the neck vertebrae, the black, blind spot in the lady's visual field became smaller and disappeared. Her vision returned to normal.

Warning: major blood vessels, nerves travel to the brain from the spine, brain stem, near C-1, 2, 3 areas. A bad chiropractic neck turn, treatment, 'mistake' can cause artery, blood vessel tears, blood clots, stroke, injury, blindness, astigmatism, impair eye movement, balance... Many good chiropractors avoid adjusting C1, 2, 3 vertebrae unless necessary due to injury from a car accident... They prefer to align the lower vertebrae C4 down only. Possibly C3. In this way; the higher vertebrae may move into alignment on their own. C1-2 are naturally very mobile as the head moves. When the rest of the spine is aligned correct, these vertebrae tend to move, align correct.

Example of Honest and Dishonest Chiropractors - Chiropractic Causes Neck, Spine Injury;



The author of this book (Mary I. Oliver) experienced an accident (a man punched me in the face) which, unknown to me at the time, caused a neck vertebrae (C4) to be slightly out of alignment. After being hit in the head I fell to the ground and was blind and partially deaf for about 10 seconds. Then I stood up and felt normal. (This was the 10th time in my life since childhood a man has hit me in the head; Relative cracked my cousin's and my heads together for laughing when we were very young, two boys hit me in the head/eye with ice/snowballs, then hit in the face, head by a man twice in Georgia one night on leave from the U.S. Army, (hit so hard my feet left the ground and body flew back and head cracked into tree. Tried to run, caught me and hit me again and I fell. He went back to get a gun. Two guys on the run robbing stores across the country. Buried myself in the Georgia woods under leaves and used old trick of concentrating, imagining I am in a different place, feeling only this thought and as real. Enemy supposed to pick up on it. Two guys had come back with rifle to kill me but gave up searching for me and took off.) Hit a few other times by men in San Mateo and South San Francisco, California. Never had mental/emotional trauma from these experiences due to the U.S. Army's good training, I know how the world is and don't let it bother me. Stay positive and "Drive on Drill Sgt., Drive on".)

After last injury, in South San Francisco, California, two months later I developed a balance problem. For two years I went to medical doctors for dizziness. I experienced stress, fear, anxiety attacks worrying about the cause of this condition. The doctors prescribed tranquilizers and a drug to dry up fluid in my ears/eustachian tubes. Ears were cleaned of much wax. A brain scan was done and found nothing wrong. The drugs did not work, produced side effects so I threw them away. The doctors did not know the cause of the dizziness/fluid build up.
One doctor said a tight muscle in the side of the neck might be pressing on the ears eustachian tube but he did not know what caused the muscle to be tight.

At this time I was earning $5.00 hr. working 7 days/nights a week and would go dumpster diving behind the main supermarkets, department stores for food, cloths in order to save money. They throw away a lot of good food, cloths and many homeless people survive this way. Senior citizens do it to avoid spending money on food so they can afford their medicine. I learnt this from the homeless in San Diego, CA and met a few Old Italian Millionaires dumpster diving getting free food for their chickens on the farms near San Francisco. The use of new dumpster compactors that crush and lock the food away for disposal is heartbreaking to these folks!

Every day I would pass the chiropractors office on my way hauling food. I decided to ask a chiropractors advice on the dizziness. I went to Doctor Soo Hoo's office in South San Francisco and Dr. Tai worked on me. Dr. Tai was very young and rode his skate board to work. He said my neck vertebrae C4 was out of alignment causing the muscle tension and ear tube dysfunction. Vertebrae up higher along the neck may have also been out of alignment. He aligned my neck vertebrae and back.
I immediately experienced normal/perfect balance for the first time in two years. My day and night vision was also exceptionally clear. A few follow-up treatments were done to maintain the alignment.
The chiropractor had me return once a month only if needed.
He gave me stretching and other exercises to keep the muscles relaxed, and vertebrae aligned.
The treatment was done without X-rays. Physical therapy was not mentioned.

Try other natural treatments, including the Bates Method and check with your doctor first. Chiropractic treatment can cause: stroke, paralysis, joints less stable, broken, worn cartilage, vertebrae moving out of alignment easily and often, fractures of the vertebrae in the back, neck, nerve damage, blindness, loss of hearing, vertigo, impaired function of any organ, area of the body the nerves, blood vessels from the spine travel to, over stretching of ligaments and other injuries. See the book: Chiropractic: The victims Perspective by George J. Magner III. Written by a man that was injured by chiropractic treatment. See www.chirobase.org
Read this article on injury caused by chiropractors;

In the year 2000 I moved to Massachusetts. I did a lot of heavy lifting which pulled my vertebrae and back out of alignment again. I started going to a new chiropractor and received beneficial treatment. Her treatment was perfect, the same routine as the California chiropractors except that X-rays were given. I felt uncomfortable when she would try to sell me Glucosamine joint pills while she had my neck in her hands right before turning my neck. Out of fear I would agree to buy the pills. I wanted to buy a neck pump machine from her that she was advertising.

She made me pay for many lessons on how to use it along with a neck alignment each time before a lesson. Then twice when she said to come by and pick it up, she would be out of the office, on vacation, at church, family meeting.... and the staff would say I need more treatment and lessons. Finally decided not to buy it. Later found out the chiropractor ended up with broken neck vertebrae cartilage, injuries. She had frequent neck alignments from other chiropractors over the years and I suspect they caused her neck injuries.
This chiropractor's staff prefers patients to sign up for weekly, monthly treatments for life.
One day the chiropractor was on vacation (due to wrist injury) and her new assistants worked on my neck. The main chiropractor told me she is hiring new assistant chiropractors and some are recently out of college and I am to let them work on me and tell her if they do it right. She did not stay to supervise. Promised she would many times, many appointments but would she not show up. The assistants practiced on me:
4 treatments and I was dizzy. She could not fix it. She was a new doctor, recently out of college.
Then, during two new appointments, new assistant chiropractors worked on my neck. On the 2nd treatment, I asked her 5 times to be sure and adjust both left and right sides of my back like the good chiropractors do and to not work on my neck because it felt ok and the last time a chiropractor at this office worked on my neck it resulted in ear ringing. She then talked me into doing my neck and turned it to the left side only. (unbalanced alignment) This resulted in loud ear ringing. (Past good chiropractors have always done left and right, perfect alignment. Twice, two different appointments, these bad assistant chiropractors caused extreme ringing in my ears by turning the neck to only one side.) She refused to correct the neck alignment by turning the neck to the left and right for a balanced, centered alignment as I asked. The ringing was constant. A black spot also began forming in the center of my visual field. I called the main doctor that weekend. She said if I have trouble with memory, a black curtain appears in the visual field, I get dizzy; to go to the hospital. She said she cannot see me that day because it was Sunday and she had to go to church, family meeting. Said to come in Monday.
On Monday another doctor at the office checked my neck. He said a few vertebrae were out of alignment, then aligned my neck vertebrae by turning the neck left and right, then a 3rd turn to only one side. The ringing was improved but the ringing and black spot remained. He said he does not like the new way chiropractic colleges are teaching. The lady that injured me was a young graduate from a new college. The lady that owns the chiropractic business is good, she does the old fashioned treatment-left and right neck, back, shoulder balanced alignments and I never had a problem with her method. After she injured her wrist and could not work, she hired a lot of new chiropractors to work for her. She told me to let her know if they do the job right. Late I realized she was using me as a test, practice dummy for the new inexperienced chiropractors so she could weed out the bad ones!

I suspect the 'dishonest' chiropractors were purposely performing incomplete neck alignments and/or purposely placing my neck vertebrae out of alignment so I would be dependent on them and need to keep returning for more appointments. Some of the chiropractors are just inexperienced, not trained well or did not study enough and make mistakes. These new assistant chiropractors caused a neck injury.
I now realize this; since chiropractic treatment can cause an ear, hearing injury, vision impairment – it can also cause or increase an eye injury; cause detached retina... Detached retina is often caused by eye muscle tension, eyeglasses with lengthening of the eye or by a blow to the head, eye. Even a less but still jarring movement of the head as when chiropractic treatment is applied, might tear a loose retina completely away from the inside of the eye resulting in blindness.

After two weeks of constant loud ringing in the ears I went to a different chiropractor and this new chiropractor corrected the condition - the ear ringing and dizziness stopped with one neck alignment treatment and the black spot in my visual field disappeared. In the past, she repaired other problems including dizziness and the first neck injury, ear ringing the dishonest chiropractor caused.
When she (this good chiropractor) aligns my neck and back, it is perfect and I do not need to return for more appointments unless I cause injury by doing heavy lifting and then only the back needs correcting. (A old retired Navy Captain warned me a few years ago to only allow chiropractors to do the back, never the neck because neck injuries have occurred from chiropractic treatment.)
She uses the original, old fashioned, basic, effective method which equally aligns both sides of the body. She turns, aligns, pops the neck to/on the left and right sides. She pops, aligns both left and right sides of the back. (See this routine on following pages.) She charges a much lower price than the other chiropractors.
I returned to her 8 months later to have her repair my back which was thrown out of alignment by a unprofessional massage therapist (near Old Colony, South Boston, MA) that applied hard pressure on my lower back vertebrae and knocked it out of alignment causing partial loss of feeling in my legs, trouble walking. Was not a real masseuse? She corrected this in one appointment and the problem did not return.

I was also taught Physical Therapy consisting of easy neck and body muscle strengthening, movement, relaxation exercises by my medical and ear doctor's physical therapists. The exercises, movements activate natural vertebrae alignment and prevent future misalignments.
This worked and I realized that I don't need to go to the chiropractor. Physical Therapy, professional massage is safe and it works! (Some Physical Therapists and Massage Professionals are now aligning the bones, vertebrae like chiropractic, but in a different way. There is concern that this may also be dangerous, cause injury just as chiropractic treatment can cause injury. Other doctors say it is safer than the chiropractic method of turning, popping the neck, spine, hips, vertebrae.) A good massage relaxes the muscles and the bones, vertebrae can often move into alignment on their own.

Chiropractors have also told me that constant vertebrae adjustments can cause the cartilage in the vertebrae

to wear down and then the vertebrae slips out of alignment easy and more often resulting in dependence upon chiropractic alignments. Neck movement impairment and other problems can occur.

The honest chiropractors told me that chiropractic alignment of the neck vertebrae to correct misalignments due to a injury will cure many health problems but it must be combined with physical therapy, good diet and other basic exercise to keep the neck, back, body muscles strong, relaxed, flexible so the vertebrae remain aligned and the patient avoids the need for repeat chiropractic adjustments. Strong, relaxed muscles help prevent vertebrae injury, misalignment.

One cause of cataracts, macula degeneration, unclear vision, astigmatism and other eye problems, migraine, sinus, tension headaches is misaligned neck vertebrae, advanced neck, shoulder, upper chest muscle tension, impaired blood, nerve flow, signals through the neck, to the brain, eyes, retina, lens and impaired neck, eye muscle, eye movement.

When a good chiropractor treats me, my health always improves. Neck, eyes move easy, day and night, close and far vision is clearer than 20/20, balance, movement perfect. When an inexperienced or dishonest chiropractor treats me, using one sided, unbalanced, partial alignments, other new fancy treatments, I experience impaired balance, hearing, vision.

I have learnt from experience, the hard way, being cured and injured by chiropractors that chiropractic can injure the patient, is dangerous and should be done only if a injury (car accident…) has misaligned the vertebrae impairing blood, nerve flow to the head, brain, eyes, ears causing blindness, balance problem… and a medical doctor cannot correct it. Even then, consider, chiropractic may cure but may cause more problems!

I was advised to quit drinking diet soda (aspartame) and caffeine.
Aspartame in diet soda, artificial sweeteners causes muscle tension and dysfunction, weakness, swollen, soar, stiff joints, vertebrae in the back, neck, knees.., M.S. like symptoms and many health problems. Caffeine causes muscle tension and dehydration. Tense neck muscles impair blood, oxygen, nutrient, lymph, energy flow to the brain, ears, eyes. The body needs some natural organic, high minerals sea salt and water to avoid dehydration, stay healthy. Dehydration is a main cause of many health problems, muscle, joint tension, stiffness. A Natural Vision Improvement student taught me this; this health cure and other healthy food, diet is printed in the Bible. It has helped to repair my extreme stiff neck, neck injury caused by chiropractors.

Tense body, neck muscles can pull the vertebrae in the neck/back out of alignment. Not enough to cause extreme ear ringing and blindness… but it can make the person uncomfortable, impair balance, coordination, body, neck, eye movement, cause eye muscle tension, abnormal eye shape and lower the clarity of vision. Exercise, relaxed muscles allow the vertebrae to move back into alignment on their own, naturally.
Tense dehydrated muscles also sprain easier. Muscle tension, vertebrae misalignment can be caused by stress, worry, incorrect lifting, heavy lifting, incorrect posture and lack of movement.
Sugar inflames, stiffens the joints, muscles. Especially processed sugar and high fructose corn syrup. Sugar is the number one enemy of good eye health. It destroys minerals, vitamins, nutrients needed by the eyes for good health, clear vision.

People that wear eyeglasses, stare, squint develop incorrect posture, back, shoulder, neck tension which can misalign the vertebrae. Muscle tension travels to the eyes impairing eye muscle function, eye movement causing, increasing unclear vision.

In July, 2009 I had back pain from lifting cement blocks and small trees on an job trying to save money for Bates Method Teacher Training School. I went to the honest chiropractor. She noted that I had not been to her for one year. I said, "Yes, your alignments last unless I do heavy lifting". I do physical therapy, regular exercise and massage and my neck, back stays aligned.

She then attempted to adjust my back and it did not pop/move into correct alignment. I asked her to try again but she said no, it's ok. Most chiropractors will do a 2nd attempt at moving/aligning the back to be sure both left and right sides of the back pop/move into place and the alignment is balanced. (Two times in the past this chiropractor could not align my back and I had to go back to the other chiropractor for back alignment and that is when they talked me into having my neck worked on and injured my neck and caused the ear ringing twice.) In her defense, I always used to go in to her office with my back and neck muscles all tense, tight, hyper and dehydrated on caffeine and aspartame from drinking diet sodas and I would not let her do muscle massage, relaxation treatment first because I was in a hurry to get back to work. If I had let her do the relaxation treatment the neck/back would have moved perfect. She is a very good chiropractor and 95% of the time even when my muscles are tight she can align me perfect, balanced. I later found out that trying to force the neck or back to move, repeating the movement 2-3 more times when it does not move fully, does not pop, can result injury; vertigo, double vision, stroke, broken vertebrae, cartilage.., so she knew what she was doing by refusing to move the neck again but she did not explain why. If she had explained why I would not have gone to another chiropractor asking them to make the neck move, to repair the injury this one side alignment caused. See rest of story below: A new chiropractor caused more injury! Another chiropractor stated that muscle relaxation for the shoulder, neck, back must be done first if the muscles are tense, in spasm, knots in order to get a full movement and pop on both left and right sides of the back and neck for a perfect, balanced alignment of the vertebrae, spine, bones. Injury, misalignment during chiropractic treatment can occur if the muscles are tense. See pictures on page 310 for methods chiropractors use to relax muscles before treatment. Maybe she knew that another neck adjustment would cause injury. I may be getting too old, stiff at times for treatment and I was told by another chiropractor that chiropractic treatment can break the bones, vertebrae and cartilage in older people and people of any age if they

have muscle tension/spasm in the neck, back.., bone loss, worn, uneven cartilage or even if the muscles, bones, vertebrae, cartilage are healthy.

Muscle tension, incorrect posture, repetitive movement (computer mouse hand…) can cause the muscles in the hand, arm, shoulder, neck to become so tense that muscles can become 'locked' a fibrous tissue can develop and press on nerves, blood vessels, pull neck vertebrae out of alignment.

I did not want my neck done but she also turned my neck left and right but it popped, moved fully only on one side, the left. The right neck, shoulder muscles were too tense, tight due to computer mouse, typing, incorrect posture, looking down at the keys and the sodas.

I asked her to please move the neck fully to both sides because when only one side is aligned fully/pops my ears ring and vision, balance becomes impaired. She would not adjust both sides. I entered her office with an impaired back (extreme pain) and perfect neck, hearing, balance. I left with my back the same and with a misaligned neck and ringing ears.

I had to return for another treatment because the incorrect, one sided alignment caused endless ear ringing. She then attempted left and right neck alignment but only one side (left) popped/moved fully, correct into alignment. She still could not get my back to align or remove the pain and did not give any advice about heat, ice until I asked first. Ear ringing continued. She told me my soar back caused the ear ringing. I did not have wear ringing until after this unbalanced neck alignment.

A chiropractic rule states that the chiropractor must 'ask the patient first' if he wants the neck aligned. She did not ask me and I was so scared from the back problem that I forgot my new rule of never allowing my neck to be turned by a chiropractor again and I automatically let her do the neck.

I had to find a new chiropractor. They fixed my back, pain reduced a little and did even alignments on the neck and back: both left and right sides of neck and back popped, moved fully into alignment. Ear ringing reduced. I had 4 more treatments in which they used only the massage machine and activator on my back, neck. This impaired my back; walking balance became impaired, and more ear ringing occurred. (The activator has always impaired my balance. Twice after the activator was used on my back my walking balance became impaired and I had to return to the chiropractor to have him do the <u>hands on only</u> left and right back alignment/pop to return the back to normal alignment and perfect balance.) Still had 70% back pain. Chiropractor only did machine waterbed massage, no hands on. (Later, a very good back massage by a masseuse removed all of the back pain permanently in 30 minutes. She removed knots, spasms in the back muscles and taught me home treatments. Only $20.00! I now think all I needed all along was a Professional Sports Massage.)

The chiropractor could not get the exact alignment of the neck to completely remove the ear ringing (He said chiropractic neck movement can irritate the nerves around C1 and other vertebrae, cause ear ringing and I should wait, no more neck alignments, only the back.) I suspect a joint, cartilage, muscle… injury also still exists in the neck from the bad chiropractic treatment. I know the irritation was a pinched, pulled nerve or other injury caused by the previous one sided neck alignments. I had to return to the chiropractor that caused the problem. I specified that I do not want any more partial, unbalanced alignments. This time she turned/moved/popped the neck/vertebrae left and right but the neck did not move easily. The ringing was reduced 90%. My ears still had some ringing and later the ringing increased, dizziness, numbness in the mouth, face, headaches, right eye became red, vision less clear. This is 4 times a chiropractor has caused an injury to my neck, hearing, balance.

I began seeking a better chiropractor that can do the old fashioned, perfectly balanced alignment by hand, and without using only the activator and other machines. I am afraid to return to the other chiropractors. I miss the oriental chiropractors on Baden and Grand Ave. (Dr. Soo Hoo, Tai, Chang) in South San Francisco, CA. They do it right!! I always experienced perfect balance, movement, hearing and vision when a good chiropractor does the old fashioned, equally balanced left and right alignment, pop to the back and neck.

Oct. 6th, 2009 - I found a new chiropractor. At first he said I needed only a few appointments and he adjusted me the old fashioned way, turned, popped the neck left and right and the ear ringing was 99% removed after the first treatment and had stopped completely after about 4 treatments. The dizziness was gone after the first treatment. I was suspicious why he could not remove the ringing in 1-2 treatments as the old honest chiropractor used to do, but I was injured by the previous chiropractor.
My muscles were very tight sometimes but he made a 2nd, 3rd attempt to turn the neck when it would not move enough on the right side at the first try and sometimes ended with a perfect alignment. (Most previous doctors in Worcester, MA did not want to spend the time to do more than one attempt at moving the vertebrae. They would leave me misaligned by their one sided movement/treatment. Maybe they were afraid injury would occur with another neck movement, but they should have done <u>muscle relaxation first</u> so the alignment would go correct at the first try.) This new doctor should have done relaxation first instead of repeatedly turning the stiff neck until it popped. Many chiropractors keep their treatments secret. Most raise their voice, become upset if I ask what the treatment is, why things don't move correct, and if things go good, why they went correct, what caused things to move correct? They will usually give an evasive answer or try other means to discourage questions.

The doctor also worked on my back and at first was a good balanced alignment. After 4 treatments I wanted to quit treatment because I said I felt good. He talked me into more treatments. Then 90% of the neck and back alignments he and staff performed were different, new, one sided, unbalanced. (The exact thing that I came to them to get away from, that they promised not to do, the type of treatment that caused the first ear injury).
'Trying to place my back out of alignment so I continue paying for more treatments?'

I do not like X-Rays but in this case was scared and talked into neck X-rays. The doctor found the top neck

vertebrae C1 (Atlas) below the skull out of alignment and lower vertebrae C4-C5... not moving well and cartilage in these lower vertebrae worn down. C-1 is a main vertebra containing nerves for the eyes, ears. C-4... nerves also connect to the ears. (Misalignment of any vertebrae in the neck and also below the neck can affect nerves, blood vessels or nerves branching out from/connected to nerves traveling to the ears, eyes, brain.) Did one of the previous chiropractors throw C1, 2, 5, 6 out of alignment? I did not have ringing, dizziness until after the first doctor worked on my neck. The old fashioned, good chiropractors never took X-Rays. They could feel the state of all the vertebrae by hand and do easy, perfect treatment.

This new chiropractor told me that the chiropractor does not always need to turn the neck, move the vertebrae left and right. Only the vertebrae that need to be moved and placed into correct alignment should be adjusted and the popping sound does not always need to occur in order for the vertebrae to be moved into alignment. (I disagree with much of this statement. Read more info. in this chapter.) In my case the neck was turned left and right and the vertebrae (he said he had to align two...) popped/moved/aligned when the neck was turned to both the left and right sides. I specified I wanted the old fashioned left and right balanced treatment only.

The vertebrae are moved to get them all aligned along the spine, moving and to be sure the vertebrae are exactly centered correct on the spine.

My opinion is that turning the neck/vertebrae left and right is also done when moving only one or more vertebrae in order to bring full left and right movement to all the vertebrae and to place all the vertebrae perfectly balanced, evenly aligned, centered on the spine. Every time a doctor turns/pops my neck or back to only one side or a full turn is not done on one or both sides they say that it is 'ok' but my balance, hearing, vision always become impaired and I need to return for more treatment until they can fully move/pop the neck/back on both left and right sides. Only then is the result beneficial. Both left and right sides of the neck and back/hip area need to be moved the full amount (not too far, not too little) and pop, (a good pop, not a tiny stiff click) for the neck, back, hips to be aligned perfectly balanced. (That's my experienced many times.)

Chiropractic videos on Youtube emphasize this and warn of stroke, other injuries caused by chiropractic;

http://www.youtube.com/watch?v=7ltnyFgUBt0&feature=related

The doctors (3 treated me) said I needed more treatments. Then, about 10 times (out of 14 treatments) the doctors could not get my neck to move fully and pop on the right side (was moving fully and popping only on the left). This chiropractor then used the activator on my neck and back and other methods with the table... placing pressure with her thumb on the back of my neck vertebrae while dropping the table down under my head (*The back of the neck normally has an inward curve, not too much, not too little. Arthritis, injury, incorrect posture can cause the neck to lose its curve and develop muscle, joint stiffness, tension, limited movement, pressure on nerves, blood vessels, misaligned vertebrae. Chiropractors claim to use this pressure on the neck to return its curve. It only caused me injury.*), then later pulling downward on my left and right ears by the earlobes and fully turning, popping only the left, top side of the neck, base of the skull (C-1, 2?) with this treatment. (They invent their own moves.) Then she did a back, base of neck/shoulder treatment (C6-T1?) and moved, popped only on the left side. All other doctors in my past always did this on both left and right sides. None of the 3 doctors knew how to relax the muscles on the right side of my neck to enable it to move fully and pop. They gave me isometric exercises to strengthen the neck muscles that caused/increased the ear/head ringing. Seemed to increase the injury. These treatments and the one sided neck alignments and strange new back/ear treatments brought the ear ringing back, walking problem and vertigo which ended with two emergency room hospital visits at U-Mass Memorial Belmont St. Hospital doctors know nothing of chiropractic and could not help me. Wanted give MRI but that causes cancer, brain, nerve damage... so I refused. My right neck, shoulder, arm, developed weakness, pain, activated vertigo when lifting with the right arm, hand or laying on the right side or moving the right arm when turning to the left side. The right leg also caused some of this condition when the muscles pull and it coincides with the right neck muscle, nerve pulling.

The chiropractors would not answer my calls for two days until Sunday night. They refused to admit the treatment caused the ringing, walking problem and vertigo. Double vision, cloudy vision almost blindness occurred, and recurred for months. Large black spot in visual field. The chiropractor told me it was my fault, 'that my thoughts, beliefs went into the 'atmosphere' and influenced the neck adjustment' his wife gave me and her thoughts. This is most unprofessional. That morning, in the chiropractors office before she injured me I did not want any more chiropractic treatment and asked his wife 4 times to please let me go home, to not have treatment. She talked me into it and I, believing I must listen to the doctor, let her do my neck.

I had to return to the doctor on Monday, (since she and her husband caused the problem and takes my insurance) and asked him to turn the neck correct. I sat in the office 10 min. waiting while he was outside complaining about his parking space. He then turned/popped my neck left and right. Then adjusted, popped only one side of my back, the right. Severe balance impairment, almost like a seizure effect occurred when sitting up after being treated. He said it was blood rushing into my head after he fixed the vertebrae but it did not feel like that was the cause. I felt that he also missed something in the neck that his wife goofed up. I asked him to do the other side of the back on that last treatment (I stopped going to him after this treatment) but he refused saying 'if he adjusts the other side and it does not pop I will complain so he may as well not bother'. Said my right foot turns in/down and causes the right leg to turn in but I never had a problem with it and then after his treatment it did turn in/down extremely, twisting the right hip up and inward, impairing my walking, balance.

He tried to sell me 240 more treatments, then treatments for life saying it is the only way to cure the condition and I will never be cured. Also tried to involve me in Multi Level Marketing sales of herbal products which I know contain 3 herbs that cause health problems including migraines, thyroid hormone malfunction; Isagenix's. I had to listen to a 15 minute sales pitch in the treatment room one time before he would do my chiropractic treatment. I felt I must agree to buy the product for $250.00+ to be sure he would work on my neck, back properly. (By law I

cannot place the name of these bad chiropractors on my website and in this book but I will give their name to anyone that writes, E-mails, calls me. They are located in Worcester, Massachusetts on Highland Ave. near Elm Park. (The chiropractor that used to work there was good; did the old fashioned, balanced method and sells only 1 treatment to get me aligned perfect and gave a effective physical therapy referral.) I suspect they, the new bad chiropractors, will move after they injure more people.

I reported them to the state board of chiropractic and was told by Medical that three more people were injured by them and filed complaints. Check with Medical for a list of other people. Many complaints. The chiropractic board will try to hide this information from you and will side with, protect the chiropractor most of the time.
Other chiropractors were afraid to go to court against them so the case was dismissed. I wonder how many people were hurt that did not report it? I notice a few school kids at their office for sports injuries that never seem to get better. I remember seeing a young teenage boy in the waiting room always looking scared, hopeless, sad and I suspect they gave him bad treatment. I wish I could contact and tell his parents what these doctors did to me so they won't hurt the boy.

After 6 days the vertigo returned and walking balance, back impaired. Back in the hospital. Doctors still can't help me. 8 days later still little vertigo, balance impaired but am staying away from the chiropractor permanently and hoping the body can knock out his/her misalignments and cure itself, return to the condition it was in before their treatments. IN 30 days my red hair had tons of grey in it and green eyes turned a light yellow/green color at times. White cloudy vision, like a fog in the visual field occasionally appeared, flashing dots of light.

These chiropractors caused the imbalanced alignments/injury after reading my website chapter that describes how some dishonest chiropractors do one sided imbalanced alignments to keep their patients mis-aligned and dependent on endless chiropractic treatments. I wonder if they were trying to stop me from writing. Main injury is in my neck, arms and it is now very hard to type, draw pictures, use the computer mouse for the website and book. Mainly in the right arm, hand. Good thing I am left handed and could switch mouse hands.

Realized I had to find another chiropractor to correct the injuries they caused - 3+ in the back/hips and 3 in the neck.

One new chiropractor I talked to told me the chiropractors that caused the injury are dishonest, throwing me out of alignment in order to keep me addicted/dependant on endless treatments, paying more money, the type of doctor that gives the chiropractic profession a bad name. Along with the spine misalignment they caused, I also suspect the unbalanced... new treatments he and staff applied can impair the ears balance system, plates inside the ears and estuation tube function. Since I now know that ear, balance problems can occur from chiropractic, I realize that a detached retina in the eye may also occur from this treatment. Their treatment caused double vision, floaters, a white fog, cloud over my visual field, ghostly after images of objects, a variety of strange vision problems and my eyes wandered outward a little, very slight Strabismus or convergence/divergence impairment! The right eye is stiff, left eye more stiff and diverges out slower than the right causing temporary double vision when looking from close to the distance. Astigmatism also developed. I removed the astigmatism and improved the eyes movement to the state of not seeing double by using The Bates Method of Natural Vision Improvement.
See recent video; http://www.youtube.com/watch?v=z8J1vhCt3SM

Also: any slight sinus/ear congestion, midlife hormone imbalance/water retention, muscle tension causing slight dizziness can become magnified causing increased dizziness, vertigo from a bad chiropractic neck/shoulder, spine, back/hip misalignment.

This chiropractor that injured me stated he is from a superior new Chiropractic College that teaches new methods of turning, moving, popping the neck to only one side: only left or only right and treating/popping only one side of the back. He and his wife also invent their own methods. Many new chiropractors are doing those one sided neck/back alignments or attempting to align both left and right sides but only on side moves fully/pops or both sides do not move fully and do not pop. Patients are complaining that these treatments are not beneficial and often cause balance problems, ear ringing, visual disturbances and other problems. Stroke has occurred!

A different, older chiropractor that is from a older college that teaches the original old fashioned method of fully moving/aligning, popping both sides of the neck/back/hips... for a balanced alignment of vertebrae, joints says he does not like the results of the new one sided alignments the new colleges are teaching.

The other, previous chiropractor that healed my back but could not cure the ear ringing, (although he did a perfect left and right neck movement with pop on each side) said that chiropractic neck treatment can sometimes irritate the nerves in the neck and it can take a while to return to normal. He wanted to leave the neck alone after two treatments. I should have taken his advice and stayed away from treatments from other doctors.

A good chiropractor usually needs to do only 1-2 treatments (few more if specific injury is being treated), no rough treatments and the patient always feels very good, better after every treatment.
The patient is then set free. No pressure for endless treatments.

I had to contact 5 new chiropractors before I found 2 that would correct the injuries, misalignments the dishonest chiropractors caused. Two of the chiropractors said 'yes, a incorrect chiropractic neck alignment can cause vertigo, stroke. Is like being in a automobile accident.
+The first one gave me good advice on the phone but kept changing his mind about whether he accepts my insurance, seemed like he was trying to get rid of me, afraid to get involved with a person that was injured from another doctor. I asked him if he will do a house call or let me come by on a walk-in' appointment because my balance is so bad I never know when I can walk out of the house. He got angry and said chiropractors do not do that.
+ The next chiropractor had me on his table, did a exam, said 3 vertebrae in the neck, 3 in the back were misaligned, one vertebrae that connects the base of the neck to the rest of the body's spine was twisted on the

spine. He then decided to do paper work first before aligning my vertebrae and told me to return in 3 days. I returned and he was not in the office, waited 1 hour, never showed up, went home, he did not call. I called him and he was then in the office and said he had a emergency. I realized he stood me up both times because he was afraid to get involved in correcting another chiropractor's injury. He has a video camera in the hall and was probably hiding in the back room. Also went to another chiropractor but he kept saying to come back later, cant work on me now, even though there were not any other patients in the office.
+ I went to a 3rd chiropractor, New England Chiropractic, on Lincoln St. in Worcester, MA.
They are the good doctors that helped my back previously.
They aligned 3 vertebrae/joints in my back/hips and one major misalignment on the top/upper back. They would not align the neck, stating 2+ vertebrae were out of alignment but my right neck, shoulder was so tight it would be dangerous to align the vertebrae until after I got my Medical Doctor to prescribe Physical Therapy and/or drugs and got a note from her stating it was ok to align the neck. I walked to her office, she and staff yelled at me for walking in without an appointment. I kept saying I have vertigo, neck injury, just came from the hospital and they told me to go to my regular doctor and I am afraid I'm going to have a stroke if cant get a good chiropractor to fix the neck. She made me walk back up the highway to get a note from the chiropractor. Then I walked back, gave her the note, they yelled again. She prescribed a drug to relax the muscles but did not call in the prescription for 1 ½ days. Never gave me the note for the Chiropractor. I finally gave up! I got the drug prescription on the night of the 2nd day but never took it. Side effects listed; heart attacks and other health problems.
New England Chiropractic then said they can now do massage, muscle relaxation treatment in their office, then would try to fix the neck. Said I did not need the drug. New England Chiropractic on Belmont Str. are the only chiropractors that told me the truth: That the neck vertebrae may not move fully, easy and pop when the neck muscles are tense and that vertebrae, cartilage, muscle, nerve, blood vessel injury, vertebrae misalignment can occur if neck movement/alignment treatment is done when the muscles are tense, in spasm.
The tense muscles in my right neck/shoulder, arm were preventing a full neck turn and pop on the right side by all those other chiropractors. They all kept selling me more unbalanced, one sided treatments and not relaxing the muscles before treatment.
I began drinking beer to relax my muscles and exercising best I could and doing a bit of 'Do It Yourself Home Chiropractic'. Got a little better but still needed a professional chiropractor to fix my neck. Beer eventually causes muscle dehydration, tension so it is not a permanent option for muscle relaxation but it did make the vertigo go away temporarily when the muscles relaxed. I took Niacin vitamin B-3 morning and night to open and clean out my arteries hoping that would correct any blocked blood flow in the neck, head, ears, eyes caused by the misaligned neck vertebrae. I know that the bad chiropractor left the main thing they did that misaligned my neck impaired, out of alignment.
My computer posture is not good but I never had these problems until after going to this bad chiropractor. I now have trouble typing, sitting, standing, walking, moving…

On January 3rd, 2010 my usual, honest chiropractor in Worcester, MA came back to work after maternity leave. For 2 months while she was not in Worcester I was treated by the other chiropractors listed in this chapter. None could completely remove the vertigo, walking, vision problems that the dishonest chiropractors caused. The good chiropractors at New England Chiropractic, Worcester, MA fixed 3 misalignments in my back and this did help a bit. All were afraid to fix my neck.
Today I drank 8 tall Coors light beers to help my neck, body muscles relax so I could walk outside to the honest Chiropractor's office and so the neck alignment will go correct with relaxed muscles. I did not let her know I had the beers. My past chiropractor in South San Francisco says if any drugs are in the body during a chiropractic neck treatment it can result in a stroke. I don't know if this pertains to beer but I felt safer on the beer rather than to try the muscle relaxers with side effects (heart attack…) the Medical Doctor gave me.
The Doctor fixed 3+ misalignments in my back/neck. I had some vertigo when she was correcting the misalignments due to the back and neck bone/vertebrae misalignments pulling on nerves along the spine, neck before she did the treatment.
Still had to work though some dizziness, ear ringing, visual disturbances, extreme trouble walking, locked up muscles, back, neck… as the body muscles, nerves adjust back to their normal state and remove abnormal muscle, nerve function that occurred for months due to the bad chiropractors unbalanced… alignments. Chiropractor said that will last a few days. (Later I found out that this good chiropractor (this is the one that initially really mis-aligned my neck way back in July 2009 causing ear ringing) either did not fully align neck vertebrae C-6 or it slipped back out of alignment after her treatment. I know she missed something because it took more than a few days to get better; it took about 10 more months, still having extreme trouble walking and getting vertigo, mainly at night, before the vertigo healed 95%. I could only walk better after studying more Home Do it Yourself Chiropractic and doing balanced, left and right back/hip alignments against the wall and laying down. Some Yoga, Physical Therapy spine twists laying down and then sitting on a bus stop bench popped, moved the left and right back, neck vertebrae and this also brought improvement. It popped, moved correct on both sides and then I could finally walk better.
I did have some improvement after her treatment. She did the old fashioned method; turn fully and pop the neck left and right and, also both left and right sides of the back. She said the back misalignment was pulling on the nerves along the spine that connect to the nerves that were pinched, pulling from the misaligned neck vertebrae. So the back does affect the neck, eyes, ears! I don't know why the chiropractors cannot do their job completely correct. Why does the patient have to learn chiropractic and do it themselves to get well?! It took 5 new chiropractors (only 2 would dare to try and fix the mis-alignments), 18 neck treatments, many done wrong, before

the honest chiropractor, with one correct treatment repaired some of the damage caused by the first chiropractor's (her) unbalanced, accidental one sided neck alignments and the back, neck mis-alignments caused by the other dishonest chiropractors. Finally my eye color is back to normal, vision better and better, hair color less grey.
A way to know that a chiropractic neck alignment has been done correct, successful is to look in a mirror; If both of your cheeks are rosy, red it usually means that the blood flow to the head through the left and right arteries, veins in the neck has improved and bloods flow is even to the head.
If only one cheek is red it can indicate a unbalanced neck vertebrae, the chiropractors alignment did not occur correct and blood flow is reduced in the arteries, veins on one side of the neck and head. After the bad chiropractor's alignment on my neck, only one cheek was rosy for days, weeks! After the good chiropractor fixed my neck, both cheeks were rosy, nice and red and remain that way.

I strongly suspect the dishonest chiropractors are purposely placing people's spine, neck out of alignment to insure repeat sale of treatments. I reported this to police; March 28, 2011 - This books chapter was sent out in PDF form to the Newspapers in Massachusetts with hope to stop the corruption, patient injuries in the Chiropractic Profession: I also sent a copy to the police by E-mail and regular mail but when I check ed in person (months later when I was able to walk to the station) and asked if they received it: they said they threw it out, they do not accept police reports by any type of mail. Then gave me a phone number to call to report it. I called and a lady yelled at me, said I need to get a lawyer. I told her and the police I was concerned about the boy that I suspected was being injured by the bad chiropractor. I tried getting a lawyer but they said chiropractic injury is very hard to prove and would not take the case. Newspapers and Reviews on the Internet are the only way to try to stop these dangerous chiropractors.

April -May 2011 - I could walk better and vertigo was 99% cured in April 2011. Took 1 yr and 9 months to heal this far! Still wake up at night a few times with vision problems, balance off a bit at night, especially if I did some lifting that day and/or lot of computer work with right hand. Affects the neck injury, mainly right side. This past winter I pulled my right shoulder, arm dragging groceries home in the snow, navigating though high drifts. This injured the shoulder muscles, aggravated the right neck muscles but seemed to have pulled the mis-aligned vertebrae (C-6?) into a alignment that helped the neck heal. Vertigo was less and less after this occurred. Switching to the left hand mouse also helps the right neck heal. A lot of Physical Therapy, Yoga and bit of home chiropractic had healed most of the condition.

In April I went to a new chiropractor to get x-rays, try find out what is not healing in the bottom right neck, side, shoulder. He said C1-, 2 at the top of the neck and C-6 at the bottom of the neck were out of alignment and my back was crooked. I did not see the x-rays. I let him do the neck with the activator only, hoping to avoid more neck injury. He absolutely promised there will be no vertigo, ear ringing. He then set up 3 more appointments after this one. That night, a lot of ear ringing and some little vertigo occurred. Trouble walking next day and for 5 days. Then was better and started to think this chiropractor may be ok. Went back for another treatment and let him use full hands on treatment on C1, C2. One side of the neck turn did not pop as well as the other. I said: hope is ok, he said its ok, the bones moved good. Then did one alignment on upper back, spine. Set up 2 more appointments.
I walked to bus stop and felt alright. Waiting for bus, looking down and felt little dizzy. Got home and ok. That night a lot of ear ringing and vertigo occurred. I called the chiropractor but no one answered. Lot trouble walking now. I have not gone back to the chiropractor. Have been in hospital with more vertigo a few weeks later. Asked them to do MRI but doctor said no. Still trouble hard to walk weeks after treatment, now May 25th.
This is the 4th time a chiropractor has turned my neck resulting in it popping fully on only one side causing ear ringing, balance impairment. This is the 4th time a chiropractor has said it does not matter if the pop does not occur. I disagree! When 2+2 =4 many times, you know that 2+2=4!
I am now back to doing my own Physical Therapy, Yoga, Little home chiropractic and some days are better. I do not feel that this new chiropractor purposely caused harm. I know the past, dishonest chiropractors caused some type of nerve, cartilage, ligament and/or other injury and this newest treatment aggravated it. I did have x-rays from the new doctor but cartilage, ligaments, muscle sprains, injuries... do not show up on x-rays.

May 13+, 2010 - I still have some double vision, ghostly after images of objects, walking problem, vertigo at night trying to sleep and something in right arm/neck, shoulder feel broken, cant lift much with right arm but refuse to take any more chances on chiropractic treatments. My use of the computer mouse-10 hours day working on this book, website, poor posture looking down at keys and having to work standing may be preventing complete healing but I did not have any problem before going to the chiropractors that caused injuries.
None of the Chiropractors told me the back pain could have been removed with Professional Hands On Massage only. I did not need the neck aligned!! Most doctors try to sell only their treatment and hide other treatments from the patient. Even the honest chiropractors hid this information.

Before this chiropractor I went to an Osteopath. He said my neck was a little out but sent me to physical therapy. Therapist was a different one, with different exercises. The exercises; stretches brought back the pain, vertigo so I stopped treatment. Doctor prescribed drugs for arthritis, injury but these are the drugs that cause more joint damage, liver damage; as in pain killers, anti-inflammatory drugs; Ibuprofen, NSAID...
I have not taken the drug. Researching natural anti-inflammatory food, herbs, use of ice... to prevent swelling after heavy lifting, computer work. When swelling in the injury is under control, it seems to heal a little more as time passes. This doctor also told me it was ok to go to a new chiropractor for treatment. Even Medical Doctors goofed!

**May 25th, 2011 - I still have some problems now but am afraid to take any more chances on chiropractic.
Neck gets so tight the head shakes. Trying to get back to normal walking.
I will now stay away from chiropractic for the rest of my life.**

June 4th-2011 - Been doing light, non-invasive do it yourself chiropractic as physical therapy and yoga exercises, postures and seem to be getting better. Dizziness is healed most of the time. Vision exceptionally clear! Maybe the new chiropractor is good. I think that as he corrected the misalignments the other chiropractor caused, it may have caused some old symptoms to return as the body, bones, muscles adjusted. A 'Healing Crisis-The Reversal Process' as old previous symptoms that first occurred re-occur as the body goes backward to the state of correct health it was in before illness. I do not know if this applies to injuries or only illness, diseases. I know all chiropractors are not corrupt, and I do tend to trust this last one. I will not go back for more treatment because it seems that the previous bad chiropractors caused an injury that gets re-activated when I try treatment from any chiropractor now.

**An inexperienced and/or dishonest chiropractor can cause great injury to the body, vision impairment and other health problems. I am grateful to the good Dr. for treating me on a walk in/emergency basis. All other doctors were angry when I told them I was so dizzy, afraid I might have a stroke some days and needed a walk in appointment so I can be treated on a day when I was able to walk to the doctor's office.
My Mom advised me years ago to avoid chiropractors because some are dishonest. She was right.**

This has been a very hard lesson. I learned <u>the hard way</u> that chiropractic can improve health if a good, honest chiropractor is found but an inexperienced and/or dishonest chiropractor can cause great injury to the body, vision, hearing, balance impairment and other health problems. I am grateful to the honest Chiropractor for treating me on a walk in/emergency basis. All other doctors were angry when I told them I was so dizzy, afraid I might have a stroke some days and needed a walk-in appointment so I can be treated on a day when I was able to walk to the doctor's office. My Mom advised me years ago to avoid chiropractors because some are dishonest. She was right.
The skill, method and honesty of the chiropractor and risk of mistakes determine the result of treatment.
Use the Bates Method, a Medical Doctor, Professional Physical Therapy, Massage. If a injury needs chiropractic treatment, find a honest chiropractor that prefers to limit adjustments to only what is necessary and also teaches Physical Therapy so the patient remains healthy <u>on their own</u>.
**I am not against chiropractic, it healed me in the past, but it must be done correct.
Even the honest chiropractor was the one that started this whole problem by not being able to fully turn/pop the neck on the right side, but at least she had the courage to try her best to correct it, but never admitted it caused the first injury.
Most cases of unclear vision do not need chiropractic treatment. Removing glasses and practicing the Bates Method is sufficient.**



Special note on posture; I have noticed that most of the old time chiropractors that use the old fashioned simple method do not over-adjust the vertebrae, bones. They tend to use a simple basic alignment and let the body move into its own natural state. That natural adjustment feels perfectly healthy, good balance, movement, perfect hearing, vision...
Some modern chiropractors place too much pressure, force, endless treatments trying to force the bones, vertebrae to be in an exact placement as is shown in models at their colleges. I have found that this often results in the body losing its natural alignment that it had adjusted well into for many years. When the modern chiropractors force the body past its natural alignment, it can result in balance, hearing, vision impairment, broken cartilage and other health problems. A persons natural, individual, comfortable way of walking, moving, dancing... is lost.
See the picture of Billy The Kid – An outlaw in the old American West. I doubt that he had ever had chiropractic treatment. He lived a rough life but he stands with a feeling of perfect balance, relaxed, strong, confident, his natural individual character showing in his own, unique posture.
The chiropractor that caused me an injury, forced my right leg, hip, sacrum upward, twisted the leg inward, in a circle in the bone socket, trying to make it conform to the 'one size fits all' model they leant in college. He refused to align the left side for balanced alignment. Resulted in dizziness, balance/walking impairment, right leg now twists in when walk and contributed to pinched, pulled nerves along the spine and into the neck causing vertigo, double vision... The top of the right leg always hurts when sitting now.
**Some types of bone spurs are created by the body to even out the spine/body when bone/vertebrae cartilage is worn down and/or uneven and to create space between the vertebrae. Some bone spurs, especially ones caused by over-consumption of calcium pills need to be removed to prevent them from pressing on nerves.., causing imbalanced bone/vertebrae alignment but others are best left alone because removing them can result in unbalanced/uneven vertebrae, bones, pinched nerves and other problems.
Chiropractic treatment can accidentally break bone spurs or cause the spur to scrape over nerves, blood vessels especially if the cartilage separating the vertebrae is worn down.**

An explanation of the basic, old fashioned, effective chiropractic routine is placed here. Also included is home treatment. YouTube has videos showing correct, balanced chiropractic alignment. Watch a few different videos to find the best doctors. Notice that most of the doctors have blocked comments, preventing patients from stating injury can occur from chiropractic. Only positive statements, selling chiropractic treatment are posted.

Chiropractors Now Teach 'Do It Yourself' Home Treatment

This can also be dangerous but some of these methods helped to correct the mis-alignments, injuries the chiropractors caused to my neck, back.
One treatment involves a plastic or rubber device placed under the body to align the vertebrae.
Raised areas on the left and right sides of the device press into the muscles on the left and right sides of the spine, vertebrae; neck, back, lumbar, sacrum, tailbone... and move the vertebrae, bones into alignment. (Device does not press on the spine/vertebrae.) Physical Therapy type body, arm, leg movements are included.
This device prevents the need for repeated visits to the chiropractor. Example;

+The person lies on the device. Device is placed under the bottom, sacrum/tailbone and the person moves the legs, other body areas a specific way. This movement moves the vertebrae, joints, bones in this area of the body into alignment.
+The device is also placed on various areas of the back, upper back with movement of the legs, arms... to align vertebrae in these areas.
+The device is then placed on the back of the neck and back of the head, arms moved a specific way to align the neck vertebrae, relax muscles in the neck, head. Product comes with a warning.
I want to find a completely natural product. Maybe just staying away from the chiropractors is best for this condition. I find it interesting to know there are other ways to align the body without the extreme twisting, popping of the neck, back with the hands on treatment, rough use of machines, imperfect alignments from the activator, hands on and other treatments by inexperienced and corrupt chiropractors.
I have tried this product in 2011 but I cannot say if it works or not because in April, May 2011 I went to a new chiropractor to 'one last time' try and fix the injury the other chiropractors caused. The doctor's treatment was not successful, returned some symptoms. I may not be able to use the device due to the injuries caused by the chiropractors.

Here is the address for this device . He also has Physical Therapy like exercises and videos:
http://www.spynamics.com/ http://www.youtube.com/watch?v=BQ5C1uTt-Kw
http://www.spynamics.com/index_files/Instructions.htm
I use the tennis balls as shown in the Physical Therapy chapter with similar results. They also act as a massage device to remove muscle knots, tension, pain.
Another treatment: The person lays on a plastic/rubber device the size, length of the entire spine; neck, upper, middle, lower back, hips, sacrum, tail-bone. The device is made to perfectly fit each individual person's spine. Raised areas on the left and right sides of the device press/massage the muscles on the left and right sides of the spine, vertebrae; neck, back, lumbar, sacrum, tail bone... and move the vertebrae, bones into alignment. Areas do not press on the vertebrae. Heat is also applied.
The person relaxes on the device, then after massage, relaxation, performs specific arm, leg movements that help to move the vertebrae, bones into alignment. More like physical therapy and safe chiropractic combined.
This device prevents the need for repeated visits to the chiropractor.

Some devices sold by mail order provide a safe way to relax painful back muscles and align the vertebrae, remove pressure on the spine. Inversion tables also do this.

http://www.home-chiropractic.com for low cost training in chiropractic treatments.
Chiropractor Dr. Holmquist states that most chiropractors run a racket of endless treatments
He teaches people 'Do It Yourself' Chiropractic, how to align your own body and avoid dishonest chiropractors. See video on his website. He sells a 'Home Chiropractic Handbook, 194 pages, with pictures and video/DVD' for a low cost. Replaces paying for endless chiropractor visits, but if it is not done correct, injury can occur. Do not practice home treatment on the neck. A chiropractor has to spend years practicing to learn how to align the body, spine.., neck correct. Even aligning the hips, back when done incorrect can paralyze the patient. This book is good to read so the patient knows if their chiropractor is doing the job correct. Avoid all chiropractic unless absolutely necessary. Try Physical Therapy, Natural Exercises first.

Vertebrae misalignment in the back, neck can result in paralysis, stroke, hearing, vision loss... so check with a professional before trying home treatment.
It is good to know how chiropractic is applied in order to search for a honest, experienced chiropractor and if simple Do It Yourself treatment can be done at home, to study this and find a safe yoga, physical therapy... treatment that will produce the same results.

Deep tissue professional massage to relax the back, neck muscles before chiropractic bone, vertebrae adjustment greatly improves ease, perfection and safety of the treatment and often the massage alone will align the vertebrae as the person gets up, moves around and the relaxed muscles allow natural bone, joint, vertebrae movement, alignment thus preventing the need for the chiropractor. Deep Tissue Massage can increase pain in some cases. It is then better to use light strokes, gentle myofascial releases.

The author of this website went to a ear doctor (ear, nose, throat) to check the ears for too much wax buildup causing impaired balance. It was also pollen season and allergy can cause this. I also have a tendency for neck vertebrae C4 to move out of alignment due to a old injury and this impairs balance and ear function.
The ear doctor removed a piece of wax from one ear. The ear that had symptoms was clear.
Then the doctor gently touched, moved the left and right sides of my neck with his left and right hands, lightly rocking my neck, vertebrae back and forth, left and right, just a little with his fingers/left and right hands. His fingers also moved up and down my neck.
He was checking for muscle tension, immobility, pain… and vertebrae misalignment.
About one hour after the exam I noticed that my neck felt a bit soar: a 'good feeling' that occurs sometimes after a perfect chiropractic neck adjustment which means the muscles, joints have released their tension and moved back to correct position. I noticed my balance, movement were improved to normal. The ear doctor did this without the extreme twisting, popping of the neck that the chiropractor applies. This proves that massage and other safe methods such as the ear doctor applied can be effective. Dr. Bates performed a similar effective treatment on a boy to correct a wandering eye. See Better Eyesight Magazine.

Migraine headache is most often caused by MSG, Nitrites, Sulfites, Smoked food and other food, drink additives. Avoiding these foods will cure the headache without chiropractic. Neck muscle relaxation, stress reduction, clean, moist air can cure tension and sinus headache.

Taking calcium supplements can cause bone spurs, calcium deposits on the neck vertebrae and other bones, joints, organs, vessels… in the body impairing nerve, blood vessel, muscle, joint function in/near the joints, bones, body. Get calcium naturally from food-no pills.

Basic Old Fashioned Chiropractic Treatment

Chiropractic treatment, if needed, can correct blindness and other eye and health problems that are caused by misaligned vertebrae in the neck, back (pressing on the nerves, blood, lymph vessels) that cannot be aligned with massage, physical therapy or other treatments.
If Chiropractic treatment is the only option, be sure to find a honest, experienced Chiropractor.

Here is the Basic, Balanced, 'Original Hands On' Treatment that the honest chiropractors in South San Francisco, CA and a Chiropractor in Worcester, MA applies with beneficial results;

+Relaxed muscles enable easy, complete vertebrae alignment – the chiropractor may apply heat and/or massage or electric current muscle relaxation treatment (see picture next page) to relax the muscles before treatment. Drinking enough water, eating bananas for daily potassium and food for natural magnesium, calcium and sunlight for vitamin D3, moderate exercise, avoiding caffeine, aspartame will relax the muscles.



1 – Patient lies on the stomach. The chiropractor aligns the vertebrae along the lower, middle, upper back. Pressure on the lower back (area that curves inward) where many nerves travel is avoided. Special 'light touch' alignment might be done here. A left and right, balanced shoulder area movement is sometimes applied.

2a – Patient lies on the left side.
Right knee/leg is bent up and the arms are positioned.
The chiropractor presses in a inward/up and toward the front of the body motion on the right upper leg, hip area. The upper body, shoulder on the same side is pushed a little in the opposite direction, toward the back of the body. This twists the entire spine a bit, aligning the vertebrae and lower back, hips area. Vertebrae in the entire spine and sometimes the neck moves into alignment. See picture on right >. Hand on the hip, (blue area) pushes up and in a bit toward the front of body. Hand on the shoulder, (green area), pushes a bit toward the back of the body.
Then the opposite way, side is done for a balanced alignment;
2b – Patient lies on the right side. Left knee/leg is bent up and arms are positioned.
The chiropractor presses inward/up and toward the front of the body motion on the left upper leg, hip area. The upper body, shoulder on the same side is pushed a little in the opposite direction, toward the back of the body. This twists the entire spine a bit, aligning the vertebrae and lower back, hips area. Vertebrae in the entire spine and sometimes the neck move into alignment.
2a and b further align the lower back, hips, sacrum, tailbone area, other areas of the spine.
Both left and right sides are aligned. This equally aligns, balances, centers the lower body, back…

Avoid chiropractors that align only one side: push on 'only the left or only right side'. This often results in a imbalance, difficulty walking, pinched nerves and need for repeated treatments.
3 – Lie on the back.
Some chiropractors do a 'bear hug' with the arms in one position, then again, in the opposite position to further align the upper back vertebrae.

4 – Lie on the back – Chiropractor aligns the vertebrae in the neck (only if absolutely needed). The Doctor must ask first if the person wants the neck treated and provide a warning; It can be dangerous, cause severe injury!.

+Start with head facing forward to the ceiling.
+The neck is turned to the left, a popping sound is heard, (often, two quick pops together) then neck is turned back to the center/forward. +Then, the neck is turned to the right, a popping sound is heard, (often, two quick pops together) then back to the center/forward.
A popping sound is heard and the patient can feel the vertebrae move when the head/neck is turned left and right. If no pop is heard/felt or if only a small click occurs, this can mean the joint did not move or move far enough, completely and will not be placed into perfect alignment. If the muscles, vertebrae are very tense, stiff a good chiropractor knows how to relax the muscles, mind before and during that treatment so the neck turns completely and pops on both sides, a balanced alignment. The neck muscles must be relaxed first or injury can occur; neck gets 'stuck' on one or both side turns, does not turn, move completely resulting in a mis-alignment, injury, stroke...

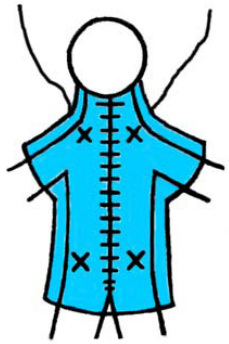
Avoid chiropractors that turn the neck to only one side; only to the left or only to the right.
The dishonest chiropractors that impaired my hearing, vision, balance... turned my neck to only the left side. Turning the neck to only one side or turning it left and right but only moving/popping the vertebrae to/on one side (in my case/experience) imbalances, misaligns the neck vertebrae, can injure the vertebrae, cartilage and cause stroke, dizziness, impaired vision, hearing and other health impairment. Health problems may not show up for a few days or longer and the patient will not realize the chiropractor caused the injury.
Five chiropractors have tried to convince me that the neck does not need to be moved and popped left and right, that the popping is only gas release, and does not need to occur but every time my neck is only turned to one side or is turned left and right but pops on only one side I experience ringing ears, balance, vision impairment. I notice when the neck does not pop on one side that it is always tense, does not move full, all the way when the chiropractor turns it.

A different chiropractor told me that the gas in the neck vertebrae joints builds up in about 20 minutes after popping the neck, so, there is gas in the joint before going to the chiropractor and it is released, pops only when the doctor moves the neck vertebrae far enough, completely, thus allowing the gas to escape. A balanced alignment occurs by turning, popping the neck to both left and right sides. The neck must not be over turned but also not under turned. The full correct amount of movement is needed to pop and align the vertebrae equally, evenly on the spine.
Test this yourself – crack a finger knuckle. Then try to crack it again. It will only crack/pop once. The joint gas has been released. The knuckle will pop again only after waiting 20 minutes+ until the gas builds up again.
This has been my experience. Others may be different but if you feel the doctor is causing you health problems by moving, popping the neck, back on only one side, try a different doctor with a better, complete, balanced routine. Doctors have confidentially told me that some new and old chiropractic colleges teach one sided partial alignments and other dishonest treatments to keep the patient out of alignment and dependent on continued treatments. There are dishonest chiropractors because; when chiropractic is done correct, honest it can quickly cure the patient in 1-2 treatments and then the chiropractor does not make any more money on selling treatments. Dishonest chiropractors do partial treatments, alignments and some chiropractors will throw perfectly aligned vertebrae out of alignment in order to cause impairment and insure repeat treatments.
An honest chiropractor will teach Massage and Physical Therapy so after the patient is aligned correct, the patient is then free of the need for future chiropractic treatment. Try to stay with Physical Therapy only!

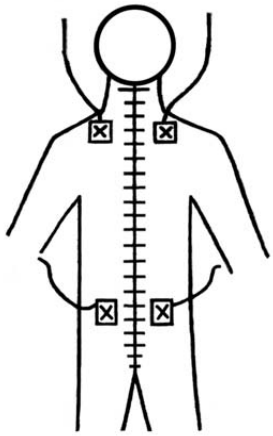
Some chiropractors have figured out how to do this on their own.
For #2a, b and #4 -The Chiropractor may determine which side is adjusted first due to the alignment needed, type of injury/condition...
Some cases/injuries may need a different routine, treatment.
1-4 is the basic treatment the author of this book has experienced with beneficial results many times when applied correct by a good chiropractor.

A good chiropractor applies heat and massage to relax the muscles in the neck and back... before applying neck, back vertebrae, joint movement, alignment to make the alignment easy, perfect, a full balanced turn/movement of the neck, back and pop on the left and right sides of the body. A balanced spine. See pictures on right >.
Heat is applied to all the muscles by placing one large heat pad on the back covering the neck, shoulders, entire back including the sacrum/tailbone.
See blue pad in picture. Heat pads are non-electric.

2-Heat pad over 4 electric pads.



1- Interferential Electric muscle stimulation, massage, relaxation pads on the back, left and right sides of the body: shoulders/base of neck and on the lower back.



Pad placement is varied for specific muscle treatment.

Interferential Electric Current muscle relaxation/massage treatment is also used; Small electric massage pads are placed on the tight muscles on the upper back area of the left and right shoulder muscles near the base of the neck and on the lower back muscles on the left and right sides of the spine. The pads are connected by wires to a machine that varies the strength of the small electric current which massages, relaxes the muscles. Pads, current is placed away from the spine, on the muscles, not on the spine/vertebrae to avoid electricity going into the spinal cord... See X's on the pictures. The Heat pad is placed on top of the electric pads.
The patient can lie on the stomach or sit up for this treatment.
Relaxing the shoulder and back muscles causes relaxation to travel into the neck, head, and other body muscles. This helps remove spasms, knots in muscles, helps the chiropractor do a easy, perfect, full, balanced movement, left and right alignment/pop of the neck, back, hips... vertebrae, joints, and reduces the chance for injury. When the muscles are tense the neck, back... get stuck during treatment, the chiropractor cannot move them completely. Injury to cartilage, vertebrae, muscles and unbalanced, misaligned vertebrae/spine, joints can occur.
Relaxed muscles help to prevent these conditions and maintain the alignment.
Electric pads can be purchased for home use. Constant exposure to electric fields impairs the body's natural chi and other energy flow. The muscles can become immune to electric muscle stimulation/relaxation. For this reason many chiropractors prefer natural hands on muscle massage and acupressure point activation. Hands on massage is best, produces more muscle relaxation, healing, blood, lymph flow, removes knots... in the muscles and has other benefits. Find a Professional Masseuse – a bad one will be ineffective and/or cause injury. A good chiropractor knows additional methods to keep the neck muscles relaxed before and when turning the neck and is also licensed in Massage and Physical Therapy.
A special trick is used by a good chiropractor to get a chronically tense neck to move; Doctor has the patient look at a spot on the wall placed in a certain location, direction. This causes the patient to keep the eyes, head, neck in a specific position with relaxed muscles in the neck, correct, best position for the treatment... enabling the chiropractor to turn the neck, vertebrae easy, fully, perfect for correct neck vertebrae alignment.

There are some yoga postures, movements along with physical therapy, massage that align all bones, joints, vertebrae in the body. If needed, a chiropractic alignment can be done first, preferably only once, then maintained by these other methods.
Relaxation of the mind, body, neck, eyes, physical therapy, massage, exercise, movement, Natural Vision Improvement, Correct Vision Habits, improves neck and back vertebrae alignment and clarity of vision. The Long Swing, Rock helps to align the spine, neck.
Chiropractic is not needed by most all Bates Method, Natural Vision Improvement students. Only specific, rare cases of blindness, injury with vertebrae mis-alignment as described previously may need chiropractic.

See the Physical Therapy chapter for a natural back, spine, neck twist, movement in a chair to align vertebrae.

Tense muscles cause and increase vertebrae misalignment and;
Misaligned vertebrae cause muscle tension.
Muscle tension occurs and increases when the muscle tension and/or the vertebrae misalignment impairs blood, oxygen, lymph and energy flow in and out of the muscles, joints.
Waste, toxins, too much gas builds up in the muscles, joints which increases muscle tension, stiffness, pain, impairs movement. Limited movement causes decreased circulation, more muscle tension.

Often muscle relaxation, stretching, strengthening, movement, positive thoughts, emotions (without chiropractic treatment) is all that is needed to enable the vertebrae to align.

A main cause of vertebrae misalignment, immobility is arthritis in the neck, worn cartilage.
An old remedy for arthritis is a mixture of apple cider vinegar and honey (both raw, organic).
Mix with pure water if it's too strong on the stomach. Drink daily or 3x... per week. It cleans out plaque and other hard deposits in the veins, arteries and the small capillaries that travel to the joints, vertebrae, cartilage. Then it cleans out the stony plaque.., deposits in the joints. This helps the vertebrae, joints move and rebuild cartilage. It is a very old remedy and many people over 100 years old recommend it for a variety of health benefits. My neighbor in Daly City California cured her dog of arthritis with this mixture. It took one month, then the dog could walk without dragging its legs. See Nutrition chapter.

Herbs, supplements can cause health problems. Example; glucosamine, chondroitin pills may cause bone growths, spurs, pain, impaired joint movement, inflamation, and many other health problems. Research is still being done on this. See Nutrition chaopter for natural joint formula alternatives.
Avoid chiropractors that push the sale of X-rays. This is radiation! X-rays only show the bones, not the cartilage and other tissues, nerves, blood vessels... Amount of spacing between the vertebrae can show if the cartilage is worn down but does not completely show if the cartilage is injured. X-rays impair the health of body, organs, eyes,

thyroid... If the vertebrae are close together, tilted... in the X-ray it means the cartilage is worn and/or vertebrae are out of alignment and this helps the doctor align the vertebrae but a good chiropractor can align without an X-ray. It depends on the individuals condition.

Dentists sell X-rays every 6 months -1 year. They lie to their patients saying it is harmless.
I am learning how to protect and fill my own teeth.

http://www.naturalvisioncenter.com/Other.html - Go to bottom of page. http://mizar5.com/rao.htm
http://www.ppnf.org/catalog/product_info.php?cPath=39&products_id=153&osCsid=d84508f62c5e4aa337aee99f6be074dd http://www.resourcesforlife.net/product.asp?product=9

MRI's, CT Scans and other X-rays/scans for the body, brain are now reported on the television news for causing brain, organ, nervous system injury, difficulty walking, skin disorders, cancer and other health problems.
They might be necessary in some cases but doctors need to invent a safe method to see inside the body.

Neck, back muscle strengthening, stretching, relaxation exercises and posture correction are taught to the patient by a good doctor to prevent future bone misalignments and reduce the need for chiropractic visits.
The chiropractor must also teach physical therapy exercises as shown in the next chapter to prevent the need for repeat chiropractor treatments.

Some chiropractors teach only stretching exercises, strenuous isometrics that are difficult, take a long time to do, are boring, not fully effective. The doctor holds back on information, trying to keep your muscles, neck impaired so they get more appointments $ out of the patient. The patient stops the exercises and then needs to return to the chiropractor.

Check with the State Medical Board for information on the chiropractor's history;
+ Years in practice. College attended. Method or Treatment.
+ Any patient injury complaints filed against the doctor?
+ Get referrals from many other patients. Avoid referrals form the chiropractor's office staff, relatives.

The 'Activator' – a small mechanical device used to push the vertebrae, joints into alignment can produce an imperfect alignment. This treatment places a machine between the patient's vertebrae and the doctors' hands and reduces the doctor's ability to 'feel' the vertebrae when it is being moved and the doctors ability to perform a perfect, exact alignment. Once the button on the machine is pushed, the machine acts alone.
When a chiropractor uses 'only their hands' (no activator), to align the vertebrae, the hands are in direct contact with the vertebrae/body before, during and after the alignment and control the entire alignment. The hands 'feel', are part of the position, movement of the vertebrae and can detect perfect alignment. Chiropractors might prefer the activator because it replaces constant use of their hands over years in practice, preventing carpel tunnel, joint pain in the chiropractor's hands.
There are patients and chiropractors that prefer the activator. They claim the hands on treatment causes injury, is too invasive. They state that the activator is less dangerous, less invasive. A friend told me the hands on chiropractic method caused her to lose feeling in her arms, hands and she had to go to another chiropractor to get the activator treatment which then corrected the problem. Another chiropractor says different types of chiropractic treatment cause the joints to pop or no sound and he prefers no sound. I am getting to the point where I don't know who to believe.
It depends on the skill of the chiropractor and the patients condition. In my experience, if the activator is necessary, the hands on treatment can be applied after the activator to be sure the bones are aligned perfectly, left and right sides of the body evenly balanced, centered. This results in perfect alignment only if the chiropractors skill is perfect. I often think the activator was invented over the years after too many people were being injured by the hands on treatment and unskilled chiropractors. My last experience in April 2011 was; activator first, it caused some injury, then hands on method after the activator increased the injury.

Avoid chiropractors that hand you off to their assistants. It's best to pick a good chiropractor and stay with only him/her. That one chiropractor knows best, exactly each treatment he has done for you and the state of your bones, muscles, health. Some chiropractors hire a lot of assistants to work on the patient while the main chiropractor is spending time bringing in new patients and collecting extra money from the assistants work. They limit treatment time and rush patients through like they are on a assembly line. Hands on massage is replaced by a machine/waterbed treatment that is not effective. The water machine prevents the chiropractors need to hire, pay for a professional masseuse. I believe one reason I was injured was because 3 different doctors in the same office were working on me and each not completely familiar with my condition and the two that owned the business were purposely placing me out of alignment to kept me returning, paying for more treatments. Even if the assistant that was hired by to owners was honest, he couldn't do the job well while working with those two crooks.

Always investigate a chiropractor (any doctor) before being treated. Check for malpractice, injury complaints... Ask 5+ other patients for references. Avoid chiropractors that are fresh out of college with little practice working on their own. Only a few new chiropractors can do a perfect treatment. A few chiropractors working in Worcester around the year 2003 were very good and they had one young kid fresh out of college that was excellent. I could tell he really studied well, practiced to perfection in college. They did the old balanced left and right method.

He would not work on the neck if it did not need treatment.
Not all students are good. Some just glide through college waiting for the license.
A few new colleges are teaching students to do mainly one sided alignments that are misaligning, injuring patients. They need to stay with the old method that works!
When a good chiropractor applies the balanced, left and right side of the neck/body alignment often the patient only needs 1-2 treatments. The patient does not need to return for more treatment. Dishonest chiropractors may be doing the one sided, partial, unbalanced alignments in order to keep the patient out of alignment and returning for more treatment, paying more money. Chiropractic, a good Natural health treatment, profession is becoming corrupt like the Medical Doctors and Pharmaceutical companies. New chiropractors should seek out the old honest chiropractors and learn the old, effective balanced method before the Colleges hide it forever. The colleges will not make money if people do not want to become chiropractors because they will not make $. The doctors do not want to learn, practice the old, honest, balanced method because it often heals the patient in 1-2 treatments and the patient does not need to purchase repeat treatments.

If you are injured by a chiropractor, call Medical and check if the doctor has injured other people. Trying to check this through the chiropractic license board is difficult. Making a complaint with the state AMA and chiropractic license board is usually a lost battle. They will side with/protect the chiropractor. Still, file that complaint; if enough injured people complain they will not be able to ignore the patients and by filing a complaint you will be protecting others from being injured. Even if the chiropractor keeps his license he/she will be reluctant to apply dishonest, unbalanced methods for fear of being caught.

Choose a good chiropractor; A good one will also be licensed in Professional Massage, Physical Therapy and use these methods on the patient before chiropractic treatment. If they are not licensed in these, they will hire a Masseuse, Physical Therapist to work on the patient, relax the muscles... before chiropractic treatment.
A minimum amount of chiropractic treatment will be used to get the patient well quickly and free of the need for future chiropractic treatment. Physical Therapy and Massage are taught to the patient and encouraged after treatment to maintain good joint/vertebrae alignment, strong relaxed muscles, good health. Strong relaxed muscles contract, un-contract easy, and prevent vertebrae misalignment, Strong muscles easily lift objects, preventing pull on the vertebrae when lifting. Try to avoid heavy lifting.
Avoid chiropractors that tried to convince the patient that routine chiropractic neck, back alignments are normal, necessary, healthy. This is a sales pitch. See the chiropractic consent form on the next page.
The first chiropractors that injured my neck, hearing, back, vision had me sign this form before treatment. The 2nd chiropractors that impaired my balance, causing vertigo had me sign this form after he caused the injury, on the last day when I told him I was not continuing treatment. Notice that the form warns patients that injury can occur from chiropractic. When the patient asks the chiropractor about this, the doctor will say injury only happens in one out of a million... people but this is not true. More and more people are being injured! Torn arteries, veins, nerves, cartilage, ligaments... in the neck, along the vertebrae and around C-1, C-2... occurs due to the chiropractor turning the neck. This results in blood clots, stroke and other injury. See this website link for examples: http://www.vocact.com/ These patients have very similar, the same unbalanced neck treatments and symptoms, vertigo, trouble walking that I experienced after the chiropractors injured my neck, back.

Chiropractors that make their patients sign a consent form may have caused injury to patients in the past and patients may have filed complaints against the chiropractor. This form protects the Chiropractor from being responsible if he/she injures the patient.

Informed Consent to Chiropractic Treatment

The nature of chiropractic treatment: The doctor will use his/her hands or a mechanical device in order to move your joints. You may feel a "click" or "pop", such as the noise when a knuckle is "cracked", and you may feel movement of the joint. Various ancillary procedures, such as hot or cold packs, electric muscle stimulation, therapeutic ultrasound or dry hydrotherapy may also be used.

Possible Risks: As with any health care procedure, complications are possible following a chiropractic manipulation. Complications could include fractures of bone, muscular strain, ligamentous sprain, dislocations of joints, or injury to intervertebral discs, nerves or spinal cord. Cerebrovascular injury or stroke could occur upon severe injury to arteries of the neck. A minority of patients may notice stiffness or soreness after the first few days of treatment. The ancillary procedures could produce skin irritation, burns or minor complications.

Probability of risks occurring: The risks of complications due to chiropractic treatment have been described as "rare", about as often as complications are seen from the taking of a single aspirin tablet. The risk of cerebrovascular injury or stroke, has been estimated at one in one million to one in twenty million, and can be even further reduced by screening procedures. The probability of adverse reaction due to ancillary procedures is also considered "rare".

Other treatment options which could be considered may include the following:

- *Over-the-counter analgesics.* The risks of these medications include irritation to stomach, liver and kidneys, and other side effects in a significant number of cases.
- *Medical care,* typically anti-inflammatory drugs, tranquilizers, and analgesics. Risks of these drugs include a multitude of undesirable side effects and patient dependence in a significant number of cases.
- *Hospitalization* in conjunction with medical care adds risk of exposure to virulent communicable disease in a significant number of cases.
- *Surgery* in conjunction with medical care adds the risks of adverse reaction to anesthesia, as well as an extended convalescent period in a significant number of cases.

Risks of remaining untreated: Delay of treatment allows formation of adhesions, scar tissue and other degenerative changes. These changes can further reduce skeletal mobility, and induce chronic pain cycles. It is quite probable that delay of treatment will complicate the condition and make future rehabilitation more difficult.

Unusual risks: I have had the following unusual risks of my case explained to me.

I have read the explanation above of chiropractic treatment. I have had the opportunity to have any questions answered to my satisfaction. I have fully evaluated the risks and benefits of undergoing treatment. I have freely decided to undergo the recommended treatment, and herby give my full consent to treatment.

MARY E. OLIVER JUNE 7, 07

Printed Name Signature Date

This chiropractors assistants injured my neck twice.

I provide the information in this chapter not to be cruel to the chiropractors. I place it here because I want my readers to be sure to choose a good chiropractor and know how to ask questions, and receive honest answers, be aware of treatments that are not working, that may cause injury, avoid dishonest doctors and try the Bates Method first, Physical Therapy, Professional Massage, a honest Medical Doctors advice and avoid chiropractic unless needed as a last resort when nothing else can help align the vertebrae, bones that are impairing blood, nerve flow in the body, eyes, impairing neck, eye muscle function... Remember, you will be tasking a chance on developing more problems if the chiropractor cannot do the job correct!

A good chiropractor will align the neck vertebrae correct. This results in; pressure, tension, pulling is removed from the muscles, nerves, blood, lymph vessels in the neck, head/brain, eye muscles, eyes, ears, brain stem, optic and eye muscle nerves, retina, lens. The eye returns to normal shape with correct focus of light rays on the retina.

The body, neck, eye muscles relax and function normally. Relaxed neck, body muscles improve movement of the head, face and body with the eyes – a Correct Vision Habit that improves shifting and central-fixation, relaxation. Body, neck relaxation and easy movement resonate into the eye muscles further relaxing, improving eye movement. Saccadic shifting eye movements occur (optimum perfect eye function), balance and coordination improve, circulation of blood, oxygen, nutrients, lymph, spinal fluid, energy, nerve signals to the head, eyes improves; this improves eye health and function.
Good circulation to the brain improves memory, imagination, left and right hemisphere, visual cortex and other brain functions.
Relaxed, healthy eye muscles and improved brain health, function move the eyes easy, perfectly; shifting, central-fixation, blinking, relaxation, all Correct Vision Habits, (normal eye functions) accommodation, convergence, un-accommodation, un-convergence (divergence) return to normal. The clarity of vision returns to 20/20 and clearer. Eye health improves.
Headaches; migraine, tension, sinus, cluster... are prevented. Ear functions - hearing, balance, coordination and the ears integration with the visual system, eyes is improved. The ears Eustachian tube and sinus drainage systems improve, preventing excess wax, congestion buildup.
Good Posture standing, walking, sitting, sleeping keeps muscles relaxed, spine, bones aligned.
Learn Abdominal, Deep diaphragm breathing to relax the muscles, move oxygen, blood, lymph throughout the body, brain, eyes.

All eyeglasses, especially Bifocals cause extreme neck, shoulder, head, eye, ear muscle tension, dizziness, astigmatism, unclear vision, often some misalignment and/or stiffness of the neck vertebrae (due to incorrect posture and less head, body movement the eyeglasses cause) and other body/health impairment.

For natural treatments to align the spine see the Correct Posture and Physical Therapy Chapters. Relaxation of the mind, body, neck, eyes, physical therapy, massage, exercise, movement, Correct Vision Habits, Natural Vision Improvement improves neck and back vertebrae alignment and clarity of vision.

The pictures on page 298-299, 319 show the vertebrae along the spine and neck.
Nerves, blood and lymph vessels travel through and/or near the vertebrae to body parts; organs, glands.., heart, lungs, digestive system, brain, ears, eyes...
Vertebrae misalignment can place pressure, tension, pulling on blood, lymph vessels, nerves, the brain stem and impair blood, oxygen, nutrient, lymph, nerve, energy flow to various areas of the body, head, brain, eyes and impair health, function of organs, glands, eyes, parts of the body.
Good vertebrae alignment keeps the blood, lymph vessels, nerves functioning normally for healthy body, brain, ears, eyes, eye muscles, optic, eye muscle nerves, and clear vision.
Pictures show the path of light rays, light energy into, through the eyes, retina, optic nerve, brain, body. (See blue dashed line). The eyes, brain, body need Full Spectrum Sunlight daily and a healthy diet to function correct, remain healthy and maintain clear vision.

Incorrect posture; frequently placing the head and upper body down, pulled, pushed forward or up too high, angled, twisted head/neck when typing, writing... can cause muscle tension, misaligned vertebrae and impair blood, nerve, lymph circulation to the arms, hands, head, eyes.
See correct and incorrect postures, chiropractic treatment alternatives in this chapter and Physical Therapy.

Muscle tension (with or without vertebrae misalignment) in the neck, back, upper back, chest, shoulders, collarbones can impair nerve, blood, lymph vessel function in the neck/head, near and in vertebrae C1, C2, C3, C4, C5, C6, C7, T1, 2, 3, 4, 5, ... resulting in eye muscle tension/dysfunction, tension, pulling upon, abnormal position/function of the brain stem, optic and eye muscle nerves, nerves that travel to the ears, nose, sinus.., impaired blood, nutrient, nerve, energy, lymph flow/signals to/in the eyes, eye muscles, retina, lens, iris... resulting in unclear vision, dizziness and impaired eye health. C1 ,2, 3, 4, 5, 6 misalignment is a main cause of ringing ears, visual disturbances but other vertebrae misalignment and muscle tension alone can cause it. Like a whiplash effect.
There are also nerves in the neck muscles. Tension on these nerves also resonates to other nerves in the neck, up into the head eyes. See pictures of various neck muscles in the Physical Therapy chapter. See pictures below. Incorrect posture at the computer 10+ hours a day can cause neck muscle tension, pulling on the vertebrae, nerves, brainstem... I know a graphic designer that developed

vertigo from extreme neck, arm, shoulder muscle tension, spasm. He had to quit computer work for a while to allow the muscles, nerves to return to normal health. Heavy lifting with tight, injured muscles after a lot of computer work can re-sprain the muscles. Massage, Physical therapy can correct these conditions.
Use a computer mouse for left and right hands. Switch back and forth. Use a wireless mouse so you can walk around, alter placement of the hands… Use speech recognition software to replace typing. Like captain Kirk on 'Star Trek' talking to the computer.

This chapter is long, too long, but it is necessary for people to know the truth about Chiropractic, Physical Therapy and their effect on the body, eyes, vision. Most eye doctors will not admit that the condition of the neck, entire spine, body health affects the eyes health, function and clarity of vision. Chiropractic treatment can cure or cripple the body.
Chiropractic can correct some types of blindness but it can also cause blindness, other eye, hearing, balance, health problems when done incorrect and when it is not needed.
Chiropractors continue to tell the public that chiropractic treatment is healthy, should be done once or more a month for life. This is a dangerous. If the body is healthy, leave it alone! Chiropractic is needed only if an injury has occurred placing the vertebra out of alignment resulting in a health problem. Drugs, surgery often results in more health impairment but sometimes the Medical Doctor is best. Make your decision carefully.
Use the Bates Method for clear vision. Physical Therapy if necessary. Even Physical Therapy, Massage can throw a vertebrae out of alignment resulting in injury, vision impairment if done incorrect.
Many people that have never been to a chiropractor live over 100 years (Old timers in Brookfield Massachusetts, Japan, various locations in the U.S. and other countries, See Bragg Books Apple Cider Vinegar, Diet, Old Farmers in the Nutrition chapter).

Light energy signals travel through the eyes, brain body, along the spine to all areas, parts of the body; heart, lungs, liver, kidneys, digestive system…
The eyes, brain, body need full spectrum sunlight daily (not passing through eyeglasses, sunglasses, windows) to keep all body organs, glands, systems, parts healthy and to properly absorb, use, balance vitamins, minerals, proteins, nutrients in the body for good health.
The eyes, brain, body also need a good diet, all vitamins, minerals, proteins, nutrients to properly absorb and use sunlight and to prevent overexposure of the eyes, skin to sunlight.

Misaligned vertebrae along the spine, body, back, neck causes tension in the muscles near and away from the vertebrae; in the lower, middle, upper back, neck, shoulders, chest. This tension can travel to muscles in other areas of the body. Extreme muscle tension in the back, chest, shoulders, neck, can cause and increase vertebrae misalignment.

Vertebrae misalignment and muscle tension places pressure, tension, pulling on the nerves, blood, lymph vessels in the neck, shoulders, chest, arms, hands, back, other areas of the body, head/face, ears, eyes. Incorrect posture occurs. Tension pulling occurs on the spinal cord, brain stem, brain, optic nerve, eye muscle nerves.
Blood, oxygen, nutrient, lymph, nerve, energy flow, circulation to/in the body, back, chest, arms, hands, neck, head, brain, ears, eyes, eye muscles, retina, lens… is impaired resulting in unclear vision, cataracts, macula degeneration, glaucoma and other eye and boy health problems.
Muscle tension in the body, back, chest, shoulders, neck, head/face also resonates directly into the eye muscles, impairing their movement, placing pressure, tension on/in the eye, disrupting the eye, corneas shape and focus of light rays in the eye.
Tense, stiff muscles also impair movement of the body, neck, head, eyes. This limited, impaired movement travels, resonates into the eyes, eye muscles. When the body, neck, head, do not move, or move with difficulty, eye movement is limited, tense. Eye shifting is reduced and occurs with effort. Staring, unclear vision occurs.
When the eye muscles do not move, eye muscle tension is increased.
Eye movement: shifting, central-fixation, convergence, divergence, accommodation, un-accommodation, iris/pupil, ciliary muscle/lens function is further impaired resulting more vision impairment.

Relaxation and movement of the muscles in the entire body, and muscles near, around the vertebrae along the spine, back, chest, neck, shoulders, head, face enables the vertebrae to align, move freely.

Aligned vertebrae improves muscle relaxation and movement.

Relaxed muscles, aligned vertebrae = Removal of pressure, tension, pulling on the spine, spinal cord, brain stem, brain, optic and eye muscle nerves, other nerves, blood, lymph vessels enabling blood, oxygen, nutrient, lymph, nerve and energy flow, circulation in the body, arms, hands, legs, neck, head/brain, ears, eyes, eye muscles, retina, lens, cornea, iris, aqueous, vitreous… to return to normal, eye, cornea shape and focus of light rays is normal resulting in healthy eyes, clear vision.
Relaxation, movement travel into the brain, eye muscles, eyes. The eyes move correct, vision is further improved.

Exercise, movement, heat, massage, Alexander Technique, Feldenkrais, Tai Chi, Dance, Yoga, Good Posture, Physical Therapy helps relax, move and align the muscles, joints.
Massage, activation of pressure points on/near the muscles in the back, shoulders, neck, head, face, TRAPEZUIS MUSCLE and eye acupressure points relax the body and eye muscles.
See Acupressure chapter.

Exercise, movement brings blood, oxygen, nutrient, lymph, energy flow into the muscles, joints and removes toxins, waste from the muscles. This enables the muscle to relax.
Toxins build up in the muscles when they do not move, causing increased tension, pain, stiffness.

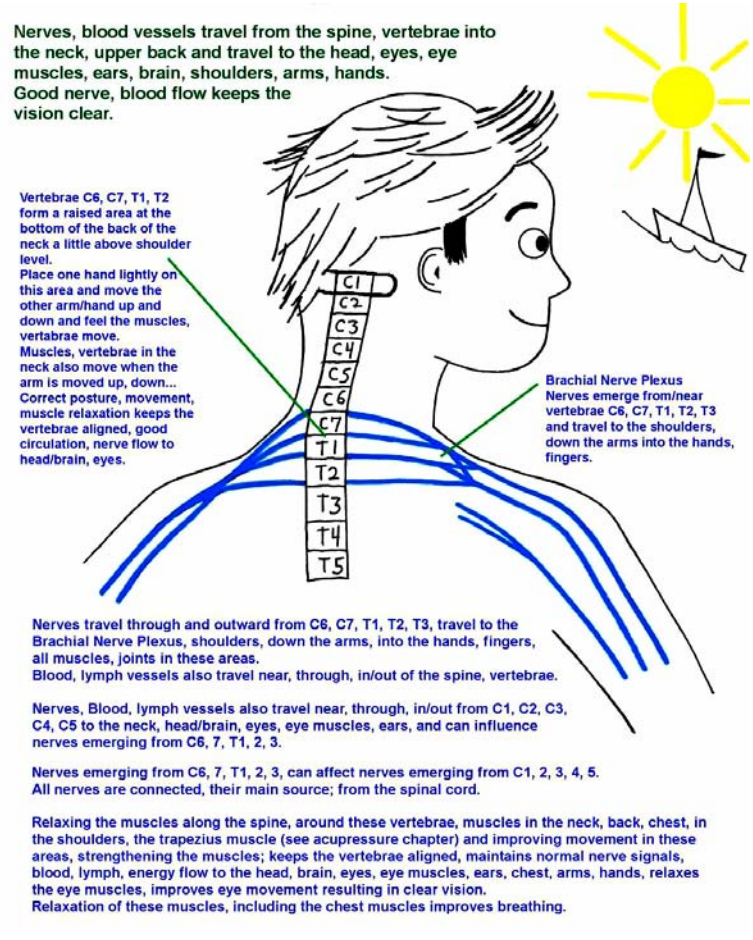
When the muscles in the back, upper body, shoulders, neck, eyes relax: the chest muscles relax, the diaphragm muscle relaxes and this improves breathing. Deep, relaxed, Abdominal, Diaphragm breathing improves circulation, relaxes the muscles in the body, eyes, improves the clarity of vision and other body functions.

The Bates Method of Natural Vision Improvement is often combined with the Alexander Technique for returning the body to normal movement, balance, coordination. This includes eye movement. Many areas of the body, especially the back, spine, shoulders, chest, neck, head are related to areas/functions of the eyes/visual system. Improving functions of the body improves eye health, function and clarity of vision.
Healthy diet; pure water, avoid caffeine, dehydration, eat potassium; bananas, avocados, potatoes, tomatoes, healthy oils; organic purified mercury, pollution free fish oil. Organic raw apple cider vinegar, honey drink clears out the arteries, capillaries to the muscles, joints improving their health and movement. See the 98 & 103 year old men, ladies in Bragg books, nutrition chapter. They have perfect mobile joints, relaxed muscles. (tomatoes cause joint stiffness for persons that have allergy)

26 - PHYSICAL THERAPY
For Relaxed Shoulders, Neck, Eye Muscles and Clear Eyesight

This chapter provides pictures, directions for exercises, treatments that strengthen, relax, bring movement to the muscles in the neck, shoulders, head/face, arms, chest, back, body and brings movement and natural alignment to the vertebrae in the neck, back.

This relaxation, movement travels/resonates into the head, eye muscles, eyes, and improves the clarity of vision.
Eye movement; shifting, convergence and accommodation for looking at close distances, divergence and un-accommodation for far distances are improved to normal.
Nerve, blood, lymph, energy flow/circulation to the head, brain, eyes, eye muscles, ears is improved resulting in healthy eyes and clear vision.



The picture on the right shows how the nerves travel from the neck, upper back vertebrae to the neck, shoulders, upper back, arms, hands. Nerves travel out from the spinal cord, through the vertebrae along the entire spine; back and neck. Nerves traveling from vertebrae C6-T3 and in the neck above C6 can affect and be affected by tension in the muscles of the neck, shoulders, arms. This tension, nerve dysfunction travels to other nerves, muscles in the neck, the ears, eyes, brain resulting in unclear vision, impaired hearing, balance, headaches... Muscle tension, vertebrae mis-alignment in any area of the neck can affect the health, function of the eyes, ears, other areas of the head, brain and clarity of vision.

When the muscles in the body, back, shoulders, chest, neck are relaxed, good posture, vertebrae are aligned, body, neck, head movement is normal: relaxation and easy movement travel to the eye muscles, eyes. Shifting, central-fixation is normal and vision is clear. Breathing improves. Circulation of blood, oxygen, nutrients, lymph, energy to the head/brain, eyes is normal and this keeps the eyes healthy, vision clear. Headaches are prevented.

The exercises, treatments in this chapter were taught to the author of this book by a licensed physical therapist/masseuse to cure: tremors, shaking, numbness, weakness, feeling of pins/needles in the arms, hands, fingers, dizziness, impaired movement/balance.
A few of the exercises are 'Trigger Release Treatment' specifically for activating full movement and relaxation of the neck.
The treatments cost a few hundred dollars. The treatment worked.
The honest chiropractor and my ear doctor (listed in chapter 25) stated I had a very stiff neck with limited neck movement, neck, shoulder, upper back muscles tense.
The neck muscles were pulling the vertebrae slightly out of alignment and the tense muscles and vertebrae were placing pressure on the nerves in the neck, shoulders, arms, hands resulting in numbness, shaky hands, dizziness, impaired body, neck movement.
(This was due to a past neck injury, vertebrae C4 out of alignment aggravated by incorrect writing,

typing posture (especially when using a old manual typewriter writing this book for a few years.), caffeine, aspartame in diet soda, low potassium, calcium deposits on the neck vertebrae from taking too many calcium supplements, dehydration and heavy lifting at my job.
They sent me to a Physical Therapist.
The exercises the therapist taught me and the muscle massage they provided strengthened, relaxed the muscles in my neck, shoulders, chest, back, arms, hands, legs. Blood, oxygen, lymph, nerve signals and energy flow to these areas returned to normal.
The movement exercises and relaxed muscles enabled the neck and back vertebrae to return to correct alignment. Vertebrae and muscle pressure on the nerves, blood vessels was removed and the numbness, tremors in the arms, hands, legs was removed.
This was done by physical therapy and massage only.
Chiropractic adjustment was not needed.
I was also prescribed two bananas or potatoes per day for potassium, a natural organic food source vitamin/mineral food supplement, Natural 'Gentle Iron by Natures Bounty', increased water consumption to correct dehydration condition.
I was advised to avoid aspartame in diet sodas, candy, cake, caffeine, tea. Aspartame causes muscle, joint stiffness, and dysfunction similar to M.S. symptoms and arthritis.

Tension, reduced movement of the body, back, especially the upper body, shoulders, chest, neck, head is a main cause of eye muscle tension, abnormal eye shape, reduced, rigid eye movement, headaches, impaired balance, coordination, unclear vision.
Relaxation, movement, good posture of the body, back, shoulders, neck, head... brings eye muscle relaxation, normal eye movement and clear vision.
When the neck, shoulder... muscles relax (along with good posture, movement) muscle relaxation resonates into the body, head/face, eye muscles and eyes.
Relaxed eye muscles keep the eye in normal shape with correct focus of light rays in the eye, improves eye movement: shifting, saccadic shifting, central-fixation, convergence, divergence, accommodation, un-accommodation resulting in clear vision.
Relaxed neck, shoulder... muscles improves balance, coordination, movement of the body, neck, head and this also improves eye movement. Eye movement increases eye muscle/eye relaxation and clear vision. Relaxed muscles keep vertebrae in the back, neck aligned.
When the body, back, neck, head posture is correct, the muscles relaxed, movement normal, vertebrae in the back, neck aligned correct; pressure, tension, pulling is removed from the spinal cord, brain stem, optic and eye muscle nerves resulting in healthy eyes, normal eye function and clear vision.
Read 'Better Eyesight Magazine' Oct. & Nov. 1927 - Relief of muscle tension in the neck, hand, arm, chest cures unclear vision, glaucoma and other eye problems.

The following exercises relax, strengthen and bring movement to the muscles in the entire body, neck, resulting in eye, eye muscle relaxation, correct function, clear vision.

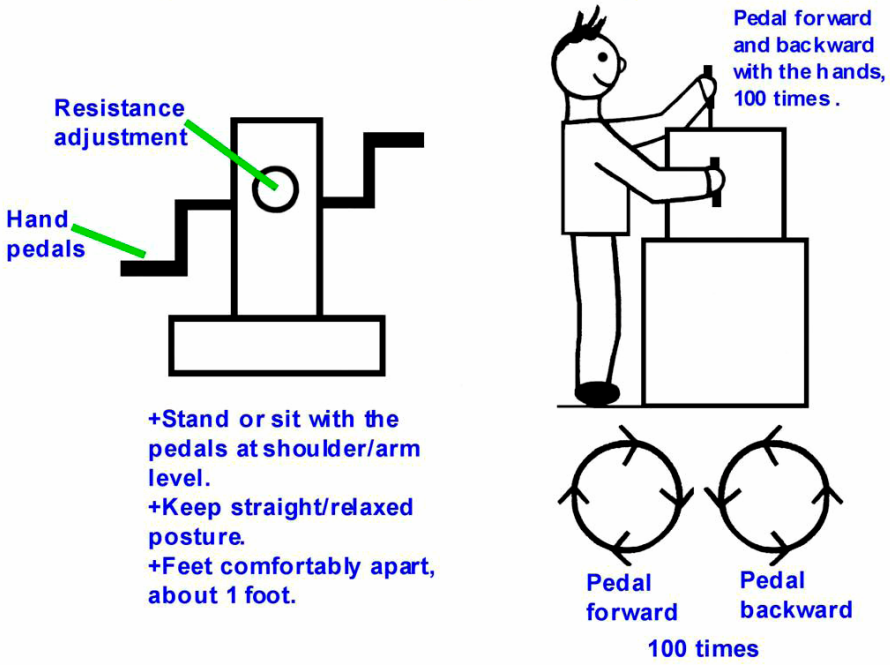
(If the reader has vertebrae, cartilage/disk, ligament, muscle injury, any body injury, health impairment, detached eye retina, vitreous, any eye, retina condition, stroke, check with a medical doctor first, before practicing the exercises in this chapter.)

DIRECTIONS

(Use correct, straight, relaxed posture when doing the exercises.)

BICYCLE EXERCISE

Bicycle exercise for strengthening, relaxing, improving movement and circulation to the muscles, joints in the hands, arms, neck, chest, upper back, shoulders, alignment of upper back and neck vertebrae. All these conditions improve balance, coordination, eye muscle relaxation, eye movement, circulation to the head, eyes and clarity of vision.



The bicycle machine is sold in many mail order catalogs. The bike exercise improves head, neck, upper and lower body posture. The exercise strengthens and brings movement, alignment, to the muscles, joints in the neck, shoulders, chest, upper body, back, arms and hands.

Place the bicycle on a table with the pedals at shoulder height, even with the arms/hands.
Sit or stand facing the machine/pedals.
The head/neck, back, body are straight, correct posture and relaxed.
Shoulders down, relaxed.
Feet placed comfortably, about a foot apart.

Place the hands on the pedals and pedal forward 50 – 100 times.
Then pedal backward 50 – 100 times.
The resistance of the pedals can be increased as the muscles become stronger.

Strong muscles/mobility of the muscles, joints keeps the muscles relaxed and the back/neck vertebrae moving easy, aligned. Strong muscles do not strain when lifting and the muscles lift the object, preventing abnormal pulling, strain on the vertebrae; the vertebrae are not pulled out of alignment. Exercise, movement and relaxation of muscles/joints improve circulation of blood, oxygen, nutrients, lymph, energy to the muscles, joints, removal of waste products. This improves relaxation and movement. Relaxation, movement, good circulation travels to the head/brain, eye muscles, eyes resulting in healthy eyes and clear vision. Nerves also emerge from all vertebrae along the spine including the lower back, lumbar, sacrum areas and near the tailbone. Aligning the vertebrae, improving their movement brings good body balance, movement, relaxation. This movement,

relaxation travels up the spine to the entire body, shoulders, neck, head and eyes.

This exercise cures shaky hands, weakness in hands, arms due to weak, tense, muscles from typing, writing with incorrect posture, limited movement.
The bicycle machine can be used to strengthen, relax the legs, back and help align the back vertebrae, hips by pedaling with the feet forward and backward.

The Long Swing, Rock, Figure Eight, Cross Crawl in improve body, eye movement, balance, coordination and other functions. Chapter 16.

The following exercises with the large elastic Bundie Cord provide many of the benefits listed for the bike exercise with additional movement, strengthening, aligning of other muscles, joints and good posture. Correct posture keeps the neck, back relaxed, vertebrae aligned and moving easy.

The red cord is hooked on a door, or onto one hand, foot and pulled with the other hand.
Use good and relaxed posture.
Pull the cord in the direction shown by the green arrows. Pull 5-10 times.
Then pull 5 -10 times with the opposite hand, opposite side of the body.
Increase to 20+ times as the muscles become stronger. See picture next page.

Muscle, joint tension, immobility, misalignment, incorrect posture in the upper body, back, chest, shoulders, neck, head is a main cause of unclear vision, cataracts and other eye problems. The health, function of the middle and lower back, legs can also affect the eyes but not as often as the upper body.
A physical therapist can teach use of the cord and other exercises to align, relax, bring movement to the lower and upper body, legs, back, neck.

For people that cannot stand - there are chairs with the long elastic Bundie Cords attached for exercising the arms, legs while sitting.

Rowing a boat forward and backward is good for strengthening, movement of the arms, neck, upper body. Riding a old 1070's bike with high handle bars for good posture strengthens, moves the legs, lower body.

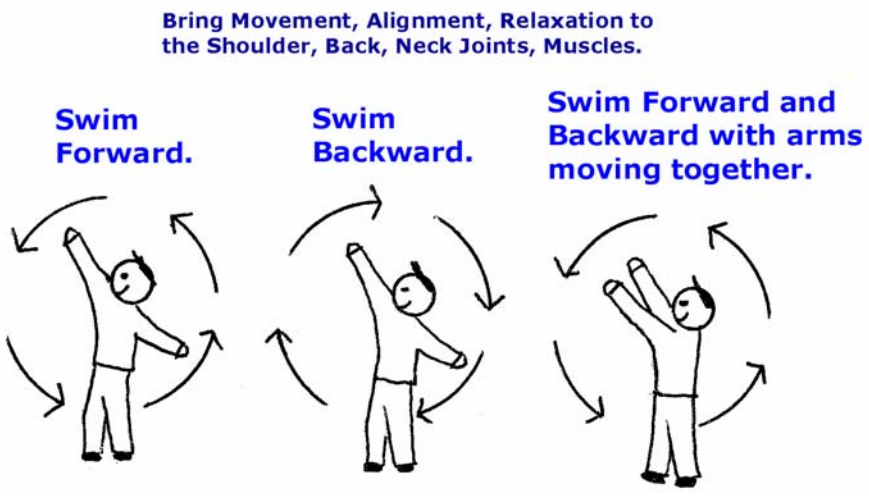
The picture below shows a exercise to loosen up and move, align shoulder, neck, joints;

Swimming is the best exercise, but if you cannot get to the water, practice swinging in the air;
Swim forward with the arms, then swim backward. Use the arms like you are swimming in the water.
Then do the exercise with both arms moving together at the same level with each other, forward and backward.

When swimming in the air, moving the arms around forward and backward;

+Walk forward and backward when swimming forward. Then;
+Walk forward and backward when swimming backward.

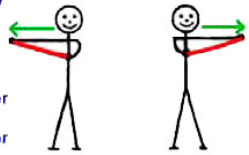
This exercise moves, aligns the spine, neck, gets the body muscles moving and activates, integrates the left and right brain hemispheres.



Physical Therapy Exercises with Elastic Cord

Stretch a long elastic cord to strengthen arms, neck, back, legs, abdominal muscles. Use a strong cord that will not break and fly into the face, eyes. No metal on the ends. Cover the ends with soft foam material. See example of red bungee cord. Follow directions below..

1 - Pull the cord to the right side of the body with the right hand/ arm..
The arm is straight.
Left hand/arm is straight ahead, center of the body. Both hands are at shoulder level. Feet about 1 ft. apart.
Pull in/ out 10+ times.
Then do the opposite side with opposite hands/arms.
See diagrams.



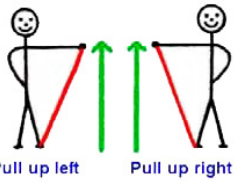
Keep straight, relaxed posture when practicing these exercises. Knees slightly bent.
Let the lower back relax, drop down. Do not twist the body, spine. Avoid curving the lower back inward.

Practice with both left and right sides of the body;

Example: #1 Pull the cord to the right side of the body with the right hand/arm, with left hand/arm extended forward in front/center of the body.
Then do the opposite;
Pull the cord to the left side of the body with the left arm/hand with right arm/hand forward, center of body.

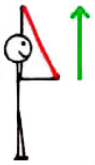
Other exercises work with the hand/arm and foot. Practice one side, then switch and do the opposite side.

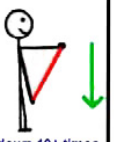
This equally strengthens, aligns, brings movement to the left and right sides of the body and activates, integrates the left and right brain hemispheres.



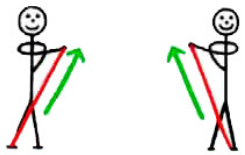
2 - Hook one end of the cord under left foot. Secure it. (Don't let it fly off into the face, eyes.)
Pull the other end of the cord up with the left hand/arm on the left side of the body.
Pull to shoulder height then release. Repeat 10+ times.
Then practice with opposite side: right: foot, hand/arm, side of body.
The hand not in use can be placed on the hip or down to the side.

3a - Pull up over the head with right hand/arm while left hand/arm is straight out in front of the body.
10+ times.
Then do with opposite hands/arms.





3b - Pull down 10+ times. Practice with left and right hands/arms. Hand pulls down all the way to side and little backwards.

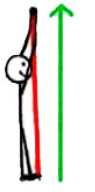


4 - Cord under right foot.
Right hand/arm pulls cord up and across the body, out to left side of body, at shoulder level.
A little above shoulder level is ok.
Then do opposite sides. See diagrams.

5 - Left and right feet together. 1 inch apart ok for comfort.
Cord under left foot and pull cord up over head with left hand/arm, center of body.
Up, down 10+ times.
Then; cord under right foot, pull up over head, center body with right hand/arm. 10+ times.
Then, cord under both feet and pull up over head with left and right hands/arms at the same time, center of the body.



One hand at a time.



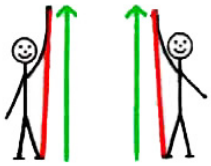
Left and right hands together

6 - Same as # 5 except: bend arm/hand up and in toward chest.
Do left foot with left hand/arm.
Then right foot, right hand/arm.
Then both feet, both hands/ arms together. 10+ times each.

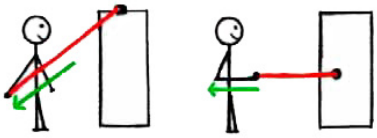


7 - Start with arms/hands straight out in front of the center of the body, shoulder level.
Then stretch the cord by extending the left and right hands/arms out to the left and right sides, then release.
10+ times.

8 - Same as # 2 except; Cord is pulled above head.
10+ times.
Do left and right sides.

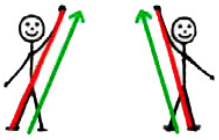


9 - One end cord attached to top of door. Pull down to and past left side with left hand/arm. 10 times.
Then do right hand/arm, right side.

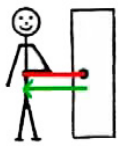


10 - Hook cord to door knob, even with hips.
Pull cord in toward center body with left and right hands together. Arm straight/horizontal to floor. Back, shoulders, neck straight.
10+ times.

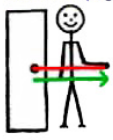
11 - Cord under right foot. Left hand/arm pulls cord across body to left side body, up over head.
10+ times.
Then do opposite side.
See diagrams.



13a



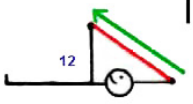
13b - See directions bottom of page.





14 - Same as # 9 except use both left and right hands, arms at same time and pull down to left and right sides.

12



12 - Lay on the back. Left hand/arm straight up, center body.
right hand/arm straight above head on floor.
Ends of cord secured in both hands.
Pull the cord up: from above the head/floor to above the center of the body with left hand/arm. 10+ times.
Keep the back, spine straight.
Then do with right hand/arm up, left hand/arm above head on floor.

Then do the opposite: pull the cord from above the body to: back/down over the head to the floor.
Then pull with the other hand/arm.

13a - Left side body to door knob, even with hips.
Pull cord in to waist with left hand/arm. (Other hand is on waist or down at side.)
Then do right side: right side body to door knob, pull with right hand/arm.
10+ times each side.

13b - Right side body to door knob. Pull cord with left hand/arm across body, out to left side body.
Then do opposite;
Left side body to doorknob, right hand/arm pulls cord across body to right side..
10+ times each side.

Exercises can be done 3-5 times each, up to 10+ repetitions.
Avoid over-working the muscles. Build up to an effective workout. The length of the cord can be shortened to increase the resistance as the muscles become stronger. Diagrams show left and right sides of a person facing the reader.

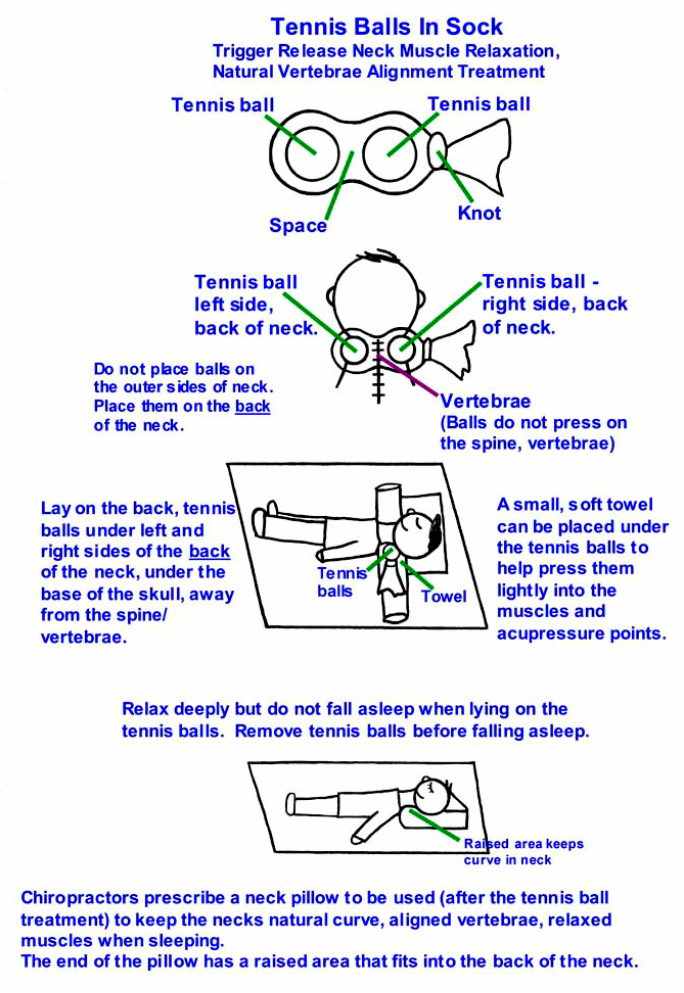
Tennis Balls in a Sock

This is a Physical Therapy 'Trigger Release' treatment to stretch and relax the neck muscles (back of the neck), activate acupressure points GB20 and B10, and help align the neck vertebrae.

Relaxation of the neck muscles enables the neck vertebrae to move, align easy, natural. The evenly placed, equal pressure of the tennis balls on the muscles outward from the spine, on the left and right back sides of the neck bring the vertebrae into alignment.

Relaxed muscles, aligned vertebrae result in improved circulation to/in the neck, neck muscles and vertebrae, head, brain, eye muscles, eyes, retina, lens.., improved neck, body, eye muscle, eye movement, shifting and clear vision.
Balance and coordination improve, headaches are prevented.

Relaxed neck muscles resonate relaxation into other muscles: entire body, shoulders, back, head, eye muscles resulting in clear vision.
Activation of pressure points GB20 and B10 on the back of the neck increases relaxation and energy flow in the neck, body, head, eyes–more vision improvement.
Ear function also improves.



(Do not use the tennis ball treatment if the neck vertebrae, cartilage are injured, out of alignment, nerves are pinched, have sprained, torn neck muscles, ligaments including micro tears... Check with a Doctor and Physical Therapist first. This treatment is mainly for people with extreme neck tension, stiffness, poor posture usually due to wearing eyeglasses. If the neck is relaxed, moves ok, leave it alone.)

Professional muscle massage on the upper body, shoulders and neck is also very effective. Choose a masseuse carefully. The author of this book has had very good results from this type of massage but was injured by a different masseuse that applied inward pressure to the lower back vertebrae causing difficulty walking, loss of feeling in the legs. I had to go to the 'honest Chiropractor' to correct this condition.

Kneading, massaging the muscles in the shoulders, back of the neck with one hand at a time: left hand, then right hand or both hands relaxes the muscles, keep good vertebrae alignment. Be sure to avoid pressure on the vertebrae and do not massage muscles in the front of the neck. See the trapezius muscle picture and safety directions in the Physical Therapy and Acupressure Chapters.

A professional masseuse can massage along the neck and on certain vertebrae the correct way resulting in vertebrae alignment and muscle relaxation. Collar bone muscle massage is done a certain way to avoid the organs, arteries... in the front of the neck.
There are specific ways to place the hands gently on the back of the neck while moving the head in certain directions, combined with other body movements that result in release of pressure on nerves in the neck, vertebrae alignment. This also results in neck muscle relaxation. See a physical therapist and other body movement licensed professionals for exact directions.
Movement exercises: Long Swing, Rock, Figure Eight brings relaxation and movement to the neck.

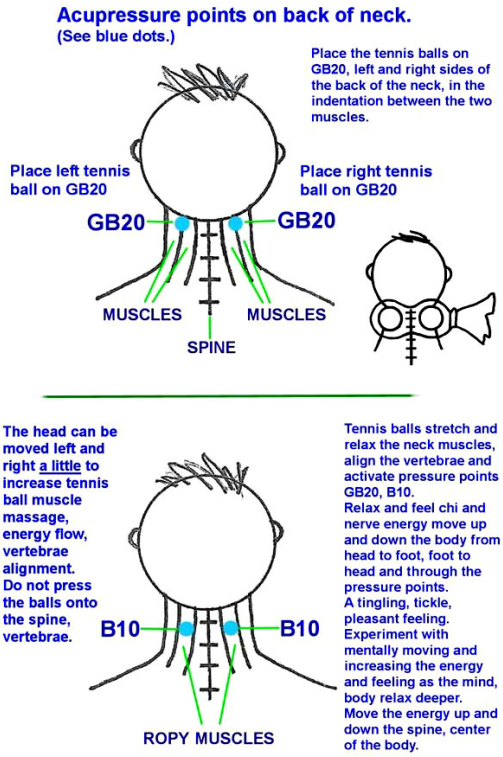
Directions

If tennis balls are too hard, use a softer rubber ball.

Place the tennis balls into a sock.
Space the balls about 2½ to 3 inches apart depending the size of the neck. Tie a knot in the sock.

Place the tennis balls on the back of the neck, top of the neck, under the base of the skull, on the muscles on the left and right sides of the back of the neck.
Each ball is placed on the muscles, centered on the indentation between the two muscles, on pressure point GB20. See pictures on right >.
Balls even, level so an equal, even amount of pressure is applied to the left and right sides.

Do not place/press the tennis balls onto the spine/vertebrae.
The space in the sock between the tennis balls goes over the spine. Keep the space loose, no pressure on the spine.
Do not place the tennis balls on the outside left and right side of the neck. The outer end of some vertebrae (C-1…) extend to this area. Do not press on them.



Place the tennis balls on the back of the neck.
(Placing the tennis balls on the spine/vertebrae or on the outer side of the neck will place pressure on the vertebrae, misalign, injure the vertebrae. Only a professional masseuse, chiropractor can press on the vertebrae correct. C1, 2 are on the top of the neck, area directly below the skull.
(See chapter 25-26. C-1, C-2, C-3 and all neck vertebrae contain nerves, blood vessels that travel to the brain, ears, eyes. Injury to a vertebrae can cause stroke, loss of hearing, ear ringing, balance and vision impairment, blindness.)

Lie on the back with the tennis balls in position as described – under the neck, on the muscles and GB20, left and right sides, back of the neck, under the base of the skull.
Do not use the tennis balls when sitting up. Use them when lying down on the back only.

A small soft towel can be placed under the neck and tennis balls to help press the tennis balls into the muscles and pressure points. The towel also improves natural neck curvature, posture.

Relax on the tennis balls.
Breathe abdominally, with the diaphragm. Yawn. Yawning stretches, relaxes the neck, shoulder, face, jaw muscles, increases relaxation, circulation. Hum to massage the bones in the neck, head, eye socket. As the neck relaxes notice that tension in the body, legs release.

The head can be moved a little bit, slightly left and right to help the tennis balls massage the muscles, activate the pressure points and relax the neck. If you try to stay completely still it can prevent muscle relaxation. My Physical Therapist allowed me to move my head side to side a little when lying on the tennis balls and it did pop/align my vertebrae, relaxed the neck muscles, improved my balance and prevented the need for visits to the chiropractor.
Persons that have slight vertebrae misalignment or stiffness may hear a small click, pop as the vertebrae release tension, move into alignment, gas is released from the joint as pressure is removed and it moves to normal position. (Similar as when chiropractor adjusts the neck.)
Avoid turning the head too much. Moving the head too far left or right will cause the tennis balls to press on the spine/vertebrae or on the outer edges of the vertebrae that extend outwards from the spine resulting in vertebrae misalignment, injury.
Do not fall asleep on the tennis balls. The head may turn in the sleep causing the tennis balls to press on the vertebrae.

The goal is to relax and massage the muscles enabling the vertebrae to move into alignment naturally, on their own. Also; after using the tennis balls, when up and moving around, the relaxed muscles will continue to induce natural neck vertebrae movement, alignment.

Activating acupressure points GB20 and B10 generates chi, nerve energy flow in the points and up and down the body. Feel it move up and down; from the pressure points in the neck to the head and down the body, the legs, arms, to the feet and back up to the neck, head, then back down again...
This is a comfortable feeling. A tickle, tingle, nice 'chill like' feeing.
Practice strengthening, moving the energy up and down the left and right sides of the body.
Send it up and down the center of the body, head, spine, feet.

Muscles in the legs, left and right sides of the body often release their tension as the muscles in the left and right sides and back of the neck relax.

After 10-20 minutes; remove the tennis balls and relax, fall asleep or getup and move around.
A small neck pillow or soft, small rolled up towel, shirt... can be used when sleeping (without the tennis balls). See pictures. The pictures on page 331 show more use of the Tennis Balls on the back...

The neck pillow, towel...keeps the natural curve, muscle relaxation and vertebrae alignment in the neck. The back of the neck is placed on the soft raised area of the pillow.
Some pillows also support the neck when sleeping on the side but must not be too large, must not press the vertebrae sideways out of alignment.
Chiropractors and most drug stores sell neck pillows.
The neck pillow/towel must not be too large. A large neck pillow can over stretch the neck and place pressure on the vertebrae, nerves, muscles in the neck.

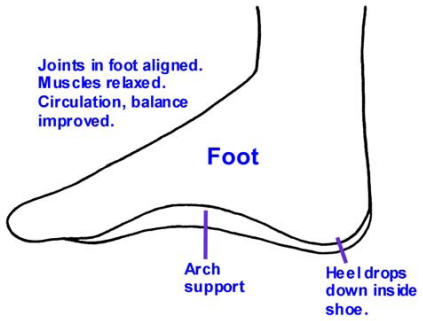
Doctors prescribe a specific way to apply cold/ice and heat pads to reduce swelling and relax, heal tense, sprained muscles. Ice first to remove swelling, sometimes ice on and off for 24 hours, maybe longer before heat. Then apply wet heat; A hot wet towel, more heat (hot water bottle) the wet towel against the skin or a hot bath.
Dry heat dehydrates the muscles and causes tension. Heat alone can relax tense muscles when there is no injury, sprain. A good heating pad is lightweight, (no heavy pressure on the shoulders). A full length pad that covers the back and sides of the neck, shoulders, upper, middle, lower back and bottom relaxes the whole body.
Epsom Salt in a warm bath is an old remedy to relax muscles. It can dry the skin. Magnesium, the ingredient in Epsom Salt can be taken as a cream on the skin/neck, shoulders, back. The magnesium travels into the muscles producing muscle relaxation in about 10 minutes. Magnesium is good for the heart. Do not take too much. Like most vitamins, minerals, a balance must be maintained. Magnesium is needed for good calcium absorption.

Clove Bud oil rubbed on the skin will relax tense muscles. Get 100% oil organic, no chemicals.

Avoid Shiatsu neck massage machines. These machines contain hard plastic parts that move automatically, pressing into and up and down the left and right sides of the neck and with some pressure on the neck vertebrae. A slight movement of the head, neck or body while using this machine can cause the hard plastic part to force a neck vertebrae out of alignment resulting in pressure on the nerves, blood vessels, blindness, hearing impairment, stroke. People have been injured.

ARCH SUPPORTS – Orthotics

Arch supports placed under the arch of the foot, into the shoes aligns the bones of the feet, keeps the muscles of the feet relaxed, strong and improves posture, balance, coordination, movement and relaxation of all body muscles.

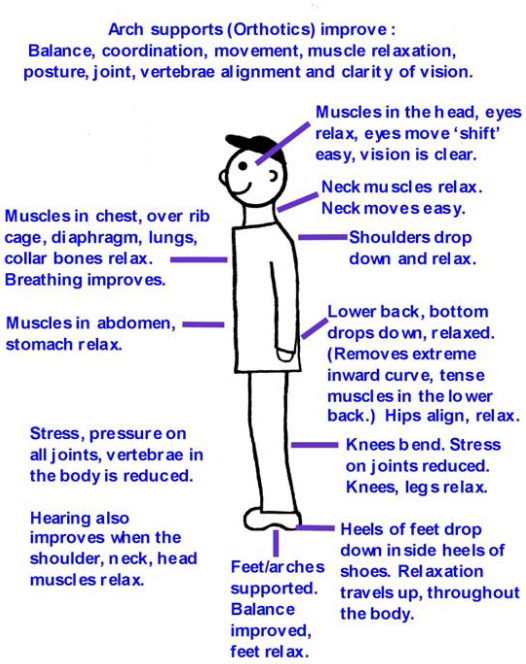


When standing on the arch supports, the heel of the foot drops down into the heel of the shoe.
The heel is lower than the arch of the foot.
This causes the knees to relax, bend. Pressure is taken off of the

knee joint, the legs relax, back leg muscles, hamstrings, the lower back, hips, bottom drop down, relaxes, abnormal, extreme inward curve and muscle tension in the lower back is corrected. Relaxation, correct posture travels up the body: the entire back; lower, middle, upper back relaxes and posture is straight, the shoulders drop down, back and relax, the neck aligns correct and relaxes, muscles in the head, face relax. This relaxation travels into the brain, eyes, eye muscles resulting in clear vision.

The arch supports activate; alignment and improved, coordinated function of the bones, joints, muscles of the feet and body. The muscles relax, circulation, balance, coordination, movement, posture, muscle relaxation in the entire body improve.

The Arch Supports improve five body functions that relate to clear vision:



1 – Relaxation of feet, arch is supported up, heels drop down = muscle relaxation travels into knees, legs, lower, middle, upper back, chest, shoulders, neck, head, face, jaw, brain, eyes, optic nerve, retina, eye muscles.

2 – Movement – Relaxation, joint alignment and easy movement, body alignment, correct posture, balance, coordination, improved body movement... all travel up, throughout the body. Tension on the spine, brain stem is relieved.

+Relaxed, easy movement travels into the body, neck, head and eyes. The eyes 'shift', perfectly-a Correct, Relaxed Vision Habit.
+Eye muscle and eye movement to produce convergence, divergence, accommodation, un-accommodation improve.
+Synchronized, coordinated movement of the head, face and body with the eyes also improves. This improves eye muscle and eye movement, shifting and central-fixation.

3 - Improved balance and coordination improves eye movement, central-fixation.

4 – Joint, vertebrae alignment, easy movement – Relaxation of all body, back, neck muscles, body movement aligns the joints, vertebrae in the body, hips, lumbar, sacrum, tailbone, back, spine, neck. This improves joint/vertebrae movement, further improves body, neck and eye movement, eye muscle relaxation, movement.
When the vertebrae in the spine, neck are aligned, move easy: this can help align the jaw, and bones of the skull. (Eye muscles are attached to skull bones.)

5 – Circulation improved – Relaxed body, neck, neck moving freely, good posture, back, neck vertebrae aligned = vertebrae and muscle pressure, tension, pulling on blood, lymph vessels, nerves, spinal cord, brain stem, brain, optic nerve is removed.
Blood, oxygen, nutrient, lymph, energy, nerve flow through the neck to the head, brain, ears, eyes, eye muscles, lens, retina.., returns to normal, health of the eyes and clarity of vision improve.
Optic nerve, eye muscle nerves, brain, visual system function together, correct.
All these improved body functions improve eye muscle and eye relaxation, movement, function, all Correct Vision Habits and clarity of vision.
Health, vision improvements are also activated by other exercises, treatments listed in this chapter.

Arch supports enable walking, standing for many hours per day without tension, fatigue.

Where to Buy Arch Supports

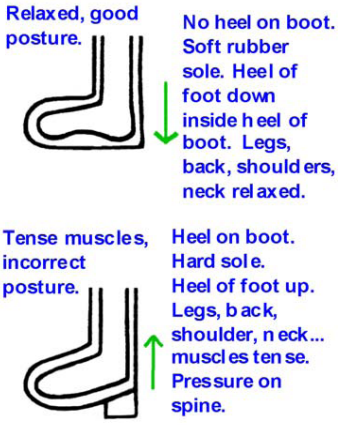
**A good arch support is made of sturdy material.
The material is flexible to prevent too much pressure on the arch, but strong enough to maintain its curve and keep the arch supported, a natural curve in the arch, under the foot.
As stated in the chapter on nutrition, plastics contain toxic chemicals.
Food, water, skin products stored in plastic and also, skin creams stored in plastic absorb the chemical and transfer it into the body. Heat increases the absorption of the chemicals.
It's possible that constant skin contact with a plastic material such as plastic used in most arch supports (especially on the feet which will create heat, sweat, open the skin pores) will cause the plastic chemical to absorb into the body. If you must buy plastic, cover it with cloth, good thick socks.
A flexible wooden arch support is a better choice.
An 'old timer' that knows how to widdel soft, flexible wood can buy the original plastic supports and copy them, make his own wooden custom made arch supports.
Avoid arch supports made of foam, jell, weak material. It will not support the arch.**

'The Good Feet Store' www.goodfeet.com makes arch supports, custom made. They cost more but are worth it. My family knows a lady, senior citizen that caught Polio when she was young before the cure was discovered. She had to use a wheel chair. She had special arch supports made and now she can walk!

**A lower cost arch support is: Walk Fit Orthotics available at: www.walkfit.com
Clark Night, author of www.cleareyesight.info uses this arch support.
I have had neck, back, hamstring, rib injuries resulting in a balance problem.
These arch supports have enabled me to regain normal balance, walk, stand long hours, and prevents the need for visits to the chiropractor. I hope they will make a non-plastic product.**

Shoes

**The sole and heel on the shoe, boot has an effect on the joints, muscles in the feet, legs, back, neck, entire body.
A shoe without a heel and a very soft rubber sole is best.
The heel of the foot must drop down a bit, below the arch, into the heel of the inside of the shoe.
See picture for arch supports and picture on right >.
If the heel drops down, and the knees bend, back drops down: this indicates the shoes are good, heels not too high.
When the knees bend, relax the back, legs... relax.
The feet, legs, back, shoulders, neck, head, entire body, eyes, eye muscles relax, move easy.
There is no pressure along the spine, joints, vertebrae.
Let the shoulders drop down, relax, shoulders over hips, ears over the shoulders. Head, neck, back/body aligned, relaxed, move freely.
Jaw relaxed, teeth slightly apart prevents teeth clenching and muscle tension in the jaw, face, head, neck.**



When I buy shoes, boots, if my heel inside the boot is up, too high, I take out the metal and other hard pieces in the sole and heel of the boot so my heels will drop down into the boot. A soft rubber sole, no or very low heel on the boot also improves this condition. If the heel of the foot is up, the lower back is being pushed upward with a inward curve and tense muscles in the lower back; the shoes heel is too high and may be too hard.

**Sneakers are a good choice if the sole is made of soft rubber.
If you can press the finger into the rubber sole and it moves, easily makes an indentation, then the sole is soft enough. Most sneakers, shoes, boots contain a hard sole.
Even some rubber has an almost hard plastic like material in it.
A hard sole and a high heel causes shock, pressure on the joints of the foot, knees, vertebrae in the back, neck, cause muscle tension in these areas, lowered balance, coordination, movement.
All these lead to more stiffness, tension, immobility.**

Tension, lowered movement travel to the eye muscles, eyes and impair circulation, eye shifting, movement… and clarity of vision.
The feet contain nerve endings, acupressure points. Foot massage, activating the pressure points improves vision, clears the sinuses.
(Sinus congestion, hay fever can affect balance, eye movement, shape, clarity of vision.)

Loose fitting cloths on the upper and lower body also improve muscle relaxation, joint, vertebrae alignment, movement. Tight pants on the waist, hips, legs can impair joint, vertebrae movement, alignment, balance.
The pictures on page 331+ describe a variety of Physical Therapy and other exercises that improve balance, coordination, clarity of vision and other body, mind, eye functions. Follow the directions next to each picture.
If any exercise causes dizziness, check with your doctor.
Sometimes dizziness is normal – When I was a child my 5 cousins and I would play spinning exercises; 'Busy Bee' - spinning around fast for 20 -30 seconds clockwise, counter-clockwise and then fall to the ground, lay down and enjoy the resulting spinning sensation when we stop.
When my cousins and I were children we used to spin fast in one direction for a couple minutes then stop quickly, lay down on the ground on our backs, eyes closed and feel the ground tip, move, spin while making believe we are pilots flying a airplane. It's strange that when people get older, dizziness scares them. Kids like it and create it.
Ice skaters perfect this to the level of being able to spin very fast, then stop suddenly and immediately move in a new direction without any dizziness.
We learnt how to do this when skating on the frog pond in the winter. Our balance was so good we were able to skate down the different levels on the frozen brook waterfall in the woods, then grab onto a tree limb at the end of the brook, hill and fly up into the air.

If dizziness persists check with your doctor for ear wax build up, sinus congestion, neck vertebrae misalignment, muscle tension, stiff joints, calcium deposits on the neck, back…
Even the natural coral calcium supplements cause calcium deposits on bones, joints, vertebrae, and in the body organs, heart, kidneys… causing health impairment. Get calcium naturally from food.
Magnesium improves calcium absorption for strong bones, teeth.
Cleaning wax from the ears can greatly improve the balance. Find a good ear, nose, throat doctor.
Many doctors do not like to clean wax because they consider it a lowly job with little pay. I have had a few doctors lie to me and say no wax is in the ears. I went to 'Miracle Ear at Sears' where they have a camera ear scope with monitor screen so you can look in your own ears. (These sell on the Internet from Japan.) You tube has a video.
I saw the wax. Found a new old ear doctor and he cleared the wax in less than 5 seconds.
When cleaning the ears, remember that it is normal to have some wax in the ears; wax is a natural defense against infection from germs, small insects and has other functions.
The Miracle Ear nurse said to use Debrox ear drops (oil and Peroxide) once a month to prevent wax buildup. (After a while it impaired my balance; found out I did not need it every month, ears were clear. Ears do need some wax to protect the ears, wax is normal. Flushing ears with cold water caused the dizziness.) Italians use olive oil to soften the wax and then remove it with a hooked pick. Chemical free Glycerin drops are used if the ear dries out too much. Homemade, strained through a paper towel warm garlic oil from fresh crushed garlic can help heal a ear infection. A small cut from the clove can also be placed in the entrance of the ear, carefully so it does not break off or go too far into the ear.
My ear doctor in San Francisco uses a small earspoon to hook and scoop out the wax.
Ophthalmologist William H. Bates states that Hayfever, Sinus congestion, pressure can place pressure on the eyes (the sinuses are under the forehead bone, on top of and around… the eyes.) disrupting the eyes shape, focus of light rays in the eye, eye movement, clarity of day and night vision, disrupt circulation of blood, fluids, lymph, nerve flow to, in, out the eyes, cause astigmatism. If infection sets in, the pressure is increased and infection can temporarily lower eye health. Sinus headache which can occur can also lower the clarity of vision.
Sinus congestion causes dizziness in a few different ways; Heavy uncomfortable feeling in the head, congestion can go into the ears, and ear estuation tubes and temporarily disrupt the ears balance system and drainage. The sinus pressure on the eyes can make eye movement, (shifting and convergence/divergence, accommodation, un-accommodation) slow, stiff, uncomfortable and this can cause dizziness.

The sinus pressure on the eyeballs can distort the eye/corneas shape and cause astigmatism which produces visual illusions such as horizontal and vertical lines on a sidewalk appearing to move in abnormal ways when walking and looking down at the sidewalk; this can cause dizziness, a unbalanced feeling in the head, eyes, body as orientation, balance become temporarily imperfect. Other object may appear to move abnormally or become wavy in appearance. The neck, body muscles become stiff from constantly trying to maintain balance and then the stiff tense muscles cause more imbalance of the body, body, neck and eye muscle tension which further disrupts the balance and eye movement. When my sinuses were cleared and my neck muscles relaxed my astigmatism was removed immediately and balance returned to perfect.
Tooth decay, infection affects the vision. Blood flows from the tooth bringing infection into the head, ears, eyes. Mercury, other chemicals, poisons, plastics in tooth fillings, false teeth, partials cause the toxins to travel to the head, brain, eyes and travel into the body through the mouth, swallowing.

A natural treatment for sinus congestion, pollen in the nose/sinuses is;

Fill a teapot (Neti-Pot) with warm pure filtered water. Steam distilled is best. Add in a little organic sea-salt. Blow the nose gently to clean it out first. Then;
+Tip the head to the right and back a little and pinch the right nostril closed while pouring the salt water into/up the left nostril and breathe in, pull it in/up until you feel it go up into the sinuses under the forehead.
Do not breathe the water into the lungs.
+ Then release the nostril and let the water flow out the nose and mouth. Move the head as needed for good outward water flow.
+Then do the other side; Tilt the head to the left and back a little, pinch the left nostril closed and breathe in, pour/pull the salt water up into the right nostril, into the sinuses under the forehead. Then release and let the water pour out. Repeat each side as needed.
People have discovered this by accidentally getting water up the nose/sinuses when swinging in the ocean. At first the water my cause a headache, 'like a ice-cream headache' from eating ice cream too fast. It's harmless. The salty sea water cleans out and purifies the sinuses.

Dry air causes the nose/sinuses to dry out. Blood in the nose occurs as the tissues in the nose weaken, crack from dryness. Infection can get in. The body reacts by producing congestion, fluid in the sinuses, ears. Dry eyes also occur and dirt, pollen stick to the eyes, corneas and tear production is lowered. Vision is temporarily unclear. (Avoid eyeglasses-you can return the vision to clear with the treatment described here.)
Use a warm steam humidifier with purified water to eliminate dry air in the home caused by dry heat and low humidity in the winter. No chlorine and other chemicals, fragrance... in the water. Chlorine burns, dries the eyes, corneas. Filter the water two+ times. Steam distilled water is best. Do not use mist or cool water humidifiers. No filter in the humidifier; filters will lower steam output and cost $30.00+ per month to replace.

Dehydration increases sinus congestion. Drink enough water, eat a banana for potassium, little salt, keep a good electrolyte balance. Caffeine cause dehydration of sinuses, muscles.
Avoid rubbing the eyes. Placing pressure on the eyes increases irritation.
Blink, Shift and Yawn to produce natural tears.
Avoid white flour, too much wheat, milk. These cause sinus congestion.
Eat Local honey – honey the bees make from flowers, pollen in your town. This acts as a natural immunity shot to prevent allergies, sinus congestion from pollen. (Do not give honey to babies.)

Dizziness, Vertigo can be caused by a blow to the head, extreme sinus congestion that gets into the ears, impaired ear fluid flow, water retention, hormone imbalance, HRT, Natural Progesterone Cream and impaired movement/position of the little plate like parts inside the ears that maintain balance. Doctors often prescribe various movement exercises to bring the plates back to normal position, function to cure vertigo. I heard of a race car driver that had vertigo after a car accident and his doctor told him to ride a roller coaster to help the ear plates move, return to correct function. I don't know if this is true but sounds similar to movement exercises the doctors prescribe. My Bates teacher says The Long Swing can cure dizziness. Cleaning excess ear wax out of the ears helps.

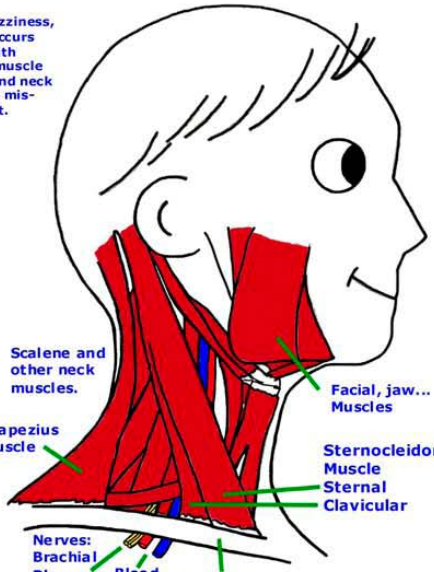
Sternocleidomastoid, Trapezuis and other Neck Muscles

Sternal Division - When tense, strained: Head, sinus pain, visual disturbances, double vision, astigmatism, blur..., ear ringing, dizziness, vertigo, sore throat, difficult swallowing. Attaches from the bone behind the ear to inner collarbone.



Sternocleidomastoid Muscle

Severe dizziness, Vertigo occurs mainly with extreme muscle tension and neck vertebrae mis-alignment.



The Neck and Eye Muscles connect, affect eachother.



Move the eyes while keeping the head, body still. Feel the neck muscles move when the eyes move.

Clavicular Division- When tense, strained: Sinus, headache, pain, nausea, dizziness, vertigo with visual disturbances, double vision, astigmatism, blur..., car-sickness, reversible ear ringing, deafness. Attaches from the bone behind the ear to collarbone.



Sternocleidomastoid Muscle

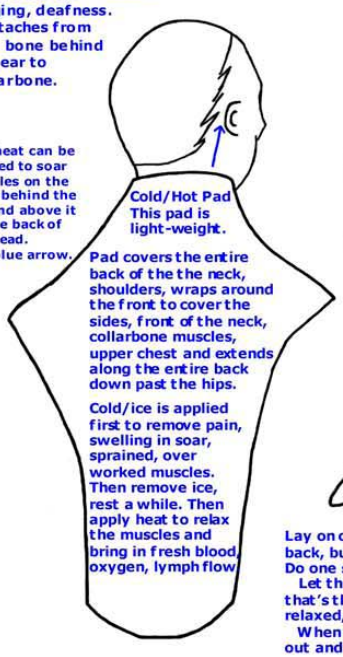
Tense neck muscles affect eye muscle, nerve, blood... vessel function, causes eye muscle tension which places pressure, tension on/in the eyeball, retina, lens, disrupts the eyes shape, impairs eye movement (shifting, central fixation...) resulting in lowered vision, astigmatism and other visual disturbances.

Touch the back, top of the neck, below the skull. Head, body are relaxed and still. Move the eyes left, right, up, down, circular clockwise and counter-clockwise. Look close and far.

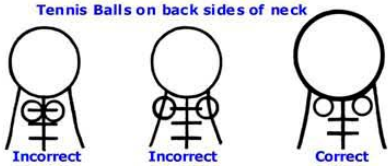
Feel the neck muscles move a bit when the eyes move or change the distance of visual attention.

The eye muscles move: contract, un-contract to move the eyes and to produce convergence, un-convergence, accommodation, un-accommodation when looking close and far.

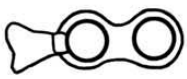
Ice, heat can be applied to soar muscles on the bone behind the ear and above it on the back of the head. See blue arrow.

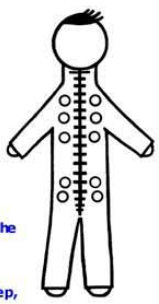


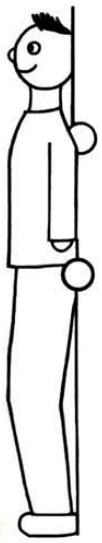
Tennis Balls on back sides of neck



Tennis Balls in sock









Lay on one tennis or larger ball to apply pressure to tense, tender muscles in the back, buttocks, hips, legs to remove tension, pain, knots in the muscles. Do one side, muscle at a time. Do not place the ball on the spine.

Let the muscle melt, sink over/into the ball. Pain may be felt at first: Good, that's the spot (fascial restriction) that needs massage to release. Breathe deep, relaxed, 2-5 minutes. Then, move the ball to find find other tight, soar areas.

When the muscle releases, the knot, pain melts away and toxins, waste... flow out and blood, oxygen, lymph, nutrients flow in and the muscle heals, relaxes.

Tennis balls in the sock are placed on the back of the neck as shown to stretch, relax the neck muscles as the person lays on the back. See other diagrams, directions in this chapter.

The tennis balls can also be placed on the muscles on the left right sides of the spine, (not on the vertebrae) along the upper and lower back, buttocks to relax tense muscles, remove knots, spasms in the muscles.

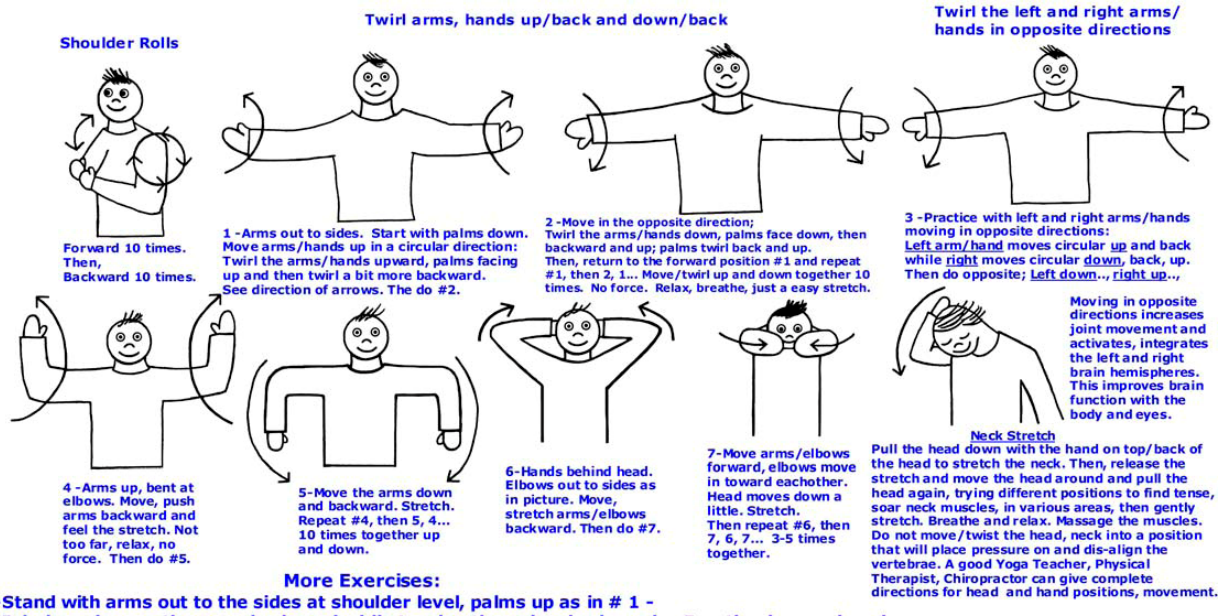
Press on the balls against a wall. Roll the two balls up and down the spine.

Specific areas of the back can be done lying down. Check with a Physical Therapist first if injury to vertebrae or severe muscle injury exists.

Shallow, tense breathing is a mina cause of muscle tension in the chest, collarbones, neck, head, eyes. The ears also contain muscles which are affected. Deep relaxed abdominal, diaphragmic breathing and yoga exercises to open, relax the chest, especially upper chest and muscles will automatically relax the neck (front, sides, back), shoulder, upper back muscles and improve eye, ear function, balance and clarity of vision. When blood, oxygen, nerve flow to the head/brain improves due to muscle relaxation the brains function also improves. Memory, creativity, thinking, mood and the brains function with the eye muscles, eyes improves.

Youtube on the Internet has many free videos for chest, shoulder, neck, back muscle relaxation by a variety of Yoga Teachers and Physical therapists.

The muscles at the top of the neck, below the skull and back of the head, when tense can cause tension in other neck, body muscles, eye muscles. The neck muscles move when the eyes move - See Picture above; The fingers are placed gently on the top back of the neck below the base of the skull. Move the eyes left, right, up, down, then look distant and close. Keep the head/body still but relaxed. Feel the neck muscles move as the eyes move or look close and far. This proves that the neck and eye muscles (and ear, sinus) muscles, nerves are connected. Neck muscle tension can lower the clarity of vision, eye movement, eye health. Neck muscle relaxation, easy neck movement is a main Natural Vision Improvement treatment for clear vision. When the neck relaxes, the eye muscles relax, eyes move/shift freely, perfect and central-fixation, convergence, divergence, accommodation, un-accommodation and all eye functions are perfect, vision is clear. Balance, coordination return to normal.



More Exercises:

+Stand with arms out to the sides at shoulder level, palms up as in # 1 -
+Inhale and move the arms backward while turning the palms backwards. Breathe deep, relaxed.
+Then Exhale and move the arms forward in front of the body, palms face eachother as if holding a large ball and stretch. The head can drop down a little. Relax. Repeat.

+Draw the Figure Eight (Infinity Swing) with both arms/hands together, arms out in front of the body. Let the arms twirl/rotate circular left and right as you move and draw a large horizontal eight in the air. This moves the shoulder... joints.

All Exercises are For Preventing Neck and Shoulder Pain, Tension and to help keep joints, vertebrae in the shoulders, neck mobile, aligned and to open the chest, relax muscles in the upper chest, back, neck. When muscles in the upper chest, collarbones relax, the neck and back muscles automatically relax, then the head, eye muscles relax. Breathing improves, oxygen to brain, eyes improves.

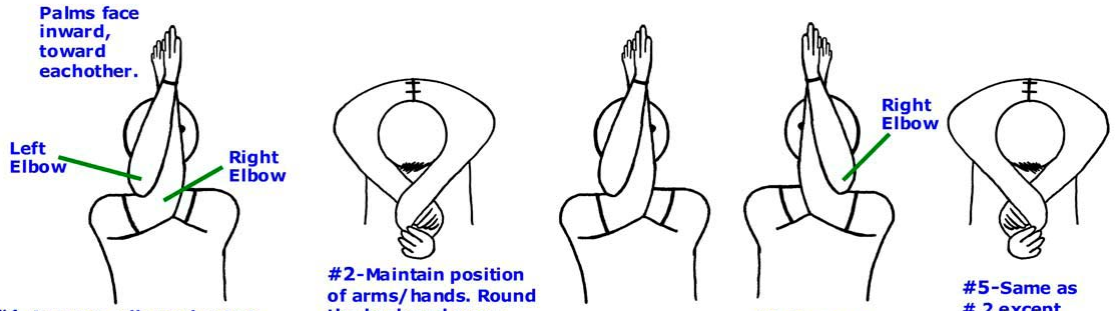
Deep relaxed, abdominal breathing relaxes the upper chest, collarbone, neck, shoulder... muscles. Short, tense, shallow breathing is a main cause of upper chest, collar bone, neck, shoulder muscle tension which travels to the head, ears, eyes resulting in headaches, unclear vision, astigmatism and a variety of visual disturbances. Tense muscles impair breathing.

Muscles may feel soar for 1-2 days after first practice of the exercises. Do not practice any exercises if a shoulder, neck... injury exists. Check with your doctor first. Go easy, no force beyond a comfortable limit.

Search for free Yoga, Physical Therapy exercises, movements, stretches on Youtube and check out a teacher in person.

A variation of #4 above - Arms up as in the picture, stand straight and move the shoulders backward. Stretches the chest, collarbone muscles, improves posture. Arms do not twirl back in this exercise.

Neck, Shoulder Pain, Muscle Tension Prevention



#1-Arms up, elbows bent at shoulder level. Move the left elbow over the right elbow.

Inter-twine the arms so that the left and right hands palms face inward toward eachother, touching. Fingers point up. Good straight, relaxed posture.

Shoulders relax, move down as the elbows, hands go slightly upward toward the ceiling. Relax, breathe slow, comfortably deep.

#2-Maintain position of arms/hands. Round the back and move the elbows down toward the navel, head moves down. Neck relaxed. Relax the body and breathe a few times. Stretch the muscles along the spine especially the upper back. Hold position 5+ seconds.

#3-Move up, back to position #1. Release the arms. Relax, breathe. Next; Do the opposite side. See # 4.

#4-Same as #1 except the right elbow is moved over the left elbow.

#5-Same as # 2 except arms/elbows interlocked as in #4.

This exercise also helps align, bring movement to the shoulder, neck joints.

In the above picture, exercise – one hand is naturally higher than other. Don't force the palms to be at a even height. If the joints, vertebrae are greatly mis-aligned, a doctor should align the bones first, then do the exercises to maintain alignment.

All pictures of the muscles are basic, do not show every muscle, nerve…

In the picture showing the neck muscles in red: These are the main muscles that become tense due to typing, using the computer mouse, incorrect posture, repetitive motion at work…

There are more neck muscle stretches with the head tilted to the side, to the front/partially side… and in other positions. See an in person Physical Therapist, Massage Professional for directions.

See www.neckpainsupport.com and www.round-earth.com for more symptoms caused by tension in the Sternocleidomastoid, collarbone muscles; Extreme dizziness, ringing ears, vision impairment, watering eyes and other conditions. These can be reversed by relaxing this muscle. Treatments shown on the website. Karate teachers know how to relax these muscles. Certain muscles in/along the shoulders, neck, when tense can affect vertebrae C1, 2, 3,4,5,6 and other vertebrae resulting in eye, ear, vision, hearing, balance, movement impairment. Neck vertebrae and/or collarbone joints dislocation can cause; unclear vision, astigmatism, double vision, crossed, wandering eyes, impaired convergence, divergence, eye movement/shifting, ringing ears, sinus congestion, inflammation, balance impairment. Collarbone, neck muscle tension can occur and cause these conditions.

In the picture showing the use of one tennis ball or larger ball: when lying down, the ball can be used on the side body muscles or lay on the back for the muscles below the spine on the buttocks… Two balls may be needed when laying on the back to keep the back aligned, to avoid uneven pressure. See example using the balls against the wall.
Check with a Physical Therapist and Professional Sports Masseuse for complete directions for using the Tennis and other Balls and Treatments.
Here is some more info. for use of the Tennis balls;

Notice in the picture on page 325 that the tennis balls are placed correctly under the base of the skull, left and right sides of the back of the neck on the muscles, not on the spine/vertebrae and not out far to the sides of the neck on the edges of the vertebrae. The edges, left and right sides of the neck vertebrae extend outward. The tennis balls must not press on this area because doing so can cause vertebrae misalignment and injury. Chiropractors do a specific turn/alignment of the vertebrae by moving the vertebrae into alignment by touching the inner area of the vertebrae, not the outer ends and not directly on the center. See the book; Home Chiropractic Handbook by Dr. Carl V. Holmquist. Directions in this book helped me to do a bit of small alignments that helped me to stay out of the hospital (after the dishonest chiropractor misaligned me) until my old, honest chiropractor and another good doctor came back to work and aligned me completely. I gently massaged the left and right sides of the back of the neck in the grove between the muscles on the pressure points GB20 top of the neck and down below that area to the bottom of the neck using both the left and right hands fingers, doing left and right sides of the back of the neck at the same time to evenly align the vertebrae. (See acupressure chapter for exact location.) Also massaged on the bone behind the ears and up to the sides of the head where ever tension/pain was felt. Massage was not applied to the outer areas of the vertebrae, only the inner areas as described in Dr. Holmquist's book. Collarbone muscles also massaged. This method was much more effective after the honest Chiropractor did a 80% perfect neck, back alignment.

Vertebrae C-1, Atlas is at the top of the neck/spine and the ends extend outward more than the other neck vertebrae. C-1 is different in shape from the other vertebrae. The outer ends of C-1 are near the left and right side of the bottom of the skull. C-2 is below C-1.

Do not apply pressure on the ends of C-1, C2 or any vertebrae.
The tennis balls do contact some areas of C-1 and other vertebrae. My physical Therapist emphasizes to place the balls in the position shown in the pictures to avoid injury, vertebrae misalignment. Balls do not press on the outer edges of C-1, 2 and other vertebrae and not on the center of the vertebrae. Tennis balls press only on the muscles and pressure points as shown in this book. Because a little pressure on C-1 does occur it is important to use two tennis balls so even pressure on the neck occurs. Using one ball placed on only one side of the neck can misalign C-1 and other vertebrae. That is my opinion and it is reasonable. Be safe! Notice that a masseuse will always massage both sides of the neck, back evenly.

Before the bad chiropractor injured/misaligned my neck I could use the tennis balls with great benefit; my balance would improve to perfect, neck and back muscles relaxed and vision would go to better than 20/20 close and far. After the chiropractor injured my neck, even though now a new chiropractor has said she aligned it correct I can no longer use the tennis balls or neck pillows. They cause ear ringing. I wish I had not allowed the bad chiropractor to work on my neck. The Physical Therapy exercises and tennis balls were working perfect before any of the good and bad chiropractor's treatments.

Do not use the tennis balls if an injury to the head, neck, spine, vertebrae, misaligned neck/back vertebrae, pinched/irritated nerves, broken/swollen cartilage, stroke, ear ringing, any medical condition exists. Check with your doctor and Physical Therapist. Discontinue use if ear ringing or any discomfort occurs. I was going to remove the tennis ball treatment but have found that many therapists use it. Sometimes I can use them with benefit now that my neck, nerves are healing since the good chiropractors aligned the neck and back vertebrae.

Some Therapists state the two tennis balls can also be pressed and rolled along/down the entire left and right sides of the neck starting at the area under the skull as shown in the pictures. The balls are pressed/rolled upon down the entire sides of the neck/spine while standing against a wall. (On the muscles on the left and right sides of the spine, not on the spine/vertebrae.) Get a professional to teach this. When using the tennis balls leaning against the wall, one ball can be used to apply pressure to a single tight muscle or two can be used to work muscles on left and right sides of the back. Be careful on the lower back. Never press directly on the spine. Only professional Masseuse, Physical Therapist or good Chiropractor knows how to work muscles very close to the spine without injury. Using one ball at a time on the left and right sides of the neck is advised by some therapists but I do not advise this as it may misalign the vertebrae when done by a inexperienced person at home. Best to find profession masseuse to do hands on massage when doing one side of the neck/back at a time.

When pressing/rolling the balls along the shoulder area of the back, raise the arms to shoulder height in front of the body to open this area. Acupressure points on the lower back, buttocks, sacrum can be activated with the tennis balls. See the chapter on acupressure points in this book. Use of tennis balls is basically an acupressure method and for trigger points.

Breathe abdominally, deep as taught in this book when applying pressure with the tennis balls. Relax. Used correct the tennis balls stretch, relax the muscles, remove knots, spasms in the muscles and improve balance, clarity of vision, hearing, improves blood, nerve, lymph flow to the body, head/brain, eyes, ears.

Relaxed muscles, exercise, movement of the muscles, aligned vertebrae, bones improve lymph flow to, in, out of the body, head, eyes. The lymphatic system is similar to the circulatory system: it flows throw pathways throughout the body. Lymph flows in to nourish cells, organs, muscles, joints... and flows out removing waste, toxins. Lymph flow is a function of the immune system, keeps the body healthy. When lymph flows, muscles relax. When muscles relax, move, lymph flows.

Inversion, rebounding on a trampoline, anti-gravity exercises improve lymph and blood flow.

Apply tennis or other ball pressure in this way;

+Pressure to get resistance. Breathe, relax, melt the muscle into/over the ball.
No force, go at your own pace. Relax deeper on a out breath and let the ball press into the muscle.
+Then, pressure until you get a muscle knot to release.
+Then, more pressure until you get a second release.
+Then, maintain until obtain total release.
+Tension, knots... may be in layers, more than one so steps may need to be repeated the next day... until free of pain and tension. Temporary pain may be felt more the next day.
+Stretch after the treatment. Soak in a hot bath with Epsom salts.

Another way to align the neck naturally can be with the use of a device that is constructed to fit exactly the curve in the back of the neck and has golf ball or small size raised areas that press into the muscles on the left and right sides of every vertebrae along the neck and shoulder area. The balls press into the muscles, release tension and this helps the vertebrae to align. No pressure is on any area of the vertebrae. The device is made a specific size for each individual patient and must be used with correct. Used incorrect it can misalign the vertebrae.

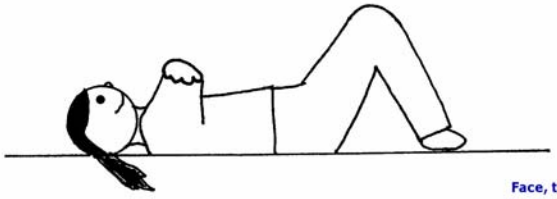
Exercise practiced with the back of a chair; sitting in the chair and moving specific ways to align areas of the lower back. Similar to the Yoga Spine Twist in the Physical Therapy chapter. Laying on the back or against a wall is a variation of the exercise. It can also be done sitting in a chair with a flat, solid back that presses on, pops, aligns the left and right hips, lower back, other areas spine, neck as the body is turned left and right.
See pictures below. Notice this posture, movement is very similar to the back, leg, hip movement of 2a, 2b that the chiropractor does in chpater 25, page 310 as the upper and lower body, spine are moved in opposite directions and the back, spine pops and bones move into alignment, release build up gas, tension. Learn to do it yourself and you will not have to worry about a bad chiropractor popping, aligning only one side of the back, neck causing an unbalanced alignment. Ask a Physical Therapist

and Yoga Teacher how to do these safely and you will be free from the need for repeat chiropractic treatments. The opposite side/position is always also done to equally align the left and right sides and center of the hips, back, body, neck. Done correct, these movements pop the back/hips and some neck vertebrae into alignment, removes tension from the sciatic nerve and other nerves in the back, spine, neck.

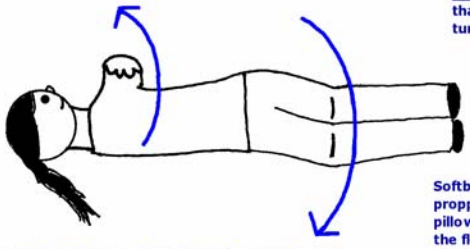
Do not overdo the exercises, positions. Avoid if injury exists. Check with a doctor. Some Physical therapists are good, others might prescribe exercises that increase injury, prevent healing.

Spine Twists, for Hip, Vertebrae Alignment in the Back, Neck

#1 - Lay on the back, knees bent up, arms crossed on the chest. Lie on a firm surface; floor, ground. Follow the blue arrows in picture # 2 below for body, head movements, positions.



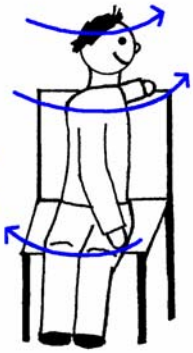
Face, turn the head, upper body to the opposite direction that the, knees, hips turn, move to.



2 - Move, turn the knees, legs down to one side as the upper body, head turns, twists gently to the opposite side.
Example;
Knees move right > to the side.
Head, upper spine/body turns to the left <.
Hold the position to get a good stretch. No force, relax and breathe deep. Then, return to position #1.
Next; Reverse directions-do the opposite side, way;
Knees move left < as the head, upper body move right >.
Hold the position, breathe, stretch, then return to #1.
Repeat the movements on left and right sides.

Pictures can be viewed in a mirror to see the opposite direction, positions the body moves to for doing the opposite side, way.

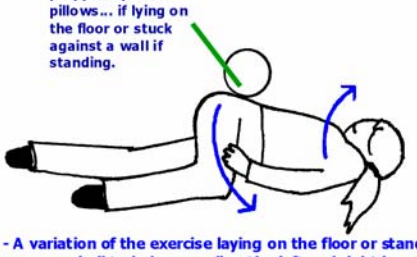
Check this exercise with a Medical Doctor, Physical Therapist first. Do not do without a Doctors advice if an injury exists. Avoid overdoing the exercise. Do not force movement beyond a normal, comfortable limit.



4 - Variation of the exercise while sitting in a chair. The chair seat and back should be flat, solid.
One hand grips the back of the chair on one side and the head, upper body turn, twist to that side and backwards. The back is straight and against chair when starting and continues to be straight when turning. Its alright if one side of the back leaves the chair as the upper body turns.
The other hand holds the knee on the side the head is facing to and pulls the knees to the opposite side.
See picture, arrows.
Hold the position to get a good stretch. No force. Relax and breathe deep.
Then do the exercise for the opposite sides, way.

A small to medium ball to help pop, align the left and right lower back, hips can be placed on the chair on the side of the back that pushes on the chair, side the upper body, head is turning to. Do gently. The ball is on the lower back, hip area, same as the chiropractor does in step # 2a and 2b.
These positions, movements aligned, popped, corrected my back, spine, neck after dishonest chiropractors mis-aligned my back, hips and neck bones, vertebrae.

Softball, soccer ball propped up with pillows... if lying on the floor or stuck against a wall if standing.



3 - A variation of the exercise laying on the floor or standing against a wall using a small to medium soft or soccer ball to help pop, align the left and right lower back, hips.
Do gently. The ball is on the lower back, hip area, same as the chiropractor does with his hand in step # 2a and 2b in this chapter.
Pull the upper leg over the lower leg, down to the side, knee bent, up. The hand on that side the knee is turned to pulls on the upper leg/knee, pulling it to the opposite side that the head, upper body turns to. The head, upper body turn to the opposite side that the bent knee is at. See arrows. Hold the position to get a good stretch. No force, relax and breathe comfortably deep.
This further aligns the joints and stretches, relaxes the muscles. Then, return to laying flat on the back. Then do the opposite, side, way. Use of ball is optional, not always needed.

One extra exercise can be done when lying on the back with knees, head, body all straight as in picture #1; Notice the space between the lower back and floor. Breathe out and pull the stomach in. Press the back down into the space, until there is no space and the back is flat on the floor. Breathe in and out. Release the back, then repeat.

Nerves, blood, lymph vessels, arteries traveling to the ears, eyes, head, brain are affected by tense neck muscles.

Other neck muscles also attach along/near the collarbone. Feel above, on and below the collar bone, on the bone behind the ear and the skull, head area above the ear for soar muscles. Massage the area. The Trapezius Muscle and shoulder muscles also affect the neck muscles.
Tension in any of the muscles shown on the picture and muscles in the arms cause muscle tension to travel into the neck, eyes, ear muscles, place pressure on the nerves, blood, lymph vessels, arteries.
The eyes, ears, brain, balance system work together.
Visual and hearing impairment can be caused by the eyes, ears, brain, balance system being impaired

by muscle tension on the nerves, blood... vessels traveling to the brain, eyes, ears. Neck, spine vertebrae misalignment can also cause this.
Muscles of the right arm, shoulder, neck, collar bones can become tense, unbalanced due to using the computer mouse, (especially for graphic designers) and typing.

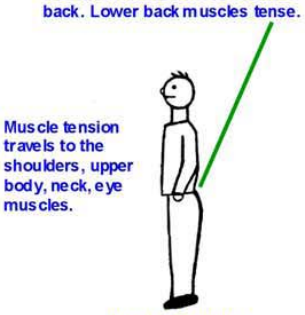
Correct Posture, time away from the computer and other muscle straining jobs is the best treatment. Learn to work in a relaxed way. Shallow, tense breathing causes tense muscles in the chest, collarbones, neck, shoulders. Deep abdominal, diaphragm breathing and yoga exercises to open, relax the chest muscles will automatically relax the neck muscles, front and back.
Heating pad; use ice first for 24 hours, then heat. See directions in picture, page 331. Ice on soar neck, shoulder, collarbone muscles, joints after a day at the computer can prevent swelling, pain, stiffness.

Dr John E. Sarno - Back Doctor–Natural Muscle relaxation, pain relief:
www.healingback.com Books: http://www.healingbackpain.com
+Healing Back Pain
+The Mind-body Prescription
+The Divided Mind
A Natural Vision Improvement Teacher taught me about Dr. Sarno's work. How stress, emotions can cause muscle tension, pain. Says holding the back... muscles tight, avoiding normal movement to avoid the pain.... blocks flow of oxygen, nutrients... into the muscles resulting in more tension, pain.

A final word: If your muscles are not tense, leave them alone. Mother Nature is the best treatment. Just exercise for fun!

If you have had surgery on the arteries, blood vessels, any area in the neck, brain, ears, eyes, retina, lens, cornea, any part of the eye: check with your doctor before doing inversion, anti-gravity exercises to be sure the blood vessels, arteries and other areas operated upon have completely healed and are strong enough to hold the increased blood flow to the neck, head, brain, ears, eyes... and the reverse pull of gravity. Stroke, detached retina, vitreous... patients should not do these exercises. Check with a doctor first.

Incorrect posture.
Too much inward curve in lower back. Lower back muscles tense.



Muscle tension travels to the shoulders, upper body, neck, eye muscles.

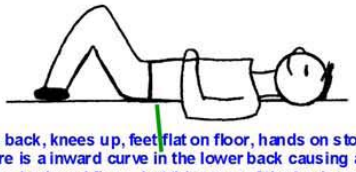
Heels of feet up, tensing the back.

Correct posture.
Lower back relaxed. No extreme inward curve. Bottom of lower back drops down, relaxed.



Heels down.
Back, shoulders down, relaxed, neck and eye muscles relaxed.

This position relaxes, aligns the lower back.



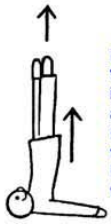
Lay on the back, knees up, feet flat on floor, hands on stomach. Notice there is a inward curve in the lower back causing a space between the back and floor. Let this area of the back move down, touch the floor - so there is no longer a curve in the lower back and space. Tighten the stomach muscles to help move the back to the floor. Hold 5 seconds, then release, then repeat 5 times.

Chinese Qi Gong Roll



Maintain position shown, weight centered over the back and roll forward and backward. (Place a soft mat or rug under the body.)
Then: use the stomach muscles and whole body to help the body rock left and right while turning a little with each rock in a small circle. Move slowly. Move in a complete clockwise circle, then counterclockwise circle.
Do an equal amount of times for each direction.

Inversion, Anti-gravity and spine alignment exercise. Taught by chinese Chiropractor.
Strengthens muscles in abdomen, back, removes pressure on vertebrae.



Lay on the floor as shown in the picture and push the body up into the air.
Repeat 5-10 times.

Chinese Chiropractor leg, back stretch, alignment.



Pull right leg, foot up over head and backward a little. Then release and pull left leg.

Inverted Backbend



Roll forward and backward

Chinese Qi Gong, Tai Chi Energy Ball.



Stand and hold an imaginary ball of white energy. Knees bent slightly, feet shoulder width apart.
Palms of hands face in toward body in front of navel area.
Fingers of left and right hands point towards eachother but do not touch.
imagine you are holding and can feel a ball of energy. Close the eyes and stand in this position 5minutes.
improves balance and strengthens energy in body.
This can be used after the color energy strengthening, breathing chart in chapter22.

Antigravity swing. Activates left and right brain hemispheres, cures crossed, wandering eyes, improves eye movement, clarity vision...



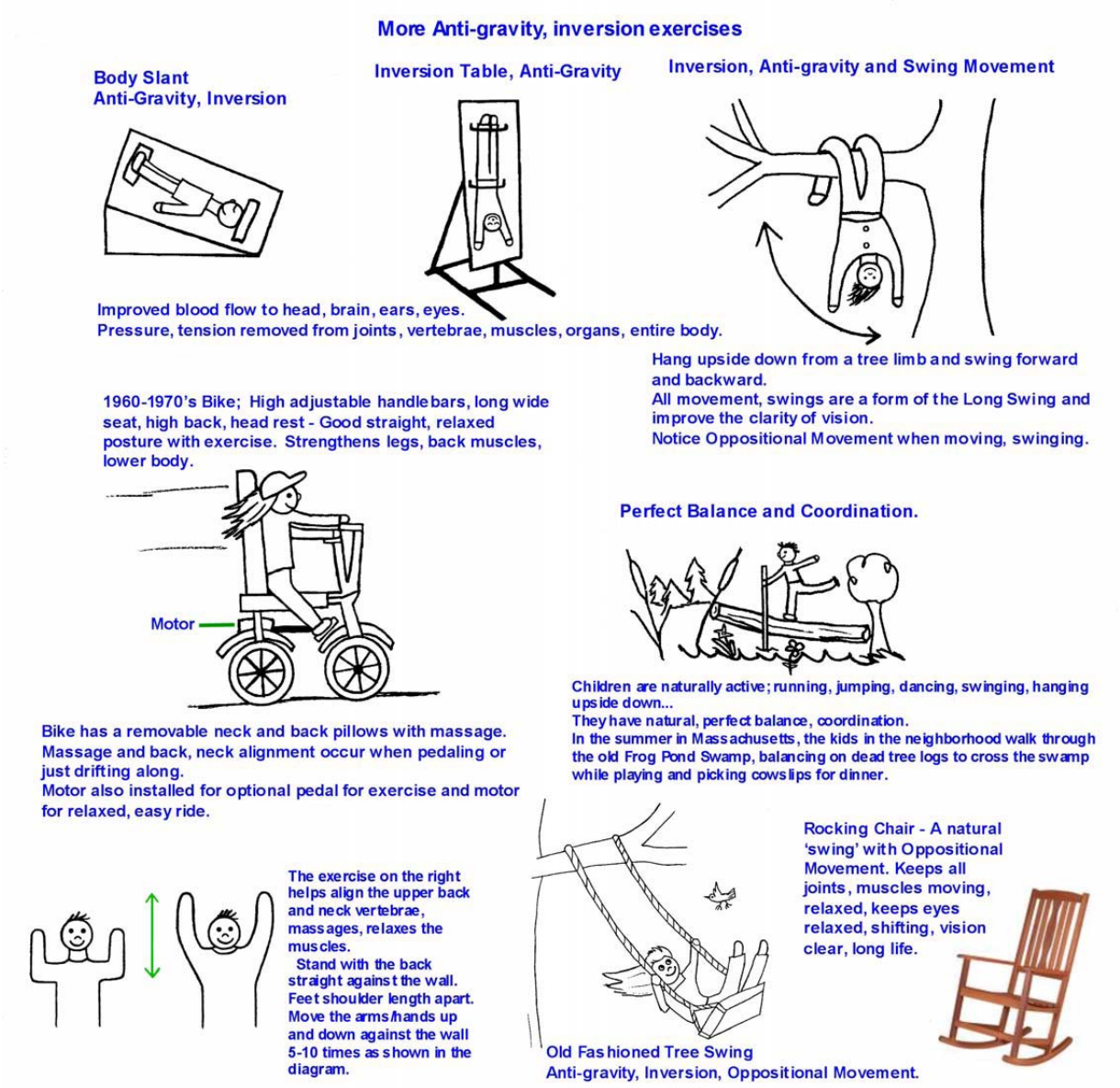
This is a old game children play with adults.
The parent swings the child around in a circle: counter clockwise, clockwise.
The childs feet leave the ground and the childs swings around in a circle in the air.
The child looks up to increase correct eye movement, position. (Cures crossed-wandering eyes.)
Children like this, its a fun game. relaxes their mind, body , eyes, eye muscles.
Do not tell the child it is for eye vision improvement. Just let them relax naturally, not thinking about the eyes.
Children naturally enjoy amusement park rides, swings, merry-go round.

Trampoline, rebounder.
Anti-gravity exercise.



Jump up and down on the trampoline.
Adjustable handel bar maintains balance, safety so the person can relax while jumping.
Jumping up and down into the air improves the flow of lymph, blood in body, reverses the pull of gravity/takes pressure off all joints in the body, vertebrae in the spine, all muscles, organs, systems in the body, activates and integrates the left and right brain hemispheres and improves the clarity of vision.

Antigravity and inversion exercises cause the body to move up and down in the air, and/or to hang upside down (as on a body slant, inversion table, swing, hanging from a tree limb...).
This reverses the pull of gravity, removes pressure from the body, all muscles, eyes, eye muscles retina, lens.., bones, joints, vertebrae in the spine, back, neck, all body organs, systems and improves; left and right brain hemisphere activation, integration, lymph, blood, energy flow to the head, eyes, entire body, vertebrae, joint alignment, movement, relaxed muscles, improved eye muscle function, eye movement. This improves health, function of the body, eyes, clarity of vision and extends life. See chapter 18 - 19 for more pictures/directions for; Left and right brain hemisphere activation and integration, movement exercises.



All exercises that have a swinging motion activate and integrate the left and right brain hemispheres, relax the mind, nerves, body, eyes, improve eye, body movement and the clarity of vision: The Long swing, Rock, Riding on a Swing, Seesaw, Trampoline, Rocking Chair… A mother rocking a baby in her arms is a perfect swing and very soothing, healthy for the baby, the baby's eyes, vision. Read this in Ophthalmologist Bates 'Better Eyesight Magazines'.

Lying on the body slant, inversion table, hanging upside down on a tree limb… places the body in a upside down position and reverses the pull of gravity and removes pressure, tension on the entire body, all body organs, systems, bones, joints, muscles, spine, back, neck vertebrae… including the eyes, eye muscles. The eye muscles, eyes, lens, retina get a break from constantly being pulled down, in one direction. A massage effect occurs on/in the eyes, eye muscles, all the internal organs, nervous, circulatory, lymphatic and other systems. Circulation of blood, nutrients, oxygen, lymph, energy in the body, brain, ears, eyes improves. Eye muscle and eye movement (shifting) all eye functions and clarity of vision improve.

Jumping up and down in the air, space on a trampoline (Rebounder – special type of trampoline that prevents pressure on the joints) has a similar beneficial effect with added benefits of the exercise and moments of complete weightlessness. It especially improves the flow of lymph, lymphatic system. The lymphatic system is similar to the circulatory system: lymph travels in vessels throughout the body and eyes removing waste, keeping the immune system strong, helps to process fats and perform other functions. Exercise, movement, trampoline improves circulation of lymph. Astronauts in space experience freedom from the pull of gravity on the body and eyes. Their vision is exceptionally clear. They see clear, fine details of the planet Earth from space.

Benefits of Rebounding, weightlessness, anti-gravity are: Extends life, aerobic heart exercise, strengthens lymphatic system/flow of lymph/immune system, improves balance, strengthens heart and other muscles, relaxes muscles of the neck, back, eyes, all muscles, improves circulation, breathing, nutrition, oxygen into the cells, tissues, and removes waste, toxins from cells, tissues, muscles, body, improves cell health, improves function of glands, digestion, brain, produces relaxation, good for the nervous system and many other health benefits. Children naturally seek out jumping, weightlessness games.

NEEDAK© Soft Bounce Rebounders - http://www.bettereyesightnow.com/index.php

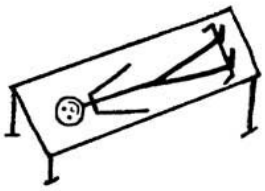
A 5th Grade teacher is a Police Officer and Marine.
He teaches physical education.
He does handstand pushups: pushups with the hands while standing upside down on his hands.
He pushes his body up into the air, claps his hands together, then returns to touch the ground and repeats the pushup 10+ times.
He has a situp board in the classroom and has the kids do situps.

The Situp Board is also used as a Body Slant.
The board is higher on the end where the feet rest.
The head, upper body is lower.
The feet hook under a bar.

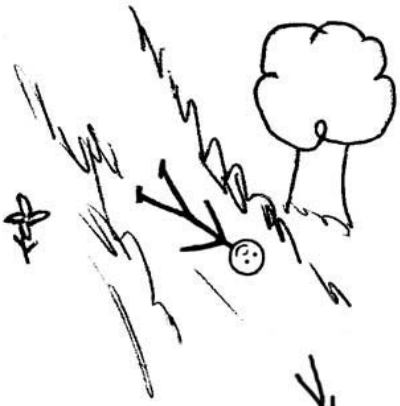
Do 10 - 20+ situps with the legs straight, feet under the bar.
Then, 10 - 20+ with the knees bent up, feet flat on the board, not using the foot hook. Feet stay on the board when sitting up and down.

Blood, oxygen flow is increased by the situp exercise and flows to the head, brain, eyes when moving back down, laying on the back.
Situps on this board increase muscle use, strength due to more power being used to sit upward on the raised board.
Stomach, back, leg muscles strengthen and the exercise helps align the lower back, tailbone.

Situp Board/Body Slant



Lying upside down on a grassy hill for natural Body Slant, Inversion



Roll down a hill.



Roll with the head on the left side of the hill

Then roll opposite with the head on the right side of the hill.

Kids in Massachusetts like to lay upside down on the high grassy hills at the Quabbin Reservoir and look at the clouds moving in the sky. A natural Inversion exercise.

The children also lay sideways, horizontally on the top of the hill and roll down the hill.
They have races to the bottom, rolling fast in a circle.
They roll down the hill with the head on one side, then down the hill again with the head on the opposite side.

Many Yoga exercises/positions align the spine, neck, body and prevent the need for Chiropractic adjustments.

Yoga - Full Twist

Improves movement of vertebrae, aligns vertebrae in entire spine and neck, stretches and relaxes muscles in the back, neck, and relieves pressure, tension on the vertebrae, muscles.

Directions

1 - Sit on the floor, legs out straight in front of body.

2 - Position #2 - See small diagram. Place the sole of the right foot against the upper, inner left leg.
Left leg out straight. (half lotus position)

#3 - Hands grasp left ankle and pull, swing the left foot over the right knee and place the sole of the left foot on floor.

#4 - Palm of left hand on floor behind body.

#5 - Right arm over left leg and hand grasps securely onto right knee.
(This locks the lumbar region of spine)

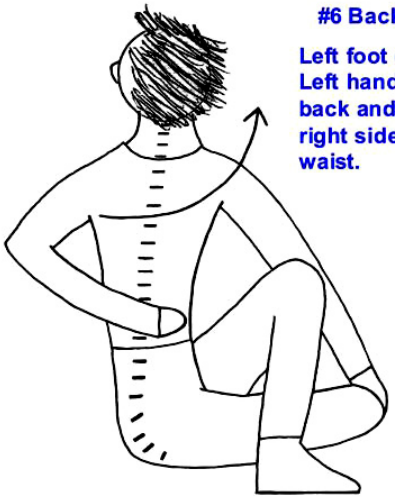
#6 - See diagrams # 6 front and back view.
Turn/twist the top, trunk of the body and head slowly to the left as far as possible.
Chin near shoulder, spine straight.
No force. Do not strain the muscles.
Move the left hand around the back and grasp the right side of the waist.
The right hand continues to hold onto the right knee.



6 Front View

Turn, twist trunk, top of body and head slowly to the left.

Left foot on floor.
Left hand around back and grasps right side waist.



#6 Back view

Left foot on floor.
Left hand around back and grasps right side of waist.

Breathe slow, relaxed and count to 5 or 10.

#7 - Then: release - return left hand to floor, and body, head move forward to posture # 5.
Repeat posture two more times.
Then: sit in # 1 posture. With practice, the muscles relax, stretch, joints move freely and the exercise is easy.

Repeat the exercise, opposite of steps 1-7 : turn to the opposite side of the body: turn right, opposite hands, feet positions; #2 - sole left foot against inner right leg, right leg straight, 3-right foot over left knee, right foot on floor, 4-palm right hand on floor, 5-left arm over right leg and hand grasps left knee. Turn, twist to right. Right hand around back and grasp left side waist.

+Another Yoga 'Head Twist' is for specifically aligning the neck vertebrae and removing tension from the neck. Must be done correct, carefully. Avoid the exercise if an injury exists.

A Variation of this twist is done lying on the back with the legs/knees to one side of the body with the head, upper body turned to the opposite side. Then do the opposite side, opposite position to equally align the left and right sides and center of the hips, back, body, neck. Another variation is done in a chair, using the back of a chair. Done correct, these movements pop the back/hips into alignment, removes tension from the sciatic nerve and other nerves in the back, spine, neck. Similar to the way a chiropractor pushes, aligns the back and upper spine when the patient lies on the left and right side. Learn to do it yourself and you will not have to worry about a bad chiropractor popping, aligning only one side of the back, neck causing an unbalanced alignment.

Ask a Physical Therapist and Yoga Teacher how to do these safely and you will be free from the need for repeat chiropractic treatments. See pictures on previous pages this chapter.

+The old fashioned 'Head, Neck Roll' is a good exercise to relax the neck;
Sit or stand with straight, relaxed posture. Shoulders down, relaxed.
Start with the head forward, down, chin to chest.
Slowly roll the head to the left, then back, around to the right, then back to the front. Roll slow, easy, relaxed. (The body stays straight.)
Repeat a few times.
Practice rolling the head clockwise and counter-clockwise.
Relax and move slow, easy through any tense areas. (Do not do exercise if the neck is injured.)

See the book; 'Richard Hittleman's YOGA 28 Day Exercise Plan'
This book contains step by step directions with photographs.
Other books show original and new, improved Yoga postures.
Yoga for the Rest of Us, Back Care Basics and other books, DVD's by Peggy Cappy are good.
YouTube has free Yoga and Physical Therapy videos by a variety of teachers, varied exercises.
Be sure teachers are licensed, professional.

The Book 'EyeBody' by Peter Grunwald is popular for correcting posture, movement for clear vision.
40+ pictures and chart of brain, eye, body connections. www.eyebody.com

Book; 'Movement For Self Healing' and other books by Meir Schneider. Teaches movement, postures for healthy body and clear vision.

Books with photos teaching Chinese Chi/Qi Gong and Wu Ming Meridian Therapy provide many exercises, postures to improve balance, movement, energy.

Be careful with Qi Gong – it is simple but very powerful. If done incorrect it can imbalance the body's energy flow and impair health.
Done right, it's a secret to natural spiritual healing.
The energy can be felt, controlled.

The long swing, sway (rock), figure eight, cross crawl improves body movement, relaxation, alignment of joints, vertebrae. Practice swaying left and right and then forward and backward; toes to heels, heels to toes to keep the body in movement, relaxed, free of muscle tension when standing.

Here is a way to heal torn rib cartilage, cracked ribs quickly;

I worked in a factory for 3 days 16 hours straight doing constant heavy lifting of boxes. Had the flu with repeating cough. This resulted in torn rib cartilage.
For weeks I could not sit, lay up, down or walk up a hill, lift anything without intense pain and more injury to the rib, muscles.
The 'honest chiropractor' told me how to heal the rib cartilage and cracked ribs;
When sitting up from lying down or when doing any movement to lay, sit, move... up, down;
First, expel all air from the lungs. When there is not any air in the lungs, there is less outward expansion, pressure on the rib cage and muscles especially when moving up, down from sitting, lying position. The rib is allowed to heal.
When there is air in the lungs, the air pushes out against the torn muscles, ligaments, injured rib and rips it apart again, prevents healing. The rib healed in a few days after following the chiropractor's advice.

Here's another tip; Uneven tooth fillings, one or more teeth too high, low can cause misaligned jaw, headaches, earaches, muscle tension in the jaw, head, face, neck, shoulders, upper body and eyes.
When getting teeth cavities filled, and the dentist says to "bite down" after the filling is in place to secure the filling into the tooth: bite hard enough to keep the filling even, fitting correct with the other teeth. If teeth are missing on one side of the mouth-this can cause a uneven bite. Get natural, non-plastic, chemical, toxin free artificial teeth partials to even out the bite.

PH balance
Keep a good PH balance in the body.
Too acid = Muscle tension, illness, many health problems.

Too alkaline = no resistance to infection and other health problems develop.
A normal healthy balance is; acid/alkaline with more towards the alkaline level but not over doing it, not going too far alkaline.

Other Exercises for muscle relaxation, movement, balance, good health and clear vision are:

+The Alexander Technique – See Books by Frederick Matthias Alexander and John Dewey – www.alexandercenter.com. See Ophthalmologists William H. Bates reference to him:

Better Eyesight Magazine - November, 1927 – Alexander Technique

The question that comes up more prominently than any other is: What can the patient do to bring about relaxation of any group of muscles? A man, by the name of F.M. Alexander, of London, England has accomplished a great deal in the cure of all kinds of diseases. He says that all diseases of the body are caused by tension. They can all be cured by the relaxation of the tension. He has offered many methods of bringing about relaxation in the most interesting, although seemingly incredible way and the most successful is to bring about relaxation by having the patient state that it is desired.

For example, a patient sitting in a chair or lying down on the floor, whichever is easier, says: **"I desire relaxation of the muscles of my neck, so that my head can be lifted forwards and upwards." This is sometimes repeated one hundred to a thousand times.** Mr. Alexander has always succeeded in having the patient bring about **relaxation of the muscles of the neck** by this method.

Mr. Alexander goes further and brings about relaxation of the muscles of the chest, both outside and inside, by having the patient say: "I wish my shoulder to relax and to move downwards and backwards. I wish my chest to relax and to move backwards. I wish my whole body to relax and move backwards. I wish my foot to move backwards without effort, without strain of any muscles of the body."

It has been a great shock to many orthodox physicians to observe the cures that Alexander has made. Epilepsy, considered by the medical profession to be incurable, has been cured by relaxation, without the use of any other form of treatment. Of course, rheumatism responds perhaps more quickly to relaxation than a great many other diseases, but there are cases of so-called rheumatism affecting the shoulder in which all parts of the joint become immovable.

One patient was afflicted with Parkinson's disease; all the joints of the body became so fastened together, so immovable, that the patient was unable to produce any voluntary movement of the hand or the arm. As time passed, the voluntary and the involuntary muscles gradually became useless from tension. Mr. Alexander had the patient relax those muscles which she could relax most readily. When this was done, the more difficult muscles became relaxed, until finally she was cured completely by the relaxation of tension.

(The Alexander technique continues to be popular today; original and modern Natural Vision Improvement teachers apply neck relaxation, movement as a main vision improvement treatment. The Alexander Technique is known for improving breathing and vision.)

+Feldenkrais Method by Dr Moshé Feldenkrais +Pilates by Joseph Pilates

The person learns to recognize incorrect posture, body movements that cause tension, impaired movement and to replace them with correct posture, movement by practicing the methods listed here.

+ Aerobics and other exercises that get the heart beating above its resting state.

+Osteopathy +Rolfing +Applied, Specialized Kinesiology +Swimming

+When swiming in the ocean: walk on your hands on the sand with the legs/feet floating straight behind the body. Water at shoulder height. Then walk on the hands and knees like a dog, cat. Look up, down, left, right. Aligns the spine, brings mobility to the entire body. Its easy to float in salt water, very lettle weight on the joints.

+Craniosacral Therapy – Gentle movements, corrections, alignment of the skull bones, head, spine, tailbone, pelvis. Professional, honest chiropractor/doctor only!

+ Cranio-Mandibular Orthopedic – Orthodontics – TMJ - Placing the bones of the jaws and the skull in their proper position.

+Tai Chi - Chi, Qi Gong – Karate

+Dance +Running in place – Do this at work. +Pushups for strong upper body muscles - lying on the stomach and standing pushing against a wall with good posture. Forward both hands on wall, then sideways one arm at a time.

+Singing – improves breathing, aligns the bones of the skull, produces positive thoughts, emotions, improves energy flow, personality, memory, imagination.

+ Non-Impact sports

+Weight lifting - strengthens muscles, bones, improves balance. – Start with light lifting. Avoid going to extremes. Back and other injuries occur from heavy, improper lifting.
Lift correct; back straight, bend the knees, squat down to pick up the object, body straight, object close to body, not leaning forward, do not twist sideways. Ask a Physical Therapist, unemployment office for pictures, complete ditrections.

+ Basic Gymnastics; Handstands, cartwheels, roundoffs... Practice cartwheels, roundoffs on both sides of the body: move in one direction then in the opposite; Example, cartwheel: left hand to ground first, cartwheel to left side. Then opposite side: right hand to ground first, cartwheel to right side.
Doing movements with both left and right sides of the body activates and integrates the left and right brain hemispheres, improves dexterity and balance.
Children must avoid peer pressure - Avoid the dangerous gymnastic exercises: uneven parrelle bars, horse, balance beam. There are some people that are not equipted for this form of exercise and especially when being forced to perform it, under pressure, fear. If a child, adult feels uncomfortable doing any position, exercise, stunt - do not be pressured by teachers, other people, peers to do it. Children have been injured doing gymnastics, other sports. Often they have a gut feeling, intutiton, 'COMMON SENSE' in their mind, warning them that the exericese is not safe, not right for them.

+ Tree climbing is a primitive sport that keeps the upper body, arms, shoulders, neck, heart strong and strengthens the entire body. Modern man has lost strength in the upper body as he spends more time in the office. Children like to climb trees. Adults feel they must go to a gym and climb artificial walls, structures so they do not look childish. Tree cliimbing is a natural, healthy instinct.

+ Rocking chair for any age, Old fashioned wooden Rocking Cradel for babies.
The ancient natural practice of a mother rocking, swinging her baby gently in her arms is the 'Swing' and relaxes the baby, improves its mental, emotional, physical health.
See Better Eyesight Magazine – Cataract Number, Feb. 1925.

+Native American Indain Running - A American Indain (Navajo from South San Francisco, CA) taught me that indains run through the woods, on the ground, trails, grass as a natural obstacle course, jumping rocks, logs, crossing rivers... They wear soft sole shoes, moccasins. They run for hours at a time, sometimes at a high speed, long distance without fatique.
Run on the beach, in the woods! Be careful when running in the woods; stay on trails or open areas to avoid tree branches hitting the eyes.

+ Walking 1–5 miles a day. Dr. Bates prescribed this for his patients. A older man started walking 6 miles a day, applied the Bates Method, good diet and obtained clear vision and perfect health. (wear good shoes.) Exercise brings blood, oxygen, nutrients to the head, eyes, ears and improves eye health, clarity of vision. Sitting all day=lowered circulation and unclear vision.

+ Muscle Stretching Exercises; legs, back, upper body... Yawn and stretch the whole body.

Natural exercise that occurs as when children run, play without thinking of exercising, 'easy automatic movement' is often the best exercise. The muscles, joints move completely normal.

+Reichian Therapy by Wilhelm Reich is used by Janet and Carina Goodrich, Natural Vision Improvement Method, Teachers. Some scientists disagree with his experiments, others work with it.

For more detailed information on the energy he studied; Read books on; Kundalini Energy, Yoga and
+Books by; Dion Fortune; Psychic Self-Defense, +The Problem of Purity, +The Secrets of Dr. Taverner,

+Esoteric Philosophy of Love and Marriage
+Robert Monroe - Books, CD's, and training at the Institute in Faber, Virginia, USA.
Energy strengthening, balance and other health improvement for mind, body, sprit.
Books; 'Journeys Out OF The Body', Far Journeys', 'Ultimate Journey'.
+Books by Alice A. Bailey for spritual growth, healing.
+Book by Leo Louis Martello - How to prevent psychic blackmail-The philosophy of psychoselfism-sensible selfishness versus senseless self-sacrifice
+NikolaTesla's energy, experiments may also be of interest.

Tony Little sells a reclining chair with heat and massage and it inverts, moves upside down for body slant, inversion, antigravity effect.
He also sells The Gazelle Edge. This is a whole body workout machine. Like a treadmill. Foot pedals are about 7 inches off the ground. The arms/hands also move with the feet/legs. Has the effect of walking, running in the air-less impact on joints. Exercise of the legs, arms, chest, neck, back, whole body with a bit of anti-gravity. Very easy exercise. People notice that it produces some natural joint, vertebrae alignment due to the synchronized whole body movement and muscle strengthening, relaxation. See his website at: www.tonylittle.com

Massage, Heat Pads

Heat, massage, acupressure point activation, energy circulation relaxes tense muscles and gets the joints, vertebrae, aligned, moving freely.

See the 'whole body heating pad' in the picture on the right. This pad contains built in (removable) tennis balls for the neck. (A softer ball made of rubber, foam... can be used). These press into and activate GB20 and B10 on the left and right sides of the back of the neck.
A small, soft, foam neck pillow is included on the pad to keep the natural curve in the neck. Tennis balls are placed on top of the pillow.
See the directions for use of the tennis balls on previous pages this chapter.

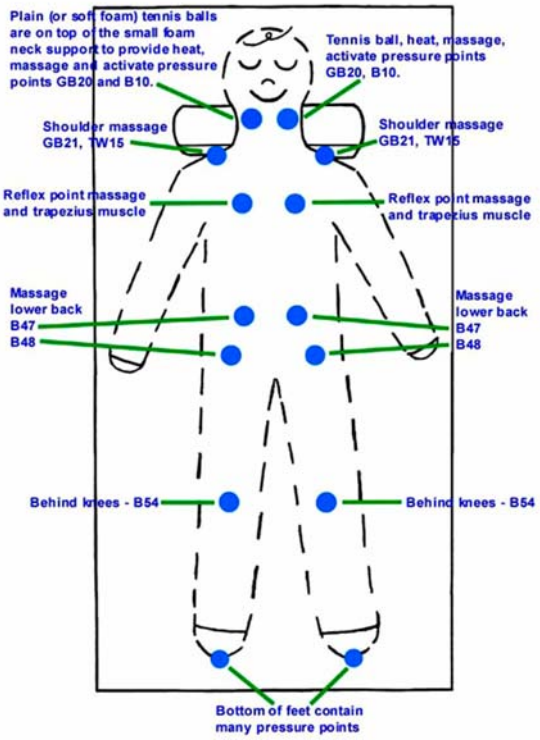
Other smaller balls are placed on the pad, left and right sides of the body to activate Acupressure points:
+GB21, TW15 on the shoulders,
+Reflex points/trapezius muscles on the back,
+B47, B48 on the lower back.
+B54 for back of the knees,
+Points on the bottom of the feet.
More balls can be added to activate, massage, relax additional points and muscles as directed by a physical therapist.
All massage balls fit into a secure pocket and are removable, can be moved on the pad. See blue dots.

Entire pad provide heat.
The tennis balls produce a optional light vibrating massage while pressing into the acupressure points.
This activates and improves flow of chi, nerve and other energies in the body, improves circulation of blood, lymph. Improves joint, vertebrae movement and muscle relaxation.

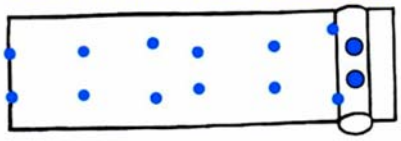
As described in previous chapters; electric currents

Whole Body Massage Pad with Heat.

Entire pad and raised massage areas (blue circles) provide heat, activates pressure points, chi energy flow and massages, relaxes the lower and upper back, shoulders, neck, legs, bottom of feet.



Massage balls can be removed or moved to various areas of the pad/body to massage, activate different pressure points and to fit each individual persons size as advised by a physical therapist.



Raised areas (massage balls) shown in blue provide heat, massage and press into, activate acupressure points on the back of the body: legs, lower and upper back and neck.
A foot pad with massage is added for the feet.
Do not place tennis balls and raised massage areas on the spine, vertebrae.
Place them only on the muscles/acupressure points.

disrupt the bodys natural chi and other energy flow.
Avoid lying on the pad when the electricity is on except for occasional brief massage. Heat the pad first, then lie on it with the electricity off. Wet heat is best, so soak in a hot tub of water before, after using the pad to prevent muscle dehydration.
The tennis balls also provide massage, acupressure point activation without the electric vibration.
Do not place the tennis balls and other small massage balls on the spine, vertebrae.
Do not fall asleep with the balls in the pad.
Do not use the massage balls if there is a broken disk, cartilage, vertebrae, bone.
If your neck, body is aligned, relaxed - you don't need the tennis balls and other massage.

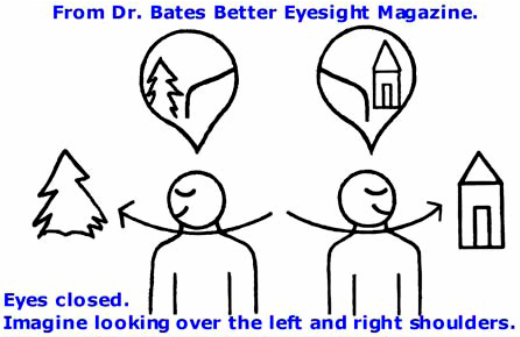
Directions;
Lie on the pad on the back.
Breathe abdominally and relax.
Feel the chi... energy flow through the acupressure points and send it up and down and throughout the body. Visualize it and relax deeper, feel it grow stronger.
Feel the muscles relax, release their tension.

Here is a activity from Dr. Bates Better Eyesight Magazine;

Sit in a comfortable chair with the back, head rested on the back of the chair. Eyes closed.
+Imagine you are looking over the left shoulder: Imagine turning the eyes, head and looking over the left shoulder.
+Then, imagine looking over the right shoulder.
Let the eyes move left and right.
First, do this without moving the head - just imagine looking over the shoulders left and right.
Then, do it with the imagination again, eyes still closed and also, physically turning the head left and right with the eyes as you imagine looking left and right.

Notice the eyes move under the closed lids when imagining looking left and right over the shoulders. The vision, eyes, eye muscles, nerves are controlled by the brain, memory, imagination, left and right hemispheres.

From Dr. Bates Better Eyesight Magazine.



Eyes closed.
Imagine looking over the left and right shoulders.
First do this without moving the head.
Then, imagine looking left and right and move the head with the eyes. Move relaxed, easy - look left, then right, left, right... no hurry.
Notice the eyes move under the closed eyelids when imagining looking left and right.
The brain, memory, imagination, left and right hemispheres... control eye movement.
This activity relaxes the eyes, eye muscles, brain, head, neck, activates easy eye movement/shifting and activates, integrates the left and right brain hemispheres.

This exercise gets the eyes and neck moving, relaxes the eyes, mind, neck and improves the memory and imagination, and the imagination, activation of the 'Swing', 'Oppositional Movement' as the eyes, head shift, move left and right. Imagine seeing objects in the viusal field move, 'swing by' in the opposite direction the eyes, head move to.

Do not hold the position too long to the left or right. Avoid neck tension.
This is for relaxation, not to stretch the muscles, (although some beneficial neck muscle stretcing occurs).
Turn slow, easy, continually, back and forth, left and right.
+Turn left – imagine seeing over the left shoulder for a fraction of a second to 1... seconds.
+Then turn right, imagine seeing over the right shoulder, fraction of a second to 1... seconds.
+Repeat left, right, left, right. Breathe deep, comfortable, relax.

Practice with the eyes; open, then closed with the imagination, then open again. Repeat.

27 - NUTRITION

A HEALTHY DIET = HEALTHY EYES = CLEAR EYESIGHT

Fresh, raw, organic, colorful vegetables, fruits, berries, whole grains, brown, wild rice and other natural foods keep the body, eyes healthy and vision clear.



Food, vitamins, minerals, and other nutrients that keep the eyes healthy and vision clear;

Dark greens, chard, spinach, dandelion greens with the flowers, stem, root, alfalfa, colorful dark blue, red, purple berries, bilberry, (bilberry fruit/berries, not the leaf), apples, yellow orange squash, yellow corn (maze- stone ground, salt free, not deep fried, yellow corn chips), red beets, unrefined whole grains, unrefined brown..., wild rice, oats, beans and other healthy food shown in the picture above keep the body, eyes, retina, lens healthy and vision clear. Lutein and beta-carotene natural vitamin A found in dark greens, chard, spinach, carrots, squash, dark blue, purple, red berries keep the eyes, retina, lens healthy. Red, itchy, sandy feeling eyes is often a sign of mal-nutrition and/or eyestrain, neck tension. Buy true organic-vegetables, herbs grown in complete nutrient rich soil.

The body eyes need a variety of nutrients;
Amino Acids from a balanced, complete food source protein; eggs, turkey, brewers yeast.., burrito with rice/beans/cheese/sour cream, fresh vegetables… mixed together for a complete protein and other nutrients. Whole grain bread, pizza crust, macaroni products is healthy if grown, packaged…organic.

Healthy oils; olive and sesame oil, fish oil (mercury, toxin free), fresh flax seeds in oatmeal and other healthy oils. EFA's-Essential Fatty Acids 3, 6, 9, with more 3.

Vitamin A – natural from Beta-Carotene food source, Vitamin C – natural from fruit, food source only, B-Vitamins for a healthy nervous system, muscles, entire body. Too much B6 can cause nerve damage but the correct amount is necessary for healthy nerves, eyes. B1, B12, B2, B3 (Niacin), B6, Folic Acid… all the B-vitamins are necessary. Niacin and B1, B12 nourish the nerves, rebuilds the nerves outer coating when injured or worn from too much alcohol. Niacin is healthier than niacinamide. Niacin can cure anxiety, depression.
Healthy food, vitamins improve nerve, eye muscle function, optic nerve… B12 cures many health problems but it is hard to find a doctor to give B12 shots because they know it will cure the patient, then they lose money selling drugs. B12 for 'sublingual under the tongue' is available at health food stores. Buy sugar/chemical free. Carpel Tunnel Syndrome and other muscle, nerve… impairment can occur due to a B-vitamin deficiency.

Other healthy nutrients are; Selenium, Chromium, Zinc, Lutein, Taurine, Rutin, Bioflavonoids, (orange, lemon, grapefruit peels, including the white part contain bioflavonoids) keep the capillaries in the body, eyes, retina strong. Lutein is very beneficial to eye health. Zeaxanthin, Hesperidin, Quercetin, Cysteine, Glutathione, Coenzyme Q10, legumes, beans, Iron, Choline, Lecithin, Vitamin K, Potassium, (Potassium is necessary for muscle relaxation, correct function, nervous system health, water/electrolyte balance in the body. Bananas, potatoes, tomatoes… provide potassium. Avoid over-dosing on potassium.), Manganese, Iodine, Folic Acid, Natural Vitamin D (D from sunlight is best) with Calcium, Zinc, Magnesium, (avoid calcium pills – they cause kidney stones, calcium deposits in the body, heart, organs, on the bones, joints, vertebrae in the neck, back, heel bone… Get calcium from full fat, Organic, Plain, full fat, sugar free Greek Yogurt and other natural sources.), Copper (too much copper is toxic), Biotin… Chromium exists in the body, eyes and is a necessary nutrient. Sugar destroys chromium resulting in lowered eye health and unclear vision.
Raw Organic Oatmeal with fresh ground flax seed is a old time healthy food. Roman meal, sugar free is a old time healthy cereal. Minerals must also be included in the diet.
Vitamin E – D-Alpha, natural only. (No DL-Alpha). Avoid overdose: too much causes unclear vision. Food source only! No pills!
Iodine is necessary for healthy thyroid. Seaweed/kelp is a good source but must be pure, free of mercury, toxins. Avoid overdosing on seaweed. Get Iodine from a variety of food sources. Most salt has iodine added but too much salt is not healthy. A little salt, sometimes more (organic, pure, natural Sea Salt from specific pollution free, high mineral areas of the ocean) is necessary, especially in hot, humid weather. (a correct amount, not too much or it raises blood pressure) Drink lots of water after taking the salt for healthy body, mobile joints, relaxed, stong muscles.

Dehydration causes muscle tension. Drink plenty of pure water. Salt and water are needed to prevent, cure dehydration. Drink enough water to clean the body/system and keep muscles, organs… hydrated. Lack of water causes a variety of health problems. Drink purified water. Twice filtered, then Steam Distilled is best but it removes healthy minerals… from the water so eat a healthy diet and take a organic vitamin, mineral supplement if your food source is not from nutrient rich soil.

All vitamins, minerals are best derived from a food source. Chemically made vitamins are not as healthy and some have side effects. Many eye health vitamins contain Eyebright and Bilberry Leaf (which are poison) and other toxins. Too much vitamin C and Calcium causes kidney stones but some is necessary. Do research and investigate all ingredients by obtaining info. from several sources that are not concerned with selling the products. Don't relay on the health food store sales person to tell you the truth. Talk to a natural health nutritionist, not brainwashed and controlled by the AMA, drug companies, expensive Health Food Stores. Even organic grocery stores sell food that is not truly organic. Laws had been passed that allow food that is not organic to be labeled organic.

I have not listed every nutrient necessary for healthy eyes, clear vision in this book because I am not a doctor and my experience/research is limited in this area. A Nutritionist that also specializes in natural health foods can provide more instruction. Study on your own but be careful; avoid overdosing on vitamins, minerals… You cannot believe everything written in books and on the Internet. Any idiot can write and publish a article book. A older man I knew at the Metropolitan Hotel in South San Francisco told me you can be healthy by eating a little bit of everything. Grazing.

American Indians, Old European, Eastern, American, Chinese... medicine has many foods, plants, spices, herbs, flowers, roots that are healthy for the body and eyes. Chrysanthemum flower is healthy for the eyes, vision, body. Careful: most Chinese and other stores sell herb products containing MSG, Sulfites, Nitrites, Ammonia and other toxic chemicals that impair health, cause migraine headaches and unclear vision. A few stores are now starting to sell chemical free nutrients. Be sure to order only organic, chemical free. The Chinese have medicine to cleanse, strengthen, improve health of the liver, kidneys, eyes for clear vision. See page 356. Buy and use organic spices, a form of herbs, plants, flowers, roots, vegetables. Italian food contains healthy spices. Tea can be made from spices. Study the amount to use, the health benefits, effects of each spice. Sprinkle a bit in hot water and drink.

Many health problems, unclear vision are caused by toxins in the body.
Fasting is a ancient health cure. Fast for a few days, weeks and eat organic apples, apple cider vinegar, pure water, oatmeal to cleanse, purify the body, eyes. Clear vision will return.
A website providing very old, home remedies, time tested, effective health treatments is at;
www.bragg.com Jack Lalaine improved Paul Bragg's health and started him and his family on a lifetime of work on natural health foods. See the organic, raw, apple cider vinegar and honey drink. Breathing, Pure Water books. People living over 100 years claim to drink the cider vinegar mixture. It cures arthritis, helps balance the body's PH. This helps the neck move, relax.
The AC vinegar, honey mixture helps keep capillaries in the eyes clear. Eat a apple after or before the vinegar drink for added benefits.

The best fruit, vegetables is eaten in a fresh, raw state. (Clean well to remove parasites, worms from the soil they are grown in.) A raw state preserves the nutrients and the live cells in the food. Cooking vegetables and any food kills the cells and destroys some nutrients. Some food must be cooked a certain amount to enable digestion. The next best food is Frozen. Must be frozen immediately upon harvest to prevent cellular, nutrient decay, loss. Food that thaws and is re-frozen loses nutrients and the cell structure breaks down. Feel a box of vegetables in the frozen food lane at the supermarket. If the vegetables are on only one area of the package, clumped together, this can indicate they were refrozen one or more times. Canned food is unhealthy, very little nutrients, cell structure gone, a dead food. Chemicals are added and poisons can grow in the can botulism... Rare, but it happens.
Dried food is also unhealthy. Sun-dried tomatoes, berries, vegetables, herbs... have some healthy nutrients (not as much as fresh), but the cell structure is gone. Most businesses that produce dried food add chemicals, preservatives. Packaged vegetables often contain bacteria and chemicals to fight the bacteria.

Fresh, live bean, alfalfa... sprouts grown at home, rich, organic soil, eaten fresh from the garden contains live cells, fresh vitamins, minerals...

Plain, full fat, sugar free Greek Yogurt for healthy intestinal bacteria, immune system. Yogurt contains healthy bacteria. The bacteria can also be consumed in pill form, but is best when yogurt is added.
A Probiotic containing; L. acidophilus and a variety of other healthy bacteria. A very good product is; Jarro-Dophilus EPS. The Greek Yogurt and this product can be applied externally on the bladder opening to help prevent stinging from a sensitive bladder opening, help prevent infection and itching. (Always check with your doctor first to be sure a real infection is not present.) The yogurt can be placed inside a females body, (as a tampon is used, using only the applicator, not the tampon. Or a straw-like applicator for other cream inserts can be used.); place a full applicator inside. This helps prevent itching, bladder infections. It is a old farmer's remedy. Also eat the yogurt and pill.
Cornsilk tea will also keep the bladder, urinary tract, kidneys healthy. Sugar-free cranberry pills or fresh or frozen cranberries also keep the bladder healthy. The vitamin C content in the berries can cause stinging if the body is too acidic. If the body is too alkaline: infection can grow. A perfect PH balance, little bit more alkaline has many health benefits.

More Nutrition For Clear Day and Night Vision

The eyes, vision adjust to light and dark, day and night vision by producing, controlling visual purple in the eyes retina. Bilberries, dark green leafy vegetables, carrots and other healthy food and sunlight is necessary for this eye function, clear day, night vision. The eyes need vitamin A to create visual purple and other functions in the eyes, maintain eye health and clear night vision. Too much vitamin A is toxic to the body, liver... and can result in unclear vision. Health of the liver and kidneys directly affects eye

health and vision. To obtain a safe, correct amount of vitamin A; avoid vitamin A from pills. Take Beta Carotene and get it from food; carrots, dark greens and other food sources.

Bilberry (the berry, not the leaf!) contains many ingredients for healthy eyes. European pilots in World War 2 ate bilberry jam before flying at night for clear night vision. Bilberries have a dark red/purple pigment, juice. Darker than blueberry.



The liver and kidneys have a direct affect on the health of the eyes and clarity of vision. Deep fried food-lard, trans-fats clog the liver. Exposure to chemicals impairs the livers health. Eat healthy food for a healthy liver, kidneys;
Dandelion; the whole plant; root, leaves, stem, flower and Milk Thistle herb purify, improve the health of the liver. Raw Red Beets. Cornsilk, the 'strings' inside and growing out the top of a ear of corn is a old healthy food for the kidneys, bladder and other body organs. Eat raw or make as tea. It can be dried and stored for the winter. Yellow Corn has a healthy nutrient for the eyes. Cranberries, no added sugar, are healthy for the kidneys.

Lutein, a carotenoid-I meet older people that buy organic lutien pills and it improves their vision. Find a natural food source of lutein-spinach, other vegetables, foods.
Too much alcohol harms the liver. Most drugs impair liver health, including prescription and non-prescription drugs anti-acids and other drugs.

Parasites, worms can live in the intestines, liver... and lower body, eye health. Soar, stiff joints, fatigue, sinus congestion, indigestion... and other health conditions can be cured by removing parasites. Wormwood is an old Spanish herb for removing parasites. Drink it as a tea 1-2 days. Be careful, it can be poison - follow directions exactly. Do not use wormwood oil-it is too strong and very toxic.

Food/Chemicals that cause Unclear Vision and Eye Health Impairment;

+White processed sugar.
+High fructose corn syrup. High fructose corn syrup causes inflammation in the body, joints and other health problems. It is not natural, it is made by a chemical process.
+Too much of all sugars, even organic, raw cane... is not healthy all the time but a little natural, raw, organic sugars; cane, maple syrup, molasses, honey occasionally is ok. Most people notice their vision lowers when they develop the sugar habit, mainly processed, unnatural sugars.
Sugar causes cavities and tooth loss, one reason being that it destroys the vitamins, minerals the teeth need to remain strong, prevent bacteria, decay. Eat mineral Rich food. Rinse the mouth with water after eating sugar.

Stevia is a natural sugar substitute but businesses are mixing it with chemicals, unhealthy sugars, processing it. My opinion is that Stevia has not been tested long enough for side effects. It makes my body feel strange, 'off'.

+Aspartame and other artificial sweeteners in diet soda, diet tea, many diet drinks/food, sugar-free cookies, cake, ice cream, candy, sugar substitutes for coffee, sugar-free cough drops, mouthwashes, toothpaste is toxic. Toxicity increases, multiplies when it's heated as in coffee, or at room temperature, in sunlight... in soda bottles. Aspartame causes many eye/vision problems, is toxic to the optic nerve, eye muscle nerves, causes; muscle dysfunction, tension, weakness, (this includes neck and eye muscle dysfunction...), balance problems, joint/vertebrae pain, swelling, stiff muscles, joints, shaking of the hands, legs, arthritis, M.S. symptoms, seizures, brain tumors, and many other health problems. Politicians promised jobs, money from the drug companies allowed it to pass as safe even though studies prove it as harmful. The company's that sells aspartame send out news reports stating that aspartame is only harmful to a few people that are allergic to it. This is false. Aspartame is harmful to all people, even if they don't notice health problems immediately, the aspartame is causing injury to the body. Television news stations, newspapers will not warn the public about the health problems caused by aspartame (phenylalanine). They state that it is safe because the pharmaceutical companies basically own most television stations, newspapers, magazines due to the large amounts of money the drug companies pay to place ads for drug sales on TV, radio, newspapers...
A major pharmaceutical company makes, sells aspartame to the food industry.
The drug company also sells drugs for; anxiety, panic attacks, depression, hyperactivity in children, muscle disorders (M.S.), seizures and other health problems all which are caused by aspartame.

Many health problems are cured by stopping use of aspartame. Aspartame is addictive. When first consumed it acts like a antidepressant bringing good mood and energy. This is soon replaced by

depression, anxiety and other health problems. It can take two weeks-30 days for withdrawal of aspartame and longer to repair other health impairments. Some people state that years later they still have muscle, joint impairment and other health problems from the aspartame.
Most doctors will tell their patients that aspartame is harmful only if taken in large dosages. This is false. Health problems occur from ingesting a very small amount. Many people that drink aspartame and must go to physical therapy for muscle dysfunction treatment would be easily cured if their doctor/therapist would insist they stop consuming aspartame. YouTube has many videos showing the health problems caused by aspartame.

+White processed flour, wheat, white macaroni, spaghetti... Whole organic grains are best.
Some people cannot digest certain grains. A few processed and organic whole grain products are contaminated with non-food substances that are causing health problems; nausea, extreme weakness, other illness, strange chemical smell from the skin for days. I have experienced this 5 times after eating a whole grain product from the local supermarkets. When I eat a different brand, I feel fine.
+Margarine, hydrogenated fats and oils, trans-fats, palm oil.
+Diet and plain soda.
+Caffeine - caffeine dehydrates the body, muscles, causes muscle tension in the body, neck, eyes, and too much impairs health, function of the nervous system, optic nerve, eye muscle nerves. Caffeine destroys potassium, calcium, B vitamins and other nutrients needed for relaxed normally functioning muscles, strong bones, good health.

+Tea impairs health of the nervous system and contains a different but very unhealthy type of caffeine. Tea destroys iron in the body resulting in anemia. China sells Americans this black and green tea with caffeine. The Chinese drink a healthy green and other teas made from herbs, green vegetables, flowers, plants that are naturally caffeine free and healthy. Much of the tea and herbs they sell to the United States and other countries contain caffeine and toxic chemicals including sulfites, nitrites, ammonia...
Decaffeinated coffee, tea is usually decaffeinated with chemicals which are toxic. It must be Naturally Decaffeinated with water only! I know a 105 year old lady that loves Coco and Cream of Wheat. Another lady, heavyset, drank coffee and lived over 105 years. A little coffee may be ok? Buy organic.
Cafix, a coffee substitute made with chicory, Barley, Figs, Red Beet is healthy. It can also be added to coffee. It helps balance the body's PH and keeps intestinal bacteria healthy.
+Dark chocolate, cocoa made with natural organic cane sugar or honey, molasses or plain without any sweetener has health benefits, boosts immunity, and improves mood but it causes some people to get migraine headaches which lowers the memory, imagination, concentration and clarity of vision. Try organic. I no longer get migraines since using organic dark chocolate. It has anti-oxidants.
Cocoa, chocolate is healthier than coffee, caffeine, tea and artificial caffeine in soda.
Dark chocolate acts like a antidepressant, improves sleep, has a relaxing and energizing effect without the nervousness, nervous system health impairment and dehydration that caffeine and tea produce. It does not affect the part of the nervous system that coffee and tea effect.
That is why chocolate gives energy without shakiness, jitters. It relaxes the body.
Chocolate causes some people to experience stiff joints, muscles, when consuming too much. This is noticed more in the summer in hot, humid weather. It may be from the processed sugar added to most chocolate bars, drinks. My Natural Vision Improvement Teacher says chocolate destroys calcium.
Avoid Chemicals
In 2008 Chinese businesses placed a poison chemical (melamine, a chemical used in plastics) in pet food that was sold to United States citizens. The chemical causes kidney failure and other health problems. Many animals died or now live with impaired health. Recently Chinese businesses placed this same chemical in dry and liquid milk and baby formulas in china. Chinese babies died and many are ill. The chemical is now being found in Chinese candy and other food products in china and sold to United States. Dry, powdered milk, soy and rice... milk, sports drinks, protein powders, sugar, flour, rice and wheat, grain pastas and other foods from china, and one type of sugar from Japan have been found to contain melamine and possibly other chemicals, unhealthy ingredients added to the food.
Avoid food imported from china and other countries.
I like the Chinese people, citizens, I worked for them for 4 years in California, at Brothers Restaurant in Burlingame. Jewish restaurant owned by a sweet Chinese man and woman. Retired Chinese Air Force military man. Very kind hard working people.
China's business owners and government need to learn respect for life, health and to inspect their food companies, products.

+Too much Soy, especially GMO soy, and soy cooked, prepared incorrect can lower the clarity of vision, impair digestion, and absorption of vitamins, minerals, protein, iron, impairs thyroid hormone function, causes gout, pain in the big toe, muscle tension in body, eyes, impairs tolerance to sunlight and causes other health problems.

If I eat soy for a couple days I will notice my vision is less clear and when I do sunning and look at the bright sky the sunlight and other light appear as 'a large blurry, hazy, ball of glare'. When I stop eating soy for a few days the sun and light returns to normal size, clarity, no haze or glare and vision is clear.

Doctors are stating soy causes breast cancer. I do not know how the Orientals eat soy and live healthy to an old age. They must prepare it a certain way, use natural soy, no GMO and eat iodine source foods and other food; fish, vegetables, minerals, vitamins... that prevent soy's negative effects.

If you eat soy and are experiencing abdominal pain, foot pain, fatigue, weakness and other health problems; stop eating the soy. In one to two weeks the health problems will go away.

Soy is in many foods; muffins, cake, cookies, cereals, bread, baby formulas... contain soy flour.

Eat onions, seaweed, a little iodized sea salt (organic) to obtain iodine to keep the thyroid healthy.

Find a honest authentic oriental cook and learn the correct way to cook soy and the amount to eat.

+Sulfite's, sulfates, nitrites, nitrates, MSG and other chemicals, preservatives, smoked foods, genetic engineering and unnatural substances in food, herbs, drinks cause migraine headaches with impaired vision, gout and other health problems. Sulfites, nitrates are in; hotdogs, baloney, salami, pepperoni, processed meats, smoked meat, fish, wine and other food. Buy organic; sulfite, sulfate, nitrite, nitrate, msg, (all chemicals) free food, drink, wine, beer and avoid morning headaches, blurry vision, health impairment. Buy the new, chemical free organic pizzas.

Coors beer is free of chemicals and is made with pure Colorado mountain spring water.

I have never had a headache and hangovers are my mild when I drink Coors beer.

Ingredients in red wine (organic; no sulfite's, nitrates, chemicals) can extend life, maintain good health. Alcohol free wines are available. Be sure the alcohol is removed naturally, no chemical process...

MSG causes many health problems.

MSG causes temporary migraine headaches with flashing lights in the eyes/visual field, blind spots and other visual impairment and blurry vision at close and far distances that can last for days.

MSG and other toxins are labeled under different names to fool the consumer; yeast extract, vegetable protein... See www.truthinlabeling.org

+Avoid chemicals in soap, detergent, shampoos, deodorants, plastic bottles, food containers, cleansers, toothpaste, skin cream, face/eye makeup, eye liner, chemicals at work, prescribed artificial and non-prescription hormones, radiation, antibiotics, pesticides in meat, vegetables, fruit, milk, dairy.

Pure, clear, unscented, chemical free glycerin soap used for shampoo, bar soap, to clean cloths, dishes... is a healthy alternative to soaps/cleansers containing chemicals.

A old eye makeup/liner from India called Kajal (when made from a natural chemical/toxin free source) is a type of black eye liner that is healthy for the eyes. It used to be made from natural oils, plants... and did not cause irritation. Modern manufacturers have changed the original formula and now use chemicals and other ingredients that impair the eyes health, clarity of vision, cause red eyes and irritation. People in certain areas of some countries develop cataracts. Is it the diet, area they live in, something they put on your skin, eyes? It is best to avoid eye, skin makeup. Hair dye has many toxic chemicals, causes a variety of health problems, red eyes, travels into the eyes, lowers eye health, clarity of vision. Avoid permanent eye makeup, tattoos and drugs, substances to make the eye lashes grow, thicken. It harms the eyes health, vision and changes the color of the eyes iris, skin around the eyes, other areas of the eye. Glaucoma, cataract can develop.

+Plastics contain a variety of chemicals, toxins, unnatural, harmful xeno-estrogen's, BPA, melamine ... that cause health impairment such as; hormone imbalance in women and men causing reproductive health problems; breast cancer, prostate enlargement, cancer, fibroids, ovarian cysts, endometriosis and other health problems.

Food and drinks stored in plastic bottles, containers, wrappers absorb these toxins.

When hot/warm food, liquid is stored in plastic containers, bottles, even for a short time while consuming the food/drink, the toxin absorption increases.

Recently the news stations have stated that leaving plastic soda, water bottles in the sun causes toxins

to be released into the beverage and this causes health impairment.
The truth is that even cold beverage/food stored in plastic absorbs toxins.
A new television, newspaper broadcast , September 17, 2008 states; that BPA in plastics, cans may also cause diabetes, heart disease and other health problems.
Foods containing fat; cheese, milk, mayonnaise, butter also increase absorption of toxins from plastic containers. Heating food in plastic containers (Tupperware...) in microwave ovens is most harmful. Avoid drinking water, soda... from plastic bottles. Avoid plastic containers, bowls, plates, utensils, bottles.

Avoid cooking in/eating, drinking out of aluminum pans, cans..., avoid cooking in non-stick pans. These substances are toxic and cause health problems. Coffee makers usually have a aluminum container inside the machine and coffee pot. The hot coffee soaks up the aluminum.
Cook in pure iron, glass.
Store and consume food/drink, beer... from pure glass bottles, bowls...
Glass containers must be lead free, pure glass only.
Buy organic milk in cardboard/wax cartons (pure organic paper/wax).
Use organic pottery (free of lead, copper and other toxins).
Wrap cheese and other foods in pure organic wax paper.
Keeping warm or cold milk, baby formulas, juice in plastic baby bottles causes toxins from the plastic to enter the liquid and baby's body causing health impairment.
Some plastic bottle companies state they have removed the toxic chemical (BPA) from their bottles but there are other unhealthy chemicals in the plastic.
Blue bottles made from a different plastic like substance also contains chemicals.
Foam coffee cups contain chemicals. Use paper cups with chemical free wax coating.
Some cans contain toxic BPA, aluminum, plastic inner coating and other unhealthy chemicals.

+Natural Progesterone Cream – Causes dizziness, vertigo, thyroid dysfunction with extreme weakness, fatigue, migraine headache, extreme muscle tension, many health problems, often causes the problems it will cure at first, then has a opposite effect and causes/increases health impairment. The cream takes months for it to get out of the body, skin when the person stops using it.
It prevents the body's natural conversion to a different hormonal state that is necessary to maintain good health for the second half of life for 40-50+ more years after the middle age transition.
People are wondering if the cream can cause stroke and other problems that the artificial HRT in birth control pills, synthetic HRT sold by the Drug Companies cause.
Parabens in skin creams and other products are unnatural estrogens that impair hormone balance, health.
Women and Men have been abused by their doctors, the drug companies for years: unnecessary operations, drugs that cause more health impairment, death, information on natural cures hidden... Men are also victims of this malpractice. Plastics, growth hormone and other unnatural hormones, chemicals in milk, meat, other food, drink, all forms of soap... dyes, cosmetics, napkins, chemicals and other toxins in building materials, furniture, carpet for homes, our drinking water... and all prescription and non-prescription drugs cause reproductive health impairment and many other health problems.

Cabinets, furniture, walls in homes, apartments, vehicles... made of crushed wood, a type of wood that is made of pieces of wood scraps pressed and held together by glue and other toxic chemicals. Formaldehyde is a main chemical produced by crushed wood. These chemicals cause breathing problems, other health damage. Mobile homes given to residents of New Orleans after the Katrina hurricane contained this toxic wood. People became sick. Many carpets fibers, carpet under-liners and glue used to set the carpet in place contain formaldehyde and other toxins. Bed mattresses contain chemicals.

+All drugs, prescription and non prescription cause many different eye problems; unclear vision, cataracts, glaucoma, macula degeneration, impaired tolerance to sunlight and artificial light...
Pain relievers for joint, muscle pain, inflammation and cough, cold syrups, drugs contain Acetaminophen and other toxins that cause liver and joint damage and other health problems.

Never take alcohol with these drugs. Even without alcohol, the drugs cause liver damage.



The giant hogweed, which can reach 15 feet in height, causes severe burns and can cause blindness in humans who come in contact with it.

Some herbs, plants, berries improve vision and eye health and some impair eye health and cause unclear vision. Be careful when picking your own herbs, berries... and don't rely on people at the health food and vitamin stores to tell the truth about side effects. Most of them only want to sell the product.
Giant Hogweed a plant native to Central Asia was fond in Massachusetts. It has a substance on parts of the plant that burns the eyes, causes blindness when the substance gets on the eyes, usually by the person rubbing the eyes with the hands after contacting the plant. Do not touch the eyes, face when walking in the woods. It grows high, be careful not to walk into it.
Black cohosh, vitex, and other herbs cause migraine headaches, hormone imbalance, concentration, memory problems and impair blood flow to the head, eyes.
Eyebright, a herb sold in health food stores for eye health can impair the eyes health.
Maca sold in Spanish stores, health food stores impairs thyroid function and can cause hormone imbalance.
Bilberry Berries: the fruit (berry) is healthy for the eyes and improves clarity of day and night vision but the bilberry leaf is poisonous. Bilberry has anti-platelet effects, keeps the blood from clotting so it cannot be taken with aspirin, drugs to thin the blood. Check the effects of all herbs, fruit, food. Eat the correct amount, the correct way.
Kava Kava causes liver damage, impairs eye, body health.
Too much vitamin C especially in pill form causes kidney stones, heartburn.
Too much calcium causes calcium deposits on the neck vertebrae, spine, feet/heels and other bones and deposits in the arteries, heart and other organs, joints... stiff immobile joints muscles in the neck, back, body occur, heart attack... The correct amount of calcium, magnesium, zinc and other minerals, vitamins, natural vitamin D and other nutrients are needed together, in balance to absorb calcium and other nutrients correct. Sunlight and food are the best natural sources.
Rose Flower Petals (a certain type) is healthy, relaxing but most businesses add chemicals to the flower. Read-'The Change' by Germaine Greer for natural middle-age health and transition. People can experience extreme joint and muscle stiffness in the late 40's, early to middle 50's as the body's hormones change. Temporary neck muscle and joint tension can temporarily affect and lower the vision. After hormones change, a new life, rebirth occurs. A good diet-stiffness cures itself, vision is clear.

+Peanuts are healthy but they are legumes/beans (not true nuts). They must not be eaten raw. Raw peanuts and the shells contain substances that can cause health problems. Peanuts must be roasted without oil, not deep fried. Salt free. Some people are allergic to peanuts.

The American Free Press is a newspaper that prints the truth about toxins in food, water, food containers and truth on many other subjects.
The information they print is not revealed on television news, newspapers, radio for months, years after it is first published in the American Free Press.
The American Free Press used to be called 'The Spotlight'.
The U.S. Government (along with other countries) closed it down because the paper was revealing the truth about poisons in our food, water, air, corruption in government, business, politicians.
The American Free Press printed the truth about chemicals in plastics, drugs in our water supply, hormones, radiation, GMO's and other toxins in meat, milk, entire food supply, toxic mercury in tooth fillings, thyroid hormone imbalance and other health problems caused by soy products and many other hidden facts 5, 10, 15 + years ago.
They also print natural health cures hidden from the public.
They have a special section in the paper on health. www.americanfreepress.net

Avoid drugs, liquids for heartburn, acid reflux. They contain chemicals and other ingredients that cause a variety of health problems. They increase acid indigestion when the drug wears off.
Digestive Enzymes, from a natural food source; vegetables, fruits, plants, organic food sources is a natural healthy cure for heartburn, improves digestion of the food and absorption of vitamins,

minerals, proteins, nutrients. Health food stores sell digestive enzymes. Buy enzymes made from organic food source only. No chemicals added.
Source of life - Vibra-Gest by Natures Plus Enzymes are good.

Yellow cornstarch/flour added to the morning cup of naturally decaffeinated coffee or whole grain beverage keeps the body's' blood sugar balanced.
Yellow corn is best, has nutrients for the eyes.

Avoid prescription and non-prescription sinus, nasal sprays. This includes plain saline sprays sold in the drug stores. They contain chemicals that impair the vision, eyes and body's health, cause unclear vision, a variety of visual disturbances, glaucoma, cataracts, loss of color perception.

A natural spray to relieve sinus and ear tube congestion, infection, dizziness is; Euphorbium homeopathic spray (now called Sinusin). www.heelusa.com. Use only when necessary. Even this natural product lists side effects.

Use completely natural methods; good, clean air quality, drink more water, use the sinus flush in Chapter 26, Physical Therapy, get moisture into the air with a warm steam humidifier filled with pure water, and a little salt, good diet, drink enough water, good acid/alkaline balance, avoid chemicals, fumes... that can disrupt the body's hormone balance, lower immunity, infect the sinuses.

Be aware that dishonest businesses sometimes purchase a honest business and sell their products under the same name but add in toxic chemicals, alter the original ingredients.

Natural cure for sinus congestion, allergy to pollen; eat raw, organic Local Honey-honey made by bees from flowers, trees... growing in your neighborhood. Acts as a immunity shot.

Here is a natural old cure for head lice; avoid chemicals in lice shampoos, treatment. In the old days families would soak the head, hair in olive oil or mayonnaise and keep it on long enough to suffocate the lice. The lice eggs are then combed out with a very fine comb to prevent re-infestation. New chemical free formulas are now available.

Raw, fresh, organic cow and Goats Milk, straight from the cow, goat/farm provides many health cures. The diary industry is trying to put raw, organic milk farmers out of business. Processed, non-organic milk causes health impairment. Buy hormone free milk. No growth or other hormones. Low fat milk loses much of its health benefits and because the natural structure is altered, the milk is unhealthy.

Natural weight loss; drink grapefruit juice when eating fat. The grapefruit prevents the fat from being absorbed. Grapefruit also interferes with certain drugs, so avoid it if taking drugs, medicines. I do not know if grapefruit blocks absorption of vitamins, minerals, nutrients.

Avoid glucosamine and chondroitin supplements! Scientists are trying to determine if it's the glucosamine, chondroitin or other ingredients in some joint formulas that are causing side effects. It is best to be safe and wait for more results of studies. Side effects occurring; possibly cataracts and other vision problems, heartburn, intestinal upset, rash, hives, painful skin eruptions, difficulty breathing, tightness in chest, swelling hands, mouth, tongue.., migraine headache, blood sugar, insulin impairment, raised blood pressure, heart rate, palpitations, soar, swollen, inflamed joints, pain in joints, impaired joint movement, growths on joints, bone growths, spurs... (similar to calcium deposits that can occur on heels, neck vertebrae, bones, joints), possibly deposits in organs, heart, arteries...

Beware of natural health food products-they are often as harmful as prescription drugs. Advertisers swear the joint formulas work, but businesses selling coral calcium said the same thing about their product and it turned out that the calcium pills cause health problems. Shellfish is the main source for the joint formulas but, are the amounts in these pills normal, safe as eating the food itself? Allergies? Sulfate sources cause migraine headaches, vision disturbances. Natural sulfur from cabbage, food is ok-no migraines as far as I have experienced.

Natural Glucosamine HCI only, derived from corn, along with SULFUR from cabbage and other food sources might be beneficial but eating natural food is best. Corn is a natural source of glucosamine HCI but I do not know how the HCI product is made, if its healthy, safe. (Must be without sulfate. Sulfate, sulfites, nitrites, nitrates cause migraine headaches and other health problems.) What part of the corn, cob... is used, can people eat this naturally instead of buying the supplements?

Natural organic food source silica, gelatin, sulfur and bioflavonoid may help repair the joints, cartilage, ligaments... Silica can rebuild, grow cartilage, joints, ligaments, fingernails, hair, bones and has other health benefits... but it can build up like sand in the body, kidneys and cause kidney stones

and other conditions if too much is taken. Silica is in some joint formulas. Its best to get Silica from food; whole unrefined grains, apples, oats, peanuts, raw cabbage, fish, some water supplies. Check a few good books, nutritionists for a complete list.

I have had good results with one joint formula that is derived from food, corn, supposed to be completely natural, a liquid form but I still get side effects. I had to try it to repair neck ligament, cartilage damage caused by the bad chiropractors. It seemed to help. I read that taking HGH-Human Growth Hormone causes stiffness, pain in the joints as it grows new cartilage. Maybe glucosamine is similar. Glucosamine exists in the body but is it safe to consume it or is it best to eat a healthy diet, food that enables the body to create its own glucosamine?

A natural food source glucosamine from organic, humanely raised chicken; chicken soup with whole chicken, real bones, marrow, cartilage, gelatin, and onions, cabbage for natural sulfur, correct natural amount of silica, natural collagen and other nutrients added to the soup may help rebuild cartilage in the neck, back.., bones, ligaments... A Chinese lady says to eat other parts of the chicken too, not just the meat. Said Americans have lost the original way to eat natural, healthy. Avoid swallowing the chicken bones, do not cut, break them open when preparing. Chicken bones can cause splinters that get caught in the throat, stomach, intestines. Never feed dogs, cats, pets chicken, turkey, bird bones. When cutting a chicken, bird, any food with bones; cut through the cartilage, joints only. Never through the bones. I was taught this by my cooking teacher Carl Tatem, retired Army, (Cute Black African American man!) in San Mateo California when I was taking job training, homeless, trying to move into a hotel, at age 20. He was the first person to teach me dexterity, brain hemisphere balance.

Most ingredients in Joint Formulas can be made naturally by the body when a good diet, food source is supplied. Organic chemical free Fish Oil, alkaline foods, rutin, potassium, vitamin K... Buy a good vitamin, mineral, nutrient book that lists the health benefits of nutrients and food sources.

A natural diet, old farm remedy for arthritis in the neck, body; Raw, organic apple cider vinegar with the mother mixed with raw organic honey (no sugar fed bees). Mix with pure water if it's too strong on the stomach. Drink daily or 3x... per week. It cleans out plaque and other hard deposits in the veins, arteries and the tiny capillaries that travel to the joints, vertebrae, cartilage. Circulation improves.

Then the Apple Cider Honey mixture cleans out the stony plaque.., deposits in the joints. This helps the vertebrae, joints move and repair, the body to rebuild the cartilage naturally. It also cleans out the veins, arteries, capillaries that travel to the head, brain, ears and eyes, improving their health, function. It is a very old remedy and many people over 100 years old recommend it for a variety of health benefits. My neighbor in Daly City, California cured her dog of arthritis with this mixture. It took one month, then the dog could walk without dragging its legs. It contains potassium. Read more, Bragg Health books on page 348.

Extensive free information for Eye, Body Nutrition see: http://www.janetgoodrichmethod.com/
Janet and Carina Goodrich – Bates Teachers.

http://www.rawfamily.com/index.htm Raw Foods.
www.curezone.com is a website containing thousands of people discussing, selling natural cures, health information, truth about drug side effects and natural cures your doctor, drug companies won't tell you. Remember; use good judgment, investigation; some people selling natural cures, medicine, herbs... are dishonest and will sell harmful products, but many are honest people, selling safe, effective natural cures.

Thomas Quackenbush Bates Teacher has a course on Nutrition for the Eyes, Body, Natural Dentists, Soil Treatment to improve nutrient content of garden soil, full spectrum lights...
http://www.naturalvisioncenter.com/ http://www.naturalvisioncenter.com/Other.html
Move to the middle, bottom of the page 'Other Resources' to see all links.

http://www.resourcesforlife.net/product.asp?product=9
http://www.ppnf.org/catalog/product_info.php?cPath=39&products_id=153&osCsid=d84508f62c5e4aa337aee99f6be074dd
http://mizar5.com/rao.htm

Chinese Herbs Direct' sells chemical free Chinese Medicine. http://www.chineseherbsdirect.com/
Chinese Herbs Direct- Herbs Direct, LLC
2475 Skypark Dr, Suite 102

Torrance, CA 90505 1-877-252-5436

Careful, they do sell some herbs that are not healthy; such as Black Cohosh… but I have had benefit from their 'Ming Mu Di Huang Wan' Teapills by Plum Flower and they have organic Chrysanthemum whole flower when in stock. 'Chinese Herbs Direct' sells a chemical free product of Ming Mu Di Huang Wan-Ancient Chinese Eye, Vision, Health Formula; 'Ming Mu Di Huang Wan Teapills, Plum Flower Chinese Herbs Direct'. Read the label, ingredients for each product. Contact customer service if needed to verify best, pure products, correct use. Retailers sell different brands so check for the brand shown here and double check that all ingredients are exact; no new ingredients added and all original ingredients are in the formula.

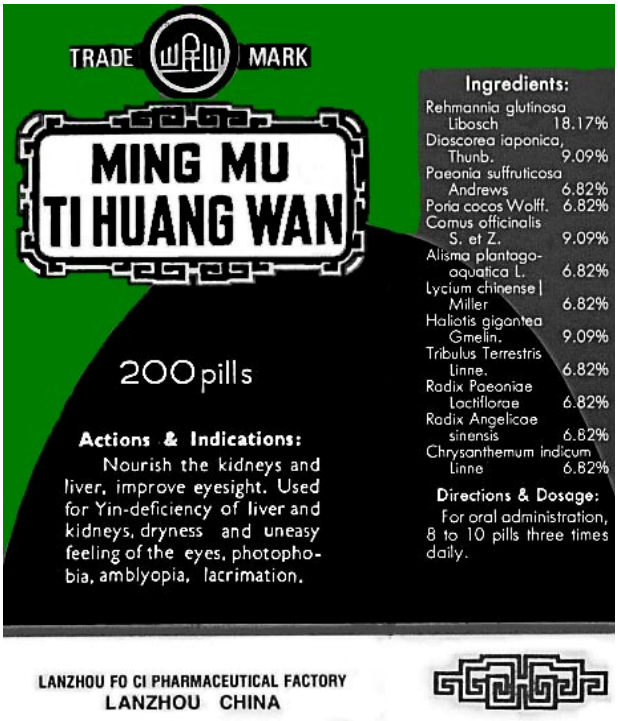
Ming Mu Ti Huang Wan

Ancient Chinese Formula. Produces very clear vision and healthy eyes. Improves circulation to/in the eyes, head, brain, improves liver, kidney, eye health. Hard to find the original, authentic formula, a organic, chemical free product, pure ingredients. Many new formulas are missing ingredients and/or contain new ingredients that cause side effects: sulfites, nitrites, MSG, ammonia and other chemicals and herbs that cause migraine headaches, partial temporary blind spots, lights in the visual field, other visual disturbances, blurry vision and impaired health. The true formula does not cause migraines, visual disturbances, blur or other side effects unless the person is allergic to the herbs, food in the product. The only formula I have ever found that is the true, authentic formula, no side effects, brings my vision to better than 20/20 at close and far distances in only 1-2 days is the one shown on the next page. I purchased it after being referred to a Chinese store with a copy of the authentic bottle given to me by my Natural Vision Improvement Teacher Thomas Quackenbush when he taught on Taravel Street in San Francisco, CA, near Golden Gate Park and the Pacific Ocean. Cable Car access. The Chinese store address is provided in the pictures. I do not know if the same people run the store and sell the same formula. This is a copy of the original bottle and ingredients. The original box says Ming Mu Ti Huang Wan. Manufacturer says the word Ti and Di is the same but it may be best to buy the product that lists Ming Mu Ti Huang Wan.

Chinese Eye, Liver, Kidney Health Tonic Pills

Ming Mu Ti Huang Wan

Natural Chinese Formula For Clear Eyesight





The author of this book, Clark Night has used this formula for many years and always obtained clear vision and improved health. Ask for Organic, Chemical Free only. I have experienced migraine headaches, lowered vision when consuming a formula from a retailer that lies to me; 'says it is chemical free, organic when it is not'. Only the pure formula is healthy. It does improve, increase blood flow to the head, eyes. Check with your doctor first if you have any health condition of the body, eyes or may be allergic to certain herbs, food, combinations. Allergies can cause a headache. Read the instructions, precautions on the 'Chinese Herbs Direct' website.



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http://www.chineseherbsdirect.com/ming-mu-di-huang-teapills-ming-mu-di-huang-wan-200-ct-plum-flower-p-139.html

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接受：政府醫療卡・HMO・保險・工傷・車禍受傷
上門服務中風患者・行動不便者



Dark Leafy Greens, spinach, chard, colorful vegetables, fruit, carrots, beets, yellow corn, bilberry fruit/berries (no leaf), lemon, orange peels, lutein and other natural food keeps the eyes healthy and vision clear. See our other books, website for free list.

Natural Digestion, Heartburn Cure



2000 year old Chinese formula. Cures heartburn, digestion.
This product bought in South Boston, MA at Chinese Store.
No chemicals. It works in 2 days!

Supplement Facts

Serving size: 1 bottle(3000mg) 每服量
Servings per container: 20 每盒可服次數

	Amount per Serving	% daily value	每服量 每日養分
Proprietary blend	3000mg	†	每服重量
Tangerine(outer peel)	480mg	†	桔紅
Chinese hawthorn(fruit)	480mg	†	山楂
Bai-zhu atractylodes(rhizome)	480mg	†	白術
Kudzu(root)	460mg	†	葛根
Chrysanthemum(flower)	460mg	†	菊花
Rice(sprout)	430mg	†	谷芽
Job's tears(seed)	430mg	†	薏米
Chinese mint(above ground parts)	80mg	†	薄荷

† Daily Values not established 每日養份并未列出

Other ingredients: Corn starch,FD&C Brown NO.5-27. 另含：澱粉，食用色素褐色5-27號。

A very good Natural Heartburn Cure is: Digestive Enzymes. Nature's Plus - Source of Life - VIBRA-GEST
Live Food Plant Enzyme Supplement. Look for the Yellow Label with the picture of pineapple, fruit, grains, vegetables.
Most cases of heartburn are caused by: not enough natural acid, enzymes in the stomach/system, resulting in food and the little acid that is left staying in the stomach, not digesting. Enzymes help the food to digest, clearing the food, acid from the stomach into the digestive tract and improves the absorption of food, nutrients.

Disclaimer - Check with your medical doctor before using herbal, vitamin... products.
Do not mix with any prescription or non-prescription drugs.

Homeopathic Eye Drops to treat cataracts and eye floaters are popular. People state the formula works.
Some products contain chemical ingredients that are unhealthy: silver sulphate, sodium nitrate...
A completely natural, chemical free product may be safe, effective.
I prefer: a healthy diet, nutrition, Chinese Medicine, The Bates Method: Palming, shifting, central fixation.., fasting/body purification, avoiding eyeglasses, bifocals, sunglasses to remove cataracts, floaters, improve eye health and clarity of vision.

ASPARTAME - SWEET POISON - A MUST READ

In October of 2001, my sister started getting very sick. She had stomach spasms and she was having a hard time getting around. Walking was a major chore. It took everything she had just to get out of bed; she was in so much pain.

By March 2002, she had undergone several tissue and muscle biopsies and was on 24 various prescription medications.

The doctors could not determine what was wrong with her. She was in so much pain, and so sick she just knew she was dying.

She put her house, bank accounts, life insurance, etc-., in her oldest daughter's name, and made sure that her younger children were to be taken care of.

She also wanted her last hooray, so she planned a trip to Florida (basically in a wheelchair) for March 22nd.

On March 19, I called her to ask how her most recent tests went, and she said they didn't find anything on the test, but they believe she had MS.

I recalled an article a friend of mine e-mailed to me and I asked my sister if she drank diet soda? She told me that she did. As a matter of fact, she was getting ready to crack one open that moment.

I told her not to open it, and to stop drinking the diet soda!

I e-mailed her the article my friend, a lawyer, had sent.

My sister called me within 32 hours after our phone conversation and told me she had stopped drinking the diet soda AND she could walk! The muscle spasms went away. She said she didn't feel 100% but she sure felt a lot better. She told me she was going to her doctor with this article and would call me when she got home.

Well, she called me, and said her doctor was amazed! He is going to call all of his MS patients to find out if they consumed artificial sweeteners of any kind.

In a nutshell, she was being poisoned by the Aspartame in the diet soda...and literally dying a slow and miserable death.

When she got to Florida March 22, all she had to take was one pill, and that was a pill for the Aspartame poisoning! She is well on her way to a complete recovery.

And she is walking! No wheelchair! This article saved her life.

If it says 'SUGAR FREE' on the label; DO NOT EVEN THINK ABOUT IT!

I have spent several days lecturing at the WORLD ENVIRONMENTAL CONFERENCE on "ASPARTAME," marketed as 'NutraSweet' "Equal" and 'Spoonful.' Also called 'Phenylalanine'.

In the keynote address by the EPA, it was announced that in the United States in 2001 there is an epidemic of multiple sclerosis and systemic lupus. It was difficult to determine exactly what toxin was causing this to be rampant.

I stood up and said that I was there to lecture on exactly that subject.

I will explain why Aspartame is so dangerous: When the temperature of this sweetener exceeds 86 degrees F, the wood alcohol in ASPARTAME converts to formaldehyde to formic acid, which in turn causes metabolic acidosis. Formic acid is the poison found in the sting of fire ants. The methanol toxicity mimics, among other conditions, **multiple sclerosis and systemic lupus**. Many people were being diagnosed in error. (Temperature of Aspartame goes up in the sun, on store shelf, in hot coffee, tea and in the body. Add the toxic plastic or aluminum container drinks, food are usually contained in and more health problems occur. Heat pulls toxins out of plastic… into the food, drink.

Although multiple sclerosis is not a death sentence, Methanol toxicity is!

Systemic lupus has become almost as rampant as multiple sclerosis, especially with Diet Coke and Diet Pepsi drinkers.

The victim usually does not know that the Aspartame is the culprit. He or she continues its use; irritating the lupus to such a degree that it may become a life- threatening condition.

We have seen patients with systemic lupus become asymptotic, once taken off diet sodas.

In cases of those diagnosed with **Multiple Sclerosis, most of the symptoms disappear.** We've seen many cases where **vision loss returned** and **hearing loss improved** markedly.

This also applies to cases of and fibromyalgia.

During a lecture, I said, "If you are using ASPARTAME (NutraSweet, Equal, Spoonful, etc) and you suffer from **fibromyalgia symptoms, spasms, shooting pains, numbness in your legs, cramps, vertigo, dizziness, headaches, tinnitus, joint pain, unexplainable depression, anxiety attacks, slurred speech, blurred vision, or memory loss** you probably have ASPARTAME poisoning!" (Aspartame causes eye muscle tension, dysfunction, impairs eye movement, function, impairs brain function with the eyes, is toxic to the optic nerve, causes neck muscle tension, muscle tension/dysfunction, weakness throughout the body. Aspartame cause more health problems not listed in this article. Aspartame (Phenylalanine) also acts as an anti-depressant first, before it causes depression, anxiety attacks… This causes it to be addictive, an addictive drug. People return to using nit for it's temporarily 'good feeling'.)

People were jumping up during the lecture saying, "I have some of these symptoms. Is it reversible?"

Yes! Yes! Yes! STOP drinking diet sodas and be alert for Aspartame on food labels! Many products are fortified with it! This is a serious problem.

Dr. Espart (one of my speakers) remarked that so many people seem to be symptomatic for MS and during his recent visit to a hospice; **a nurse stated that six of her friends, who were heavy Diet Coke addicts, had all been diagnosed with MS. This is beyond coincidence!**

Diet soda is NOT a diet product! It is a chemically altered, multiple Sodium (salt) and ASPARTAME containing product that actually makes you crave carbohydrates. It is far more likely to make you GAIN weight!

These products also contain formaldehyde, which stores in the fat cells, particularly in the hips and thighs. Formaldehyde is an absolute toxin and is used primarily to preserve "tissue specimens." Many products we use every day contain this chemical but we SHOULD NOT store it IN our body!

Dr. H. J. Roberts stated in his lectures that once free of the "diet products" and with no significant increase in exercise; his patients lost an average of 19 pounds over a trial period.

Aspartame is especially dangerous for diabetics.

We found that some physicians, who believed that they had a patient with **retinopathy**, in fact, had symptoms caused by Aspartame.

The Aspartame drives the blood sugar out of control.

Thus diabetics may suffer acute memory loss due to the fact that aspartic acid and phenylalanine are NEUROTOXIC when taken without the other amino acids necessary for a good balance.

Treating diabetes is all about BALANCE.

Especially with diabetics, the Aspartame passes the blood/brain barrier and it then **deteriorates the neurons of the brain; causing various levels of brain damage, seizures, depression, manic depression, panic attaches, uncontrollable anger and rage.**

Consumption of Aspartame causes these same symptoms in non- diabetics as well. Documentation and observation also reveal that thousands of children diagnosed with **ADD and ADHD** have had complete turnarounds in their behavior when these chemicals have been removed from their diet.
So called "behavior modification prescription drugs" (Ritalin and others) are no longer needed. Truth be told, they were never NEEDED in the first place! Most of these children were being "poisoned" on a daily basis with the very foods that 'they believed' were "better for them than Sugar."

It is also suspected that the Aspartame in thousands of pallets of diet Coke and diet Pepsi consumed by men and women fighting in the Gulf War, may be partially to blame for the well-known Gulf War Syndrome.

Dr. Roberts warns that it can cause **birth defects, i.e. mental retardation,** if taken at the time of conception and during early pregnancy.
Children are especially at risk for neurological disorders and should NEVER be given artificial sweeteners. There are many different case histories to relate of children suffering **grand mal seizures and other neurological disturbances** talking about a plague of neurological diseases directly caused by the use of this deadly poisoning.

Herein lies the problem: There were Congressional Hearings when Aspartame was included in 100 different products and strong objection was made concerning its use. Since this initial hearing, there have been two subsequent hearings, and still nothing has been done. **The drug and chemical lobbies have very deep pockets.**
Sadly, **MONSANTO'S** patent on Aspartame has EXPIRED!
There are now over 5,000 products on the market that contain this deadly chemical and there will be thousands more introduced. Everybody wants a "piece of the Aspartame pie." I assure you that **MONSANTO, the creator of Aspartame, knows how deadly it is.**

And isn't it ironic that MONSANTO funds, among others, the American Diabetes Association, the American Dietetic Association and the Conference of the American College of Physicians? This has been recently exposed in the New York Times.
These (organizations) cannot criticize any additives or convey their link to MONSANTO because they take money from the food industry and are required to endorse their products.

(Drug companies sell Aspartame and other toxic chemicals to the food industry, to be placed in the food. Then, the drug companies sell drugs to treat the symptoms caused by the Aspartame and other toxins. The drugs cause side effects, never cure the health problems and more harmful drugs are sold to treat the previous drugs side effects. Aspartame is one of many toxic drugs, chemicals placed in our food, drinks, water, soaps, shampoos, toothpaste...)

Senator Howard Metzenbaum wrote and presented a bill that would require label warnings on products containing Aspartame, especially regarding pregnant women, children and infants. The bill would also institute independent studies on the known dangers and the problems existing in the general population regarding **seizures, changes in brain chemistry, neurological changes and behavioral symptoms.**

The bill was killed.
Former President George Bush in a speech on national television stated he wants to get all the toxins out of our food supply. Corrupt politicians, big businesses fought against him.
People starving in other countries refuse free food from the united States due to its chemicals and

other toxins, unnatural treatments, genetically modified...

It is known that the powerful drug and chemical lobbies are responsible for this, letting loose the hounds of disease and death on an unsuspecting and uninformed public. Well, you're informed now!

YOU HAVE A RIGHT TO KNOW!

Please print this out and/or e-mail to your family and friends.
They have a right to know too!

This was given to me by a friend and is being circulated on the internet.
Clark Night www.cleareyesight.info



Click the Pictures Below in the E-Book for YouTube Videos
Printed links are for the Paperback book and extra videos on the website

Natural Eyesight Improvement Training; Shifting, Central Fixation, Correct Vision Habits, Switching Close, Middle, Far, Eye Chart Training, Close Vision, Night Vision, Infinity Swing, Sunning, Palming, Better Eyesight Magazines, EFT, E-Book Video Samples, Book Functions.

YouTube videos can be downloaded (with free Real Player SP) to play on computer and convert for Television. Or; Download Camstudio Free Software and view the video large, clearest with Camstudio's Movie Player. http://www.camstudio.org

Book Chapter Training Videos



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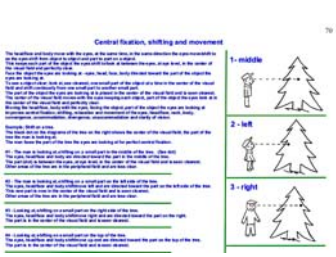

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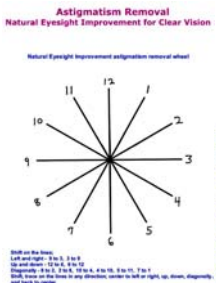

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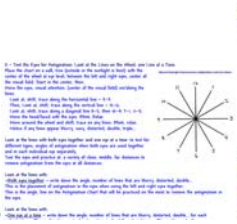

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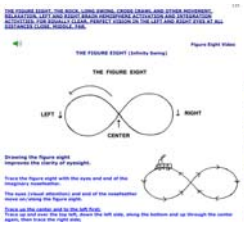

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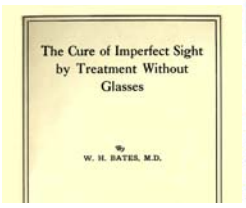

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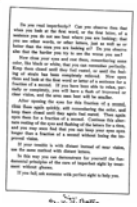

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The list below labels videos for the video pictures.

http://www.youtube.com/watch?v=-HcAMLGptHo - Central-Fixation 1
http://www.youtube.com/watch?v=YVQ6pWHcO78 - central-Fixation 2
http://www.youtube.com/watch?v=t3qlFE8EKTo - Close Vision 1, 2
http://www.youtube.com/watch?v=r5JxOFVi3hc&feature=related - Night Vision
http://www.youtube.com/watch?v=xCAVnepbF2I - 8 Correct Vision Habits
http://www.youtube.com/watch?v=sEyQa60-h0E - Palming
http://www.youtube.com/watch?v=bZPbWo95cvQ - Sunning, Sunlight
http://www.youtube.com/watch?v=nIrKuQEJ6y4 - Chapter 5 - Human Eye, Central-Fixation, shifting.
http://www.youtube.com/watch?v=W6YLe-Wgpv8 - Astigmatism 1
http://www.youtube.com/watch?v=UUF02OdGFCg&feature=related - Astigmatism 2
http://www.youtube.com/watch?v=BjQW2C4CPbA - The Figure Eight - Brain Hemisphere balance
http://www.youtube.com/watch?v=BXDdMjFoeug - EFT - Emotional Freedom Technique
http://www.youtube.com/watch?v=txC1e8TOQfw - Color Breathing, Energy, Relaxation Chart
http://www.youtube.com/watch?v=H1Z9MnEe3Hg&feature=related - The Cure of Imperfect Sight...
http://www.youtube.com/watch?v=ULg14bkZJBo - Better Eyesight Magazine-1927
http://www.youtube.com/watch?v=Q2zwzBVlgF0 - Better Eyesight Magazine-1924
http://www.youtube.com/watch?v=xyiPwaWPpdo&feature=related - Better Eyesight Magazine-1919
http://www.youtube.com/watch?v=AtagUUupAVg - Strengthening The Eyes by Bernarr MacFadden

Video # 1, 2 - Sifting, Central-Fixation & other Natural Vision Improvement Training Activities and E Book directions-how to search for various treatments, eye conditions....
 # 3 - Shifting, Central-Fixation, Human Eye. # 4, 5 - Eyecharts-1 Eyecharts-2
 # 6, 7- Central Fixation-1 Central-Fixation-2
 # 8 - Clear Close Vision, Fine Print # 9 - Clear Night Vision
#10 - Eight Correct Vision Habits #11 - Palming #12 - Sunning, Sunlight
#13 - Astigmatism 1 #14 - Astigmatism 2
#15 - The Figure Eight - Left and Right Brain Hemisphere Activation, Integration.
#16 - EFT - Emotional Freedom Technique #17 - The Color Breathing Relaxation Chart
 # 18, 19, 20, 21, 22 - Dr. Bates Book, Better Eyesight Magazine, Bernarrr MacFadden's Book.

Chapter# 1 - http://www.youtube.com/watch?v=k68krZMl7Gs
Chapter# 2 - http://www.youtube.com/watch?v=dqQWtjX6lvo
Chapter# 3 - http://www.youtube.com/watch?v=-m3Kunmnnps -See Chapter 3-part 2, 3 on YouTube
Chapter# 4 - http://www.youtube.com/watch?v=VJ87waWtNQs
Chapter# 5 - http://www.youtube.com/watch?v=nIrKuQEJ6y4

Natural Vision Improvement with Behavioral Optometry - http://www.youtube.com/watch?v=qubQAAZ4oLE
Reading, Seeing Fine Print Clear - http://www.youtube.com/watch?v=z_UcUtAUtzA

Free Training on the Website; www.cleareyesight.info - http://cleareyesight.info/id79.html

Videos that advertise Clearsight Publishing Co., Central-Fixation Publishing Co. books also contain a variety of Natural Eyesight Improvement Training. More videos are on Clark Night's YouTube channel;

http://www.youtube.com/user/ClarkClydeNight?feature=mhsn
http://www.youtube.com/watch?v=lkQ9KEpA8zE
& at Ophthalmologist William H. Bates Amamzon.com page;
http://www.amazon.com/William-H.Bates/e/B004H9DOBC/ref=ntt_athr_dp_pel_1

More Natural Vision Improvement Videos;

http://www.youtube.com/watch?v=n1MWGeF0iU4&feature=channel_page

http://www.youtube.com/watch?v=863yFmc-Ius

http://www.youtube.com/watch?v=mYpsYPPV_hg

http://www.youtube.com/watch?v=ZsiBKELMxDw

http://www.youtube.com/watch?v=n1MWGeF0iU4

http://www.youtube.com/watch?v=r5JxOFVi3hc

http://www.youtube.com/watch?v=xCAVnepbF2I

There are some Yoga eye exercises on YouTube teaching to look to the left, right, up, down while keeping the head/face straight, not in the same direction the eyes move to and to force, stretch the eyes as far to the side, up... as possible. This is against Bates teaching, is the opposite of central-fixation and prevents easy, relaxed eye movement, shifting and can cause eye muscle tension and unclear vision. A few of the exercises are helpful.
Here is a Yoga video that is interesting, has some Bates teachings which may be derived from Yoga and is more toward a relaxed way to do the exercise.
http://www.youtube.com/watch?v=00XqvNwYMoc

Check the Youtube and Amaozn.com Videos Page for new Videos in 2011-2012. Live, in person videos showing every step in the book.

29 - Blind, Visually Disabled Achieve Independence , Guide Dog Schools, DAV, Perkins School For The Blind, The Seeing Eye, Morris Frank & Buddy, Guiding Eyes For The Blind

DAV PDF, Example of Organizations Cleareyesight-batesmethod.info Supports - Click Here



Hadley - Ten years of service

Video, The Seeing Eye, Morris Frank and Buddy;
https://www.youtube.com/watch?v=gwYHXNItSks

If the reader of this website does not need to buy a paperback book but wants to donate money; you may donate directly to one of the organizations on this page. Click to their website. www.cleareyesight-batesmethod.info donates part of the profits from book sales to the organizations listed on this page and we give out free e-books to visually disabled, everyone. I pay for the website and give free Natural Eyesight training, send money to the blind schools, people that need vision improvement including people that are homeless due to eye/vision conditions. See Donation Receipts on the bottom of this page. (Contact the organizations below for a copy of Mary I. Oliver's support history and recent gifts to date 2015...)

Thanks to; **Ophthalmologist William H. Bates, Emily C. Lierman-A. Bates, their family, friends, Optometrist Harold M. Peppard, Dr. Monroe J. Hirsch, all the honest eye doctors, Bates teachers, many Optometry, Ophthalmology libraries for preserving Dr. Bates book Perfect Sight Without Glasses, his Medical Articles, 132 Issues of Better Eyesight Magazine. They are now sold in paperback at worldwide bookstores, placed here and on GoogleBooks free in PDF E-book.**

DAV - Disabled American Veterans helps military service men and women that have been injured in combat. They also help Veterans that have experienced eye injuries. Cleareyesight-batesmethod.info has been donating to DAV for a few years and is now sending more money thanks to book purchases. See their PDF at the top of this page.

We equally support; The Seeing Eye, Guiding Eyes For The Blind and Perkins School for the Blind.



Guide Dogs for the Blind Training Schools that Accept Donations are;
www.seeingeyedog.org www.guidingeyes.org



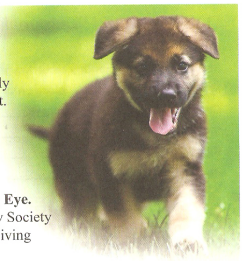




CONVENIENT . . . EFFICIENT . . . LIFE-CHANGING
Now it's easier than ever to help those who are blind!

Want to make your support of The Seeing Eye as convenient and effective as possible? Join our Monthly Giving Program where your donations are automatically deducted from your credit card or bank account.

- **Your gifts go directly to support programs** that help men and women who are blind pursue their dreams and experience greater independence.
- Recurring gifts are **more convenient for you** — no more dealing with envelopes and postage!
- And depending on the amount you choose, you can **become a sustaining member of The Seeing Eye.** (For instance, a commitment of just $25 or more a month could make you a member of our Buddy Society — you will receive product discounts, our magazine *The Guide*, and more. See more about our Giving Societies at www.SeeingEye.org/supportUs.)



Just fill out the information on the back of this form and return it with your gift to begin! Or call our Donor and Public Relations Department at 1-800-539-4425.

10 Washington Valley Road Morristown, NJ 07960-3412 • (973) 539-4425 Fax (973) 539-0922 • www.SeeingEye.org

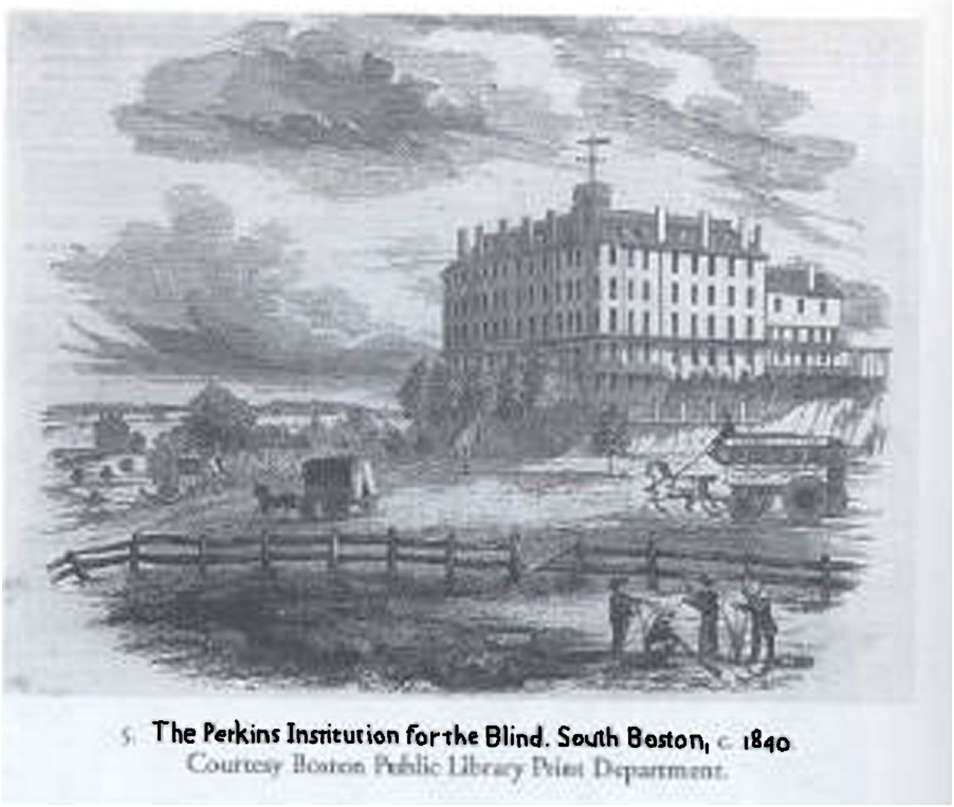
The Seeing Eye®

Video Guiding Eyes For the Blind; https://www.youtube.com/watch?v=rHIx2_duZu4

The top pictures and video on the top of this page show Morris Frank and his Guide Dog Buddy making the first test for Blind Human and Guide Dog walk across a busy street. Friends are with him watching as they walked. The walk was successful and the use of Guide Dogs for the Blind began that day. Morris and Buddy were great friends. There is a children's book telling their story. Morris and Buddy established; The Seeing Eye - The first Guide Dog School. See link above. Read Morris and Buddy's book; *First Lady of the Seeing Eye*. Their life story and free training.

Other pictures are from; Guiding Eyes For The Blind - Guide Dog School. See link and video above. The author of www.clearеyesight-batesmethod.info found this school by direct contact, referrals from blind and disabled persons with guide dogs; Black lab Retrievers 'Flo, Hadley' and other friendly guide dogs in downtown Worcester, Massachusetts. This school is recommended for its very kind treatment of customers, low cost training, loving dogs.

https://www.youtube.com/watch?v=3rBp4dV_LaQ



5. The Perkins Institution for the Blind. South Boston, c. 1840
Courtesy Boston Public Library Print Department.

'Perkins School for the Blind' helps people with all types of blindness, vision, hearing... impairment gain independence. Helen Keller (Deaf and Blind) was trained to communicate at the Perkins Institute for the Blind in South Boston, Massachusetts. Later the Institute moved to Watertown, Mass. on the Charles River and is now called 'Perkins School for the Blind'.

www.perkins.org

175 North Beacon St. - Watertown, MA, 02472 - 617-972-7328



We also donate to the local 'home town only' Animal Rescue, Humane Societies. They treat animal injuries, including eye injuries and provide good homes for pets.
We also help out the wild animals, birds in our neighborhood during the winter, times when food is scarce. Help injured animals.

I no longer donate to some of the famous Animal Rescue places due to corruption in their businesses; Killing 90% of rescued animals, then selling the body to the pet food industry with the euthanizing drug in the body. They also store billions of dollars in their account and personal accounts, not spending the money to help animals. Their telemarketers were always calling me asking for more money even though I was sending more money every month. I found out on YouTube and a major TV news station that they have billions of dollars just sitting in the bank and they hire donation collection businesses to mass market for more money. I have held off posting this because I don't want to deter people from donating to honest places. Please choose carefully.

https://www.youtube.com/watch?list=FL8f8jhrxbwrHc-4v0fz7qcQ&v=tl9DGzEgnf8

Donation receipts available on request and see the website;

http://cleareyesight-batesmethod.info/id73.html

www.DAV.org

Disabled American Veterans • P.O. Box 14301 • Cincinnati, Ohio 45250-0301 • www.dav.org

I was near the road junction known as "IED Alley" the day I became a disabled American veteran!

Dear Mary,



The blast threw me from a Humvee and tossed me over a guardrail on a road outside Baghdad.

The explosion ripped out my right eye and a large chunk of my skull. Despite damage to my brain, my thoughts focused on the two injured soldiers who were with me.

My helmet was filled with blood. When I went to re-snap my chin strap, I realized that my left thumb was gone.

Despite the agony from my wounds, the greatest hurt of all came later when I learned I would be medically retired from the Army. That's when I realized the challenges veterans face transitioning to civilian life.

The DAV helped me to obtain the benefits I'd earned from the VA. And after going through the process, I decided I wanted to join the DAV's mission.

If I couldn't stay in the military, at least I could serve my fellow soldiers as a DAV National Service Officer.

I thank you, Mary, for your support of the DAV. You're helping me reach out to my fellow disabled veterans, making a real difference in their lives.

I know people feel detached from the soldiers and Marines who are serving. And many people put decals and yellow ribbons on their vehicles.

We appreciate that support, but we're especially grateful for people like you who make tangible contributions to help the men and women who sacrificed so much through military service. Will you continue the legacy of hope you have created?

Will you give $12 or $18 to help me and my fellow DAV National Service Officers in Boston and across the country?

The enclosed labels, honoring your loyalty to veterans, are gifts we offer without obligation. But your continued gifts help us continue the programs and services that help disabled veterans and their families.

Disabled American Veterans • P.O. Box 14301 • Cincinnati, Ohio 45250-0301 • www.dav.org

Anguish comes home from the war in Afghanistan!



Dear Mary,

A Taliban fighter's rocket-propelled grenade tore off one of Brad's* legs. The blast spattered his back with shrapnel, leaving this young hero severely disabled.

But these wounds aren't the only harm Brad suffered in Afghanistan. Says his wife: "Brad's not the same man who went over to the war. I just don't know the Brad who came home to me."

Brad's mind is filled with anguished memories and pain. The war not only scarred his body. It scarred his heart. For now, he cannot live with his wife and little girls. It's too much for everyone.

This is the agonizing road walked by a veteran with post-traumatic stress disorder (PTSD) ... and the Disabled American Veterans is walking this road with Brad.

Thanks to your generosity, the DAV is working hard to make sure Brad gets all the treatment he needs – for his physical wounds and for PTSD – appropriate treatment that will help him rebuild a life that, right now, hangs on the edge of

Thank You for Registering

Page 1 of 1

$5.00 per month

From: Guiding Eyes for the Blind <info@guidingeyes.org>
To: MCLEARSIGHT@AOL.COM
Subject: Thank You for Registering
Date: Wed, Nov 4, 2009 6:12 pm

Dear Mary,

Thank you for supporting Guiding Eyes for the Blind at donate.guidingeyes.org. In order to make it easier for you to continue to support us, we have created a user name and password for you to use when you return to our site:

User Name: mclearsight@aol.com
Password: hat374dew

You can change your password or update your profile at any time.

Sincerely,

Guiding Eyes for the Blind

I challenge other Natural Vision Improvement Teachers, Authors 'especially the greedy high priced ones' to share their profits! Support the Blind, Guide Dog Schools; Help people learn to work with Guide Dogs, read Braille...

Place a link to the schools on your websites.

New Stuff!

Cleareyesight.info, Clearsight Publishing Co. was started in September, 1996 and August, 2007. http://cleareyesight-batesmethod.info/id61.html The E-Book was first created in 1996. The 'New Stuff' web page for quick reference to new Natural Vision Improvement pictures, treatments, book chapters - Free Adobe PDF E -Book/website upgrade announcements. If the reader of this book sees a announcement stating that a new book upgrade has been sent out and you have not received a copy, notify the author of this book at mclearsight@aol.com

Forum-GuestPage - More free PDF E-Books, Discussion;

http://cleareyesight-batesmethod.info/id93.html

http://naturaleyesightimprovement-batesmethod.com/GuestPage/index.php

30 - Clark Night's (Mary Iva Oliver) Natural Eyesight Improvement Training Certificates My Favorite Teachers! Where I Received My Training, Experience;

The author of this book, website; www.cleareyesight-batesmethod.info has taken 5 Natural Eyesight Improvement Courses from Bates Teachers in 1996, 1999, 2008, 2009, 2010. I began study, use of the Bates Method in 1974, age 17. 1st book I studied was 'The Art Of Seeing' by Aldous Huxley found in a used bookstore on Rt. 9/148 intersection, end of the common in Brookfield, Massachusetts. Cured myopia. Age 40, cured presbyopia. Studied many Natural Eyesight (Vision) Improvement books, Dr. Bates Better Eyesight Magazines, (11 years, 132 Issues, 2400+ Pages), his book Perfect Sight Without Glasses, Medical Articles, all teachers, author's books listed on the website *Bates Method History page*; http://cleareyesight-batesmethod.info/id4.html, other pages of the website and a variety of books related to Natural Eyesight Improvement; Natural Heath Cures, Physical Therapy, Movement, Posture, EFT, Tai Chi, Acupressure, Color Treatment, Relaxation Methods, Robert Monroe books, tapes; Left-Right Brain Hemisphere Synchronization and other skills, Basic Nutrition. I stay informed of the best original and modern up to date training. It's all free in the e-books and on the website. Completed part of an optician course from Penn Foster to be able to communicate with students as they work with their eye doctor to stop use of eyeglasses. Some people need to reduce their prescription strength 'weaker and weaker' in stages in order to drive, work... legal and safe; http://cleareyesight-batesmethod.info/id36.html

Now age 58 and continue to see clear, even after many eye, vision, health problems due to neck, spine injuries that were caused by a dishonest chiropractor. (I am against most chiropractic treatment because even the best honest, helpful doctor-technique can cause injury. It's risky.)

After years of research, use and study of the Bates Method I have learned everything there is to know to keep my eyesight clear. I continually learn more from others, study, keeping up on new ideas. I like optometry, ophthalmology books, deep contemplation of the eyes-vision, brain's mechanics, chemistry, light focus, ect... It's fascinating. The eyes are part of the brain. There is spirit, energy and light-color energy moving in and through the eyes, brain, body.

I learn a lot from the people I teach. They teach me! Many minds are better than one. I have learned much by communicating with, teaching, observing the vision improvement process of different people on the Bates Method Internet forums, groups since 2007. After May, 2014 I rarely attend these groups due to them being taken over by people who sell eyeglasses, lasik and other eye surgery, unnatural harmful eyesight methods, drugs, other products and people that sell high priced books, hourly training. They are very aggressive, forcing Natural Eyesight Improvement teachers off the forums, *especially if you teach for free and provide Dr. Bates entire collection of Better Eyesight Magazine and his books.* In 2014 I was banned, blocked from a few popular Bates Method forums (where I posted since 2007, 1500 posts helping people see clear) because I spoke up about members advising, selling lasik eye surgery, eyeglasses, other unnatural-harmful methods such as the cataract producing plus lens method, drugs and revealed the identity of 3 people (competing teachers, authors) who hack Natural Vision teacher's computers, bookstores and are a threat to their schools, safety. Obviously they are no longer true Bates Method Forums. I learned a lot from the old time members before the trolls and greed for money took it over. My posts might be deleted, altered by the forum, group owners *without my permission.*

I now teach solely by phone, GoogleHangouts, Skype, some Facebook and our GuestPage. Places where people are kind, honest, show their true face and identity. Members can block anyone they prefer not to communicate with. It's much more effective teaching on a video chat. Very relaxed, positive atmosphere for both teachers and students. You learn easier, faster.

Some of the people I trained have become teachers, they cured their friends, family.

Thank you for preserving the Bates Method. Pass the torch!

In 1994 I read more Bates Method books, then started writing, publishing in 1995-1996. The books are in the U. S. Copyright Office; http://cocatalog.loc.gov/cgi-bin/Pwebrecon.cgi?Search_Arg=EYE+EXERCISE+CARD&Search_Code=TALL&PID=mu2dCN42gFzP8kromYRd_blKVH&SEQ=20131103082801&CNT=25&HIST=1

See the picture below;



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United States Copyright Office

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http://cocatalog.loc.gov/cgi-bin/Pwebrecon.cgi?Search_Arg=EYE+EXERCISE+CARD&Search_Code=TALL&PID=mu2dCN42gFzP8kromYRd_blKVH&SEQ=20131103082801&CNT=25&HIST=1

Public Catalog

Copyright Catalog (1978 to present)
Search Request: Author = OLIVER, MARY IVA, 1957-
Search Results: Displaying 1 through 4 of 4 entries.

previous | next

Resort results by:

Set Search Limits

#	Name Heading	Author	Full Title	Date
[1]	Oliver, Mary Iva, 1957-		Better Eyesight Magazines by Ophthalmologist William H. Bates - July 1919 to June 1930.	2007
[2]	Oliver, Mary Iva, 1957-		DO IT YOURSELF NATURAL EYESIGHT IMPROVEMENT.	2008
[3]	Oliver, Mary Iva, 1957-		Do it yourself : natural eyesight improvement.	1999
[4]	Oliver, Mary Iva, 1957-		Eye exercise card for close vision.	1996

Resort results by:

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Copyright
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Help | Search | History | Titles | Start Over

Public Catalog

Copyright Catalog (1978 to present)
Search Request: Simple Search = EYE EXERCISE CARD
Search Results: Displaying 1 through 2 of 2 entries.

previous | next

Resort results by:

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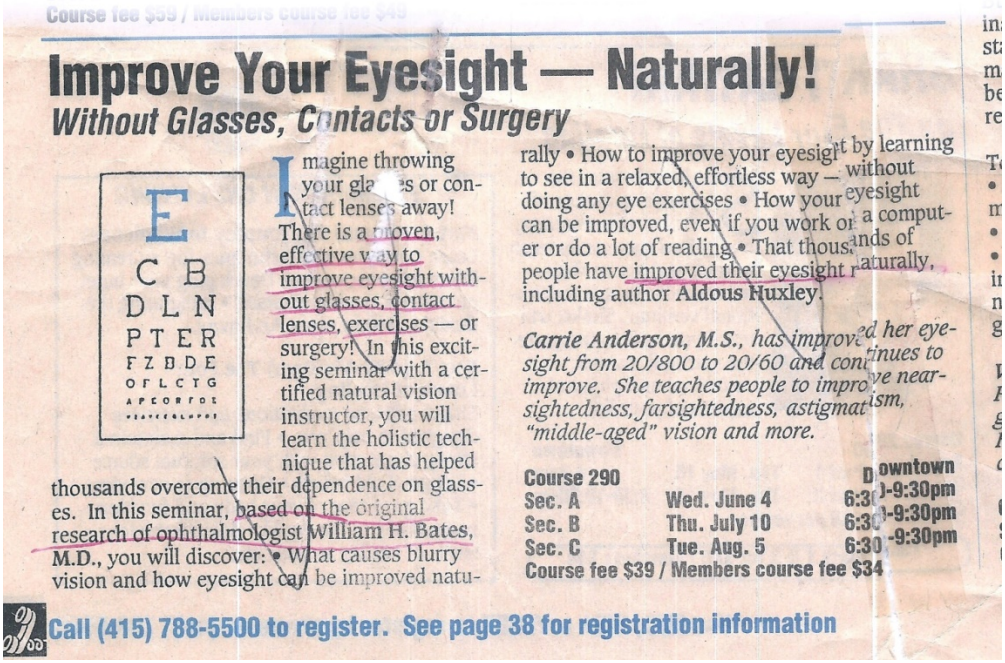
#	Title <	Full Title	Copyright Number	Date
[1]	EYE EXERCISE CARD AND PAMPHLET OF INSTRUCTIONS AND VARIOUS EYE EXERCISES AND INFORMATION	DO IT YOURSELF NATURAL EYESIGHT IMPROVEMENT.	TX0006856777	2008
[2]	Eye exercise card for close vision.	Eye exercise card for close vision.	TX0004416669	1996

Better Eyesight Magazine and all Dr. Bates books that I assemble are copyrighted to preserve Dr. Bates work as public domain, protect his original copyright, prevent dishonest people from blocking it.

My Author's pen name is Clark Night. Birth name is Mary Iva Oliver.
(See reason for pen name at the end of the certificates, teachers section.)

1st Class with a Real Live Teacher! Carrie Anderson - Great!

San Francisco, California, 1997 - 1999



Course fee $39 / Members course fee $34

Improve Your Eyesight — Naturally!

Without Glasses, Contacts or Surgery

E
C B
D L N
P T E R
F Z B D E
O F L C T G
A P E O R F O E

Imagine throwing your glasses or contact lenses away! There is a proven, effective way to improve eyesight without glasses, contact lenses, exercises — or surgery! In this exciting seminar with a certified natural vision instructor, you will learn the holistic technique that has helped thousands overcome their dependence on glasses. In this seminar, based on the original research of ophthalmologist William H. Bates, M.D., you will discover: • What causes blurry vision and how eyesight can be improved naturally • How to improve your eyesight by learning to see in a relaxed, effortless way — without doing any eye exercises • How your eyesight can be improved, even if you work on a computer or do a lot of reading • That thousands of people have improved their eyesight naturally, including author **Aldous Huxley**.

Carrie Anderson, M.S., has improved her eyesight from 20/800 to 20/60 and continues to improve. She teaches people to improve nearsightedness, farsightedness, astigmatism, "middle-aged" vision and more.

		Downtown
Course 290		
Sec. A	Wed. June 4	6:30-9:30pm
Sec. B	Thu. July 10	6:30-9:30pm
Sec. C	Tue. Aug. 5	6:30-9:30pm

Course fee $39 / Members course fee $34

Call (415) 788-5500 to register. See page 38 for registration information



Certificate of Completion

THIS CERTIFIES THAT

Mary Oliver

HAS SUCCESSFULLY COMPLETED A COURSE IN

Improve Your Eyesight Naturally

The Learning Annex

BETH GREER, PRESIDENT
THE LEARNING ANNEX

Teacher - Carrie Anderson - 1998

Mary Oliver - writers pen name; Clark Night

Live Class with Thomas Quackenbush in San Francisco, CA, 1999!

Learned that vision can be much clearer than 20/20, close and far! (Use Centralization. Also known as *Central-Fixation with Shifting*.) Saw local homeless man 5 blocks away from top of Grand Avenue in So. San Francisco. Saw crystal clear fine details of his face, beard... Also quickly cured presbyopia that occurred at age 40.

SKETCH,

BREATHE,

and BLINK

— ALWAYS.

Thomas R. Quackenbush

The importance of practicing certain parts of the routine activities at all times, such as blinking, centralizing, and imagining stationary objects to be moving opposite to the movement of the head, is emphasized. The normal vision does these things unconsciously, and the imperfect vision must at first practice them consciously until they become unconscious habits [again.]

William H. Bates, M. D.

Now teaching student and teacher training in Europe; Malden, The Netherlands.
www.NaturalVisionCenter.com

Natural Vision Center, P. O. Box 986, Ashland, OR 97520 (541) 512-2525. www.NVCSF.com

NATURAL VISION CENTER OF SAN FRANCISCO

THOMAS R. QUACKENBUSH, Director
P. O. Box 986
Ashland, Oregon 97520 USA
Office: (541) 512-2525
Fax (541) 512-2626
Internet: www.nvcsf.com
Email: RELRN2SEE@nvcsf.com

August 14, 2001

Dear Mary,

Thank you for your recent letter. Sorry for the delay in my reply; I have been very busy with the Summer schedule, including training and certifying nine Teacher Trainees last week.

I do not offer a "certificate" for the regular Natural Eyesight Improvement course you attended; only the Teacher Training Program. However, this letter can vouch for your attendance in the regular Natural Eyesight Improvement course April-May 1999 in San Francisco. My records do not indicate you missed the last class, at which you should have received at "Sketch, Breathe and Blink" diploma. I have enclosed an extra copy for you with this letter; it is signed by me on the back.

Enclosed is information regarding the Winter 2002 Certified Natural Eyesight Improvement Teacher Training Program (TTP). There is a $250 discount for Winter 2002 TTP tuitions paid in full by August 31, 2001. I now offer shared room housing in my modern, comfortable home during the TTP.

I hope you will be able to take advantage of this excellent training at your earliest convenience.

Sincerely,

Thomas R. Quackenbush, Director
Author of *Relearning to See: Improve Your Eyesight—Naturally!*
Editor of *Better Eyesight: The Complete Magazines of William H. Bates*

Teachers signature has been removed for security on internet.

Clark Night is writers pen name for Mary Oliver

My teacher's classroom; http://www.naturalvisioncenter.com/CoursesSeminars.html
http://www.naturalvisioncenter.com/TeacherTrainingProgram.html

Now in the Netherlands; http://www.naturalvisioncenter.com

Before and again during Thomas Quackenbush's class I read, studied his book; 'Relearning to See-Improve Your Eyesight Naturally!' I later bought, studied his 2nd book; 'Better Eyesight - The Complete Magazines of William H. Bates' (Ophthalmologist Bates). After comparing many teachers I now prefer Thomas Quackenbush's training. He teaches only natural, healthy practices, the true Bates Method.
His books are like college textbooks that work well with his class and at home.

Certificates from three teachers, schools I have taken courses from previously posted here have been removed from the website and books due to them selling unnatural methods, things I disagree with. They have a lot of good training but then they ruin it by directing the student in the wrong way, into unnatural practices that are unhealthy for the eyes, vision.
So I placed them in a PDF for people that want to see my full training and why I left some teachers as my knowledge, experience grew. Contains 5 certificates, the best-truly natural teachers and the unnatural teachers, methods to avoid, things they teach that is wrong, harmful. I don't want to 'bite the hands that taught me' so their certificates and names are removed from public view. The PDF is free via e-mail on request; mclearsight@aol.com.

A list of more teachers I've taken courses from, books I have studied is listed on the *Bates Method History, Teachers, Books* page in this book and on the website; http://cleareyesight-batesmethod.info/id4.html Here's a bit of information about my three other teachers;

Home Study Course; (*name and certificate picture removed*)

This course was taken in April, 1997. A few of the things in this teacher's course (*name and certificate picture removed*) I strongly disagree with; advertising the unhealthy plus lens -anti corrective eyeglass method, some of their unnatural behavioral optometrists, orthokeratology (ortho-k), use of auto-stereograms 'artificial 3-D-Magic Eyes' (causes crossed-wandering eyes, double vision, astigmatism) and some of their herbs, supplements and other products. The Optometric Extension Program they are affiliated with uses unnatural methods including the harmful cataract, detached retina producing plus lens method. Avoid these unnatural methods. 70% of the course was beneficial, worth learning. Shifting, looking close and far, tracing and other simple easy practices they teach improve the vision. See my website, books to learn what is true healthy Natural Eyesight Improvement and what is unnatural, causes impaired eyesight.

2009 - Completed 2 Home Study, Student DVD and Book Natural Vision Improvement Courses From (*names and 2 certificates picture removed*.)

I learned some beneficial things from these two popular eyesight courses, but unfortunately they also teach, sell unnatural methods, products; colored lenses, pinhole glasses without warning of the side effects, blocking the eyes central field, methods that cause muscle tension and other destructive advice, practice. One charges over $5000.00 dollars for multi levels of unnecessary and false training. He hides Dr. Bates books, medical articles and magazines. He refuses to help the blind unless they pay 'bigtime money'. I listed the methods, products, teachers to avoid so students can detect unnatural teachers. Read the entire experience, see list of original and modern teachers on the *Bates Method History, Teachers, Books* website page and chapter in this book.

See PDF's top of this page. http://cleareyesight-batesmethod.info/id110.html

My Pen Name

A famous poet is named Mary Oliver. So I do not use this name to publish books.

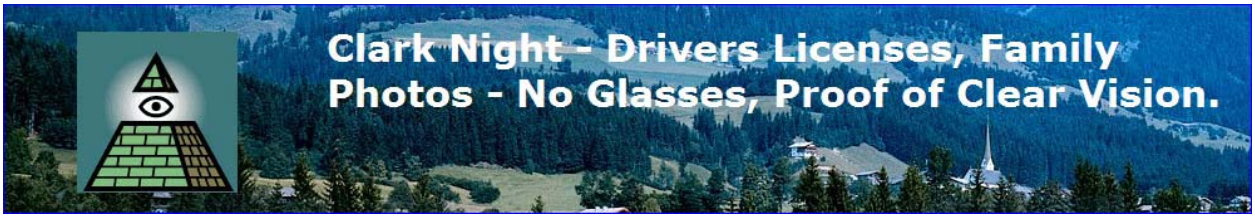
One of my favorite poems by her is about her father; 'A Visitor'.
See her poems on this website;

http://www.best-poems.net/mary_oliver/index.html
www.poets.org/poet.php/prmPID/265
http://maryoliver.beacon.org/aboutmary/

I chose the pen name Clark Night when I was a young kid playing secret agent with my five cousins and neighbors on Kimball Street in Brookfield, Massachusetts. Mike was the leader. I was one of his agents. Some of our favorite TV shows and songs were; The Man From Uncle, Secret Agent Man, The Lone Ranger, Batman and Hogan's Heroes. We had a hideout 'office' underground in the cellar. We would climb up the old stone/brick wall through a hole in the top of the wall and jump down into the other end of the cellar. This was our secret escape route. I had a pet spider named speedy. We would crawl through the drain pipe that ran underground where the brook flowed from the frog pond in the woods, under the street, through a tall grass field, down the waterfall and into the swamp. We would hide in there safe and secure, spy on the neighbors and plan our next adventure. We raced homemade boats down the brook. Ate wild wine and blueberries. We had hideouts in the woods, trees and about town. We were always happy, laughing, often about some mischief we had done or were planning. I remember when my cousin Tom, with help from Mike printed up a bunch of *Secret Agents for Hire* cards with their parent's phone number on them. Tom placed them on all the neighbors' front doors. All night long my aunt was getting phone calls from people asking about the card! We would steal food, candy. One night when we were throwing dirt bombs at cars from our spruce tree hideouts, a man circled back and dragged Tom out of a tree, brought him into the house and forced him to confess to Mom. There was a lot of action that night! In fear, one of the girls jumped down the tree face to face with the man! Many happy memories from childhood, remembered clear, in color, motion keeps the memory, imagination strong, mind-emotions positive and eyesight clear.

See the YouTube Channel for free Original and Modern Bates Method Training;
https://www.youtube.com/user/ClarkClydeNight/videos?flow=grid&view=0

Videos in PDF work with Internet Connection. To play off-line; download videos from YouTube. Set to HD best clarity before downloading.



This page shows the Author's Drivers Licenses and old ID cards through the years.
Notice that glasses are not needed to drive... Proof that Natural Vision Improvement works!
Other photos are of family, friends. Stress shows in my face on some license pictures due to working for $5.00 a hour, 12-16 hr. day for years, homeless at times, violent boyfriend... but my vision remained clear (close and distant), mind in a positive state due to use of the Bates Method since high school. In 1999 Thomas Quackenbush brought my close and distant vision to better than 20/20. http://www.naturalvisioncenter.com/
Social security numbers, signatures are hidden.

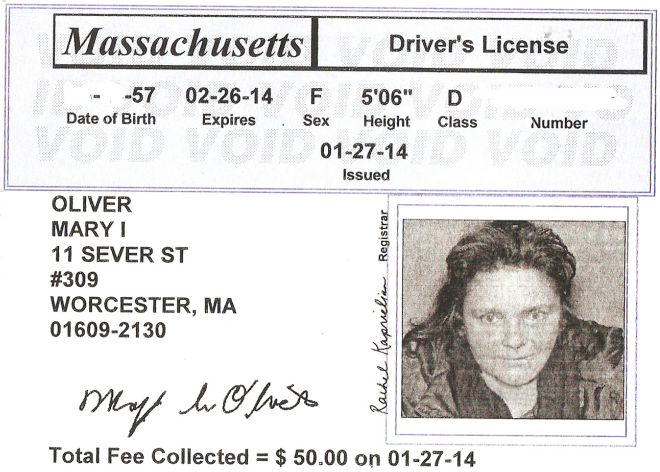


A main cause of unclear vision is childhood trauma, sadness, fear, unhappy life - Stress!!
I know that one reason my vision was easy to cure, by just throwing away my glasses in the 4th grade (before I learnt the Bates Method in High School from Aldous Huxley's book) was due to having a very happy childhood. I grew up with my 5 cousins and many kids on our street. We played in the woods, had a Secret Agent club and used our imagination to play act a variety of characters, games; Cowboys and Indians, Secret Agents 4, Johnny and Richard, The Lone Ranger... Our parents did not wear glasses. They taught us right, the basics-how to respect other people. Life was not perfect but it was great! I have many clear happy memories, mental pictures of my childhood stored in my brain and heart.
Below are photos of my Family starting with Gramps and Gram.

Present License - January 2014



New License age 57, 2014.
Signature, personal information removed for security. REST = NONE = No Restriction, close and far eyesight clear.



Class - D: Small vehicle less than 26,001 lbs, except school bus.

Organ Donor

New temporary lisence renewal, until it is delivered in the mail. Then will post it.
Passed the eyesight test in their machine. No glasses needed for day or night driving!
Close and far eyesight clear.
Age 57 in 2 months.

NOT VALID FOR IDENTIFICATION

The Bates Method works! For life!

You did not register to vote today 01-27-2014



Gramps and Gram. Police Sergeant and Newspaper Reporter.



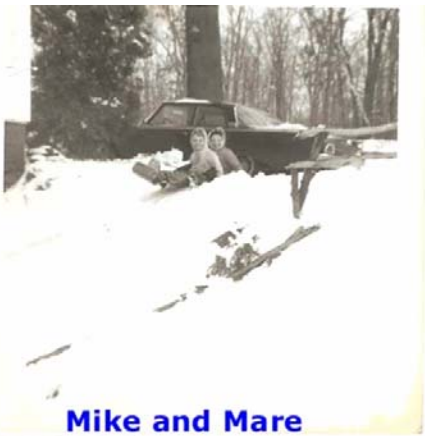
Mom, Aunt, Gram#2, Gramps, Friends, Family. Gram#1 with Identical twins













Mike and Mare





Mike, Mare, Tom





Mike, Mare...



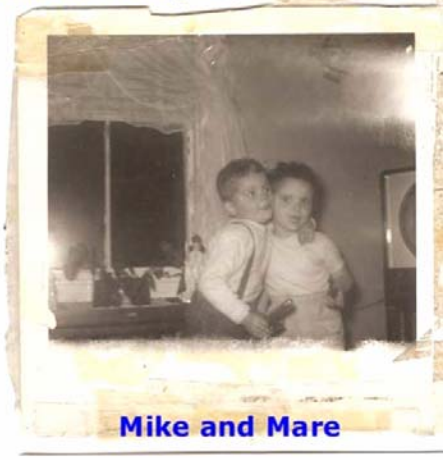


Mom and Mary





John and Mary



Mike and Mare





Mike, Mare and Tom - Secret Agents





Playing in the leaves



Ice Cream man truck was here



Morning by the old oak Tree



Cookout - homemade fireplace/grill



Summer

There are more family members but they did not send us pictures in time for book publishing.



Water fall
We ice-skated on the Frog water falls.



River from Pete's Blueberry hill Pond, down the frozen brook



Ozzy- Part Wolf, German Shepard



Mom at Christmas



These pictures are friends from 1980 to Present



Greg and Lucy



Roof of Metropolitan Hotel
South San francisco, CA where I would hide and study, practice Natural Eyesight Improvement and write this book.



Tommy and Evelyn

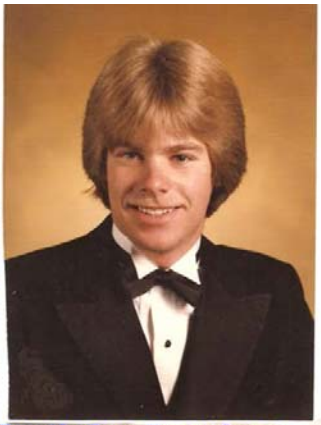




Tommy - Stutters but not when singing, playing guitar.

**Christmas Tree on South San Francisco Mountain seen from 3rd floor and roof of hotel.
We watched the planes fly over the hill, cars moving on the hill and streets at night.
We could set our television screen to reflect in the window and watched TV at night like on a movie screen with the mountain in the distance through the window glass.**





Best Friends Greg and Ernie in South San Francisco





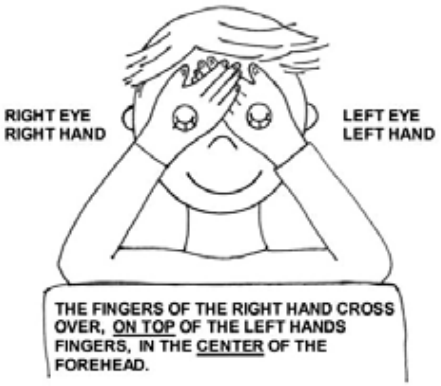
Equally best friends
Don and Jose.
Don is a retired Air
Force Pilot.

The next page connects to the website www.cleareyesight.info
The Navigation bar on the left works for webpage links.

PALMING

PALMING

TO COVER THE CLOSED EYES WITH THE PALMS OF THE HANDS WHILE RELAXING AND THINKING SOMETHING PLEASANT.



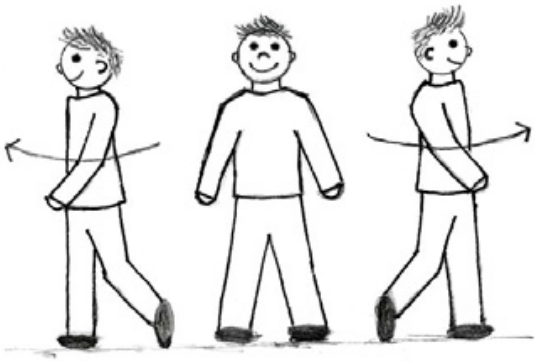
THE FINGERS OF THE RIGHT HAND CROSS OVER, ON TOP OF THE LEFT HANDS FINGERS, IN THE CENTER OF THE FOREHEAD.

THIS PICTURE SHOWS THE LEFT AND RIGHT HANDS/EYES OF A PERSON FACING THE READER.
TO SEE HOW THE READERS HANDS ARE PLACED; VIEW THIS PICTURE IN A MIRROR OR PLACE THE PICTURE OUTWARD ON THE CHEST AND LOOK DOWN AT THE PICTURE FOR A SECOND.

PALMING RELAXES THE MIND, BODY, NECK, EYE MUSCLES, EYES, AND WHEN COMBINED WITH SUNNING IMPROVES THE EYES/RETINA, BRAIN AND BODY'S ACTIVATION/REACTION TO SUNLIGHT AND ABSORPTION, USE OF SUNLIGHT. THIS IMPROVES FUNCTION, HEALTH OF EYES, BRAIN, BODY.

THE LONG SWING

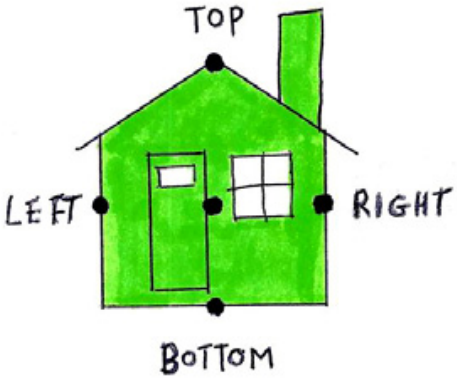
THE LONG SWING



TURN AND SWING RIGHT | CENTER | TURN AND SWING LEFT.

SHIFTING – EYE MOVEMENT – THE EYES/VISUAL ATTENTION/CENTER OF THE VISUAL FIELD SHIFT/MOVE FROM POINT TO POINT, PART TO PART ON A OBJECT AND FROM OBJECT TO OBJECT.

SHIFT ON THE HOUSE, DOT TO DOT.



SHIFT IN ANY DIRECTION/PATTERN.



THE DIAGRAM ABOVE SHOWS A EXAMPLE OF THE NATURAL SHIFTING PATTERN OF THE EYES.. NOTICE THE EYES MOVE FREELY ON THE HOUSE IN A VARIETY OF PATTERNS, DIRECTIONS.

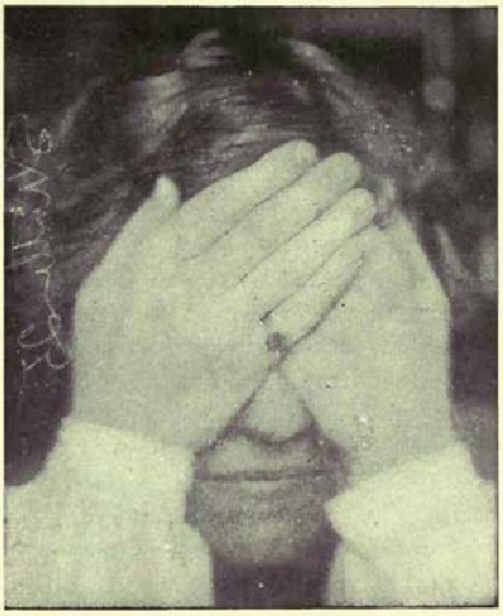


Fig. 42. Palming

This is one of the most effective methods of obtaining relaxation of all the sensory nerves.



Palm and remember, shift on a favorite object: flower, colorful stone, jewelry, tree, land, old house... Improving the memory, imagination of clear mental pictures relaxes the mind, body, eyes and improves the vision.



Palm and imagine drifting down a river. See objects in color, clear, motion. Movement of the boat, water, wind, birds flying, sun shining, sparkling on the river, animals walking on the shore, colorful dragonflies... Imagine all the senses; touch, warmth of sun, feel the breeze, hear the water, birds, wind, taste your favorite drink...

CENTRAL FIXATION

BIRD IS SEEN CLEAR BY
PLACING IT IN THE CENTER
OF THE VISUAL FIELD



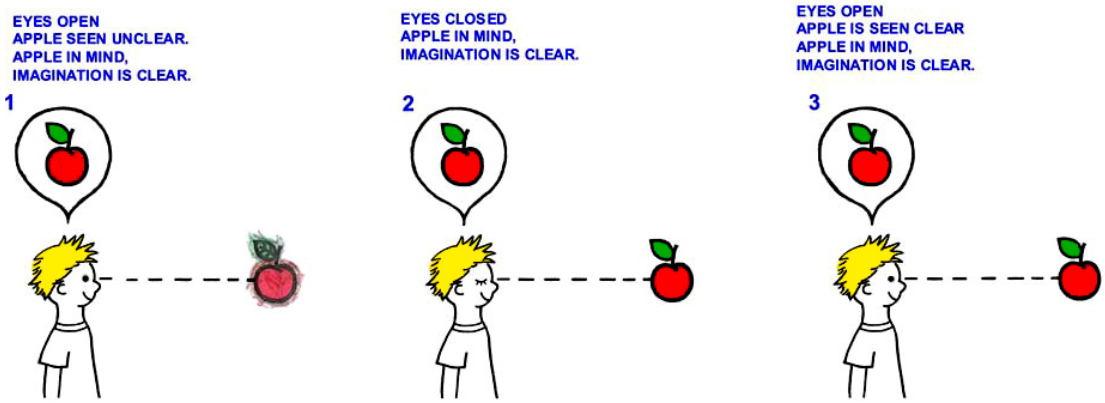
SUNNING



When looking at the bird;
Place it in the center of the visual field.
Shift part to part on the bird, moving the exact center of the visual field part to part.
Do this for any object the eyes look at; shift part to part on the object. Blink, relax.
Move the head/face, body with the eyes, in the same direction.
The center of the visual field moves with the eyes from object to object, part to part.
Use perfect, exact central fixation; shift small point to small point on objects and small parts of objects.

MEMORY AND IMAGINATION – CLEAR MENTAL PICTURES

REMEMBERING, IMAGINING OBJECTS CLEAR IMPROVES FUNCTION OF THE BRAIN WITH THE EYES AND CLARITY OF VISION.

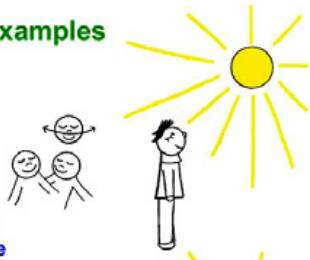


USE THE IMAGINARY NOSEFEATHER WITH STEPS # 1,2,3. (SEE NOSEFEATHER, CHAPTER ---)
REMEMBER, IMAGINE, SEE THE APPLE CLEAR WITH THE EYES OPEN, CLOSED, OPEN WHILE SHIFTING FROM PART TO PART ON THE APPLE WITH THE NOSEFEATHER. TRACE AROUND THE EDGES OF THE APPLE, STEM, LEAF WITH THE END OF THE FEATHER. TRACE SMALL PARTS OF THE APPLE.
PRACTICE STEPS # 1,2,3 WITH BOTH EYES TOGETHER, THEN ONE EYE AT A TIME, THEN BOTH TOGETHER AGAIN.
PRACTICE ON ANY SIZE OBJECT; LARGE, MEDIUM, SMALL, TINY AT CLOSE, MIDDLE, FAR DISTANCES.

Remembering, imagining any pleasant object, scene, happy memory, fantasy relaxes the mind, body, eye muscles, eyes resulting in clear vision.
Remembering, imagining the objects, scene clear while relaxed, easy, without effort improves the clarity of vision.
If the boy remembers, imagines a different object, any happy memory, image, scene (playing baseball, a favorite adventure...) with the eyes open looking at the apple, shifting on it and when the eyes are closed shifting on the imaginary image: when the eyes are opened - the apple will be seen clear. He can remember, imagine the apple or any pleasant object clear, shift on it in his mind and the apple will be seen clear.
Palming with the eyes closed combined with the memory imagination activity brings clear vision.

Sunning Examples

Face the sun with the eyes closed and move the head/ face slowly, relaxed side to side; left, right, left, right... Feel and see the sun move across the face/closed eyes. Then, move the head/face up and down, then circular; trace around the sun counter clockwise, clockwise. The eyes, head/face (and body) move together, at the same time, in the same direction.



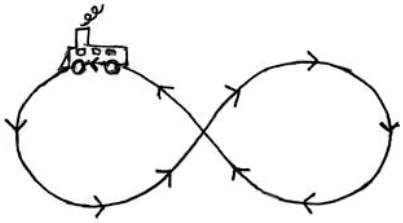
Do the rock while sunning; Face the sun with the eyes closed and rock the entire body side to side, left and right.
Do the long swing.



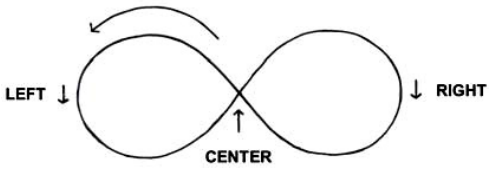
Sit facing the sun, relax, eyes closed and daydream pleasant thoughts. Occasionally move the head/ face side to side.

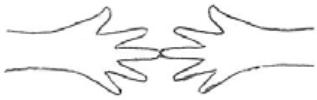


FIGURE EIGHT



THE FIGURE EIGHT

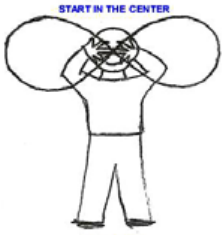




THE FINGERTIPS OF THE 3RD FINGER OF THE LEFT AND RIGHT HANDS TOUCH WITH THE PALMS FACING IN TOWARD THE FACE.
THIS IS THE START POSITION AT THE CENTER OF THE FIGURE EIGHT.

THE FIGURE EIGHT – INFINITY SWING



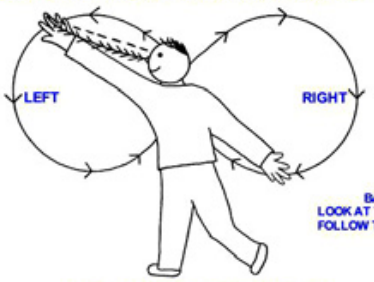


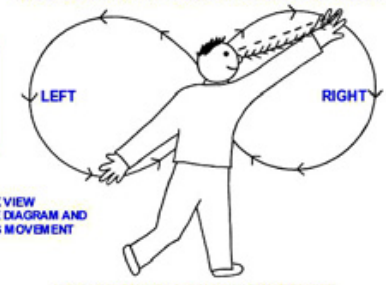
FRONT VIEW

DRAW THE FIGURE EIGHT WITH THE EYES, HAND AND END OF THE NOSEFEATHER WHILE DOING THE LONG SWING.
FOLLOW THE ARROWS - START IN THE CENTER AND DRAW UP THE CENTER AND TO THE LEFT FIRST. DRAW THE LEFT SIDE AND BACK UP THE CENTER. THEN DRAW THE RIGHT SIDE; DRAW LEFT, RIGHT, LEFT, RIGHT...

DRAW THE LEFT SIDE FIRST WITH THE LEFT HAND.
SWING, TURN LEFT AND LIFT THE HEEL OF THE RIGHT FOOT.
EYES LOOKING AT/SHIFTING ON AND MOVING WITH THE CENTER FINGERTIP OF THE LEFT HAND AS THE HAND DRAWS THE EIGHT.
THE END OF THE NOSEFEATHER AND EYES (VISUAL ATTENTION) ARE ON AND MOVING WITH THE LEFT HANDS CENTER FINGERTIP.
PALM OF HAND IS FACING IN TOWARD THE FACE WHEN IN THE CENTER, THEN MOVES OUT STRAIGHT WITH THE ARM AS THE HAND DRAWS THE LEFT SIDE..

DRAW THE RIGHT SIDE WITH THE RIGHT HAND.
SWING, TURN RIGHT AND LIFT THE HEEL OF THE LEFT FOOT.
EYES LOOKING AT/SHIFTING ON AND MOVING WITH THE CENTER FINGERTIP OF THE RIGHT HAND AS THE HAND DRAWS THE EIGHT.
THE END OF THE NOSEFEATHER AND EYES (VISUAL ATTENTION) ARE ON AND MOVING WITH THE RIGHT HANDS CENTER FINGERTIP.
PALM OF HAND IS FACING IN TOWARD THE FACE WHEN IN THE CENTER, THEN MOVES OUT STRAIGHT WITH THE ARM AS THE HAND DRAWS THE RIGHT SIDE.





BACK VIEW
LOOK AT THE DIAGRAM AND FOLLOW THIS MOVEMENT

LOOKING, MOVING LEFT WHEN DRAWING THE LEFT SIDE ACTIVATES THE RIGHT BRAIN HEMISPHERE AND CLEAR DISTANT VISION.

LOOKING, MOVING RIGHT WHEN DRAWING THE RIGHT SIDE ACTIVATES THE LEFT BRAIN HEMISPHERE AND CLEAR CLOSE VISION.

MOVING BACK AND FORTH; LEFT, RIGHT, LEFT, RIGHT AND PASSING ACROSS THE CENTER OF THE EIGHT (MIDLINE/CENTER OF THE BRAIN AND BODY) ACTIVATES AND INTEGRATES THE LEFT AND RIGHT BRAIN HEMISPHERES, CLEAR CLOSE AND DISTANT VISION AND EQUALLY CLEAR PERFECT VISION IN THE LEFT AND RIGHT EYES.

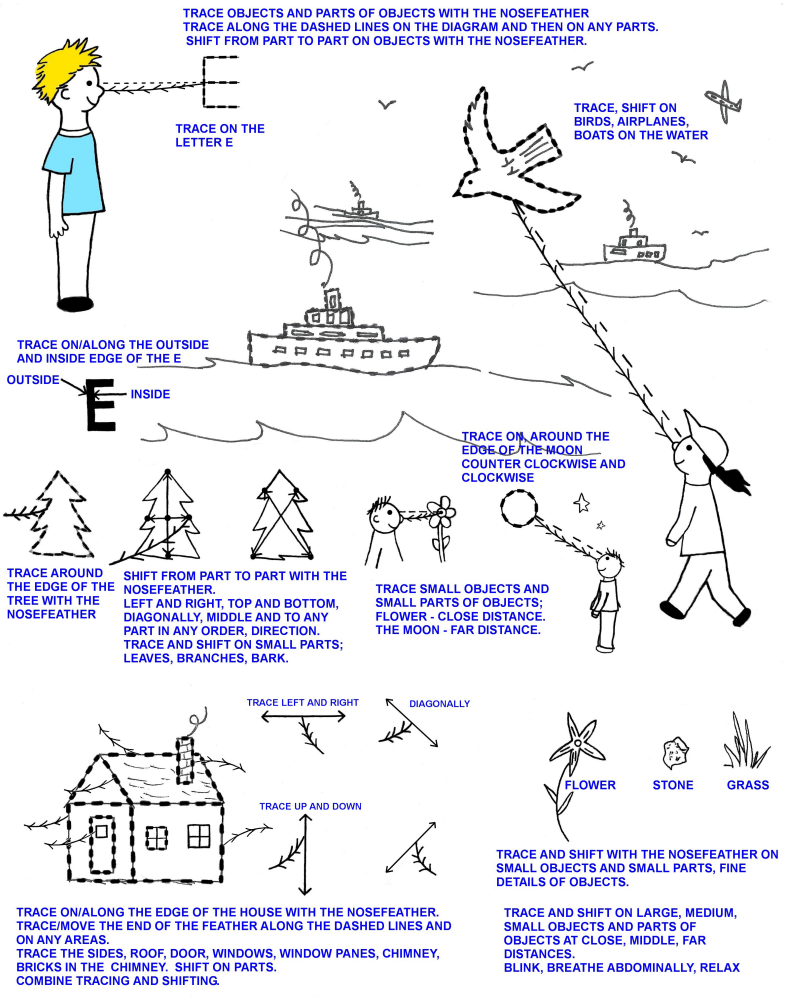
DRAWING THE FIGURE EIGHT RELAXES AND BRINGS MOVEMENT TO THE EYES, HEAD/FACE, NECK, BACK AND BODY AND ACTIVATES CORRECT VISION HABITS.
THIS ALSO IMPROVES THE CLARITY OF EYESIGHT.

The Figure Eight - Infinity Swing

THE NOSEFEATHER

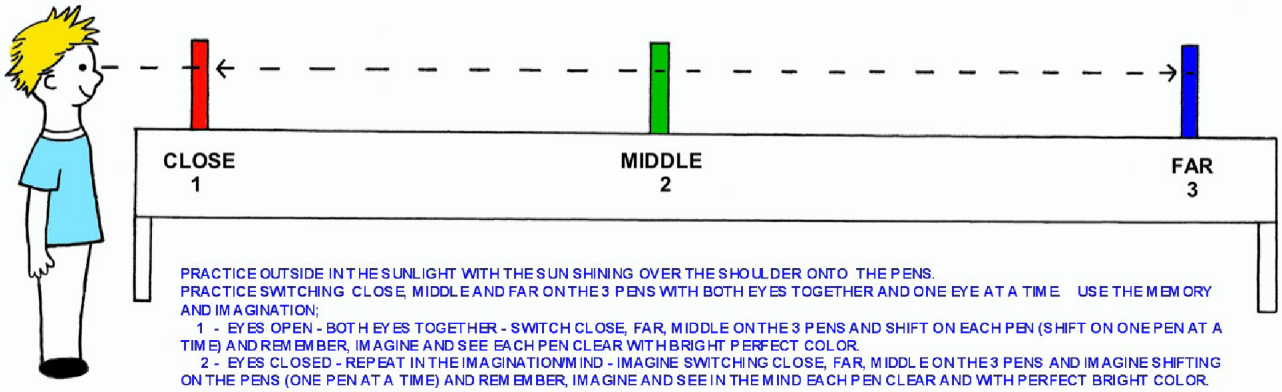


THE MAN IS TRACING AROUND THE EDGE OF THE TREE WITH THE IMAGINARY NOSEFEATHER.
THE END OF THE FEATHER EXTENDS OUT FROM THE END/CENTER OF THE NOSE AND BENDS UP TO EYE LEVEL TO TOUCH THE PART OF THE OBJECT THE EYES ARE LOOKING AT IN THE CENTER OF THE VISUAL FIELD.
THE FEATHER IS VERY THIN AND THE END FORMS A VERY SMALL POINT WHICH IS THE SIZE OF THE EXACT CENTER OF THE VISUAL FIELD PRODUCED BY THE FOVEA CENTRALIS IN THE MACULA, CENTER OF THE EYES RETINA.
MOVE THE POINTED END OF THE NOSEFEATHER AROUND THE EDGE OF OBJECTS AND PARTS OF OBJECTS.
THE EYES, END OF THE NOSEFEATHER, HEAD/FACE AND BODY MOVE TOGETHER, IN SYNCHRONIZATION; SAME TIME, SAME DIRECTION.
THE NECK IS RELAXED AND MOBILE.
BLINK, BREATHE ABDOMINALLY, RELAX.
THE NOSEFEATHER IS ALSO USED TO SHIFT FROM POINT TO POINT (SMALL PART TO SMALL PART) ON A OBJECT.
THE NOSEFEATHER IS USED TO SWITCH FROM CLOSE OBJECTS TO DISTANT OBJECTS AND DISTANT TO CLOSE, MIDDLE...
THE FEATHER BECOMES LONGER WHEN LOOKING TO THE DISTANCE AND SHORTER WHEN LOOKING AT CLOSE OBJECTS.
THE NOSEFEATHER ACTIVATES EASY USE OF CORRECT VISION HABITS; SHIFTING (EYE MOVEMENT), CENTRAL FIXATION, MOVEMENT OF THE HEAD/FACE, BODY WITH THE EYES, RELAXATION AND MOVEMENT OF THE NECK.
THE FEATHER CAN BE IMAGINED AS BEING INVISIBLE.
THIS ALLOWS THE BRAIN TO IMAGINE, REMEMBER THE OBJECT THE EYES ARE LOOKING AT CLEAR WITHOUT BEING DISTRACTED BY THE IMAGE OF THE FEATHER.



SWITCH BACK AND FORTH; CLOSE, MIDDLE, FAR ON THREE PENS FOR CLEAR VISION AT ALL DISTANCES

DIRECTIONS; PLACE THREE COLORED PENS (OR POPSICLE STICKS) UPRIGHT INTO A CARDBOARD BOX, IN A STRAIGHT LINE AT CLOSE, MIDDLE AND FAR DISTANCES.
THE 3 PENS ARE IN THE CENTER OF THE VISUAL FIELD, BETWEEN THE EYES, AT EYE LEVEL.
RED, GREEN AND BLUE ARE THE MAIN COLORS OF THE SUNS LIGHT SPECTRUM. COMBINATIONS OF RED, GREEN, BLUE CREATES OTHER COLORS.
THE CONES IN THE EYES RETINA DETECT RED, GREEN, BLUE AND ALL OTHER COLORS.
RED ACTIVATES THE LEFT BRAIN HEMISPHERE AND CLEAR CLOSE VISION.
BLUE ACTIVATES THE RIGHT BRAIN HEMISPHERE AND CLEAR DISTANT (FAR) VISION.
GREEN ACTIVATES AND INTEGRATES BOTH LEFT AND RIGHT BRAIN HEMISPHERES AND CLEAR CLOSE AND DISTANT VISION.
ALL 3 COLORS ACTIVATE CLEAR MIDDLE DISTANCE VISION.
ACTIVATING AND INTEGRATING THE LEFT AND RIGHT BRAIN HEMISPHERES PRODUCES EQUALLY CLEAR PERFECT VISION IN THE LEFT AND RIGHT EYES AT ALL DISTANCES CLOSE, MIDDLE, FAR.
SWITCHING ON ANY OBJECTS; CLOSE, FAR, CLOSE, FAR, AND TO THE MIDDLE DISTANCE ACTIVATES AND INTEGRATES THE LEFT AND RIGHT BRAIN HEMISPHERES AND CLEAR VISION AT ALL DISTANCES. SWITCHING ON THE RED, BLUE AND GREEN PENS INCREASES ACTIVATION AND INTEGRATION THE LEFT AND RIGHT BRAIN HEMISPHERES AND CLARITY OF VISION.



PRACTICE OUTSIDE IN THE SUNLIGHT WITH THE SUN SHINING OVER THE SHOULDER ONTO THE PENS.
PRACTICE SWITCHING CLOSE, MIDDLE AND FAR ON THE 3 PENS WITH BOTH EYES TOGETHER AND ONE EYE AT A TIME. USE THE MEMORY AND IMAGINATION;

1 - EYES OPEN - BOTH EYES TOGETHER - SWITCH CLOSE, FAR, MIDDLE ON THE 3 PENS AND SHIFT ON EACH PEN (SHIFT ON ONE PEN AT A TIME) AND REMEMBER, IMAGINE AND SEE EACH PEN CLEAR WITH BRIGHT PERFECT COLOR.

2 - EYES CLOSED - REPEAT IN THE IMAGINATION/MIND - IMAGINE SWITCHING CLOSE, FAR, MIDDLE ON THE 3 PENS AND IMAGINE SHIFTING ON THE PENS (ONE PEN AT A TIME) AND REMEMBER, IMAGINE AND SEE IN THE MIND EACH PEN CLEAR AND WITH PERFECT BRIGHT COLOR.

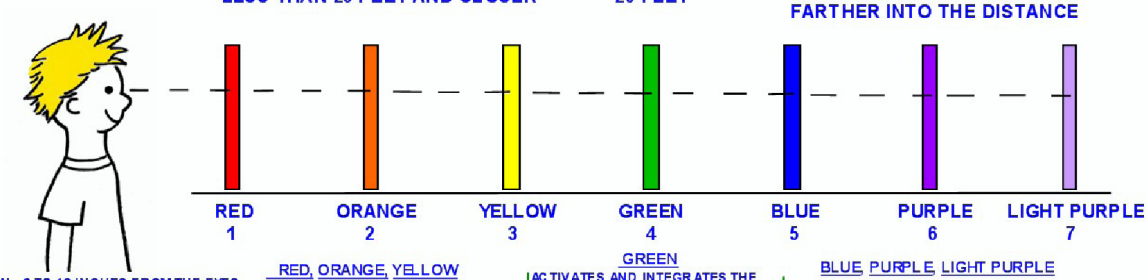
3 - EYES OPEN - REPEAT NUMBER 1.

4 - ONE EYE AT A TIME - REPEAT NUMBER 1, 2, 3 WITH ONE EYE AT A TIME; LEFT EYE (RIGHT EYE COVERED WITH PATCH AND OPEN UNDER THE PATCH) - SWITCH, SHIFT ON THE 3 PENS AND REMEMBER, IMAGINE AND SEE THE PENS CLEAR AND WITH PERFECT BRIGHT COLOR WITH THE EYE OPEN, CLOSED, OPEN.
REPEAT WITH THE RIGHT EYE (LEFT EYE COVERED WITH PATCH AND OPEN UNDER THE PATCH).
REPEAT WITH LEFT EYE AGAIN, THEN RIGHT, LEFT, RIGHT.
IF VISION IS LESS CLEAR IN ONE EYE - PRACTICE WITH THAT EYE A LITTLE LONGER.
WHEN USING ONE EYE; KEEP THE PEN BETWEEN THE EYES, AT EYE LEVEL, CENTER OF THE VISUAL FIELD.

5 - END BY PRACTICING WITH BOTH EYES TOGETHER AGAIN - STEPS 1,2,3.

PRACTICE WITH THE PENS PLACED AT A VARITY OF DISTANCES FOR CLEAR VISION AT ALL DISTANCES.

SWITCH ON THE SEVEN COLORED PENS PLACED AT CLOSE, MIDDLE AND FAR DISTANCES



RED PEN - 6 TO 12 INCHES FROM THE EYES OR START AT ANY DISTANCE THAT IS COMFORTABLE.
PLACE THE 7 PENS IN THE CENTER OF THE VISUAL FIELD, BETWEEN THE EYES, AT EYE LEVEL. PENS ARE IN A STRAIGHT LINE.

RED, ORANGE, YELLOW
ACTIVATES THE LEFT BRAIN HEMISPHERE AND CLEAR CLOSE VISION

GREEN
ACTIVATES AND INTEGRATES THE LEFT AND RIGHT BRAIN HEMISPHERES AND CLEAR CLOSE, MIDDLE AND FAR VISION.
GREEN, THE MIDDLE DISTANCE, IS THE BALANCING COLOR AND REPRESENTS THE CENTER/MIDLINE OF THE BRAIN WHERE THE LEFT AND RIGHT HEMISPHERES MEET, COMMUNICATE, SWITCH BACK AND FORTH.

BLUE, PURPLE, LIGHT PURPLE
ACTIVATES THE RIGHT BRAIN HEMISPHERE AND CLEAR DISTANT (FAR) VISION

DIRECTIONS

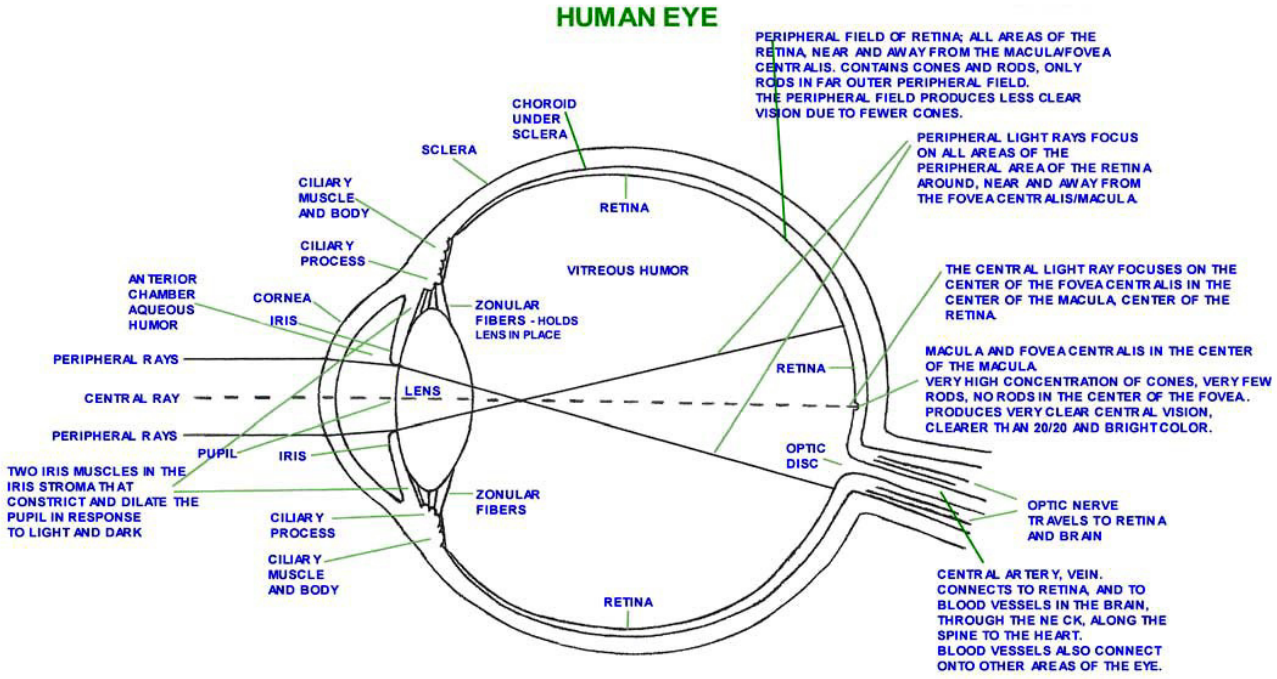
+SWITCHING BACK AND FORTH; CLOSE TO FAR, FAR TO CLOSE AND TO/ FROM THE MIDDLE DISTANCE TO/FROM CLOSE AND FAR ACTIVATES AND INTEGRATES THE LEFT AND RIGHT BRAIN HEMISPHERES AND CLEAR CLOSE, MIDDLE, DISTANT/FAR VISION.
COLOR IMPROVES BRAIN FUNCTION AND CLARITY OF VISION.
+ SWITCHING ON THE COLORED PENS; RED, ORANGE, YELLOW (CLOSE DISTANCES) TO BLUE, PURPLE, LIGHT PURPLE (FAR DISTANCES) AND TO GREEN (MIDDLE DISTANCE) INCREASES ACTIVATION AND INTEGRATION OF THE LEFT AND RIGHT BRAIN HEMISPHERES AND CLARITY OF VISION.
EXAMPLE; RED, CLOSE (LEFT BRAIN HEMISPHERE) TO BLUE, FAR (RIGHT BRAIN HEMISPHERE)
BLUE, FAR (RIGHT HEMISPHERE) TO RED, CLOSE (LEFT HEMISPHERE) ACTIVATES AND INTEGRATES THE LEFT AND RIGHT HEMISPHERES AND CLEAR CLOSE AND FAR VISION.
MIDDLE DISTANCE VISION IS AUTOMATICALLY IMPROVED. SWITCHING TO AND FROM THE MIDDLE DISTANCE GREEN TO/FROM THE CLOSE AND FAR DISTANCES WILL INCREASE ACTIVATION AND INTEGRATION OF THE BRAIN HEMISPHERES, CLARITY OF CLOSE, MIDDLE AND FAR VISION.
SWITCH CLOSE, MIDDLE, FAR IN ANY ORDER ON THE 7 PENS;
RED TO BLUE - BLUE TO RED. RED TO LIGHT PURPLE -LIGHT PURPLE TO RED. RED TO GREEN - GREEN TO RED
RED TO BLUE, TO GREEN, TO BLUE, TO YELLOW ORANGE TO GREEN - GREEN TO ORANGE, PURPLE TO BLUE, PURPLE, RED..
SHIFT ON EACH PEN THE EYES LOOK AT. LOOK AT A PEN AND SHIFT ON IT TO PREVENT STARING. AVOID STARING, EYE IMMOBILITY, SQUINTING, TRYING TO SEE CLEAR.
SHIFT ON THE PEN FROM PART TO PART; TOP AND BOTTOM, LEFT AND RIGHT, DIAGONALLY, TO MIDDLE AND TO ANY DIRECTION, PART.
MOVE THE HEAD/FACE WITH THE EYES, SAME TIME, SAME DIRECTION.
THE EYES, HEAD, FACE, NECK AND BODY ARE RELAXED AND MOBILE.
BLINK, BREATHE, RELAX. PRACTICE OUTSIDE IN THE SUNLIGHT. PRACTICE WITH BOTH EYES AND ONE EYE AT A TIME. USE THE MEMORY AND IMAGINATION.
SEE COMPLETE DIRECTIONS ON TOP PICTURE. TRACE AROUND THE EDGES OF THE PENS WITH THE NOSEFEATHER.
SWITCHING, SHIFTING ON THE PENS AND USE OF CENTRAL FIXATION KEEPS THE EYES RELAXED, IMPROVES CONVERGENCE, ACCOMMODATION AT CLOSE DISTANCES, UNCONVERGENCE, UNACCOMMODATION AT FAR DISTANCES.
CENTRAL FIXATION; PLACE THE PART OF THE PEN THE EYES ARE LOOKING AT IN THE CENTER OF THE VISUAL FIELD, BETWEEN THE EYES AT EYE LEVEL.
THE CLEAR CENTER OF THE VISUAL FIELD MOVES WITH THE EYES AS THE EYES SHIFT FROM PART TO PART ON THE PENS.

SPACE THE PENS FARTHER APART OR CLOSER TOGETHER TO PRACTICE SWITCHING AT A VARIETY OF DISTANCES CLOSE AND FAR.
AT VERY CLOSE DISTANCES THE PENS SIZE MAY BLOCK THE VIEW OF OTHER PENS.
COLORED TOOTHPICKS CAN BE USED IN PLACE OF THE PENS WHEN SWITCHING AT VERY CLOSE DISTANCES; ALL TOOTHPICKS WITHIN 8 INCHES FROM EYES...
SEE DIAGRAM BELOW.
BE CAREFUL WHEN LOOKING AT THE TOOTHPICKS CLOSE TO THE EYES; KEEP ENDS AWAY FROM EYES.

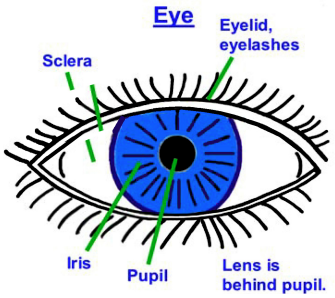


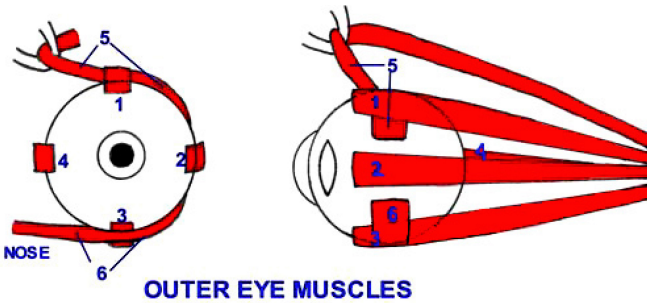
COLORED TOOTHPICKS

CENTRAL FIXATION - SEE CLEAR WITH THE CENTER OF THE VISUAL FIELD



THE RETINA CONTAINS CONES AND RODS - LIGHT, ENERGY RECEPTORS.
CONES PRODUCE VERY CLEAR VISION - CLEARER THAN 20/20 AND BRIGHT COLOR.
RODS PRODUCE LESS CLEAR VISION (20/400) - RODS PERCEIVE GREY/BLACK/WHITE, LIGHT AND DARK BUT NO OTHER COLORS. RODS DETECT MOVEMENT OF OBJECTS IN THE VISUAL FIELD AND CONTINUE TO FUNCTION IN ALMOST COMPLETE DARKNESS.
THE FOVEA AND MACULA IN THE CENTER OF THE RETINA CONTAIN MANY CONES, (ONLY CONES IN THE CENTER OF THE FOVEA) AND PRODUCE VERY CLEAR VISION IN THE CENTER OF THE VISUAL FIELD.
THE PERIPHERAL FIELD OF THE RETINA AROUND, NEAR AND AWAY FROM THE FOVEA/MACULA CONTAINS LESS CONES AND MORE RODS, AND ONLY RODS (NO CONES) IN THE FAR OUTER PERIPHERAL FIELD.
THIS RESULTS IN LESS CLEAR PERIPHERAL VISION, THE FAR OUTER PERIPHERAL FIELD BEING MOST UNCLEAR.
SEE CLEAR WITH CENTRAL FIXATION - A CORRECT VISION HABIT - PLACE THE OBJECT OF VISUAL ATTENTION IN THE CENTER OF THE VISUAL FIELD.
WHEN THE EYES USE THE CENTER OF THE VISUAL FIELD, THE CENTRAL RAY FOCUS PERFECT ON THE CENTER OF THE FOVEA CENTRALIS, RAYS CLOSEST TO THE CENTRAL RAY FOCUS ON THE MACULA, AND PERIPHERAL RAYS FOCUS PERFECTLY ON THE PERIPHERAL FIELD OF THE RETINA RESULTING IN PERFECT CLEAR CENTRAL VISION, CLEARER THAN 20/20 AND MAXIMUM CLARITY AND FUNCTION OF THE PERIPHERAL FIELD. THE CLARITY OF THE ENTIRE VISUAL FIELD IMPROVES.

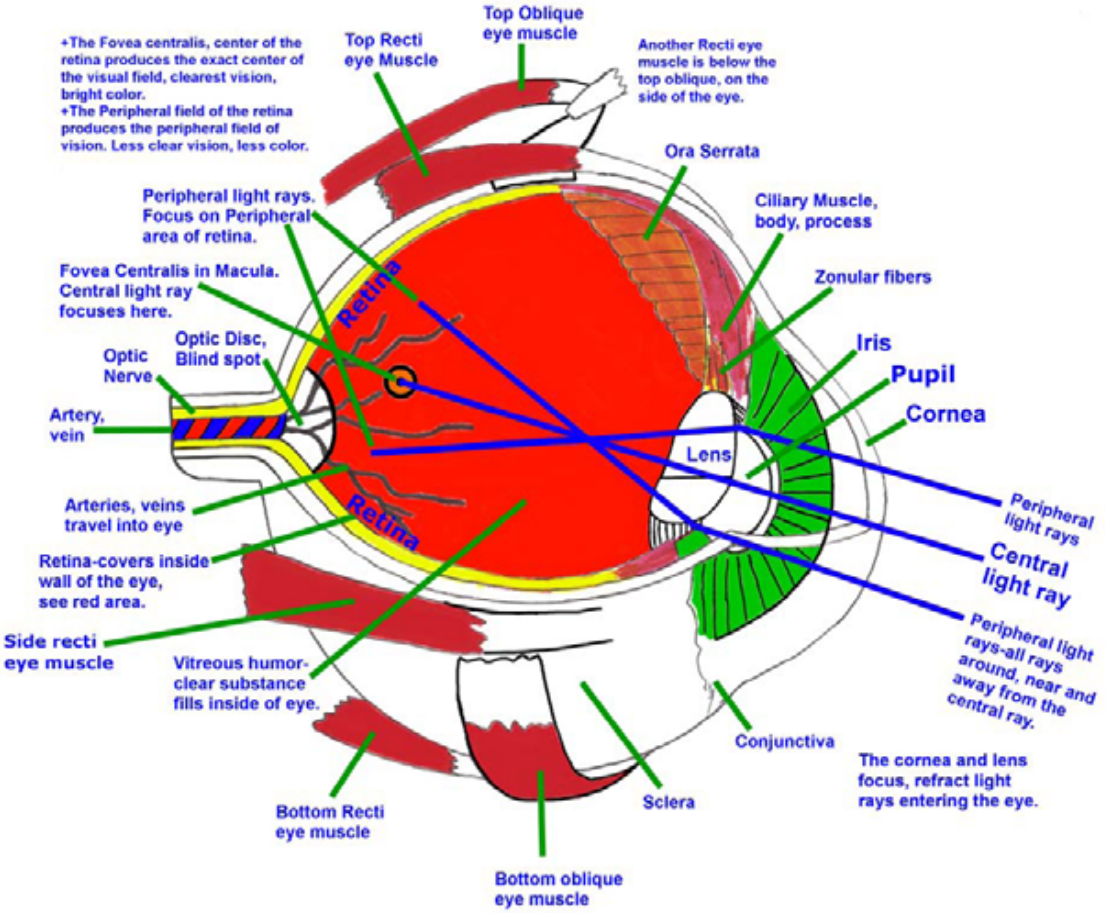


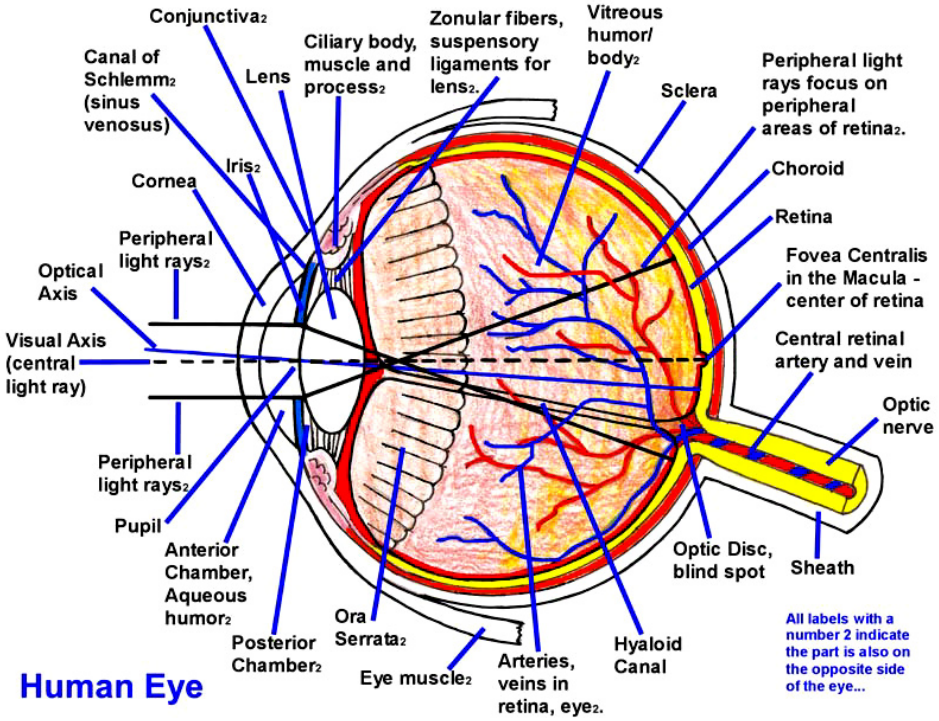


OUTER EYE MUSCLES
RECTI - # 1, 2, 3, 4
OBLIQUE - 5, 6

Video - http://www.youtube.com/watch?v=nIrKuQEJ6y4

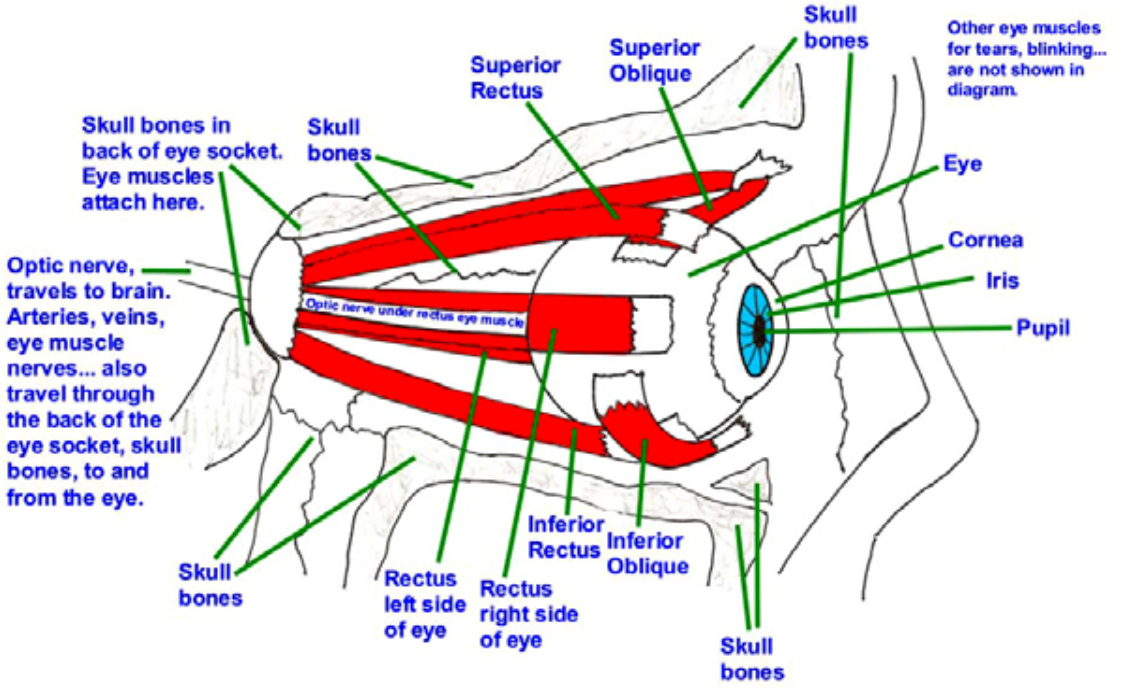
The retina contains cones and rods, light receptors. Cones=very clear vision, bright color. Activated in light. Stops functioning in almost complete darkness. Rods=Less clear vision, grey, white color. Also senses movement in the visual field and continues to function in very dim light, almost complete darkness. The macula contains many cones, and a few rods. The fovea contains a high concentration of cones and no rods. The peripheral field of the retina contains many rods and some cones with less and no cones into the far outer peripheral. This is why the center of the visual field is clearest. See clear by using the Macula, Fovea Centralis, center of the visual field. See much clearer, fine details, brightest color by using the fovea, exact center of the retina, visual field. The center of the visual field moves with the eyes from object to object, part to part on objects keeping the vision clear.



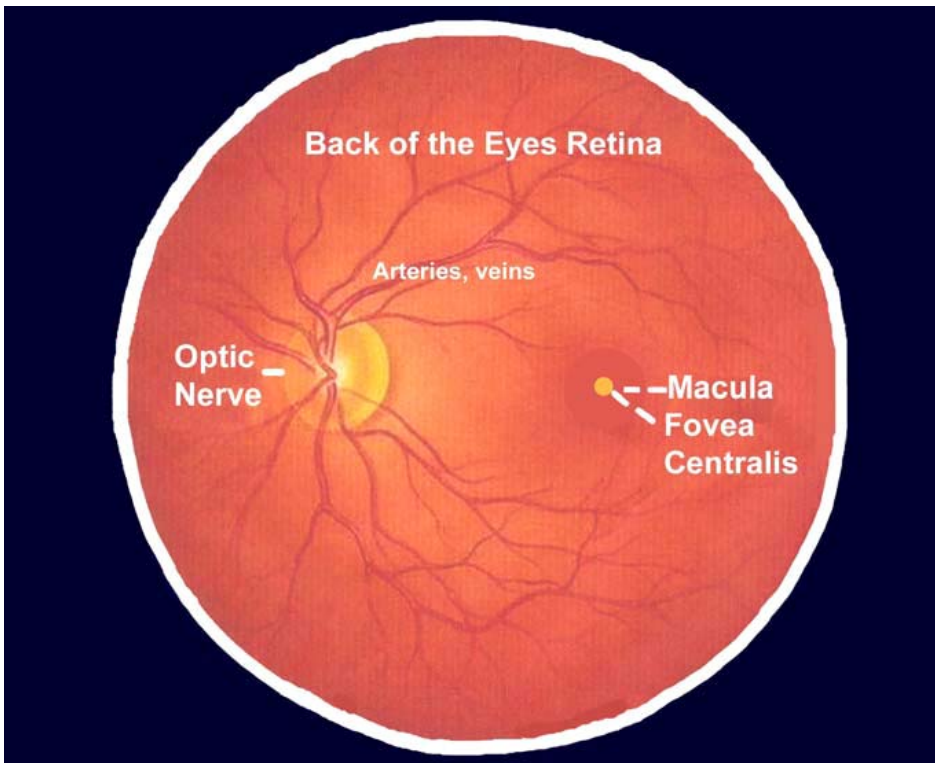


Human Eye

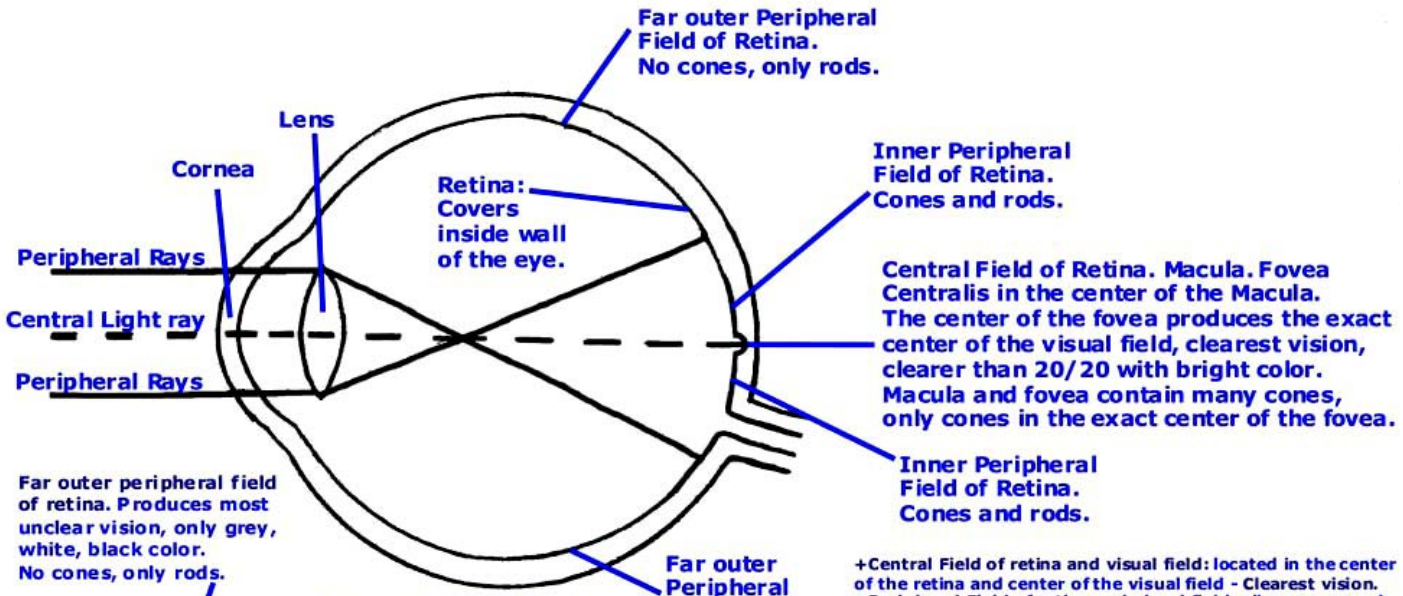
Eye socket, bones, eye, eye muscles, optic nerve.



Notice that the eye socket is composed of bone segments, aligned, grown together. These are part of the skull bones. Eye muscles attach to the skull bones in the back of the eye socket. Misalignment of the eye socket or skull bones due to accidents, birth trauma, forcep, suction delivery... can mis-align the bones, place pressure, tension on/in the eye, optic nerve, eye muscles resulting in crossed, wandering eyes, imperfect convergence, divergence, accommodation, un-accommodation, unclear vision, astigmatism and other abnormal eye conditions. Special chiropractors (Cranial, Cranio Sacral Therapy, Osteopathy) can re-align the bones of the skull if needed. Often, use of the Bates method alone can correct eye function and clarity of the vision.



Central Fixation-Center of the Retina produces the Center of the Visual Field.
The center of the visual field is clearest.



Central Fixation:
See a object clear by placing it in the center of the visual field. The central field moves with the eyes as the eyes move 'shift' on a object and from object to object. The brain, eyes continue to be aware of the peripheral field, but the object of mental/visual attention is placed in the clear central field.

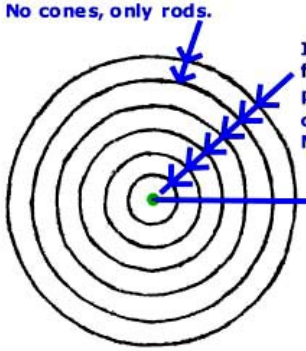
The peripheral field keeps the brain aware of other objects, moving objects... in the peripheral field.

People that have unclear vision, cataracts, astigmatism, macula degeneration... tend to try to see objects clear with the peripheral field by turning, tilting the head, eyes to place the object away from the central field and into the peripheral. This increases the blur, vision impairment.

Central Fixation activates clear vision and healthy eyes.

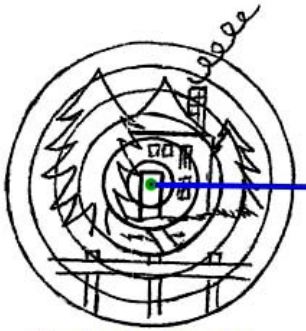
Even when looking at a tiny part of a object: place it in the center of the visual field.

Far outer peripheral field of retina. Produces most unclear vision, only grey, white, black color. No cones, only rods.



Inner and outer peripheral field of retina - Produces peripheral field of vision, less clear vision. Cones and rods. No cones in far outer field.

Center of retina, Macula and Fovea Centralis - Produces center of visual field, clearest vision. Cones and rods, mainly cones. Only cones in center of fovea. Green dot is the macula. Fovea= blue dot in center of the macula. Fovea produces the clearest vision, clearer than 20/20 with fine detail, bright color.



Eyes looking at the top, center of the house door. The exact center of the visual field moves point to point on this area.

Center of visual field produced by Macula and Fovea.
Green dot=outer central field produced by the macula.
Blue dot =inner central field, exact center of visual field produced by center of the fovea centralis- Very clear vision, clearer than 20/20.

Central Fixation: Place the exact center of the visual field on the object and move it part to part with the eyes as the eyes shift from part to part (point to point) on the object. The exact center of the visual field is the size of the pointed end of a pin, can see tiny, fine details clear at close and far distances.

+Central Field of retina and visual field: located in the center of the retina and center of the visual field - Clearest vision.
+Peripheral Field of retina and visual field: all areas around, near (but not within) and away from the macula/fovea, away from the central field of vision - Less clear vision.

The retina contains light/photo sensitive, receptor cells; 'Cones and Rods' that convert light energy by electro-chemical action into signals that are carried by the optic nerve to the brain, then travel down the spinal cord to the body.
Cones produce very clear, fine detailed vision and bright color.
Rods produce less clear vision, only grey, black, white color.

The central field of vision is clearest, due to the macula, fovea containing many cones.
See clear by using the center of the visual field.

Cones exist in the central and peripheral areas of the retina and increase in number closest to and in the center of the retina, macula. Cones decrease in the peripheral field.

Many cones exist in the macula and fovea. Few rods. An increased, maximum amount of cones (no rods) are in the exact center of the fovea. This produces very clear vision in the exact center of the visual field.

The outer central field produced by the macula is less clear than the inner, exact central field produced by the center of the fovea centralis.

Cones stop functioning in very dim light.

Rods in the Peripheral field sense objects, movement and continue to function in very dim light, almost complete darkness. Only rods (no cones) exist in the far outer peripheral field of the retina. This causes vision to be most unclear in the far outer peripheral field.

All areas of the peripheral are less clear due to less cones and more rods in the peripheral field of the retina.
The inner peripheral field closest to the center is clearer than the outer peripheral areas but is less clear than the central field.
In very dim light when the cones stop functioning causing the exact center of the visual field to stop functioning: the rods, peripheral field continue to produce vision.

EYECHARTS

Letter size for the charts on the following pages are approximate; print from the PDF E-Book and resize with a copy machine for exact measurement. Print the 20/20 line 3/8 inches. When letters on that line and below are clear; vision is clearer than 20/20 for distant vision at 20 feet and farther. Print the charts small and fine print for close vision practice at 5 feet and up to 1 inch from the eyes.

Read, See Small letters Clear on a Familiar Eyechart Daily;
Both eyes together, one eye at a time, both eyes together again.

SNELLEN TEST CARDS

There should be a Snellen test card in every family and in every school classroom. When properly used it always improves the sight even when it is already normal. Children or adults with errors of refraction, if they have never worn glasses, are cured simply by reading every day the smallest letters they can see at a distance of ten, fifteen, or twenty feet.

For Sale By

The Central Fixation Publishing Company

Paper ....50 Cents

Cardboard (folding) .....75 Cents

DELIVERED

Back numbers BETTER EYESIGHT: single copies, 30 cents; first and second years, unbound, $3 each; bound in cloth, $1.25 extra. Photographic reductions of the Bible,$4. Ophthalmoscopes (best quality), $20. Burning glasses, $4. Reprints of articles by Dr. Bates in other medical journals, a limited number for sale. Send for list.

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Videos are on Youtube. Download with Real Player SP.
Watch on computer. Can also be converted for television.



http://www.youtube.com/watch?v=sM-EHgC-J6w&feature=channel
http://www.youtube.com/watch?v=863yFmc-Ius&feature=channel
http://www.youtube.com/watch?v=mYpsYPPV_hg&feature=channel
http://cleareyesight.info/id79.html

More Videos - Click Here

How to Use the Snellen Test Card

FOR THE

Prevention and Cure of Imperfect Sight in Children

The Snellen Test Card is placed permanently upon the wall of the classroom, and every day the children silently read the smallest letters they can see from their seats with each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. This takes no appreciable amount of time, and is sufficient to improve the sight of all children in one week and to cure all errors of refraction after some months, a year, or longer.

Children with markedly defective vision should be encouraged to read the card more frequently.

Records may be kept as follows:

John Smith, 10, Sept. 15, 1918.
R. V. (vision of the right eye) 20/40.
L. V. (vision of the left eye) 20/20.

John Smith, 11, Jan. 1, 1919.
R. V. 20/30.
L. V. 20/15.

The numerator of the fraction indicates the distance of the test card from the pupil; the denominator denotes the line read, as designated by the figures printed above the middle of each line of the Snellen Test Card.

A certain amount of supervision is absolutely necessary. At least once a year some one who understands the method should visit each classroom for the purpose of answering questions, encouraging the teachers to continue the use of the method, and making a report to the proper authorities.

It is not necessary that either the inspector, the teachers, or the children, should understand anything about the physiology of the eye.

BETTER EYESIGHT

A MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Copyright, 1919, by the Central Fixation Publishing Company

Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I AUGUST, 1919 No. 2

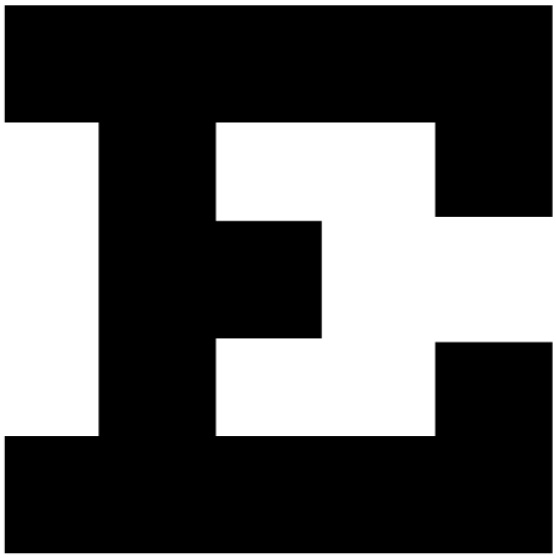
A HOUSE BUILT ON SAND

That the results of the present method of treating defects of vision are far from satisfactory is something which no one would attempt to deny. It is well known that many patients wander from one specalist to another, seeking vainly for relief, while others give up in despair and either bear their visual ills as best they may without assistance, or else resort to Christian Science, mental science, osteopathy, physical culture, or some of the other healing cults to which the incompetence of orthodox medicine has given birth. The specialists themselves, having daily to handle each other's failures, are scarcely better satisfied. Privately they criticize each other with great asperity and freedom, and publicly they indulge in much speculation as to the underlying causes of this deplorable state of affairs.

At the recent meeting of the Ophthalmological Section of the American Medical Association, Dr. E. J. Gardiner, of Chicago, in a paper on *The Present Status of Refraction Work*,[1] finds that ignorance is responsible for the largest quota of failure to get satisfactory results from what he calls the "rich heritage" of ophthalmic science, but that a considerable percentage must be attributed to other causes. Among these causes he enumerates a too great dependence on measuring devices, the delegation of refraction work to assistants, and the tendency to eliminate cycloplegics, in

1 For reports of all the papers quoted, see Jour. Am. Med. Assn, June 21, 1919.

20/200 at 200 Feet



20/100

F P

20/70

T O Z

20/60

P D C

20/50

L P E D

20/40

P E C F D

20/30

E D F C Z P

20/25

F E L O P Z D

20/20 Vision at 20 Feet

20/20 D E F P O T E C



20/15

L E F O D P C T

20/13

F D P L T C E O

20/10

P E Z O L C F T D

20/8

E D L T O Z F C P

20/6

L P C F E T O D Z

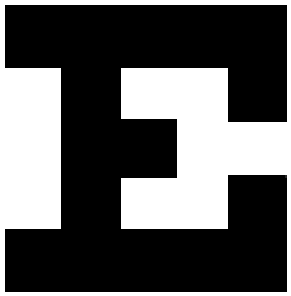
20/5

T F D O P Z L E C

Very Clear Vision, Small Print Clear at 20 Feet

Z C T L O P D F E

20/200



F P

T O Z

L P E D

P E C F D

E D F C Z P

F E L O P Z D

20/20 D E F P O T E C

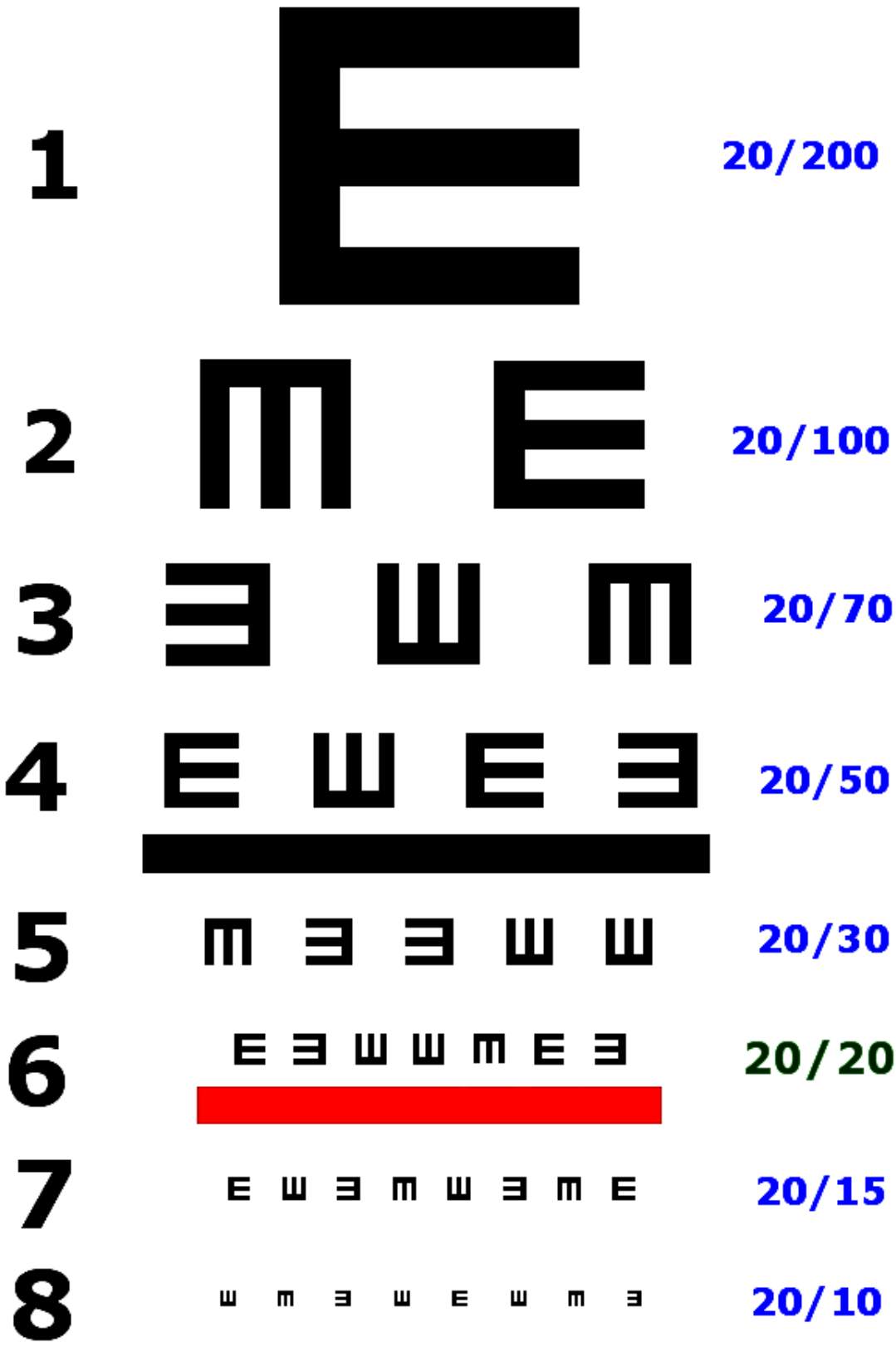
L E F O D P C T

F D P L T C E O

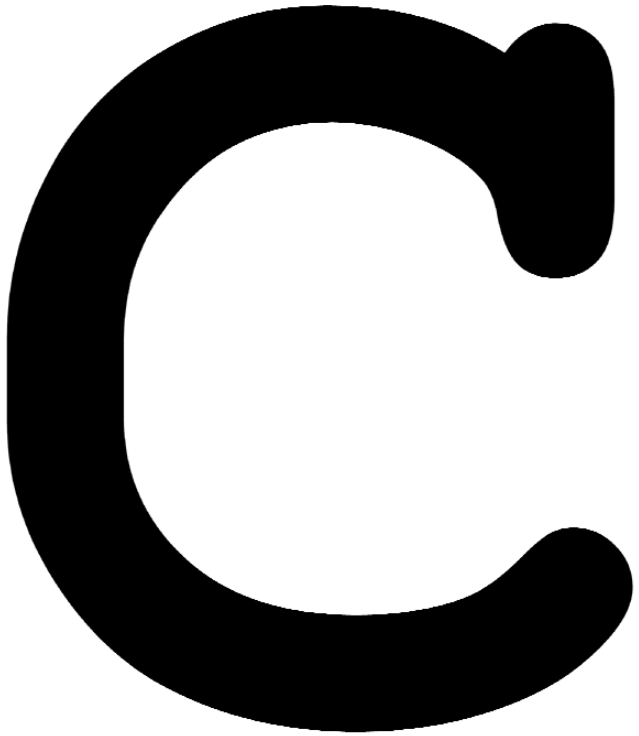
P E Z O L C F T D


20/200
E
F P
T O Z
L P E D
P E C F D
E D F C Z P
F E L O P Z D
20/20
D E F P O T E C
L E F O D F C T
F D P L T C E O
F E Z O L C F T D

Pothooks, Tumbling, Inverted E Eyechart



20/200 Vision at 200 Feet



20/100

R B

20/70

T F P

20/50

5 C G O

20/40

4 K B E R

20/30

3 V Y F P T

20/20

 2 Q C O G D □ C

20/15

R Z 3 B 8 S H K F O

20/10

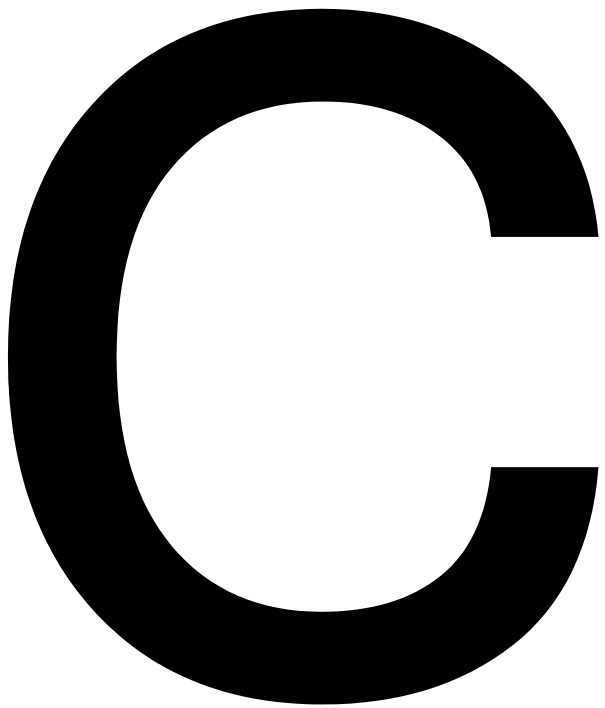
F T Y V P E C □ O B R K 5 6

20/5

A B C D E F G H I J K L M N O P Q R S T

CLEAR EYESIGHT IS EASY WITH THE BATES METHOD

Very Clear Vision, Small Print Clear at 20 Feet



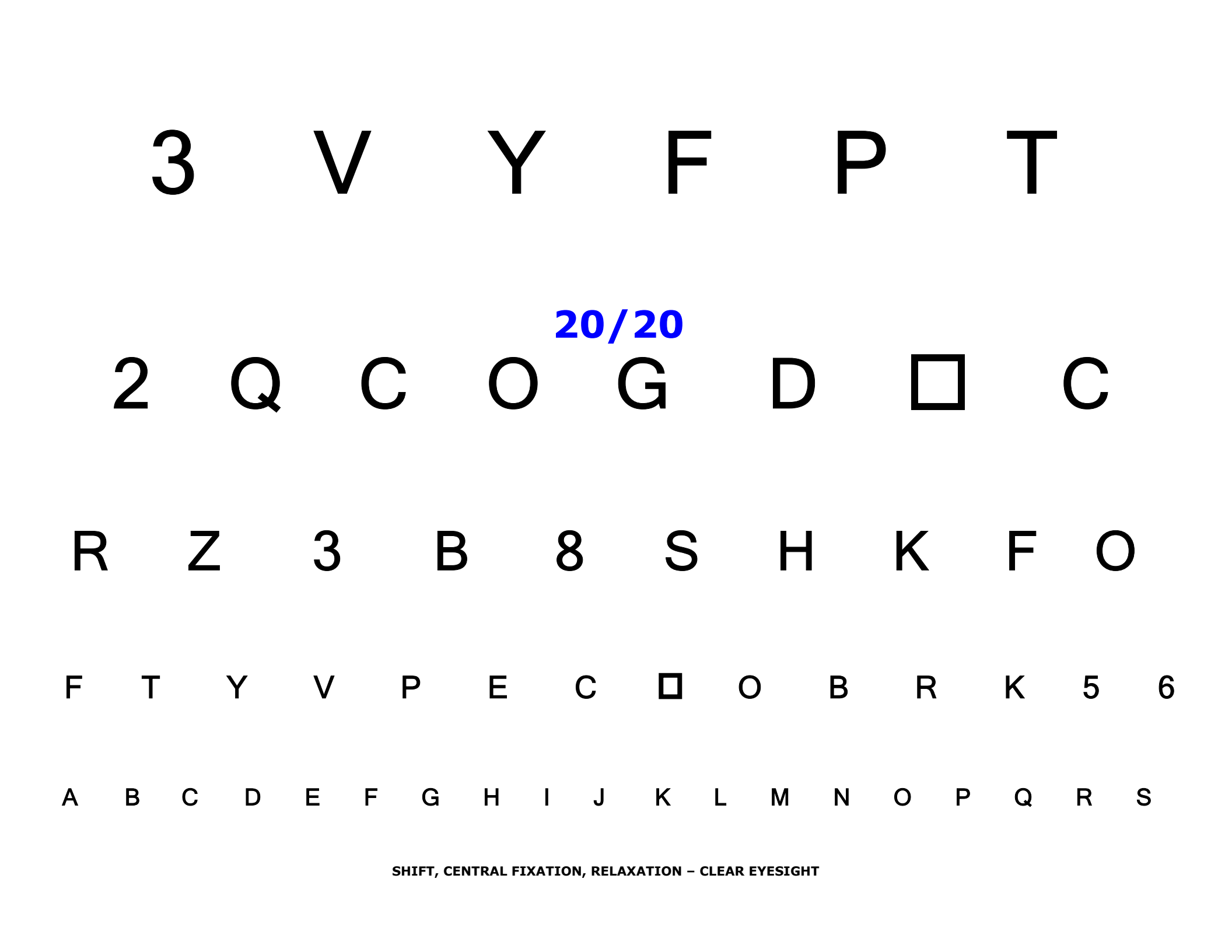
20/200

R B

T F P

5 C G O

4 K B E R


3 V Y F P T
20/20
2 Q C O G D C
R Z 3 B 8 S H K F O
F T Y V P E C O B R K 5 6
A B C D E F G H I J K L M N O P Q R S
SHIFT, CENTRAL FIXATION, RELAXATION – CLEAR EYESIGHT

Big C Distant eye chart - test vision at 20 feet.

20/200



20 - Top letter - distance standing from chart.
20 - Bottom letter - line looking at, size of letter.
Bottom letter also indicates the distance a person with clear 20/20 vision can see the letter clear at. Example; 20/200 = person with 20/20 vision can see the 200 line letter, (big C) at 20 feet and up to 200 feet away.

Seeing the 20/20 line letters clear at 20 feet indicates clear (20/20)vision.

Seeing the 20/20 line and smaller letters on the 20/15, 10, 5 lines clear at 20 feet and farther; 25, 30, 40+ feet indicates clearer than 20/20 vision.

Seeing only the larger letters above the 20/20 line clear at 20 feet or closer indicates less clear than 20/20 vision.

Test and improve the vision; shift on the letters with both eyes together, then with one eye at a time, then both together again.

When looking at a letter; Shift small part to small part on the letter.
Shift part to part on letters and shift letter to letter along a line of letters and then to the next line; relaxed, easy, continually.
Avoid staring; let the eyes move.
Movement prevents staring, squinting effort, strain and blur.

The eyes, head/face, neck, shoulders and body are relaxed and move freely.

Move the head/face with the eyes when shifting from part to part, letter to letter.

Allow the eyes to blink, soft and easy.
Breathe slow, abdominal and relax.

Practice with the memory and imagination; remember, imagine the letter clear, dark black.
Practice with the eyes open, closed, open.

Notice central fixation; see one letter, one small part of a letter darkest black, clearest at a time in the center of the visual field.

Print a smaller identical copy of the eye chart and place it at a clear close distance.
Look at the identical letter at the clear distance to strengthen the memory of the letter seen at the far distance.

20/100

R B

20/70

T F P

20/50

5 C G O

20/40

4 K B E R

20/30

3 V Y F P T

20/20

2 Q C O G D C

20/15

R Z 3 B 8 S H K F O

20/10

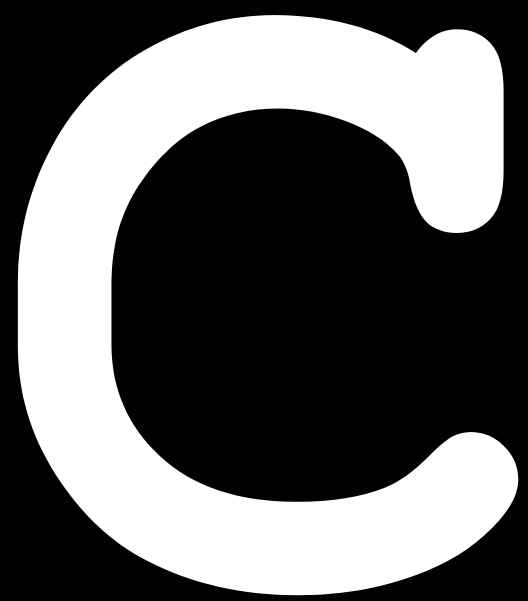
F T Y V P E C O B R K 5 6

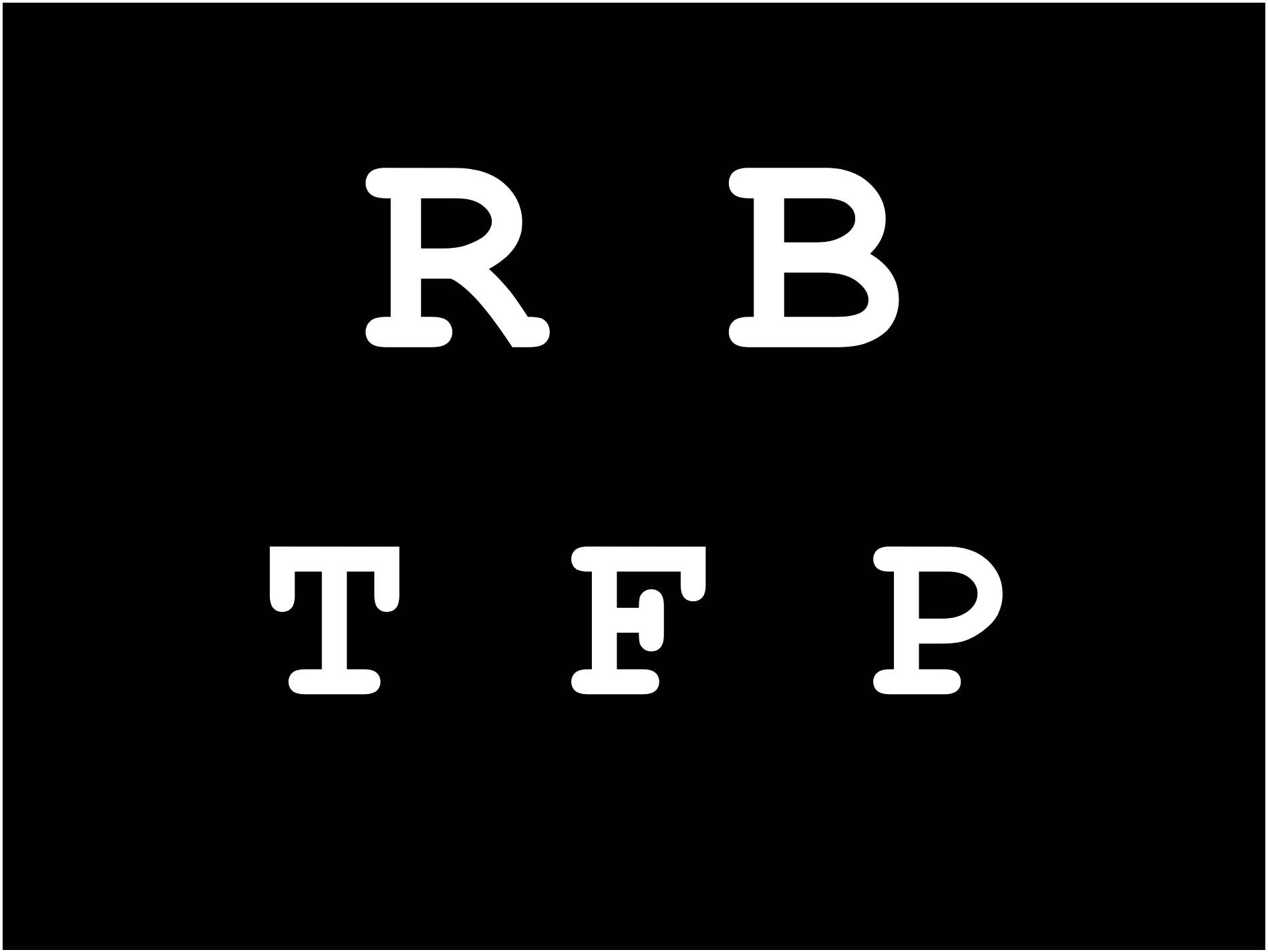
20/5

BATES METHOD - CLEAR EYESIGHT

Assembled from photo by Clark Night -
www.cleareyesight.info Sept. 9th, 2008

20/200




R B
T F P


5 C G O
4 K B E R
3 V Y F P T

20/20

2 Q C O G D □ C

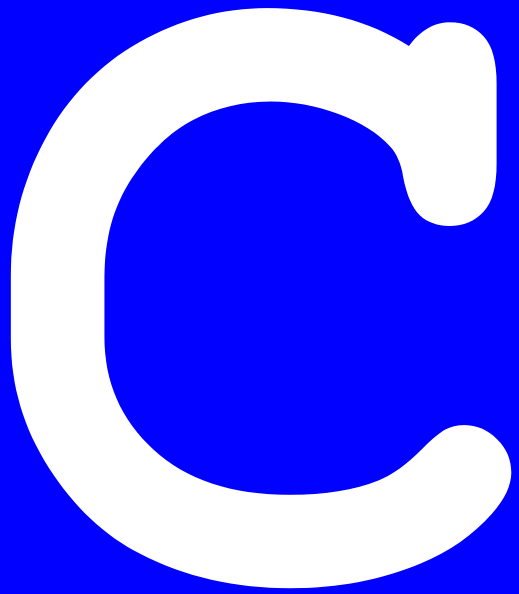
R Z 3 B 8 S H K F O

F T Y V P E C □ O B R K 5 6

A B C D E F G H I J K L M N O P Q R S T

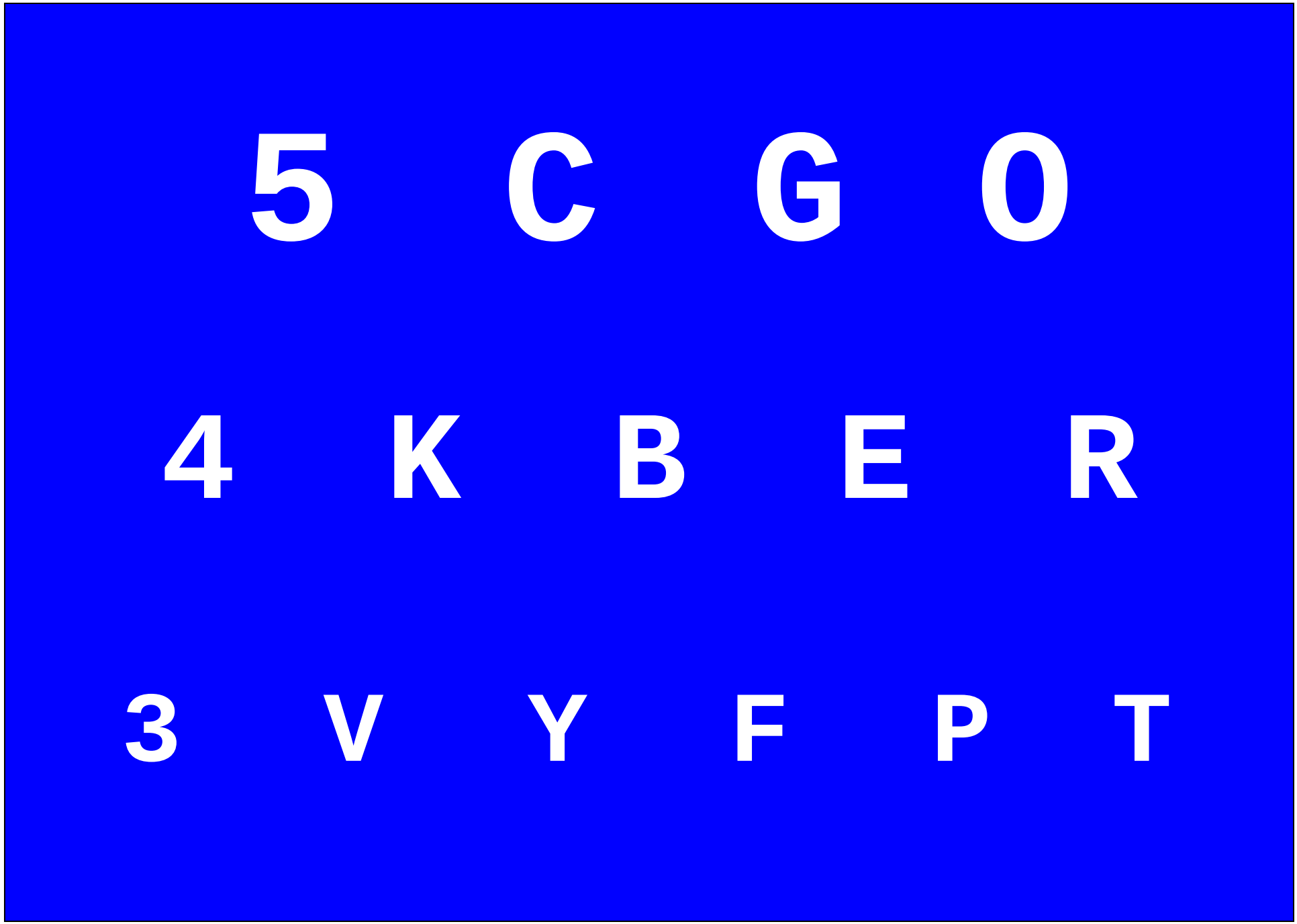
CLEAR EYESIGHT IS EASY WITH THE BATES METHOD – SHIFT, BLINK, CENTRAL FIXATION, RELAXATION, MEMORY/IMAGINATION = CLEAR EYESIGHT

20/200



R B

T F P


5 C G O
4 K B E R
3 V Y F P T

20/20

2 Q C O G D □ C

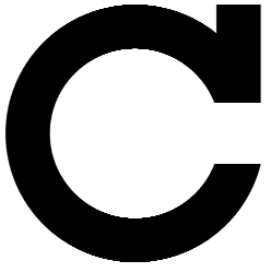
R Z 3 B 8 S H K F O

F T Y V P E C □ O B R K 5 6

A B C D E F G H I J K L M N O P Q R S T

CLEAR EYESIGHT IS EASY WITH THE BATES METHOD – SHIFT, BLINK, CENTRAL FIXATION, RELAXATION, MEMORY/IMAGINATION = CLEAR EYESIGHT

Big C Chart
From Better
Eyesight
Magazine



R B

T F P

5 C G O

4 K B E R

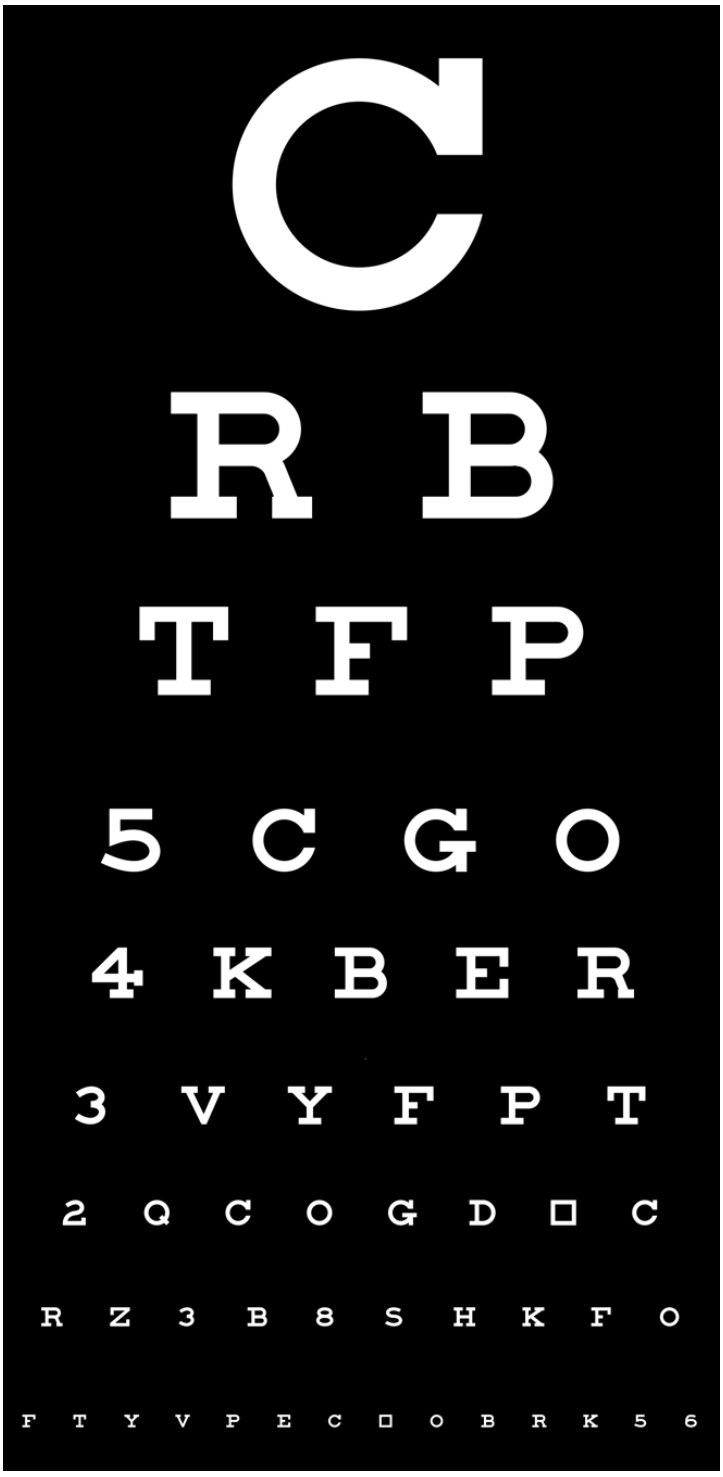
3 V Y F P T

20/20 2 Q C O G D □ C

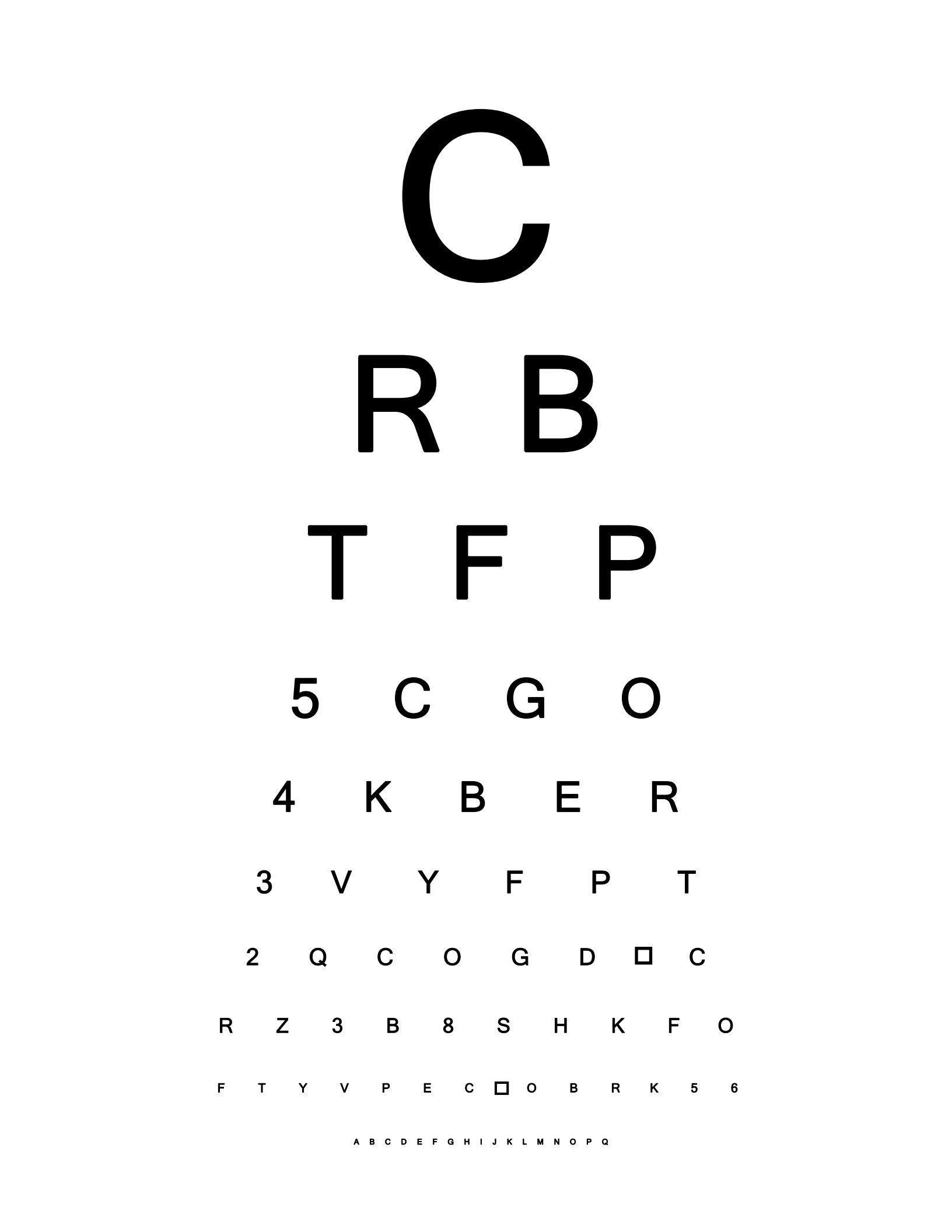
R Z 3 B 8 S H K F O

F T Y V P E C □ O B R K 5 6

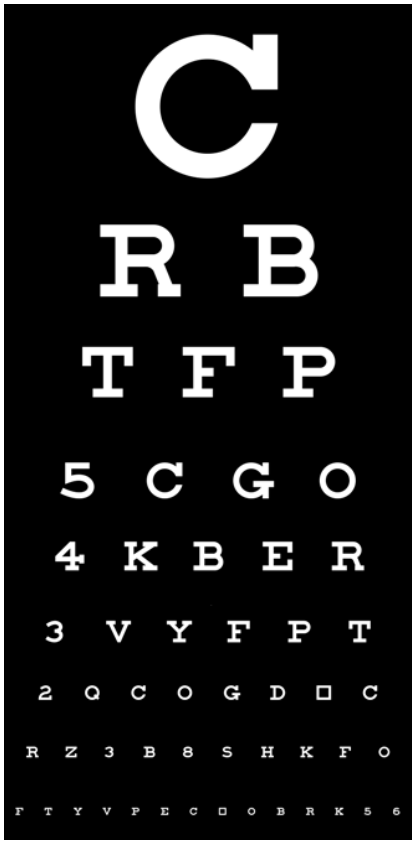
White Print Relaxes the Mind and Eyes

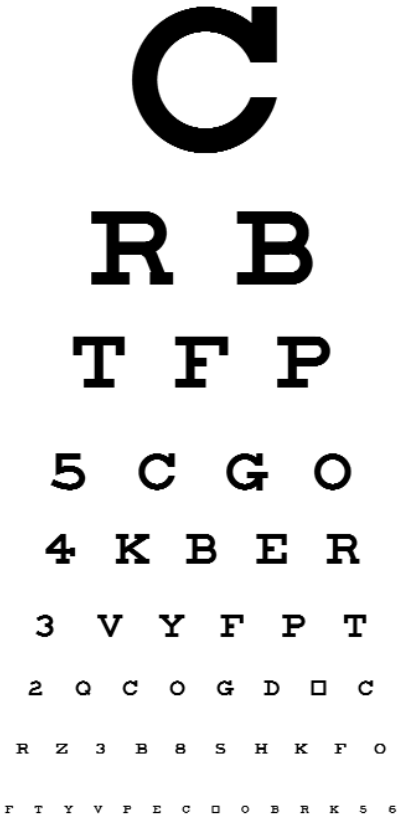


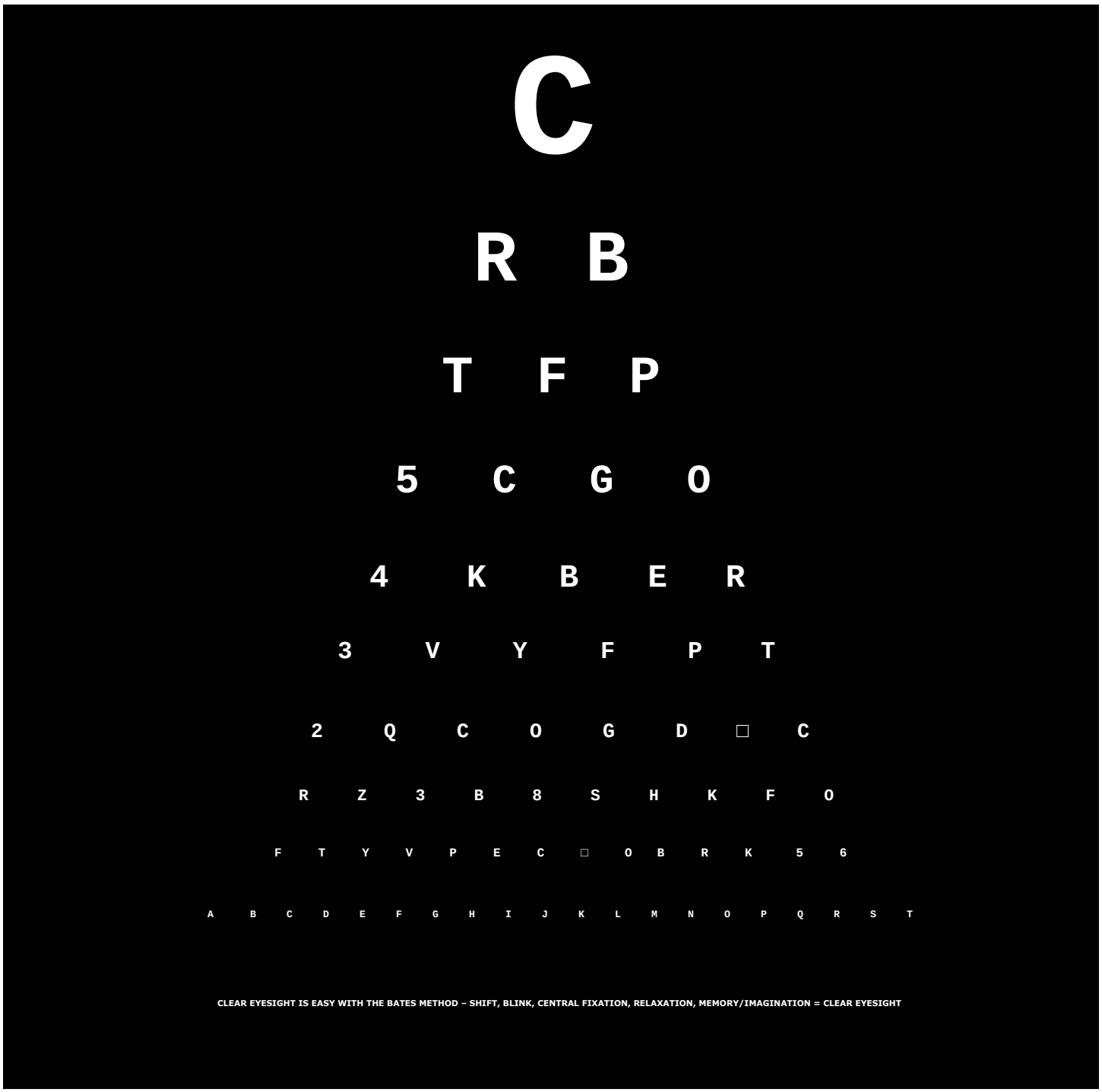
20/20

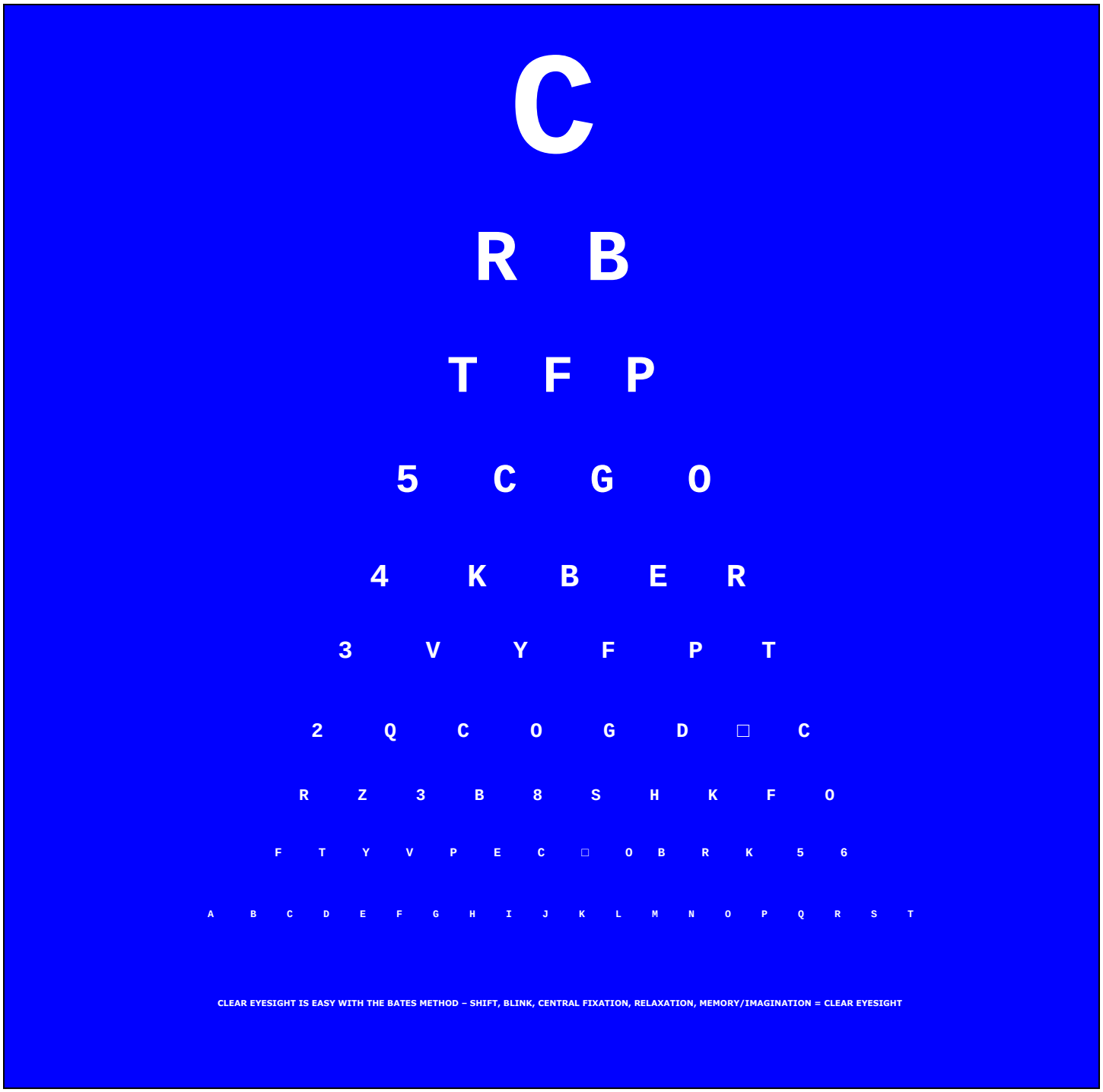

C
R B
T F P
5 C G O
4 K B E R
3 V Y F P T
2 Q C O G D C
R Z 3 B 8 S H K F O
F T Y V P E C O B R K 5 6
A B C D E F G H I J K L M N O P Q

Close Reading Vision



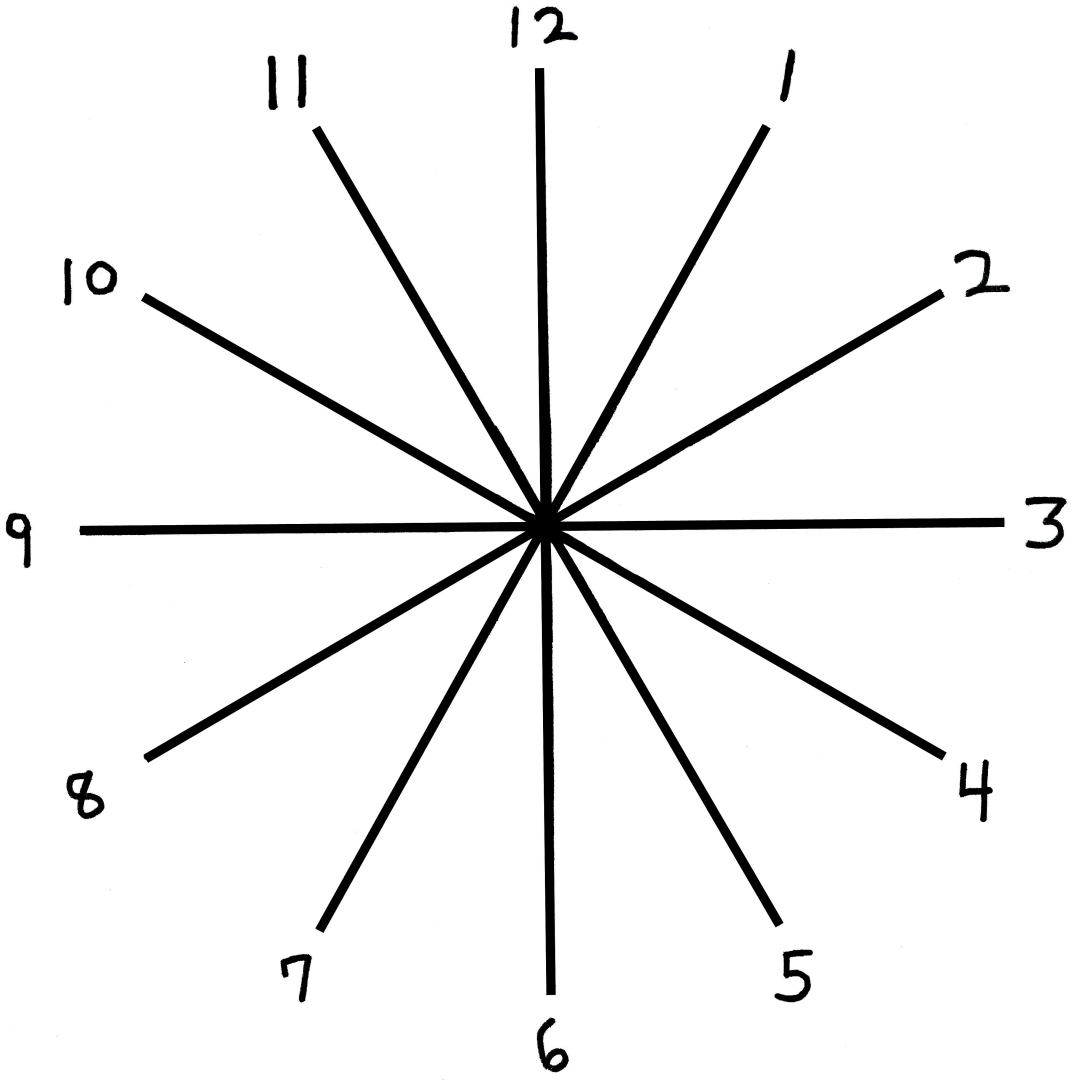



C
R B
T F P
5 C G O
4 K B E R
3 V Y F P T
2 Q C O G D □ C
R Z 3 B 8 S H K F O
F T Y V P E C □ O B R K 5 6
A B C D E F G H I J K L M N O P Q R S T
CLEAR EYESIGHT IS EASY WITH THE BATES METHOD – SHIFT, BLINK, CENTRAL FIXATION, RELAXATION, MEMORY/IMAGINATION = CLEAR EYESIGHT



Eyecharts can also be printed small, fine print, or larger with Adobe reader.

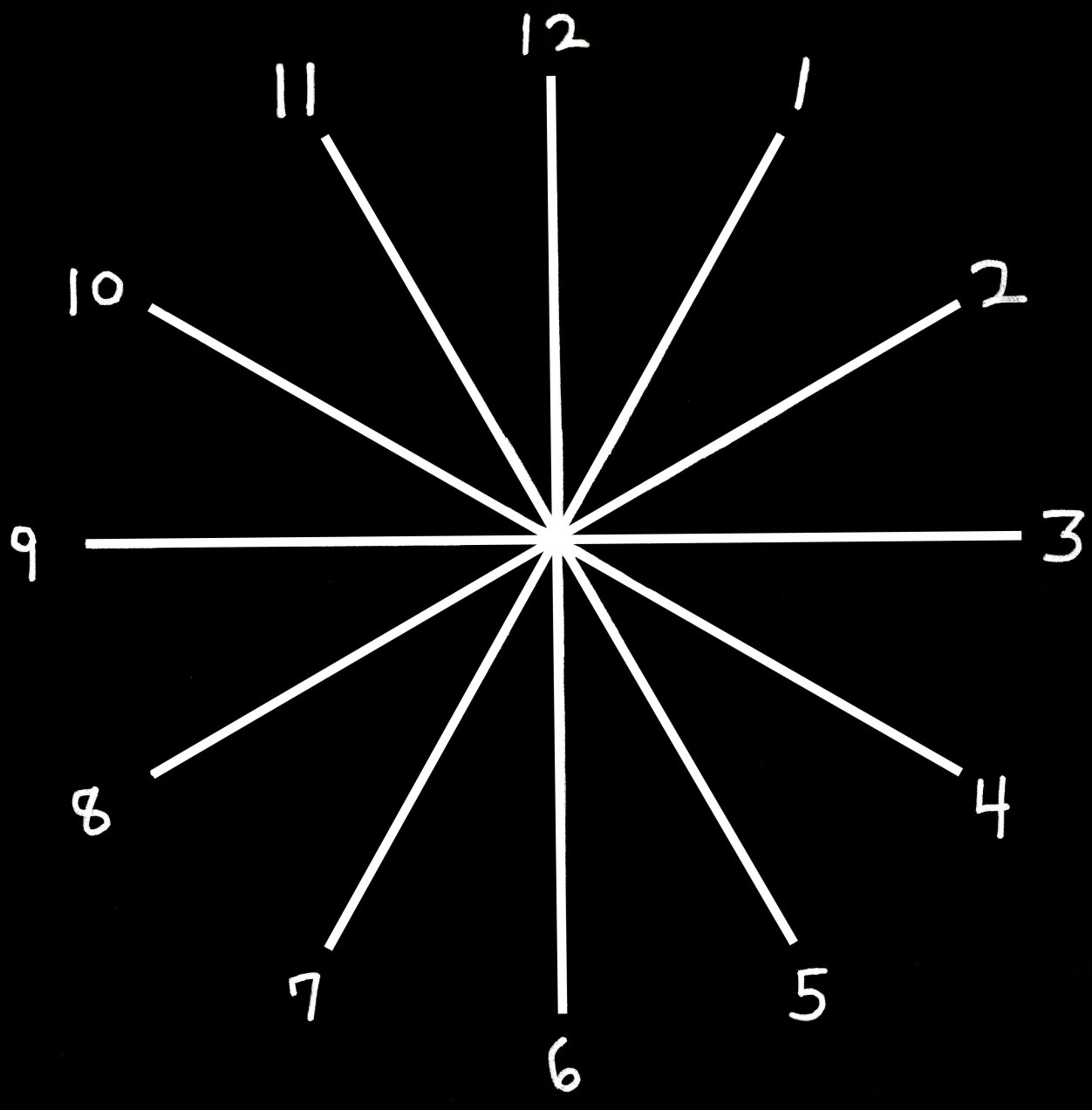
Natural Eyesight Improvement astigmatism removal wheel



Shift on the lines;
Left and right - 9 to 3, 3 to 9
Up and down - 12 to 6, 6 to 12
Diagonally - 8 to 2, 2 to 8, 10 to 4, 4 to 10, 5 to 11, 7 to 1
Shift, trace on the lines in any direction; center to left or right, up, down, diagonally... and back to center.
Move the eyes/center of the visual field along the lines and remember, imagine, see the lines dark black and perfectly clear.
Central fixation; see one small part of a line clearest at a time in the center of the visual field and move the eyes/center of the visual field continually, easy, relaxed along the line from part ot part.
Blink. breathe slow, abdominally, relax.

Astigmatism Videos for this next training Lesson:
http://www.youtube.com/watch?v=W6YLe-Wgpv8
http://www.youtube.com/watch?v=UUF02OdGFC

Natural Eyesight Improvement astigmatism removal wheel



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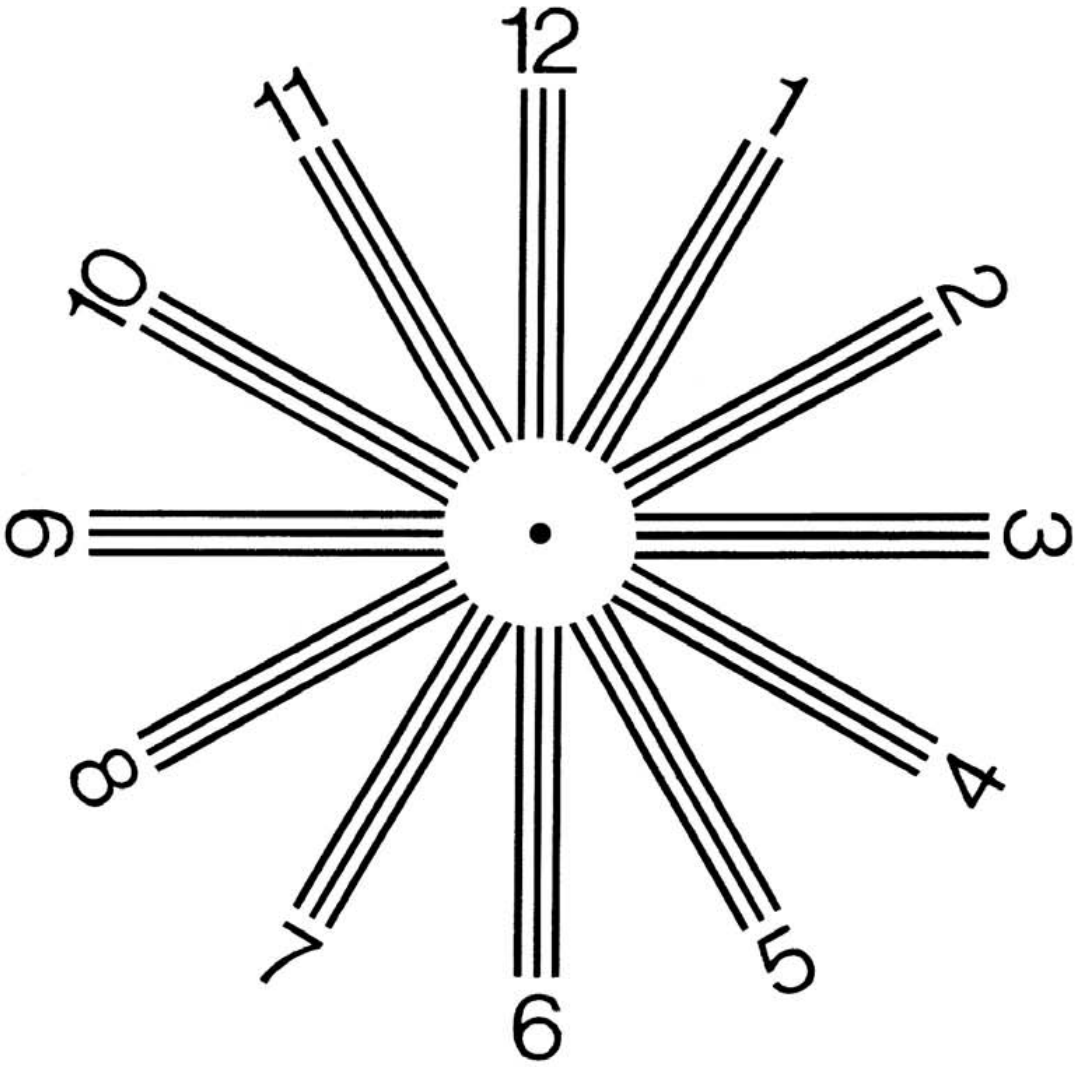
Blink. breathe slow, abdominally, relax.

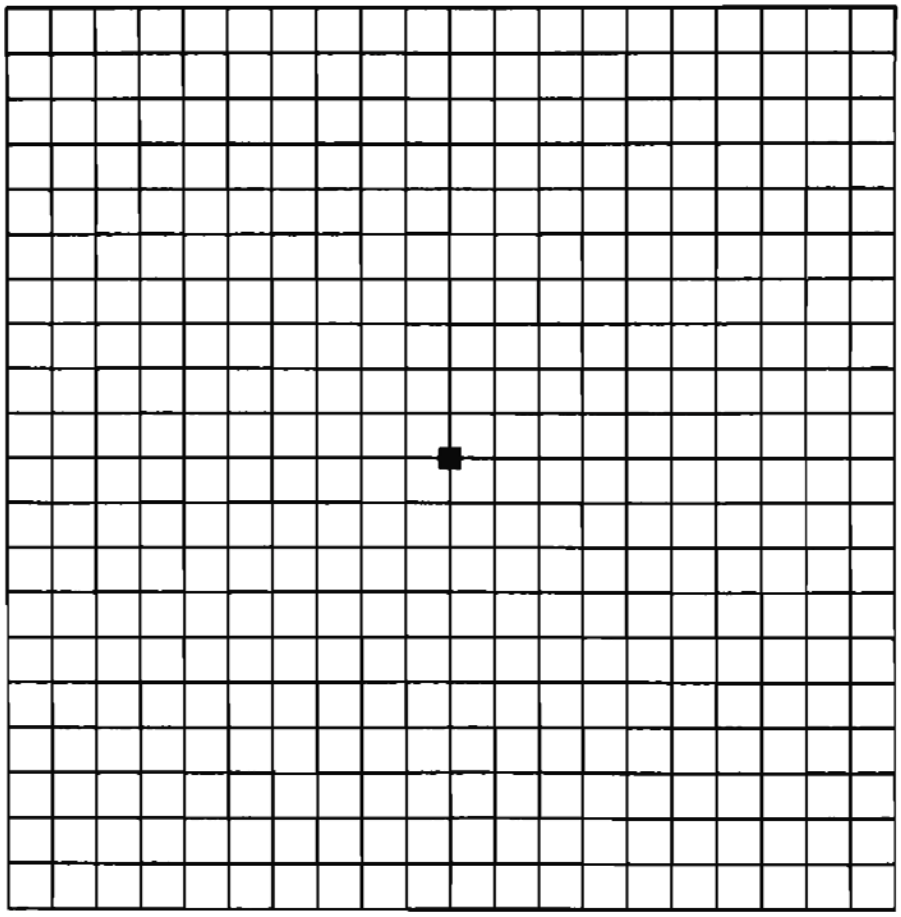
Astigmatism wheel



Look at the lines on the wheel, one line at a time. Shift, trace along the lines; left and right, up and down, diagonally.
Remember, imagine and see the line the eyes are looking at dark black, clear, straight.
Practice with the eyes open, closed, open.
Practice with both eyes together, then one eye at a time; left, right, left, right, then both eyes together again.

Grid Eye Test

Shift point to point on the black square in the center of the box. Blink, relax. Then shift, trace on the entire picture: on the lines, boxes on any areas; top, then bottom, left, right, corners, middle...
If the lines, boxes appear straight, square, clear: This indicates that the eyes retina, lens cornea are functioning correct.
Ask a eye doctor for a complete test for the eyes health and clarity of vision.



Wavy lines can also indicate Astigmatism.

White Print is Light to the Eyes, Activates the Retina, Relaxes the Eyes and Mind

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

Sign.
Dr. W. H. Bates
Jr. 28 1924.

BETTER EYESIGHT

A Magazine devoted to the prevention and cure of imperfect sight without glasses

Copyright, 1919, by the Central Fixation Publishing Company
Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I JULY, 1919 No. 1

FOREWORD.

WHEN the United States entered the European war recruits for general military service were required to have a visual acuity of 20/40 in one eye and 20/100 in the other.[1] This very low standard, although it is a matter of common knowledge that it was interpreted with great liberality, proved to be the greatest physical obstacle to the raising of an army. Under it 21.68 per cent. of the registrants were rejected, 13 per cent. more than for any other single cause.[2]

Later the standard was lowered[3] so that men might be "unconditionally accepted for general military service" with a vision of 20/100 in each eye without glasses, provided one eye was correctible to 20/40. For special or limited service they might be accepted with only 20/200 in each eye without glasses, provided one was correctible to 20/40. At the same time a great many defects other than errors of refraction were admitted in both classes, such as squint not interferring with vision, slight nystagmus, and color blindness. Even total blindness in one eye was not a cause for rejection in the limited service class, provided it was not due to progressive or organic change, and the vision of the other eye was normal. Under this incredible standard eye defects still remained one of three leading causes of rejection.

[1]Havard: Manual of Military Hygiene for the Military services of the United States, third revised edition 1917, p. 195.

[2]Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917.

[3]Standards of Physical Examination for the Use of Local Boards, District Boards and Medical Advisory Boards under the Selective Service Act, Form 75, issued through office of the Provost Marshal General.

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

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Ar. W. H. Bates
Jr. 28 1924

BETTER EYESIGHT

A Magazine devoted to the prevention and cure of imperfect sight without glasses

Copyright, 1919, by the Central Fixation Publishing Company

Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I JULY, 1919 No. 1

FOREWORD.

WHEN the United States entered the European war recruits for general military service were required to have a visual acuity of 20/40 in one eye and 20/100 in the other.[1] This very low standard, although it is a matter of common knowledge that it was interpreted with great liberality, proved to be the greatest physical obstacle to the raising of an army. Under it 21.68 per cent. of the registrants were rejected, 13 per cent. more than for any other single cause.[2]

Later the standard was lowered[3] so that men might be "unconditionally accepted for general military service with a vision of 20/100 in each eye without glasses, provided one eye was correctible to 20/40. For special or limited service they might be accepted with only 20/200 in each eye without glasses, provided one was correctible to 20/40. At the same time a great many defects other than errors of refraction were admitted in both classes, such as squint not interferring with vision, slight nystagmus, and color blindness. Even total blindness in one eye was not a cause for rejection in the limited service class, provided it was not due to progressive or organic change, and the vision of the other eye was normal. Under this incredible standard eye defects still remained one of three leading causes of rejection.

[1] Havard: Manual of Military Hygiene for the Military services of the United States, third revised edition 1917, p. 195.

[2] Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917.

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Better Eyesight Magazine

Illustrated With 500 Pictures

By

Ophthalmologist William H. Bates

July, 1919 to June, 1930 - 132 Issues

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Vol. I JULY, 1919 No. 1

Foreword

Fundamental Facts

Central Fixation

A Teacher's Experiences

Army Officer Cures Himself

$2.00 per year 20 cents per copy

Published by the CENTRAL FIXATION PUBLISHING COMPANY

39-45 EAST 42nd STREET NEW YORK, N. Y.

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July, 1919 to June, 1930 - 132 Monthly Issues

By Ophthalmologist William Horatio Bates M.D., Eye, Ear, Nose & Throat

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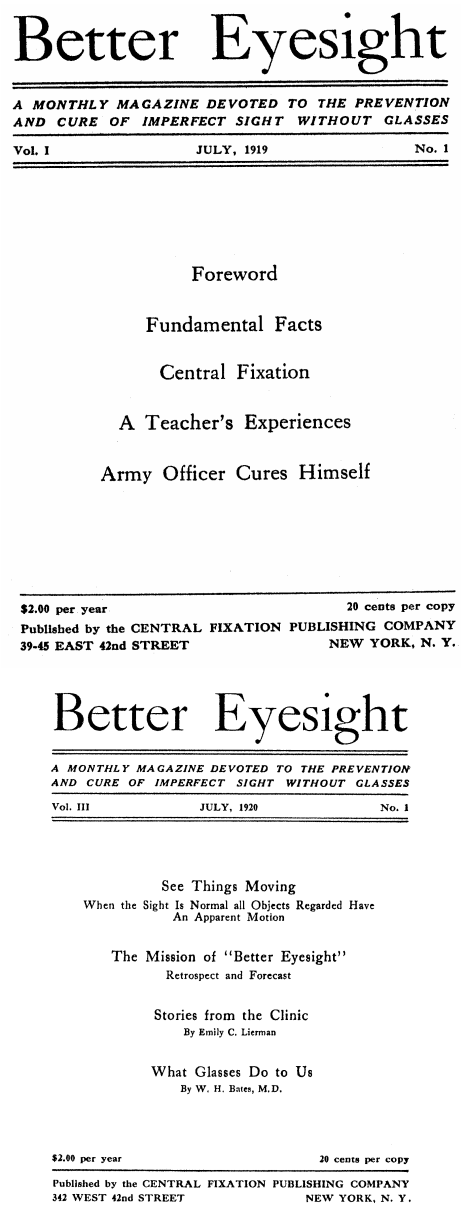
Central Fixation Publishing Company
39-45 EAST 42nd Street, NEW YORK, N.Y.

Stories From The Clinic By Emily C. A. Lierman, Bates Included.



Dr. William H. Bates
Ophthalmologist - M.D.
Eye, Ear, Nose & Throat.
Discovered the Principles of Eye Function-Natural Eyesight Improvement.



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Vol. III JULY, 1920 No. 1

See Things Moving
When the Sight Is Normal all Objects Regarded Have An Apparent Motion

The Mission of "Better Eyesight"
Retrospect and Forecast

Stories from the Clinic
By Emily C. Lierman

What Glasses Do to Us
By W. H. Bates, M.D.

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Published by the CENTRAL FIXATION PUBLISHING COMPANY
342 WEST 42nd STREET NEW YORK, N. Y.

Natural Eyesight Improvement

Original and Modern Bates Method

This book contains Doctor Bates Better Eyesight Magazine. Every Year, Month, Page from July, 1919 to June, 1930 - Unedited. The Origin of Natural Eyesight Improvement. Safe, Natural Treatments for Clear Close, and Distant Vision, Astigmatism, Cataract, Glaucoma and other Eye Conditions.

Illustrated with 500 Pictures. All of his Original Treatments and Modern Versions of Older Treatments & New Treatments.

Pictures with directions are placed in the book to help the reader quickly understand each activity Dr. Bates describes. Learn, apply & obtain Natural Eyesight Improvement, clear vision easy and fast.

Remembering, imagining, creating clear mental/visual pictures is a main Natural Eyesight Improvement Treatment. The Brain, Memory, Imagination, Visual System work with the eyes to produce clear Eyesight (Vision).

Books that contain entertaining, interesting pictures improve the brain, visual systems memory, imagination of clear pictures, clear mental, visual images of objects the eyes look at. This improves eye function with the brain, relaxation and clarity of Eyesight.

12 Natural Eyesight Improvement E-books, Eyecharts, Videos, Audio Training and the Original Antique Print Pages of Better Eyesight Magazine included.

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Do It Yourself–Natural Eyesight Improvement.

Clearsight Publishing Co., www.cleareyesight.info preserves Ophthalmologist Bates work free and low cost to the public. mclearsight@aol.com



Better Eyesight Magazine by William H. Bates, M. D.

Ophthalmologist - Eye, Ear, Nose & Throat

Central-Fixation Publishing Co.,
New York City, New York, USA

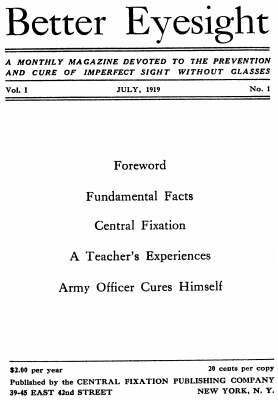

Ophthalmologist
William H. Bates


Emily C. Lierman, Bates

Do It Yourself - Natural Eyesight Improvement - Original and Modern Bates Method & Better Eyesight Magazine Illustrated with 500 Pictures by Ophthalmologist William H. Bates. Based on the Method, Treatments of Dr. Bates, the Eye Doctor that discovered The Bates Method of Natural Eyesight, (Vision) Improvement.

This Book contains Better Eyesight Magazine; a PDF text version of the magazines Illustrated with 500 pictures & additional Modern Natural Eyesight Improvement Training, Activities and a copy of the Original Magazine Pages. Better Eyesight Magazine contains all 132 Monthly Magazine Issues, 11 years-July, 1919 to June, 1930.

Stories From The Clinic included; 123 True Stories of Dr. Bates and Emily C.A. Lierman Bates patients varied treatments, eyesight improvement. Written and published by Ophthalmologist William Horatio Bates and his assistant, wife Emily C. A. Lierman, Bates. Eyecharts, Videos, Audio Lessons & 12 E-Books included by Dr. Bates and other Bates Teachers, Doctors. Learn the Modern Treatments and the Original Method, Treatments, Activities from Dr. Bates.


Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. 1 JULY, 1919 No. 1

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Introduction

Dr. Bates discovered the natural principles, true function of the eyes and applied relaxation, natural methods to return the eyes, eye muscles, nerves, mind/brain, thought patterns, body (entire visual system) to normal function with healthy eyes and clear vision. 'The Bates Method of Natural Eyesight Improvement.'

Dr. Bates Better Eyesight Magazine stories, articles describe how Dr. Bates & Emily Lierman Bates, other Doctors, School Teachers, Bates Method Students/Teachers, Children and Parents used Natural Treatments to remove, correct, prevent many different eye problems without use of eyeglasses, surgery, drugs.

The natural treatments they applied removed/prevented; unclear close and distant vision, astigmatism, cataracts, glaucoma, conical cornea, cornea scars, wandering/crossed eyes (strabismus) and other conditions. Hundreds of Natural Treatments are listed.

Read more in Dr. Bates Dedication.

The 10 Correct, Relaxed, Vision Habits (natural, normal, relaxed eye, visual system function); Shifting, Central-fixation, Relaxation, Movement, Blinking, Abdominal Breathing, Switching Close and Far, Long Swing, Sway (Rock), Familiar Eyecharts, Memory and Imagination, Sunning, Palming, Reading Fine Print and other activities described on the Author's website www.cleareyesight.info and in this book are derived from Dr. Bates treatments, method and are listed in his Better Eyesight Magazine and books. The Natural Eyesight Improvement Student practices, imitates this normal eye function to gently coax, return the eyes (visual system) to normal, natural function and clear vision.

Dr. Bates Better Eyesight Magazines, books, Medical Articles are included in this E-Book to enable the Natural Eyesight Improvement student to learn directly from Ophthalmologist Bates, the original eye doctor that discovered Natural Eyesight Improvement, to provide the reader with access to Dr. Bates treatments,

teaching method, true Natural Eyesight Improvement. The reader can avoid fraudulent teachers, harmful methods.

The Author, Clark Night is a Natural Eyesight Improvement Graduated Student and Self Trained Teacher that has maintained clear eyesight, freedom from eyeglasses for 37 years. Completed 5 different Natural Eyesight (Vision) Improvement Courses, Trained by Teachers in Person and Home School, studied many Bates and other Natural Vision Improvement books) Improved her close and distant vision to 20/20 and clearer at age 17. Age 54, can read fine print clear at 3 ft.+ and to 30 to 1 to 1/4 inches from the eyes. Teaches friends, family, public how to obtain clear vision without eyeglasses. http://www.cleareyesight.info

This Book Teaches a Variety of Natural Vision Improvement Treatments, Activities

Shifting; (Natural Eye movements), Central-fixation, Relaxation of the Mind/brain, body, eye muscles, eyes, Blinking, Memory and Imagination, Switching Close, Middle, Far for Perfect, Equally Clear Vision, Convergence, Accommodation, Divergence, Un-Accommodation in the Left and Right Eyes at all Distances, Left and Right Brain Hemisphere Activation and Integration, Color Treatment, Visualization, Alpha, Theta, Delta Brain Wave Frequency Deep Relaxation, Palming, Long Swing, Short Swing/Rock and Figure Eight Infinity Swings, Astigmatism Removal Swings, Positive Thinking, Constructive Thoughts, Emotions, Correct Posture, Neck, Shoulder Relaxation, Coordinated Body Movement Exercises, Physical Therapy, Abdominal Deep Breathing, Energy Circulation/Strengthening, Sunning, Saccadic Sunning, Reading, Seeing Fine Print and Eyecharts Clear, EFT, Acupressure, Headache Treatments, Nutrition Chapter-Eye, body Nutrition and other Activities for Clear Close, Distant, Day and Night Vision and Healthy Eyes. Treatments to reverse, remove, prevent: Myopia, Presbyopia (Unclear Distant & Close Vision), Astigmatism, Strabismus, Cataracts, Glaucoma and other eye/vision conditions.

Eyeglass Strength Reduction & Freedom From Glasses - Learn how to work with a Bates Method Behavioral Optometrist or Ophthalmologist for a complete eye exam and be prescribed reduced, weaker and weaker eyeglass lenses (if needed for driving, work safety...) temporarily as vision is improving. Gain complete freedom from eyeglasses.

Treatments are Derived from Dr. Bates Better Eyesight Magazines and Books

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

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Dr. W. H. Bates
Jr. 28 1926

PAGE TWO

BETTER EYESIGHT

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Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I JULY, 1919 No. 1

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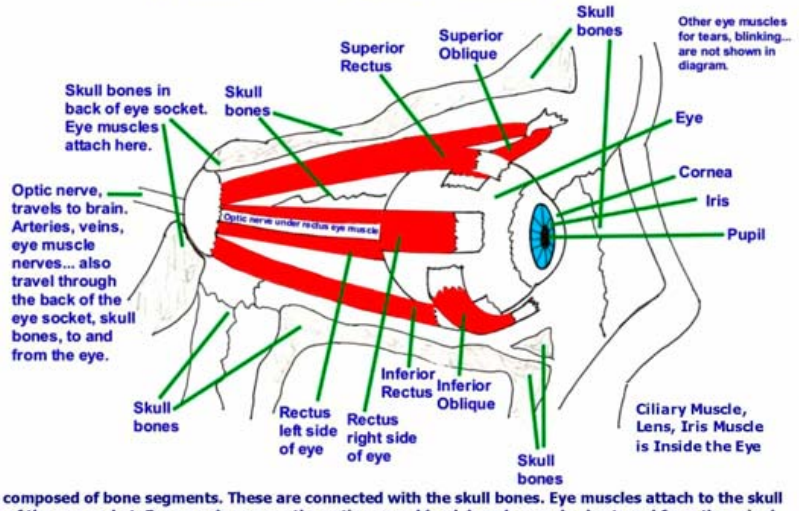
Ophthalmologist William H. Bates

Discovered Natural Eyesight Improvement

Author of Better Eyesight Magazine

Eye socket, bones, eye, eye muscles, optic nerve.



The eye socket is composed of bone segments. These are connected with the skull bones. Eye muscles attach to the skull bones in the back of the eye socket. Eye muscle nerves, the optic nerve, blood, lymph vessels also travel from the spinal cord/brain stem, brain, neck through the eye socket, skull bones. Unclear vision is usually caused by mental strain, tense, incorrect use of the eyes, 'staring-squinting', incorrect posture, stress, negative thoughts, emotions. These can cause: outer and inner eye muscle tension, abnormal eye shape, disrupted focus of light rays in the eye, tension, abnormal pressure on/in the eye, impair circulation in the eye, resulting in unclear vision... Extreme neck, shoulder muscle tension, incorrect posture places pressure, tension, pulling on the nerves, blood, lymph vessels that travel from the spine, neck, brain stem to the eyes, eye muscles, retina, lens, brain. Neck muscle tension also travels directly up into the eye muscles. These conditions cause: tension, abnormal pressure on/in the eye, optic nerve, eye muscle nerves, retina, lens, outer and inner eye muscle tension/dysfunction, abnormal eye shape, disrupts focus of light rays in the eye, resulting in: unclear vision, astigmatism, crossed, wandering eyes, imperfect convergence, divergence, accommodation, un-accommodation, cataracts and other conditions. Circulation of blood, oxygen, lymph, fluid, tears... in the eye is impaired. Sinus, tension, migraine headaches, disrupted ear function can also occur and affect the vision.
Wearing eyeglasses creates, increases, maintains all of these causes and resulting conditions.



The Bates Method of Natural Eyesight Improvement, relaxation of the mind, neck, body, eye muscles, eyes, good posture returns the eyes to normal function with 20/20 and clearer close & distant Vision. Wandering, Crossed Eyes, Astigmatism are corrected. Cataracts and other eye conditions are reversed, removed without use of eyeglasses, eye surgery, drugs.



Does Your Boy Squint?

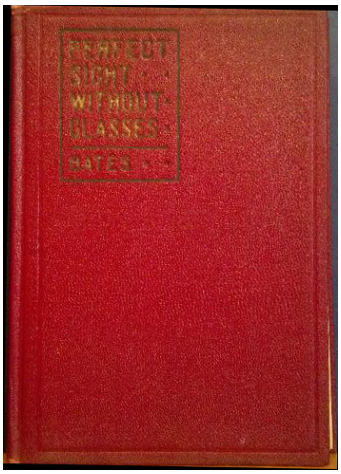
Avoid Squinting - Learn to 'Shift' for Clear Vision

Dr. Bates, Emily C. A. Lierman, Bates. Bates Method Student in Dr. Bates Clinic reading the Eyechart with strain, blur and without strain, blur.

Better Eyesight Magazine is created, assembled in its Original Antique form with the old English language used in the early 1900's. The words 'Colored, Mammy'… as pertaining to African Americas, Black People is used in the old magazines by the author and assistants in a respectful, loving way, as the only words they knew at that time. This is in no way meant to hurt the feelings of African Americans. (Some cruel, racist minded people used the word 'colored' and other words as a means of disrespect and these words are now omitted from the English language when speaking of African Americans.)

The PDF E-Book text version of this book is unsecured. People can replace the words colored… with African American if preferred. Dr. Bates treated many Black African American People in Harlem, New York City. Harlem accepted him as their Ophthalmologist, specializing in safe, natural treatments for the eyes, eyesight when the Optical and Medical Industry, Association fought against Dr. Bates, prevented him from working at their hospital because Dr. Bates was healing their patients naturally, successful, safely without use of eyeglasses, eye surgery, drugs. The other doctors, surgeons preferred to sell addictive, harmful, stronger & stronger eyeglasses, surgery and drugs. The Patients of Dr. Bates, people in Harlem and other Clinics, Hospitals; Black, White, Spanish, Irish, German, all races have contributed greatly to the creation, preservation of the Bates Method of Natural Eyesight Improvement and Dr. Bates Better Eyesight Magazines, Books. Dr. Bates and Emily Lierman/Bates stated that the Bates Method grew over the years as they learnt from their patients, treated a variety of people, eye conditions with natural methods. As time went on, more honest eye doctors, surgeons heard of Dr. Bates successful natural treatments and worked with him. Dr. Bates worked, taught in many Hospitals, Clinics in his lifetime and recorded his work, Natural Eyesight Improvement Treatments in his books, Medical Articles, Better Eyesight Magazine.





Picture; Mary I. Oliver (Clark Night-Pen Name) assembler, preserver of Dr. Bates Better Eyesight Magazines, books, articles and author of other Natural Eyesight Improvement books. Dr. Bates is in the background using the Retinoscope to inspect a Patients eyes while he reads the Eyechart. Relaxation, shifting, central-fixation, blinking enables the 20/10 and smaller letters on the chart to be seen clear at all distances. Bates original book on right.

Better Eyesight Magazine

Original Antique Magazine Pages

July, 1919 to June, 1930 - 132 Monthly Issues
By Ophthalmologist William Horatio Bates M.D.,
Eye, Ear, Nose & Throat

Stories From The Clinic by
Emily C. A. Lierman, Bates Included



Dr. William H. Bates
Ophthalmologist - M.D.
Eye, Ear, Nose & Throat.
Discovered the Principles
of Eye Function-Natural
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$2.00 per year 20 cents per copy

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39-45 EAST 42nd STREET NEW YORK, N. Y.

Fine Print a Benefit to the Eye

Seven Truths of Normal Sight

1.—Normal Sight can always be demonstrated in the normal eye, but only under favorable condition.
2.—Central Fixation: The letter or part of the letter regarded is always seen best.
3.—Shifting: The point regarded changes rapidly and continuously.
4.—Swinging: When the shifting is slow, the letters appear to move from side to side, or in other directions, with a pendulum-like motion.
5.—Memory is perfect. The color and background of the letters, or the letters themselves, are remembered perfectly, instantaneously and continuously.
6.—Imagination is good. One may even see the white part of letters whiter than it really is, while the black is not altered by distance, illumination, size, or form, of the letters.
7.—Rest or relaxation of the eye and mind is perfect and can always be demonstrated.

When one of these seven fundamentals is perfect, all are perfect.

It is impossible to read fine print without relaxing. Therefore the reading of such print, contrary to what is generally believed, is a great benefit to the eyes. Persons who can read perfectly fine print, like the above specimen, are relieved of pain and fatigue while they are doing it, and this relief is often permanent. Persons who cannot read it are benefited by observing its blackness, and remembering it with the eyes open and closed alternately. By bringing the print so near to the eyes that it cannot be read pain is sometimes relieved instantly, because when the patient realizes that there is no possibility of reading it the eyes do not try to do so. In myopia, however, it is sometimes a benefit to strain to read fine print. Persons who can read fine print perfectly imagine that they see between the lines streaks of white whiter than the margin of the page, and persons who cannot read it also see these streaks, but not so well. When the patient becomes able to increase the vividness of these appearances [see *Halos*, February number] the sight always improves.

Natural Eyesight Improvement

The Bates Method

This Book Contains a Photo Copy of the Original Printed Pages of Ophthalmologist William H. Bates Better Eyesight Magazine. Every Year, Month, Page from July, 1919 to June, 1930. Unedited. True History! An Antique Collection, The Origin of Natural Eyesight Improvement. Treatments, Activities from the Eye Doctor that discovered and practiced this effective technique of Natural, Normal Eye Function.

Book consists of his Original Treatments and a 2nd additional Better Eyesight Magazine Book Illustrated with 500 Pictures, containing the Original and Modern Versions of Older Treatments & New Treatments. Read the Original and New 2nd Book to learn which treatments have been improved or changed, how to practice the activities, treatments correct.

Pictures with directions are placed in the 2nd book to help the reader quickly understand each activity Dr. Bates describes. Learn and apply Natural Eyesight Improvement, obtain clear vision easy and fast. Safe, Natural Treatments for Clear Close, and Distant Vision, Astigmatism, Cataract, Glaucoma and other Eye Conditions.

12 Natural Eyesight Improvement E-Books, Eyecharts, Videos & Audio Training included.

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William H. Bates M.D.
Central Fixation Publishing Company
39-45 EAST 42nd Street, NEW YORK, N.Y.**

**Pictures, blue text in the 2nd book are drawn, written by Clark Night. Books Assembled, Distributed by Clearsight Publishing Co. -
Do It Yourself–Natural Eyesight Improvement.
Clearsight Publishing Co., www.cleareyesight.info preserves Ophthalmologist Bates work free and low cost to the public. mclearsight@aol.com**



Better Eyesight Magazine by William H. Bates, M. D.

Ophthalmologist - Eye, Ear, Nose & Throat



Ophthalmologist
William H. Bates

Central-Fixation Publishing Co.,

New York City, New York, USA

Original Antique Magazine Pages

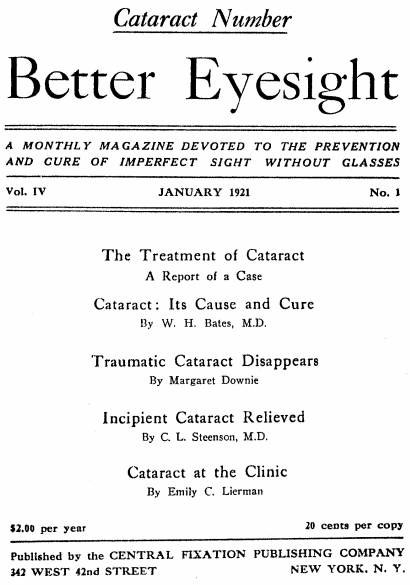


Emily C. Lierman, Bates

This E-book contains Photo-Copies of the Original printed pages of 'Better Eyesight Magazine' written and published by Ophthalmologist William H. Bates and his assistant/wife Emily C. A. Lierman/Bates. 11 Years - All 132 Monthly Magazine Issues; July 1919 to June 1930. A History Book, Antique Collection.

Dr. Bates discovered the natural principles, true function of the eyes (Visual System) and applied relaxation, natural methods to return the eyes, eye muscles, nerves, mind/brain, body to normal function with clear vision and healthy eyes. The Bates Method.

The Stories, articles in Better Eyesight Magazine describe how Dr. Bates, Emily Lierman Bates, other Doctors, School Teachers, Bates Method Students/Teachers, Children and Parents used Natural Treatments to prevent, remove many different eye problems without use of eyeglasses, surgery, drugs; unclear close and distant vision, astigmatism, cataracts, glaucoma, conical cornea, cornea scars, wandering and crossed eyes (Strabismus, Squint) and other conditions. Hundreds of Natural Treatments are listed. Dr. Bates used surgery only when necessary.



Cataract Number

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. IV JANUARY 1921 No. 1

The Treatment of Cataract
A Report of a Case

Cataract: Its Cause and Cure
By W. H. Bates, M.D.

Traumatic Cataract Disappears
By Margaret Downie

Incipient Cataract Relieved
By C. L. Steenson, M.D.

Cataract at the Clinic
By Emily C. Lierman

$2.00 per year 20 cents per copy

Published by the CENTRAL FIXATION PUBLISHING COMPANY
342 WEST 42nd STREET NEW YORK, N. Y.

Better Eyesight Magazine consists of articles that are interesting, positive, fun to read. 'True Life Stories' of the doctors, patients, adults and children. Vision improvement based 'Fairy Stories' and other articles for children are included.

The magazines, books are the original source of Natural Eyesight (Vision) Improvement. The Original Better Eyesight Magazine collection is proof that Ophthalmologist William H. Bates discovered the Bates Method, Natural Eyesight Improvement and is the True Author of the Magazine.

Dr. Bates discovered Natural Eyesight Improvement over 100 years ago. The Optical and Medical Industry/Association and most Eye Doctors, Opticians have hidden Dr. Bates magazines, books, articles, Natural Eyesight Improvement from the public for over 100 years because: The writings are proof that Natural Eyesight Improvement works, produces clear vision, healthy eyes, it teaches people how to obtain clear vision 'on their own' and prevents the need for purchasing eyeglasses, contact lenses, sunglasses, eye surgery and drugs.

Due to the truth about Natural Medicine becoming available to the modern public, Dr. Bates work has been recovered from individual owners and re-published. Many modern Ophthalmologists, Optometrists are now learning, teaching the Bates Method.

The 8 Correct Vision Habits, (natural, normal, relaxed eye, visual system function): Shifting, Central-fixation, Memory, Imagination, Switching Close and Far, Long Swing, Sunning, Palming and other activities described in this book are derived from Dr. Bates work, magazines.

Directions for the Original Better Eyesight Magazines

The Original Better Eyesight Magazine contains a few treatments that are no longer taught the old way to Natural Eyesight Improvement students. They have been changed, improved and new treatments, activities added. The E-Book 'Better Eyesight Magazine Illustrated with 500 Pictures' is attached free with this book. Read that modern text version of Better Eyesight Magazine to learn the new correct way a few of the old treatments in the original magazines are practiced.

Treatments, activities must be practiced correct to maintain healthy eyes, clear vision. Blue print and pictures in the text version describe the old, new, and improved treatments and the correct new way to practice them. The text version can also be used to check for correction of the old worn print in some copies of the original pages.



Fig. 8. The Usual Method of Using the Retinoscope
The observer is so near the subject that the latter is made nervous, and this changes the refraction.

Example of older methods that have been changed;

Open Eyes Sunning is no longer practiced in this way. Closed Eyes Sunning only is practiced.

Some people still practice open eyed sunning but in a specific way: Eyes, head/face continually move, eyes blinking, eyes, head/face shifting to the sky near the left, right, top, bottom of the sun and across the sun quickly. The person faces the sun for a brief time. Other directions are applied for safety.

Modern Bates Teachers teach Closed Eyes Sunning only and with eye, head/face movement. Looking at the bright sky, clouds, trees... away from the sun is allowed.

The Sunglass is used only in special cases of near or complete blindness by an experienced Bates Method Ophthalmologist if other methods fail. It can burn the eye, like a magnifying glass when used incorrect, and, because it is a glass, it blocks full spectrum light resulting in partial spectrum, unbalanced light emitting through, from the glass. The light does not go into the eyes pupil and is not directed at the cornea. It is only directed at the sclera, white area of the eye, but it still must not be overused. Partial spectrum light is unhealthy. Pure full spectrum sunlight, not passing through glass is best, healthy for the eyes, brain, body, clarity of vision. The Sunglass is only a short, temporary treatment to awaken, bring to life and action the cells in the eyes retina, lens... to reverse extreme vision impairment, blindness. Done correct, by a Bates Method Eye Doctor, it is beneficial and will not harm the eye.

Reading by 'first' looking at the white spaces between sentences - Do not try to see, read the print clear while at the same time, looking at the white spaces between sentences. Central-fixation must be used: look directly at the print to see, read it. In Better Eyesight Magazine, Dr. Bates explains in detail in his 'Questions and Answers Page' to: Use central-fixation when reading; Look directly at the object you want to see. First: Look at, move the eyes (visual attention, center of the visual field) along the white spaces between the sentences to relax the mind and eyes. (Looking at the white spaces causes relaxation because there if nothing to see, there is no effort to see anything clear, so, strain is avoided. This enables relaxation of the mind, eyes, eye muscles to occur. The relaxation produces clear vision, a 'Flash of Clarity'.) When the relaxation and clarity occur and the print flashes dark black and clear; then: look away from the spaces, look directly at the black print, place the print in the center of the visual field to read, see it clear. The relaxation and clear vision from looking at the white spaces continues when looking at the print. If it blurs, return to the spaces or Palm to regain relaxation. Then back to the print. Use the memory and imagination when looking at the white spaces: Imagine painting the spaces pure, bright white with a white paint brush and pure white paint while imagining the white space is seen pure, bright, glowing white and clear. Relax, no effort. Move the paintbrush, eyes left and right along the spaces, blink, relax. Practice with the eyes open, then in the imagination with the eyes closed, then open again. Paint with an imaginary paint brush in the hand or use a white Nosefeather.
Practice on Fine Print in the Sunlight.

Some people misunderstood Dr. Bates in early times and would try to read the print while looking at the white spaces. Dr. Bates explained to; look at the space or the print; only one at a time, not both at the same time. Looking at, trying to see, think about 2 or more objects at the same time is the opposite of central-fixation: it is diffusion, eccentric fixation and causes tension, strain in the mind, (brain) eye muscles, eyes and unclear vision.
Look at one object at a time for clear vision. This is central-fixation: looking directly at the object of visual attention: first at the white spaces, then the black print, one object at a time, in the center of the visual field.

Palming and imagining, remembering, seeing perfect black on the closed eyes produces perfect relaxation and clear vision. Dr. Bates noticed that some patients used effort to imagine, see black and this prevented relaxation. Dr. Bates states that imagining, seeing black is not necessary to obtain perfect relaxation and clear vision. Remembering, imagining any pleasant thoughts, letting the mind drift from one happy thought, object to another while palming will produce the relaxation and clear vision. Then, black may also appear in front of the closed eyes. If black does not appear, it's alright, it will not make a difference in relaxation, clarity. See the palming chapter for examples.

Square, elliptical...swings - Some of the older swings are now combined into the Infinity, Figure Eight Swing. The Long Swing, Sway (Rock) remain as Dr. Bates created them and are also combined in the Figure Eight Swing.

In later editions of Better Eyesight Magazine and books, Dr. Bates and Emily Lierman, Bates lists these changes.
Dr. Bates himself stated that the Bates Method is continually advancing, being improved. As he treated thousands of patients over the years the Bates Method was perfected. Bates Teachers state they learn much from their patients, students, each student being an individual and various treatments being successful for each condition, state of mind, body, eyes and personality.

A few original magazine pages that are old with unclear print have an additional new clear page attached, typed in present date print. A few misprints are corrected with additional print, leaving the original pages untouched.
Book printing settings for the original pages is best at: darkest black and highest quality. Not too dark or it will smear the print. The Original Antique Magazines will be in Paperback on Amazon.com in 2011-2012.

Distributing this book free to the public is encouraged. Keep this page in the Original Better Eyesight Magazine E-book that states; The modern version is free with the original book and should also be read to insure correct application of some of the older original practices, treatments.

Thank-You, in Historical Order

+The University of California Library - http://www.lib.berkeley.edu/ and the Optometrist - Monroe J. Hirsch (name shown in old print, pictures in this book) and other Colleges, Libraries, Eye Doctors, Emily C. A. Lierman Bates, Bates Teachers, Individual Persons that preserved Ophthalmologist Bates Magazines, Books, hid them from the Optical Industry when these businesses, doctors were destroying Doctor Bates work. The law in Europe allowed preservation of Dr. Bates magazines, books.

+Thomas Quackenbush - http://www.naturalvisioncenter.com Bates Method, Natural Vision Improvement Teacher, Author of 'Relearning to See - Improve Your Eyesight Naturally' and 'Better Eyesight - The Complete Magazines of William H. Bates'. He is the first Natural Vision Improvement Teacher to re-publish and bring Dr. Bates work, treatments in Better Eyesight Magazine to the modern public.

+In 2005 people created the first public Internet PDF photo copy of all 132 issues of Dr. Bates Original Better Eyesight Magazine and Medical Articles. Every year, month, page in the original antique print! This proved that Dr. Bates discovered Natural Eyesight-Vision Improvement, he is the true source of the Bates Method. In 2005-2012 two people converted the PDF's and their own photo-copies of the magazines, articles and Dr. Bates book into paper books and free on-line PDF's. Small and fine microscopic print magazine, book versions were also created.

The following pages provide a sample of the 1919 Better Eyesight Magazine Issue Illustrated with 500 Pictures. Free in PDF form with this book.

Better Eyesight Magazine

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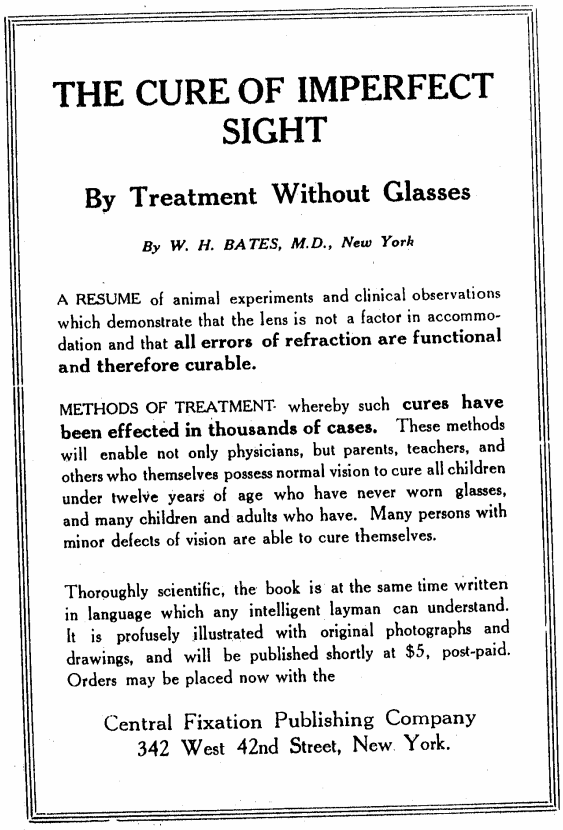

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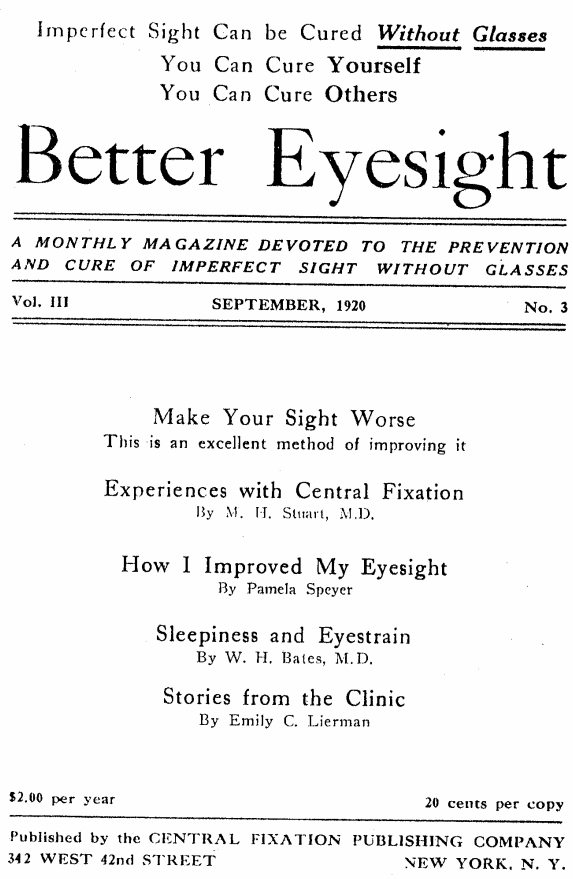

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"PAGE TWO"

ON page two of this magazine are printed each month specific directions for improving the sight in various ways. Too many subscribers read the magazine once and then mislay it. We feel that at least page two should be kept for reference.

When the eyes are neglected the vision may fail. It is so easy to forget how to palm successfully. The long swing always helps but it has to be done right. One may under adverse conditions suffer a tension so great that the ability to remember or imagine perfectly is modified or lost and relaxation is not obtained. The long swing is always available and always brings sufficient relief to practice the short swing, central fixation, the perfect memory and imagination with perfect relief.

Be sure and review page two frequently; not only for your special benefit but also for the benefit of individuals you desire to help!

Persons with imperfect sight often have difficulty in obtaining relaxation by the various methods described in the book and in this magazine. It should be emphasized that persons with good vision are better able to help others than people who have imperfect sight or wear glasses. If you are trying to cure yourself avoid people who wear glasses or do not see well. Those individuals are always under a strain and the strain is manifested in their face, in their voices, in their walk, the way they sit, in short in everything that they do.

Strain is contagious. Teachers in Public Schools who wear glasses are a menace to their pupils' sight. Parents who wear glasses or who have imperfect sight lower the vision of their children. It is always well when treating children or adults to keep them away from people with imperfect sight.

Sight
Dr. W. H. Bates
7-28-1924

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A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. I **JULY, 1919** **No. 1**

Foreword

Fundamental Facts

Central Fixation

A Teacher's Experiences

Army Officer Cures Himself

$2.00 per year **20 cents per copy**

Published by the CENTRAL FIXATION PUBLISHING COMPANY
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Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

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A. L. H. Bates
Oct. 28 1924

BETTER EYESIGHT

A Magazine devoted to the prevention and cure of imperfect sight without glasses

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Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I JULY, 1919 No. 1

FOREWORD.

WHEN the United States entered the European war recruits for general military service were required to have a visual acuity of 20/40 in one eye and 20/100 in the other.[1] This very low standard, although it is a matter of common knowledge that it was interpreted with great liberality, proved to be the greatest physical obstacle to the raising of an army. Under it 21.68 per cent. of the registrants were rejected, 13 per cent. more than for any other single cause.[2]

Later the standard was lowered[3] so that men might be "unconditionally accepted for general military service with a vision of 20/100 in each eye without glasses, provided one eye was correctible to 20/40. For special or limited service they might be accepted with only 20/200 in each eye without glasses, provided one was correctible to 20/40. At the same time a great many defects other than errors of refraction were admitted in both classes, such as squint not interferring with vision, slight nystagmus, and color blindness. Even total blindness in one eye was not a cause for rejection in the limited service class, provided it was not due to progressive or organic change, and the vision of the other eye was normal. Under this incredible standard eye defects still remained one of three leading causes of rejection.

[1]Havard: Manual of Military Hygiene for the Military services of the United States, third revised edition 1917, p. 195.

[2]Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917.

[3]Standards of Physical Examination for the Use of Local Boards, District Boards and Medical Advisory Boards under the Selective Service Act, Form 75, issued through office of the Provost Marshal General.



Ophthalmologist
William H. Bates

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

July, 1919 - June, 1930 - 132 Magazine Issues

Central Fixation Publishing Co.

New York, N. Y. USA

July, 1919



Emily C. Lierman, Bates

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In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses. If you fail, ask someone with perfect sight to help you.

Do You Read Imperfectly? - This first article and others are placed on page 2 on the inside cover of each monthly Better Eyesight Magazine issue. The articles consist of a variety of the Best of Dr. Bates Original Natural Eyesight Improvement Treatments, Activities. The student can copy, paste these into a small fine print booklet to carry in a pocket and practice in your spare time.

FOREWORD

WHEN the United States entered the European war recruits for general military service were required to have a visual acuity of 20/40 in one eye and 20/100 in the other.1 This very low standard, although it is a matter of common knowledge that it was interpreted with great liberality, proved to be the greatest physical obstacle to the raising of an army. Under it 21.68 per cent of the registrants were rejected, 13 per cent more than for any other single cause.2

Later the standard was lowered3 so that men might be "unconditionally accepted for general military service" with a vision of 20/100 in each eye without glasses, provided one eye was correctible to 20/40. For special or limited service they might be accepted with only 20/200 in each eye without glasses, provided one was correctible to 20/40. At the same time a great many defects other than errors of refraction were admitted in both classes, such as squint not interfering with vision, slight nystagmus, and color blindness. Even total blindness in one eye was not a cause for rejection to the limited service class, provided it was not due to progressive or organic change, and the vision of the other eye was normal. Under this incredible standard eye defects still remained one of three leading causes of rejection.

Over ten per cent, (10.65) of the registrants were disqualified by them, while defects of the bones and joints and of the heart and blood-vessels ran respectively one and one and a half percent higher.4 Most of the revelations about the physical condition of the American people which resulted from the operation of the draft law had been anticipated by persons who had been giving their attention to such matters - and whose warnings had long fallen upon deaf ears - but it is doubtful if anyone had formed an adequate conception of the truth regarding the condition of the nation's eyesight. That it should be impossible to raise an army with even half normal vision in one eye, and that one man in every ten rejected for military service should have been unable, even by the aid of glasses, to attain this standard, is a situation so appalling that words fail to characterize it, so incredible that only the most unimpeachable evidence could compel belief in it. Under these circumstances it seems to me the plain duty of anyone who has found any means of controlling the evil in question to give the facts the widest possible publicity.

Most writers on ophthalmology today appear to believe that defective eyesight is part of the price we must pay for civilization. The human eye, they say, was not designed for the uses to which it is now put. Eons before there were any schools, or printing presses, electric lights, or moving pictures, its evolution was complete. In those days it served the needs of the human animal perfectly, but it is not to be expected, we are told, that it should respond without injury to the new demands. By care it is thought that this injury may be minimized, but to eliminate it wholly is considered to be too much to hope for. Such is the depressing conclusion to which the monumental labors of a hundred years and more have led us.

I have no hesitation in stating that this conclusion is unqualifiedly wrong. Nature did not blunder when she made the human eye,

but has given us in this intricate and wonderful mechanism, upon which so much of the usefulness as well as the pleasure of life depends, an organ as fully equal to the needs of civilization as to those of the Stone Age. After thirty-three years of clinical and experimental work, I have demonstrated to my own satisfaction and that of others that the eye is capable of meeting the utmost demands of civilization; that the errors of refraction which have so long dogged the footsteps of progress, and which have made the raising of an army during the recent war so difficult, are both preventable and curable; and that many other forms of imperfect sight, long held to be incurable, may be either improved or completely relieved.

All these discoveries have been published in the medical press, but while their reliability has never been publicly disputed, the medical profession has so far failed to make use of them. Meantime the sight of our children is being destroyed daily in the schools, and our young men and women are entering life with a defect which, if uncorrected, must be a source of continual misery and expense to them, sometimes ending in blindness or economic ruin. Admitting for the sake of argument that I may be wrong in my conclusion that these things are unnecessary, it is time I was proven to be wrong. I should not be allowed to play on the forlorn hope of a suffering world. If I am right, as I know I am, a suffering world should no longer be deprived of the benefit of my discoveries.

To give publicity to these discoveries and arouse discussion regarding them is one of the objects for which this magazine has been started. At the same time its pages are open to everyone who has any light to throw upon the problem. It has too long been the custom of ophthalmologists to disregard every fact at variance with the accepted theories. Such facts, when observed, have usually not been published, and when published they have either been ignored or explained away in some more or less plausible manner. The management of this magazine wishes to make it a medium for the publication of such facts, which, it may safely be asserted, are known to every ophthalmologist of any experience, and which, if they had received proper consideration, would long ago have led us out of the blind alley in which we are now languishing.

While I think it may be truthfully said that many of my methods are new and original, other physicians, both in this country and in Europe, have cured themselves and others by treatment without glasses. Lay persons have done the same.

Fine Print – For Clear Close Vision



In *The Autocrat of the Breakfast Table*, Oliver Wendell Holmes published a very remarkable case of the cure of presbyopia.

"There is now living in New York State," he says, "an old gentleman who, perceiving his sight to fail, immediately took to exercising it on the finest print, and in this way fairly bullied Nature out of her foolish habit of taking liberties at five-and-forty, or thereabouts. And now this old gentleman performs the most extraordinary feats with his pen, showing that his eyes must be a pair of microscopes. I should be afraid to say how much he writes in the compass of a half-dime, whether the Psalms or the Gospels, or the Psalms and the Gospels, I won't be positive."[5]

An officer in the American Expeditionary Forces, whose letter is published elsewhere, wrote to me about a year ago that he has cured himself of presbyopia, and after half a lifetime of misery was entirely free from eye discomfort. There must be many more of these cases, and we want to hear of them.

(Five and forty=fifties, forties… year of age.) Reading fine print maintains clear close and distant vision at all ages and keeps the eyes healthy, prevents development of eye diseases.

FUNDAMENTAL FACTS

For about seventy years it has been believed that the eye accommodates for vision at different distances by changing the curvature of the lens, and this theory has given birth to another, namely, that errors of refraction are due to a permanent organic change in the shape of the eyeball. On these two ideas the whole system of treating errors of refraction is based at the present time.

My experiments and clinical observations have demonstrated that both these theories are wrong.[6] They have shown:

(1) That the lens is not a factor in accommodation;
(2) That the change of focus necessary for vision at different distances is brought about by the action of the superior and inferior obliques, which, by their contraction and relaxation, change the length of the eyeball as the length of the camera is changed by the shortening and lengthening of the bellows;
(3) That errors of refraction are due to the abnormal action of these muscles and of the recti, the obliques being responsible for myopia and the recti for hypermetropia, while both may combine in the production of astigmatism;
(4) That this abnormal action of the muscles on the outside of the eyeball is always due to mental strain of some kind.

This being the case it follows that all errors of refraction can be cured by relaxation. All methods of treatment, therefore, are simply different ways of obtaining relaxation. And because it is impossible to relax the eye muscles without relaxing the mind - and the relaxation of the mind means the relaxation of the whole body - it also follows that improvement in the eyesight is always accompanied by an improvement in health and mental efficiency.

The fact that all errors of refraction are functional can often be demonstrated within five minutes. When a person with myopia, hypermetropia, or astigmatism, looks at a blank wall without trying to see, the retinoscope, with a plane mirror, at six feet, indicates, in flashes or more continuously no error of refraction. The conditions should be favorable for relaxation and the doctor should be as much at his ease as the patient.

It can also be demonstrated with the retinoscope that persons with normal sight do not have it all the time.[7] When the vision of such persons becomes imperfect at the distance it will be found that myopic refraction has been produced;[8] when it becomes imperfect at the near point it will be found that hypermetropia has been produced.

CENTRAL FIXATION

An invariable symptom of all abnormal conditions of the eyes, whether functional or organic, is the loss of central fixation. When a person with perfect vision looks at a letter on the Snellen test card he can always observe that all the other letters in his field of vision are seen less distinctly. He can also observe that when he looks at the bottom of even the smallest letter on the card, the top appears less black and less distinct than the part directly regarded, while the same is true of a letter of diamond type, or of the smallest letters that are printed. When a person with imperfect sight looks at the card he can usually observe that when he can read a line of letters he is able to look at one letter of a line and see it better than the others, but the letters of a line he cannot read may look all alike, or those not directly regarded may even be seen better than the one fixed.

These conditions are due to the fact that when the sight is normal the sensitiveness of the fovea is normal, but when the sight is imperfect, from whatever cause, the sensitiveness of the fovea is lowered, so that the eye sees equally well, or even better, with other parts of the retina. Contrary to what is generally believed, the part seen best when the sight is normal is extremely small. **The text-books say that at twenty feet an area having a diameter of a quarter of an inch can be seen with maximum vision, but anyone who tries at this distance to see every part of one of the small letters of the Snellen test card - the diameter of which is about a quarter of an inch - equally well at one time will immediately become myopic. The fact is that the nearer the point of maximum vision approaches a mathematical point, which has no area, the better the sight.**

The cause of this loss of function in the center of sight is mental strain; and as all abnormal conditions of the eyes, organic as well as functional, are accompanied by mental strain, all such conditions must necessarily be accompanied by loss of central fixation. When the mind is under a strain the eye usually goes more or less blind. The center of sight goes blind first, partially or completely, according to the degree of the strain, and if the strain is great enough the whole or the greater part of the retina may be involved. When the vision of the center of sight has been suppressed, partially or completely, the patient can no longer see the point which he is looking at best, but sees objects not regarded directly as well, or better, because the sensitiveness of the retina has now become approximately equal in every part, or is even better in the outer part than in the center. Therefore in all cases of defective vision the patient is unable to see best where he is looking. When the person with imperfect vision sees the peripheral field clearest, it is not as clear as the central field is when the vision is normal.

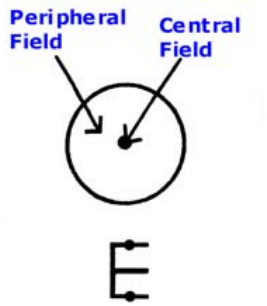
This condition is sometimes so extreme that the patient may look as far away from an object as it is possible to see it and yet see it just as well as when looking directly at it. In one case it had gone so far that the patient could see only with the edge of the retina on the nasal side. In other words, she could not see her fingers in front of her face, but could see them if she held them at the outer side of her eye. She had no error of refraction, showing that while every error of refraction is accompanied by eccentric fixation, the strain which causes the one condition is different from that which produces the other. The patient had been examined by specialists in this country and Europe, who attributed her blindness to disease of the optic nerve, or brain; but the fact that vision was restored by relaxation demonstrated that the condition had been due simply to mental strain.

Eccentric fixation, even in its lesser degrees, is so unnatural that great discomfort, or even pain, can be produced in a few seconds by trying to see every part of an area three or four inches in extent at twenty feet, or even less, or an area of an inch or less at the near point, equally well at one time, while at the same time the retinoscope will demonstrate that an error of refraction has been produced. This strain, when it is habitual, leads to all sorts of abnormal conditions and is, in fact, at the bottom of most eye troubles, both functional and organic. The discomfort and pain may be absent, however, in the chronic condition, and it is an encouraging symptom when the patient begins to experience them.

Natural health improvement doctors state; When health or vision is impaired, pain and other symptoms occur. When health/vision impairment increases, sometimes the pain, other uncomfortable symptoms vanish, are not felt. New symptoms may take their place. When healing occurs and the health/vision is reversing back to normal, is being corrected/cured; the old pains, symptoms may temporarily re-appear as the health/vision is passing backwards through previous beginning stages of the health or vision problem. Then, as the health/vision improves to perfect health, clear vision; the pain, symptoms are completely removed. Complete recovery without passing through pain, uncomfortable symptoms can also occur.

The center of the retina, macula and fovea centralis with its many cones produce the clearest vision and brightest color in the center of the visual field. The peripheral field of the retina produces less clear vision and less color in the peripheral field of vision. When the vision is normal, clear; the center of the visual field is clearest and the peripheral field less clear. The exact center of the visual field is produced by the fovea centralis and is the size of the pointed end of a pin and produces very clear vision, much clearer than 20/20 and brightest color, fine detailed vision, ability to see very small parts of objects at close and far distances.

Central fixation – To look at/see one small part of a object clearest at a time in the center of the visual field. Shifting is combined with central fixation- The eyes, center of the visual field moves, shifts continually from part to part (point to point) on a object to see the object clear. The center of the visual field also moves with the eyes from object to object seeing one object at as time clearest.
Natural Eyesight Improvement returns perfect clear central vision and brings the peripheral to its maximum possible clarity.



**Look at the dot on the top of the E.
The dot is in the center of the visual field and is clearest. The dot on the bottom is in the peripheral field and is less clear.
Shift dot to dot seeing one dot clearest at a time.**

When the eye possesses central fixation it not only possesses perfect sight, but it is perfectly at rest and can be used indefinitely without fatigue. It is open and quiet; no nervous movements are observable; and when it regards a point at the distance the visual axes are parallel. In other words, there are no muscular insufficiencies. This fact is not generally known. The text-books state that muscular insufficiencies occur in eyes having normal sight, but I have never seen such a case. The muscles of the face and of the whole body are also at rest, and when the condition is habitual there are no wrinkles or dark circles around the eyes.

In most cases of eccentric fixation, on the contrary, the eye quickly tires, and its appearance, with that of the face, is expressive of effort or strain. The ophthalmoscope reveals that the eyeball moves at irregular intervals, from side to side, vertically or in other directions. These movements are often so extensive as to be manifest by ordinary inspection, and are sometimes sufficiently marked to resemble nystagmus. Nervous movements of the eyelids may also be noted, either by ordinary inspection, or by lightly touching the lid of one eye while the other regards an object either at the near point or the distance. The visual axes are never parallel, and the deviation from the normal may become so marked as to constitute the condition of **squint**. Strain, eccentric fixation, diffusion causes squint, crossed, wandering eyes, imperfect convergence, divergence. Redness of the conjuctiva and of the margins of the lids, wrinkles around the eyes, dark circles beneath them and tearing are other symptoms of eccentric fixation.

Eccentric fixation is a symptom of strain, and is relieved by any method that relieves strain; but in some cases the patient is cured just as soon as he is able to demonstrate the facts of central fixation. When he comes to realize, through actual demonstration of the fact, that (when experiencing blur, eccentric fixation, diffusion, not seeing with the center of the visual field) he does not see best where he is looking, and that when he looks a sufficient distance away from a point (when the eyes are working correct, relaxed, with central fixation) he can see it worse than when he looks directly at it, he becomes able, in some way, to reduce the distance to which he has to look in order to see worse, until he can look directly at the top of a small letter and see the bottom worse, or look at the bottom and see the top worse. The smaller the letter regarded in this way, or the shorter the distance the patient has to look away from a letter in order to see the opposite part indistinctly, the greater the relaxation and the better the sight. When it becomes possible to look at the bottom of a letter and see the top worse, or to look at the top and see the bottom worse, it becomes possible to see the letter perfectly black and distinct. At first such vision may come only in flashes. The letter will come out distinctly for a moment and then disappear. But gradually, if the practice is continued, central fixation will become habitual.

Most patients can readily look at the bottom of the big C and see the top worse; but in some cases it is not only impossible for them to do this, but impossible for them to let go of the large letters at any distance at which they can be seen. In these extreme cases it sometimes requires considerable ingenuity, first to demonstrate to the patient that he does not see best where he is looking, and then to help him to see an object worse when be looks away from it than when he looks directly at it. The use of a strong light as one of the points of fixation, or of two lights five or ten feet apart, has been found helpful, the patient when he looks away from the light being able to see it less bright more readily than he can see a black letter worse when he looks away from it. It then becomes easier for him to see the letter worse when he looks away from it. This method was successful in the following case:

A patient with vision of 3/200, when she looked at a point a few feet away from the big C, said she saw the letter better than when she looked directly at it. Her attention was called to the fact that her eyes soon became tired and that her vision soon failed when she saw things in this way. Then she was directed to look at a bright object about three feet away from the card, and this attracted her attention to such an extent that she became able to see the large letter on the test card worse, after which she was able to look back at it and see it better. It was demonstrated to her that she could do one of two things: look away and see the letter better than she did before, or look away and see it worse. She then became able to see it worse all the time when she looked three feet away from it. Next she became able to shorten the distance successively to two feet, one foot and six inches, with a constant improvement in vision; and finally she became able to look at the bottom of the letter and see the top worse, or look at the top and see the bottom worse. With practice she became able to look at the smaller letters in the same way, and finally she became able to read the ten line at twenty feet. By the same method also she became able to read diamond type, first at twelve inches and then at three inches. By these simple measures alone she became able, in short, to see best where she was looking, and her cure was complete.

The highest degrees of eccentric fixation occur in the high degrees of myopia, and in these cases, since the sight is best at the near point, the patient is benefited by practicing seeing worse at this point. The distance can then be gradually extended until it becomes possible to do the same thing at twenty feet. One patient with a high degree of myopia said that the farther she looked away from an electric light the better she saw it, but by alternately looking at the light at the near point and looking away from it she became able, in a short time, to see it brighter when she looked directly at it than when she looked away from it. Later she became able to do the same thing at twenty feet, and then she experienced a wonderful feeling of relief. No words, she said, could adequately describe it. Every nerve seemed to be relaxed, and a feeling of comfort and rest permeated her whole body. Afterward her progress was rapid. She soon became able to look at one part of the smallest letters on the card and see the rest worse, and then she became able to read the letters at twenty feet.

On the principle that a burnt child dreads the fire, some patients are benefited by consciously making their sight worse. When they learn, by actual demonstration of the facts, just how their visual defects are produced, they unconsciously avoid the unconscious strain which causes them. When the degree of eccentric fixation is not too extreme to be increased, therefore, it is a benefit to patients to teach them how to increase it. **When a patient has consciously lowered his vision and produced discomfort and even pain by trying to see the big C, or a whole line of letters, equally well at one time, he becomes better able to correct the unconscious effort of the eye to see all parts of a smaller area equally well at one time.** (experience strain=learn to avoid it.)

In learning to see best where he is looking it is usually best for the patient to think of the point not directly regarded as being seen less distinctly than the point he is looking at, instead of thinking of the point fixed as being seen best, as the latter practice has a tendency, in most cases, to intensify the strain under which the eye is already laboring. One part of an object is seen best only when the mind is content to see the greater part of it indistinctly, and as the degree of relaxation increases the area of the part seen worse increases until that seen best becomes merely a point. (Exact center of visual field, fovea centralis, clearer than 20/20)

The limits of vision depend upon the degree of central fixation. A person may be able to read a sign half a mile away when he sees the letters all alike, but when taught to see one letter best he will be able to read smaller letters that he didn't know were there. The

remarkable vision of savages, who can see with the naked eye objects for which most civilized persons require a telescope, is a matter of central fixation. Some people can see the rings of Saturn, or the moons of Jupiter, with the naked eye. It is not because of any superiority in the structure of their eyes, but because they have attained a higher degree of central fixation than most civilized persons do.

Not only do all errors of refraction and all functional disturbances of the eye disappear when it sees by central fixation, but many organic conditions are relieved or cured. I am unable to set any limits to its possibilities. I would not have ventured to predict that glaucoma, incipient cataract and syphilitic iritis could be cured by central fixation; but it is a fact that these conditions have disappeared when central fixation was attained. Relief was often obtained in a few minutes, and sometimes this relief was permanent. Usually, however, a permanent cure required more prolonged treatment. Inflammatory conditions of all kinds, including inflammation of the cornea, iris, conjunctiva, the various coats of the eyeball and even the optic nerve itself, have been benefited by central fixation after other methods had failed. Infections, as well as diseases caused by protein poisoning and the poisons of typhoid fever, influenza, syphilis and gonorrhoea, have also been benefited by it. Even with a foreign body in the eye there is no redness and no pain so long as central fixation is retained.

Since central fixation is impossible without mental control, central fixation of the eye means central fixation of the mind. It means, therefore, health in all parts of the body, for all the operations of the physical mechanism depend upon the mind. Not only the sight, but all the other senses - touch, taste, hearing and smell - are benefited by central fixation. All the vital processes - digestion, assimilation, elimination, etc. - are improved by it. The symptoms of functional and organic diseases are relieved. The efficiency of the mind is enormously increased. The benefits of central fixation already observed are, in short, so great that the subject merits further investigation.

Central fixation example:
Look at the top part of the letter C. Place it in the center of the visual field. Shift on it to avoid staring. While looking at that part, in the center of the visual field; that part is clearest. Other parts of the C away from the part the eyes are looking directly at are in the peripheral field are seen worse, less clear. When the eyes move, shift to a new part, example; a part on the bottom of the C; this part is now in the center of the visual field, is clearest and the top of the C and other parts are in the peripheral field, away from the central field and are seen less clear.
Shift from part to part on the C and see one small part at a time clearest in the center of the visual field – Central Fixation.
Practice on large, then smaller letters, any objects, then on small objects, a fine print letter.
When the eyes can shift: small point to small point on a small object, small part of a object, fine print letter and use central fixation, vision is very clear.
Central fixation must be combined with shifting; shifting from point to point.
Central fixation does not mean to fix the eyes immobile on a point.



Look at/see clearest - one part (dot) of the C at a time, in the center of the visual field. The part (dot) in the peripheral field is less clear.

Eccentric fixation is – Diffusion – trying to see two or more objects or more than one part of a object at the same time, objects in the central and peripheral field equally clear at the same time. Not shifting from part to part, object to object. To space the visual attention out to cover the entire field without moving the eyes. Using the peripheral area of the retina and field of vision to see with, placing the object of visual attention in the peripheral field.

A TEACHER'S EXPERIENCES

A teacher forty years of age was first treated on March 28, 1919. She was wearing the following glasses: O. D. convex 0.75 D. S. with convex 4.00 D. C., 105 deg.; O. S. convex 0.75 D. S. with convex 3.50 D. C., 105 deg. On June 9, 1919, she wrote:

I will tell you about my eyes, but first let me tell you other things. You were the first to unfold your theories to me, and I found them good immediately - that is, I was favorably impressed from the start. I did not take up the cure because other people recommended it, but because I was convinced: first, that you believed in your discovery yourself; second, that your theory of the cause of eye trouble was true. I don't know how I knew these two things, but I did. After a little conversation with you, you and your discovery both seemed to me to bear the ear-marks of the genuine article. As to the success of the method with myself I had a little doubt. You might cure others, but you might not be able to cure me, However, I took the plunge, and it has made a great change in me and my life.

To begin with, I enjoy my sight. I love to look at things, to examine them in a leisurely, thorough way, much as a child examines things. I never realized it at the time, but it was irksome for me to look at things when I was wearing glasses, and I did as little of it as possible. The other day, going down on the Sandy Hook boat, I enjoyed a most wonderful sky without that hateful barrier, of misted glasses, and I am positive I distinguished delicate shades of color that I never would have been able to see, even with clear glasses. Things seem to me now to have more form, more reality than when I wore glasses. Looking into the mirror you see a solid representation on a flat surface, and the flat glass can't show you anything really solid. My eye-glasses, of course, never gave me this impression, but one curiously like it. I can see so clearly without them that it is like looking around corners without changing the position. I feel that I can almost do it.

I very seldom have occasion to **palm**.[9] Once in a great while I feel the necessity of it. The same with **remembering a period**.[10] Nothing else is ever necessary. I seldom think of my eyes, but at times it is borne in upon me how much I do use and enjoy using them.

My nerves are much better. I am more equable, have more poise, am less shy. I never used to show that I was shy, or lacked confidence. I used to go ahead and do what was required, if not without hesitation, but it was hard. Now I find it easy. Glasses, or poor sight rather, made me self-conscious. It certainly is a great defect and one people are sensitive to without realizing it. I mean the poor sight and the necessity for wearing glasses. I put on a pair of glasses the other day just for an experiment, and I found that they magnified things. My skin looked as if under a magnifying glass. Things seemed too near. The articles on my chiffonier looked so close I felt like pushing them away from me. The glasses I especially wanted to push away. They brought irritation at once. I took them off and felt peaceful. Things looked normal.

I see better in the street than I ever did with glasses. I can see what people look like across the street, can distinguish their features, etc., a thing I could not do with glasses, or before I wore them. I can see better across the river and further into people's houses across the street. Not that I indulge, but I noticed an increase of power while looking out of the window in school.

Speaking of school, I corrected an immense pile of examination papers the other day, five hours at a stretch, with an occasional look off the paper and an occasional turn about the room. I felt absolutely no discomfort after it. Two weeks previous to this feat I handled two hundred designs over and over again, looking at each one dozens and dozens of times to note changes and improvement in line and color. Occasionally, while this work was going on. I had to palm in the mornings on rising.

I use my eyes with as much success writing, though once in a while after a lot of steady writing they are a little bit tired. I can read at night without having to get close to a light. I mention this because last summer I had to sit immediately under the light, or I could not see.

From the beginning of the treatment I could use my eyes pretty well, but they used to tire. I remember making a large Liberty Loan poster two weeks after I took off my glasses, and I was amazed to find I could make the whole layout almost perfectly without a ruler, just as well as with my glasses. When I came to true it up with the ruler I found only the last row of letters a bit out of line at the very end. I couldn't have done better with glasses. However this wasn't fine work. About the same time I sewed a hem at night in a black dress, using a fine needle. I suffered a little for this, but not much. I used to practice my exercises at that time and palm faithfully. Now I don't have to practice, or palm; I feel no discomfort, and I am absolutely unsparing in my use of my eyes. I do everything I want to with them. I shirk nothing, pass up no opportunity of using them. From the first I did all my school work, read every notice, wrote all that was necessary, neglected nothing. Everything I was called upon to do I attempted. For instance, I had to read President Wilson's "Fourteen Points" in the assembly room without notice in a poor light-unusual wording, too,-and I read it unhesitatingly. I have yet to fail to make good.

Now to sum up the school end of it, I used to get headaches at the end of the month from adding columns of figures necessary to reports, etc. Now I do not get them. I used to get flustered when people came into my room. Now I do not; I welcome them. It is a peasant change to feel this way. And-I suppose this is most important really, though I think of it last-I teach better. I know how to get at the mind and how to make the children see things in perspective. I gave a lesson on the horizontal cylinder recently, which, you know, is not a thrillingly interesting subject, and it was a remarkable lesson in its results and in the grip it got on every girl in the room, stupid and bright. What you have taught me makes me use the memory and imagination more, especially the latter, in teaching.

Now, to sum up the effect of being cured upon my own mind. I am more direct, more definite, less diffused, less vague. In short, I am conscious of being better centered. It is central fixation of the mind. I saw this in your latest paper, but I realized it long ago and knew what to call it.

ARMY OFFICER CURES HIMSELF

An engineer, fifty-one years of age, had worn glasses since 1896, first for astigmatism, getting stronger ones every couple of years, and then for astigmatism and presbyopia. At one time he asked his oculist and several opticians if the eyes could not be strengthened by exercises, so as to make glasses unnecessary, but they said: "No. Once started on glasses you must keep to them." When the war broke out he was very nearly disqualified for service in the Expeditionary Forces by his eyes, but managed to pass the required tests, after which he was ordered abroad as an officer in the Gas Service. While there he saw in the Literary Digest of May 2, 1918, a reference to my method of curing defective eyesight without glasses, and on May 11 he wrote to me in part as follows:

At the front I found glasses a horrible nuisance, and they could not be worn with gas masks. After I had been about six months abroad I asked an officer of the Medical Corps about going without glasses. He said I was right in my ideas and told me to try it. The first week was awful, but I persisted and only wore glasses for reading and writing. I stopped smoking at the same time to make it easier on my nerves.

I brought to France two pairs of bow spectacles and two extra lenses for repairs. I have just removed the extra piece for near vision from these extra lenses and had them mounted as pince-nez, with shur-on mounts, to use for reading and writing, so that the only glasses I now use are for astigmatism, the age lens being off. Three months ago I could not read ordinary head-line type in newspapers without glasses. Today, with a good light, I can read ordinary book type (18 point), held at a distance of eighteen inches from my eyes. Since the first week in February, when I discarded my glasses, I have had no headaches, stomach trouble, or dizziness, and am in good health generally. My eyes are coming back, and I believe it is due to sticking it out. I ride considerably in automobiles and trams, and somehow the idea has crept into my mind that after every trip my eyes are stronger. This, I think, is due to the rapid changing of focus in viewing scenery going by so fast.

Other men have tried this plan on my advice, but gave it up after two or three days. Yet, from what they say, I believe they were not so uncomfortable as I was for a week or ten days.

I believe most people wear glasses because they "coddle" their eyes.

July, 1919 footnotes

1 - Harvard: Manual of Military Hygiene for the Military services of United States, third revised edition 1917, p. 195.
2 - Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917.
3 - Standards of Physical Examination for the Use of Local Boards, District Boards and Medical Advisory Boards under the Selective Service Act, Form 75, issued through office of the Provost Marshal General.
4 - Second Report of the Provost Marshal General to the Secretary of War on the Operations of the Selective Service System to December 20, 1918.
5 - Everyman's Library, 1908, pp. 166 and 167.
6 - Bates: The Cure of Defective Eyesight by Treatment Without Glasses. N. Y. Med. Jour., May 8, 1915. A Study of Images Reflected from the Cornea, Iris, Lens and Sclera. N. Y. Med. Jour., May 18, 1918.
7 - Bates: The Imperfect Sight of the Normal Eye. N. Y. Med. Jour., Sept 8, 1917.
8 – Bates: The Cause of Myopia. N. Y. Med. Jour., March 16, 1912.
9 - By palming is meant the covering of the closed eyes with the palms of the hands in such a way as to exclude all the light, while remembering some color, usually black.
10 - Bates: *Memory as an Aid to Vision.* N. Y. Med. Jour., May 24, 1919.

SCHOOL NUMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
August, 1919

How to Use the Snellen Test Card
FOR THE
Prevention and Cure of Imperfect Sight in Children

The Snellen Test Card is placed permanently upon the wall of the classroom, and every day the children silently read the smallest letters they can see from their seats with each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. This takes no appreciable amount of time, and is sufficient to improve the sight of all children in one week and to cure all errors of refraction after some months, a year, or longer.

Children with markedly defective vision should be encouraged to read the card more frequently.

Records may be kept as follows:

John Smith, 10, Sept. 15, 1918.
R. V. (vision of the right eye) 20/40.
L. V. (vision of the left, eye) 20/20.

John Smith, 11, Jan. 1, 1919.
R. V. 20/30.
L. V. 20/15.

SNELLEN TEST CARDS

There should be a Snellen test card in every family and in every school classroom. When properly used it always improves the sight even when it is already normal. Children or adults with errors of refraction, if they have never worn glasses, are cured simply by reading every day the smallest letters they can see at a distance of ten, fifteen, or twenty feet.

For Sale By
THE CENTRAL FIXATION PUBLISHING COMPANY

Paper .....50 Cents
Cardboard (folding) .....75 Cents

DELIVERED

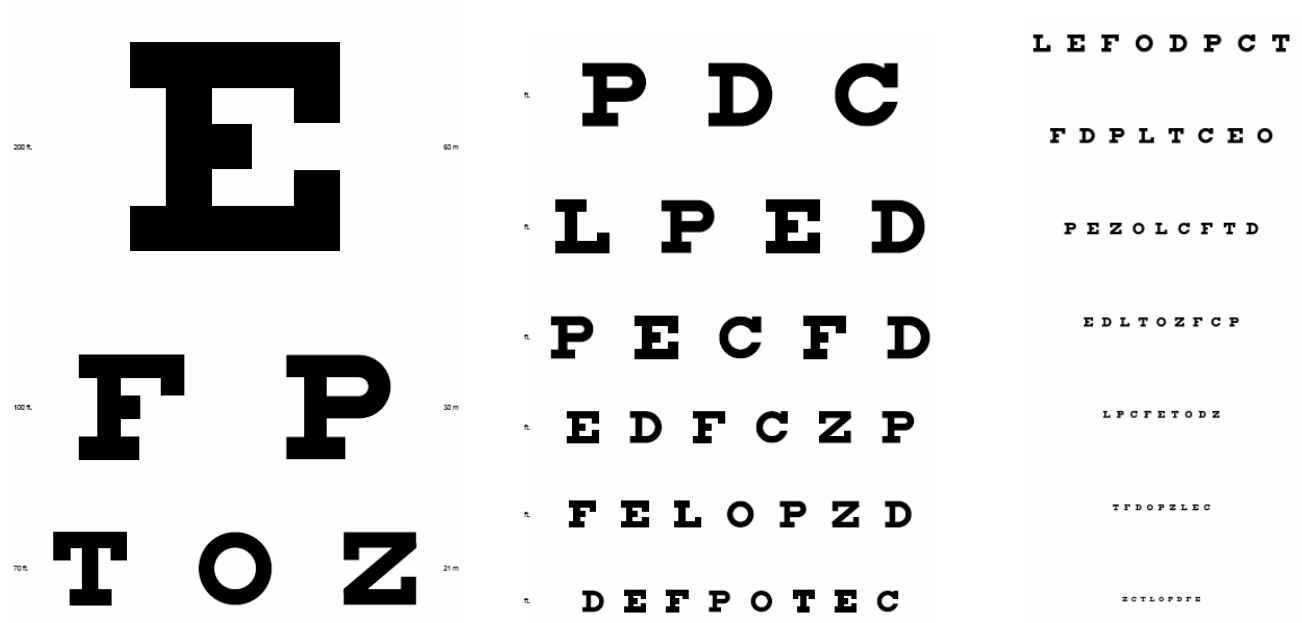
A limited number of reprints of articles by Dr. Bates published in other medical journals also for sale. Send for list.

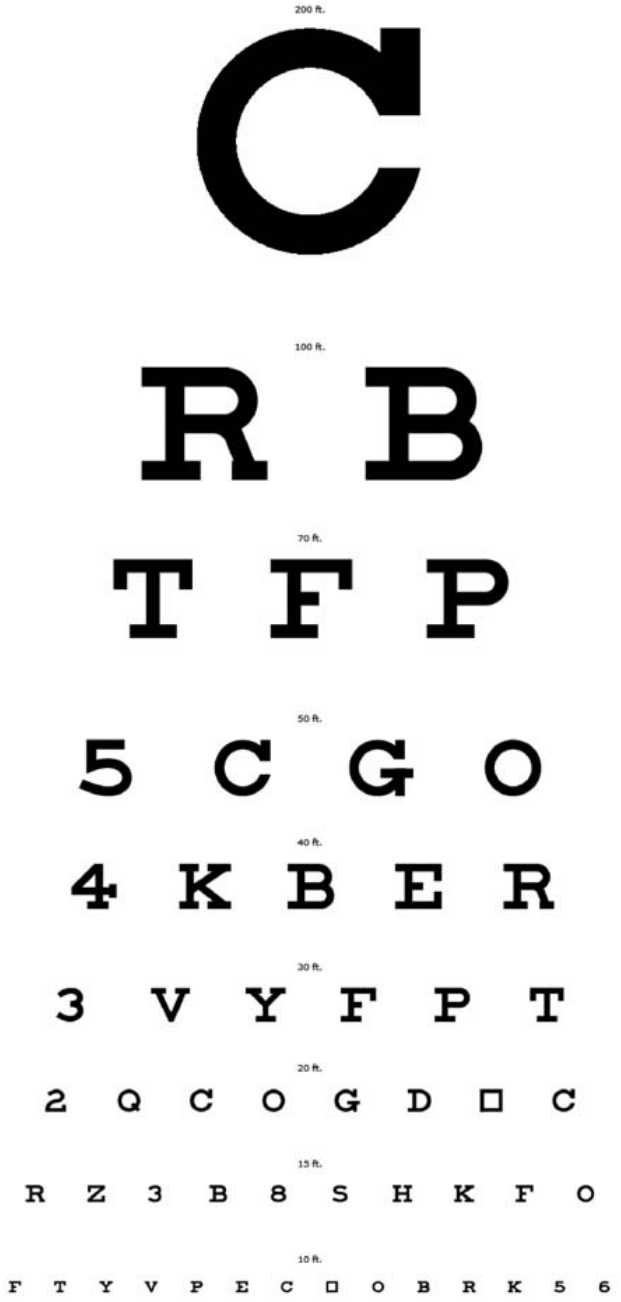
20/20

The numerator (top number) of the fraction indicates the distance of the test card from the pupil;
The denominator (bottom number) denotes the line read, as designated by the figures printed above the middle of each line of the Snellen Test Card.

A certain amount of supervision is absolutely necessary. At least once a year some one who understands the method should visit each classroom for the purpose of answering questions, encouraging the teachers to continue the use of the method, and making a report to the proper authorities.

It is not necessary that either the inspector, the teachers, or the children, should understand anything about the physiology of the eye.

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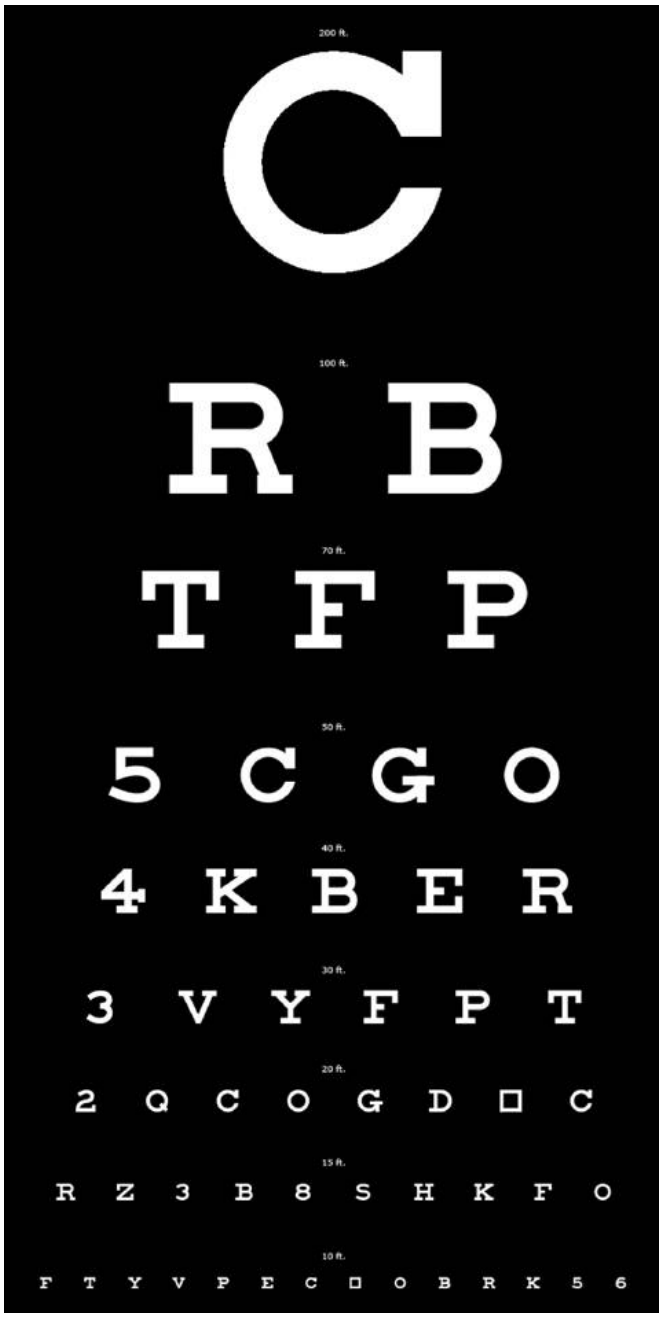
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Fig. 8. The Usual Method of Using the Retinoscope
The observer is so near the subject that the latter is made nervous, and this changes the refraction.

Glasses are often prescribed unnecessarily or 'too strong' (over-corrected) due to temporary nervousness, pressure to hurry, limited eye, head, neck, body movement, looking into test equipment during an eye exam. Eye doctors also prefer to prescribe an 'extra strength' to the eyeglass lenses. All eyeglasses, especially strong eyeglass lenses cause fast, increased vision/eye impairment and prescriptions for stronger and stronger lenses.



Fig. 43

Patient with atrophy of the optic nerve gets flashes of improved vision after palming.

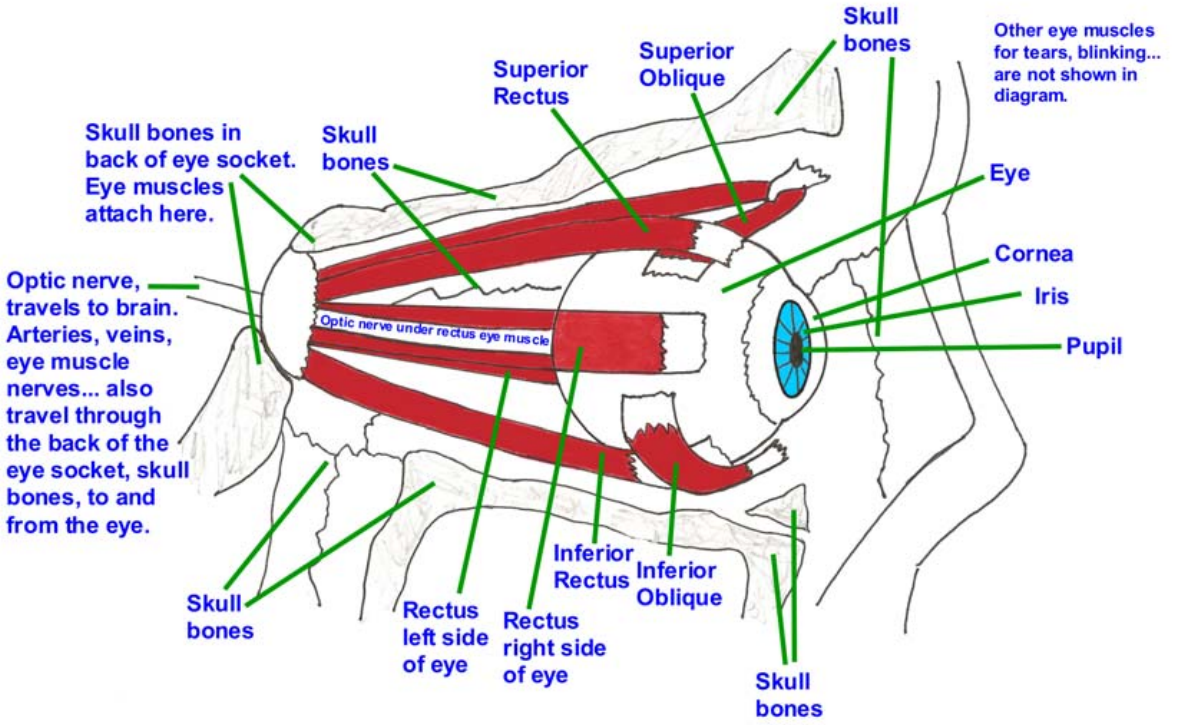


Fig. 39. A Family Group Strikingly Illustrating the Effect of the Mind Upon the Vision

No. 1.—Girl of four with normal eyes. No. 2.—The child's mother with myopia. No. 3—The same girl at nine with myopia. Note that her expression has completely changed, and is now exactly like her mother's. Nos. 4, 5 and 6.—The girl's brother at two, six and eight. His eyes are normal in all three pictures. The girl has either inherited her mother's disposition to take things hard, or has been injuriously effected by her personality of strain. The boy has escaped both influences. In view of the prevailing theories about the relation of heredity to myopia, this picture is particularly interesting.

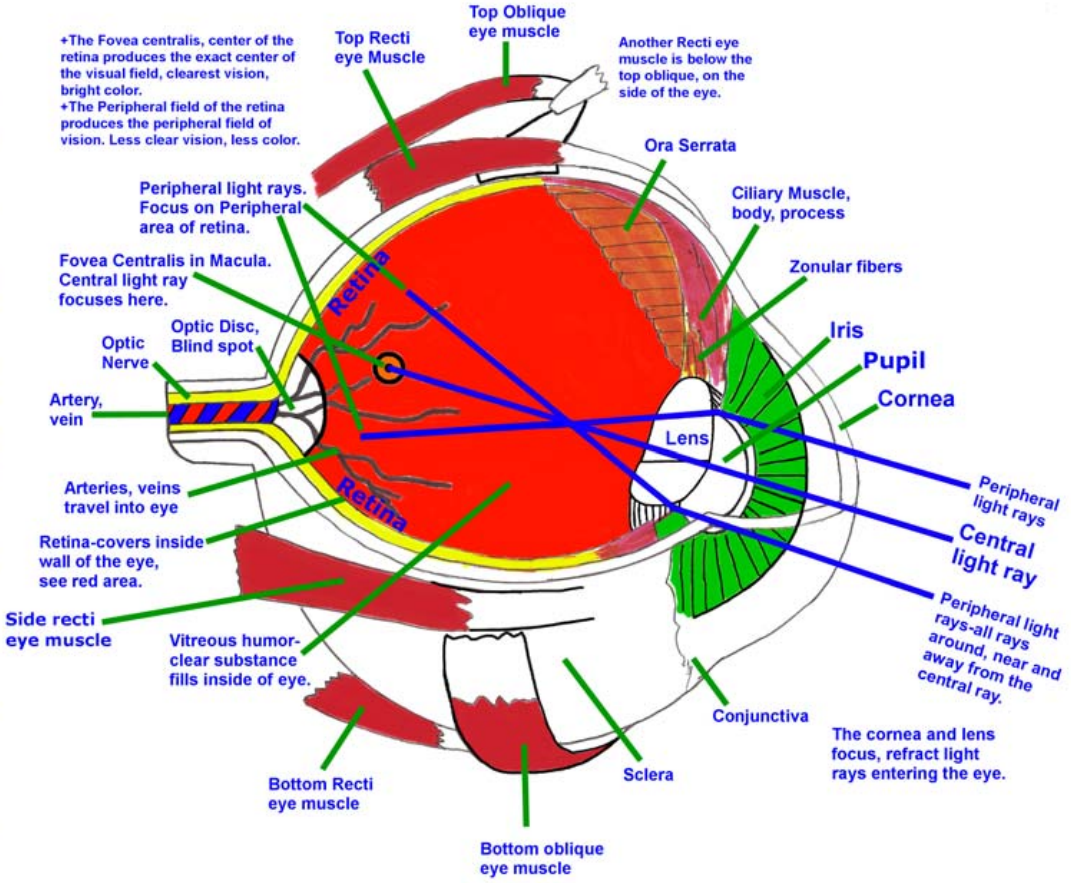
These old pictures are from Dr. Bates original book 'The Cure of Imperfect Sight by Treatment Without Glasses'. More pictures in that book and Medical Articles. Books are included free in E-Book form with this book. Contact www.cleareyesight.info mclearsight@aol.com

Eye socket, bones, eye, eye muscles, optic nerve.



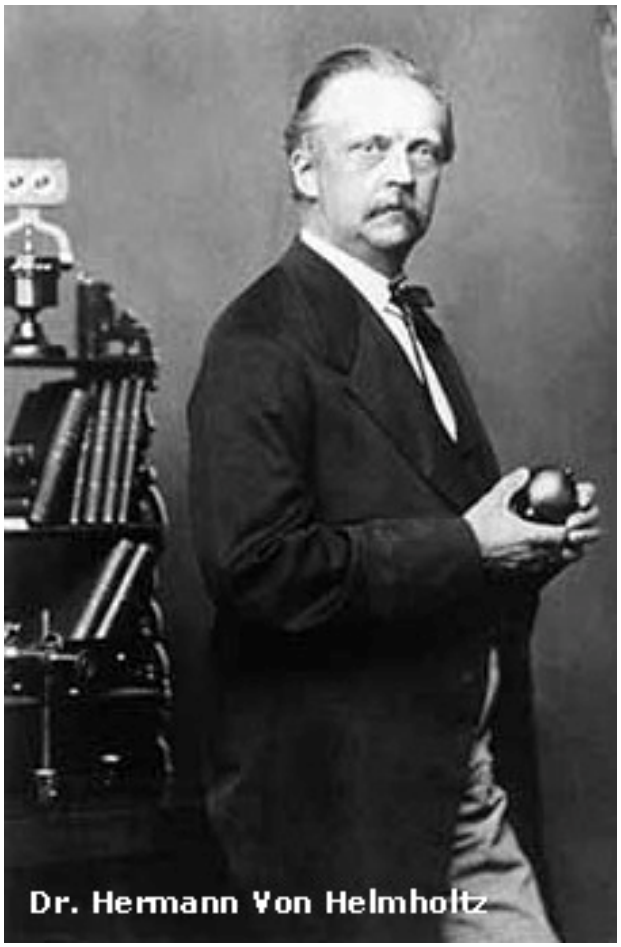
Notice that the eye socket is composed of bone segments, aligned, grown together. These are part of the skull bones. Eye muscles attach to the skull bones in the back of the eye socket. Misalignment of the eye socket or skull bones due to accidents, birth trauma, forcep, suction delivery... can mis-align the bones, place pressure, tension on/in the eye, optic nerve, eye muscles resulting in crossed, wandering eyes, imperfect convergence, divergence, accommodation, un-accommodation, unclear vision, astigmatism and other abnormal eye conditions. Special chiropractors (Cranial, Cranio Sacral Therapy, Osteopathy) can re-align the bones of the skull if needed. Often, use of the Bates method alone can correct eye function and clarity of the vision.

The retina contains cones and rods, light receptors. Cones=very clear vision, bright color. Activated in light. Stops functioning in almost complete darkness. Rods=Less clear vision, grey, white color. Also senses movement in the visual field and continues to function in very dim light, almost complete darkness. The macula contains many cones, and a few rods. The fovea contains a high concentration of cones and no rods. The peripheral field of the retina contains many rods and some cones with less and no cones into the far outer peripheral. This is why the center of the visual field is clearest. See clear by using the Macula, Fovea Centralis, center of the visual field. See much clearer, fine details, brightest color by using the fovea, exact center of the retina, visual field. The center of the visual field moves with the eyes from object to object, part to part on objects keeping the vision clear.



Dr. Hermann Von Helmholtz

Inventor of the Ophthalmoscope





Hermann Von Helmholtz (1821–1894) A German Physician, Physicist

Dr. Helmholtz studied and contributed to developments in mechanics, physics, science, mathematics, energy conservation, electrodynamics, fluid dynamics, thermodynamics, chemical thermodynamics, chemistry, electricity, magnetism, meteorology, philosophy, fine arts, physiology of the eye and the ear, hearing, acoustics, motion perception, physiological optics, mathematics of the eye, theories of vision, visual perception of space, color vision, color blindness, dioptrics (study of the refraction of light, especially by lenses) of the eye and many other areas of science.
He studied electrodynamics by Michael Faraday and James Clerk Maxwell, began the revolution in wireless communication, wrote the 'Handbook of Physiological Optics'.

He invented the Ophthalmoscope to examine/inspect the interior of the eye/retinal blood vessels, detect high blood pressure and arterial disease… He also invented the Ophthalmometer to measure the eyes accommodation/the eye's curvature.

Dr. Helmholtz created the 'Theory of Accommodation' – which states that the human eyes lens changes shape due to the action of the Ciliary Muscle to produce accommodation in the eye for clear vision when looking at close distances.

For years the Optical Industry, Eye Doctors stated Helmholtz's Theory as an absolute fact and stated that due to this fact, unclear vision cannot be cured, that only glasses, surgery, drugs can correct unclear vision and other eye problems.

Dr. William H. Bates, Ophthalmologist, eye, ear… doctor proved that the outer eye muscles (Oblique, Recti) can change the shape of the eye, produce accommodation and affect the clarity of vision. Relaxed, normally functioning outer eye muscles produced clear vision. Bates stated the lens does not produce accommodation. Dr. Bates proved as fact that unclear vision and a variety of other eye problems can be corrected, cured by natural methods of relaxing the mind, body, eye muscles, returning mind, body, eye muscles, eyes to normal function without eyeglasses, surgery, drugs. The Bates Method.

Modern day Ophthalmologists state that: with new technology, they have proven that the lens does change shape and can produce accommodation.

Some Scientists, Ophthalmologists state that Helmholtz and Bates were correct, that the eye and lens change shape, work together (and the lens might also move) to produce accommodation.

The Bates Method relaxes, improves function, health of the entire visual system, eyes, mind, body and relaxes, improves function of all the eye muscles; outer (Oblique, Recti & other outer muscles), inner (ciliary/lens, iris…) and continues to produce clear vision for over 100 years. Even before Bates time, the Bates Method was used naturally by the human eye.



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BETTER EYESIGHT LEAGUE
8:00 P. M., JUNE 13th
Room 504
300 MADISON AVENUE NEW YORK CITY

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The Snellen Test Card

OWING to the many inquiries requesting information for the use of the Snellen Test Card, we have had little booklets printed explaining its value and how to use it in relation with Dr. Bates' method of treating imperfect sight. We shall be glad to send one of these on request.
In addition to the Snellens, we have what we call the Various Cards. These were made especially for those who have memorized the Snellen, and think that their good sight is due to the fact that they know what letter is coming. This is proof positive of one of Dr. Bates' statements that familiar things are more readily seen.

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A HOUSE BUILT ON SAND

That the results of the present method of treating defects of vision are far from satisfactory is something which no one would attempt to deny. It is well known that many patients wander from one specialist to another, seeking vainly for relief, while others give up in despair and either bear their visual ills as best they may without assistance, or else resort to Christian Science, mental science, osteopathy, physical culture, or some of the other healing cults to which the incompetence of orthodox medicine has given birth. The specialists themselves, having daily to handle each other's failures, are scarcely better satisfied. Privately they criticize each other with great asperity and freedom, and publicly they indulge in much speculation as to the underlying causes of this deplorable state of affairs.

At the recent meeting of the Ophthalmological Section of the American Medical Association, Dr. E. J. Gardiner, of Chicago, in a paper on *The Present Status of Refraction Work*,1 finds that ignorance is responsible for the largest quota of failure to get satisfactory results from what he calls the "rich heritage" of ophthalmic science, but that a considerable percentage must be attributed to other causes. Among these causes he enumerates a too great dependence on measuring devices, the delegation of refraction work to assistants, and the tendency to eliminate cycloplegics, in deference to the prejudices of patients who have a natural objection to being incapacitated by "drops."

On the same occasion, Dr. Samuel Theobald, of Johns Hopkins University, noted a tendency to "minimize the importance of muscular anomalies" as an important cause of many failures to give relief to eye patients. Among cases that have come into his hands after glasses had been prescribed by other ophthalmologists he has often found that "though great pains had been taken to correct even minor faults of refraction, grave muscular errors had been entirely overlooked." From this fact and from the small number of latent muscular defects noted in the hospital reports which he has examined, the conclusion seems to him inevitable that such faults are in large measure ignored.

Dr. Walter Pyle, of Philadelphia, laid stress on "necessary but often neglected refinements in examination of ocular refraction." "Long practice, infinite care and attention to finer details," he said, "are imperative requisites, since a slight fault in the correction of a refractive error aggravates rather than relieves the accompanying asthenopic symptoms." This care, he says, must be exercised not only by the oculist but by the optician, and to the end that the latter may be inspired to do his part, he suggests that the oculist provide himself with the means for keeping tabs on him in the form of a mechanical lens measure, axis finder and centering machine.

Dr. Charles Emerson, of the Indiana University School of Medicine, suggested a closer co-operation between the ophthalmologist and the physician, as there were many patients who could not be helped by the ophthalmologist alone.

The fitting of glasses by opticians is usually condemned without qualification, but in the discussion which followed these papers, Dr. Dunbar Roy, of Atlanta, said that the optician, just because he does not use cycloplegics, frequently fits patients with comfortable glasses where the ophthalmologist has failed. When a patient needs glasses, said Dr. Roy, he needs them when his eyes are in their natural or normal condition and not when the muscle of accommodation is partially paralyzed. Even the heavy frames used in the adjustment of trial lenses were not forgotten in the search for possible causes of failure, Dr. Roy believing that the patient is often so annoyed by these contrivances that he does not know which is causing him the most discomfort, the frames or the glasses.

Nowhere in the whole discussion was there any suggestion that this great mass of acknowledged failure could possibly be due to any defect in fundamental principles. These are a "rich heritage," the usefulness of which is not to be questioned. If they do not

produce satisfactory results, it must be due to their faulty application, and it is taken for granted that there are a select few who understand and are willing to take the trouble to use them properly.

The simple fact, however, is that the fitting of glasses can never be satisfactory. The refraction of the eye is continually changing.[2] Myopia, hypermetropia and astigmatism come and go, diminish and increase, and the same adjustment of glasses cannot suit the affected eyes at all times. One may be able, in many cases, to make the patient comfortable, to improve his sight, or to relieve nervous symptoms; but there will always be a considerable number of persons who get little or no help from glasses, while practically everyone who wears them is more or less dissatisfied. The optician may succeed in making what is considered to be a satisfactory adjustment, and the most eminent ophthalmologist may fail. I personally know of one specialist, a man of international reputation, who fitted a patient sixty times with glasses without affording him the slightest relief.

And even when the glasses do what is expected of them they do very little. Considering the nature of the superstructure built on the foundation of Donders, and the excellent work being done by leading men, Dr. Gardiner thinks the present status of refraction work might be deemed eminently satisfactory if it were not for the great amount of bad and careless work being done; but I do not consider it satisfactory when all we can do for people with imperfect sight is to give them eye crutches that do not even check the progress of the trouble, when the only help we can offer to the millions of myopic and hypermetropic and astigmatic and squinting children in our schools is to put spectacles on them. If this is the best that ophthalmology can do after building for three-quarters of a century upon the foundation of Donders, is it not time that we began to examine that foundation of which Dr. Gardiner boasts that "not one stone has been removed"? Instead of seeking the cause of our failure to accomplish even the little we claim to be able to do in the ignorance and carelessness of the average practitioner, great as that ignorance and carelessness often are; in the neglect of cycloplegics and the refinements of lens adjustment: in the failure to detect latent muscular anomalies; in the absence of co-operation between specialist and general practitioner: would it not be wiser to examine the foundation of our superstructure and see whether it is of stone or of sand?

THE PREVENTION OF MYOPIA

Methods That Failed

The publication in 1867 by Professor Hermann Cohn of Breslau of a study of the eyes of ten thousand school children first called general attention to the fact that while myopia is seldom found in the pre-school age, the defect increases steadily both in percentage of cases and in degree during the educational period. Professor Cohn's investigations were repeated in all the advanced countries, and his observations, with some difference in percentages, were everywhere confirmed. The conditions were unanimously attributed to the excessive use of the eyes for near work, and as it was impossible to abandon the educational system, attempts were made to minimize the supposed evil effects of the reading, writing and other near work which it demanded. Careful and detailed rules were laid down by various authorities as to the size of type to be used in school books, the length of the lines, their distance apart, the distance at which the book should be held, the amount and arrangement of the light, the construction of the desks, the length of time the eyes might be used without a change of focus, etc. Face rests were even devised to hold the eyes at the prescribed distance from the desk and to prevent stooping, which was supposed to cause congestion of the eyeball and thus to encourage elongation. The Germans, with characteristic thoroughness, actually used these instruments of torture, Cohn never allowing his children to write without one, "even at the best possible desk."[3]

The results of these preventive measures were disappointing. Some observers reported a slight decrease in the percentage of myopia in schools in which the prescribed reforms had been made; but on the whole, as Risley has observed in his discussion of the subject in Norris and Oliver's *System of Diseases of the Eye*, "the injurious effects of the educational process were not noticeably arrested."

"It is a significant, though discouraging fact," he continues, "that the increase, as found by Cohn, both in the percentage and in the degree of myopia, had taken place in those schools where he had especially exerted himself to secure the introduction of hygienic forms, and the same is true of the observations of Just, who had examined the eyes of twelve hundred and twenty-nine of the pupils of the two High Schools of Zittau, in both of which the hygienic conditions were all that could be desired. He found, nevertheless, that the excellent arrangements had not in any degree lessened the percentage of increase in myopia. It became necessary, therefore, to look beyond faulty hygienic environments for the cause of the pathological states represented by Myopia."[4]

With the passage of time further evidence to the same effect has steadily accumulated. In an investigation in London, for instance, in which the schools were carefully selected to reveal any difference that might arise from the various influences, hygienic, social and racial, to which the children were subjected, the proportion of myopia in the best lighted and ventilated school of the group was actually found to be higher than in the one where these conditions were worst.[5] It has also been found that there is just as much myopia in schools where little near work is done as in those in which the demands upon the accommodative power of the eye are greater, while in any case it is only a minority of the children in any school who become myopic, although all may be exposed to practically the same eye conditions. Dr. Adolf Steiger, in his recent hook on *Spherical Refraction*, bears witness, after a comprehensive survey of the whole question, to the "absolutely negative results of school hygiene,"[6] and Dr. Sidler-Huguenin reports[7] that in the thousands of cases that have come under his care he has observed no appreciable benefit from any method of treatment at his command.

Facts of this sort have led to a modification of the myopia theory, but have produced no change in methods of myopia prevention. An hereditary tendency toward the development of the defect is now assumed by most authorities; but although no one has ever been able to offer even a plausible explanation for its supposed injuriousness, and though its restriction has been proven over and over again to be useless, near work is still generally held to be a contributing cause and ophthalmologists still go on in the same old way, trying to limit the use of the eyes at the near-point and encourage vision at the distance. It is incomprehensible that men calling themselves scientific, and having had at least a scientific training, can be so foolish. One might excuse a layman for such irrational conduct, but how men of scientific repute who are supposed to write authoritative textbooks can go on year after year copying each other's mistakes and ignoring all facts which are in conflict with them is a thing which reasonable people can hardly be expected to

understand.

In 1912,[8] and a good many times since, I published the observation that myopia is always lessened when the subject strains to see at the near point, and always produced in the normal eye when the subject strains to see at the distance. These observations are of the greatest practical importance, for if they are correct, they prove our present methods of preventing myopia to be a monumental blunder. Yet no one, so far as I have heard, has taken the trouble to test their accuracy. I challenged the medical profession to produce a single exception to the statements I made in the 1912 publication, and that challenge has stood for seven years, although every member of the Ophthalmological Section of the American Medical Association must have had an opportunity to see it, and anyone who knows how to use a retinoscope could have made the necessary tests in a few minutes. If any did this, they failed to publish the results of their observations, and are, therefore, responsible for the effects of their silence. If they found that I was right and neglected to say so, they are responsible for the fact that the benefits that must ultimately result from this discovery have been delayed. If they found that I was wrong, they are responsible for any harm that may have resulted from their indifference.

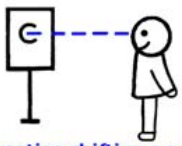
THE PREVENTION AND CURE OF MYOPIA AND OTHER ERRORS OF REFRACTION

A Method That Succeeded

You cannot see anything with perfect sight unless you have seen it before. When the eye looks at an unfamiliar object it always strains more or less to see that object, and an error of refraction is always produced. When children look at unfamiliar writing, or figures, on the blackboard, distant maps, diagrams, or pictures, the retinoscope always shows that they are myopic, though their vision may be under other circumstances absolutely normal. The same thing happens when adults look at unfamiliar distant objects. When the eye regards a familiar object, however, the affect is quite otherwise. Not only can it be regarded without strain, but the strain of looking later at unfamiliar objects is lessened.

This fact furnishes us with a means of overcoming the mental strain to which children are subjected by the modern educational system. It is impossible to see anything perfectly when the mind is under a strain, and if children become able to relax when looking at familiar objects, they become able, sometimes in an incredibly brief space of time, to maintain their relaxation when looking at unfamiliar objects.

I discovered this fact while examining the eyes of 1,500 school children at Grand Forks, N. D., in 1903.[9] In many cases children who could not read all of the letters on the Snellen test card at the first test read them at the second or third test. After a class had been examined the children who had failed would sometimes ask for a second test, and then it often happened that they would read the whole card with perfect vision. So frequent were these occurrences that there was no escaping the conclusion that in some way the vision was improved by reading the Snellen test card. In one class I found a boy who at first appeared to be very myopic, but who, after a little encouragement, read all the letters on the test card. The teacher asked me about this boy's vision, because she had found him to be very "near-sighted." When I said that his vision was normal she was incredulous, and suggested that he might have learned the letters by heart, or been prompted by another pupil. He was unable to read the writing or figures on the blackboard, she said, or to see the maps, charts, and diagrams on the walls, and did not recognize people across the street. She asked me to test his sight again, which I did, very carefully, under her supervision, the sources of error which she had suggested being eliminated. Again the boy read all the letters on the card. Then the teacher tested his sight. She wrote some words and figures on the blackboard and asked him to read them. He did so correctly. Then she wrote additional words and figures, which he read equally well. Finally she asked him to tell the hour by the clock twenty-five feet distant, which he did correctly. It was a dramatic situation, both the teacher and the children being intensely interested. Three other cases in the class were similar, their vision, which had previously been very defective for distant objects, becoming normal in the few moments devoted to testing their eyes. It is not surprising that after such a demonstration the teacher asked to have a Snellen test card placed permanently in the room.



Practice shifting on a familiar object - letters on a test card daily with;
Both eyes together, one eye at a time, both eyes together again.

The children were directed to read the smallest letters they could see from their seats at least once every day, with both eyes together and with each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. (Use of eye patch is best so the hand does not need to be held up – holding hand up to eye causes the muscles in hand, arm, shoulder, neck, then eyes to become tense.)

Those whose vision was defective were encouraged to read it more frequently, and in fact needed no encouragement to do so after they found that the practice helped them to see the blackboard, and stopped the headaches, or other discomfort, previously resulting from the use of their eyes.

In another class of forty children, between six and eight, thirty of the pupils gained normal vision while their eyes were being tested. The remainder were cured later under the supervision of the teacher by exercises in distant vision with the Snellen card. This teacher had noted every year for fifteen years that at the opening of the school in the fall all the children could see the writing on the blackboard from their seats, but before school closed the following spring all of them without exception complained that they could not see it at a distance of more than ten feet. After learning of the benefits to be derived from the daily practice of distant vision with familiar objects as the points of fixation, this teacher kept a Snellen test card continually in her classroom and directed the children to read it every day. The result was that for eight years no more of the children under her care acquired defective eyesight.

This teacher had attributed the invariable deterioration in the eyesight of her charges during the school year to the fact that her classroom was in the basement and the light poor. But teachers with well-lighted classrooms had the same experience, and after the Snellen test card was introduced into both the well-lighted and the poorly lighted rooms, and the children read it every day, the deterioration of their eyesight not only ceased, but the vision of all improved. Vision which had been below normal improved, in most cases, to normal, while children who already had normal sight, usually reckoned at 20/20, became able to read 20/15 or 20/10. And not only was myopia cured, but the vision for near objects was improved.

At the request of the superintendent of the schools of Grand Forks, Mr. J. Nelson Kelly, the system was introduced into all the schools of the city and was used continuously for eight years, during which time it reduced myopia among the children, which I found at the beginning to be about six per cent, to less than one per cent.

In 1911 and 1912 the same system was introduced into some of the schools of New York City[10] with an attendance of about ten thousand children. Many of the teachers neglected to use the cards, being unable to believe that such a simple method, and one so entirely at variance with previous teaching on the subject, could accomplish the desired results. Others kept the cards in a closet except when they were needed for the daily eye drill, lest the children should memorize them. Thus they not only put an unnecessary burden upon themselves, but did what they could to defeat the purpose of the system, which is to give the children **daily exercise in distant vision with a familiar object as the point of fixation**. A considerable number, however, used the system intelligently and persistently, and in less than a year were able to present reports showing that of three thousand children with imperfect sight over one thousand had obtained normal vision by its means. Some of these children, as in the case of the children of Grand Forks, were cured in a few minutes. Many of the teachers were also cured, some of them very quickly. In some cases the results of the system were so astonishing as to be scarcely credible.

In a class of mental defectives, where the teacher had kept records of the eyesight of the children for several years, it had been invariably found that their vision grew steadily worse as the term advanced. As soon as the Snellen test card had been introduced, however, they began to improve. Then came a doctor from the Board of Health who tested the eyes of the children and put glasses on all of them, even those whose sight was fairly good. The use of the card was then discontinued, as the teacher did not consider it proper to interfere while the children were wearing glasses prescribed by a physician. Very soon, however, the children began to lose, break, or discard, their glasses. Some said that the spectacles gave them headaches, or that they felt better without them. In the course of a month or so most of the aids to vision which the Board of Health had supplied had disappeared. The teacher then felt herself at liberty to resume the use of the Snellen test card. Its benefits were immediate. The eyesight and the mentality of the children improved simultaneously, and soon they were all drafted into the regular classes, because it was found that they were making the same progress in their studies as the other children were.

Another teacher reported an equally interesting experience. She had a class of children who did not fit into the other grades. Many of them were backward in their studies. Some were persistent truants. All of them had defective eyesight. A Snellen test card was hung in the classroom where all the children could see it, and the teacher carried out my instructions literally. At the end of six months all but two had been cured and these had improved very much, while the worst incorrigible and the worst truant had become good students. The incorrigible, who had previously refused to study, because, he said, it gave him a headache to look at a book, or at the blackboard, found out that the test card, in some way, did him a lot of good; and although the teacher had asked him to read it but once a day, he read it whenever he felt uncomfortable. The result was that in a few weeks his vision had become normal and his objection to study had disappeared. The truant had been in the habit of remaining away from school two or three days every week, and neither his parents nor the truant officer had been able to do anything about it. To the great surprise of his teacher he never missed a day after having begun to read the Snellen test card. When she asked for an explanation he told her that what had driven him away from school was the pain that came in his eyes whenever he tried to study, or to read the writing on the blackboard. After reading the Snellen test card, he said, his eyes and head were rested and he was able to read without any discomfort.

To remove any doubts that might arise as to the cause of the improvement noted in the eyesight of the children comparative tests were made with and without cards. In one case six pupils with defective sight were examined daily for one week without the use of the test card. No improvement took place. The card was then restored to its place and the group was instructed to read it every day. At the end of a week all had improved and five were cured. In the case of another group of defectives the results were similar. During the week that the card was not used no improvement was noted, but after a week of exercises in distant vision with the card all showed marked improvement, and at the end of a month all were cured. In order that there might be no question as to the reliability of the records of the teachers some of the principals asked the Board of Health to send an inspector to test the vision of the pupils, and whenever this was done the records were found to be correct. Dr. Bates has the children read the eyechart with both eyes together, then one eye at a time, then both eyes together again. He also has the children look close and distant, shifting on exact letters on two identical eyecharts placed at close and far distances. Also done with both eyes together, then one eye at a time, then both eyes together again. If vision needs more improvement in one eye, extra time is spent practicing with that eye to bring the vision equally clear, perfect in both left and right eyes. Basic Behavioral Optometry.

One day I visited the city of Rochester, and while there I called on the Superintendent of Public Schools and told him about my method of preventing myopia. He was very much interested and invited me to introduce it in one of his schools. I did so, and at the end of three months a report was sent to me showing that the vision of all the children had improved, while quite a number of them had obtained perfect sight in both eyes.

The method has been used in a number of other cities and always with the same result. The vision of all the children improved, and many of them obtained perfect sight in the course of a few minutes, days, weeks or months.

It is difficult to prove a negative proposition, but since this system improved the vision of all the children who used it, it follows that none could have grown worse. It is therefore obvious that it must have prevented myopia. This cannot be said of any method of preventing myopia in schools which had previously been tried. All other methods are based on the idea that it is the excessive use of the eyes for near work that causes myopia, and all of them have admittedly failed.

It is also obvious that the method must have prevented other errors of refraction, a problem which previously had not even been seriously considered, because hypermetropia is supposed to be congenital, and astigmatism was until recently supposed also to be congenital in the great majority of cases. Anyone who knows how to use a retinoscope may, however, demonstrate in a few minutes that both of these conditions are acquired; for no matter how astigmatic or hypermetropic an eye may be, its vision always becomes normal when it looks at a blank surface without trying to see. It may also be demonstrated that when children are learning to read, write, draw, sew, or to do anything else that necessitates their looking at unfamiliar objects at the near-point, hypermetropia, or hypermetropic astigmatism, is always produced. The same is true of adults. These facts have not been reported before, so far as I am aware, and they strongly suggest that children need, first of all, eye education. They must be able to look at strange letters or objects at the near-point without strain before they can make much progress in their studies, and in every case in which the method has been tried it has proven that this end is attained by daily exercise in distant vision with the Snellen test card. When their distant

vision has been improved by this means children invariably become able to use their eyes without strain at the near-point.

The method succeeded best when the teacher did not wear glasses. In fact, the effect upon the children of a teacher who wears glasses is so detrimental that no such person should be allowed to be a teacher, and since errors of refraction are curable, such a ruling would work no hardship on anyone. Not only do children imitate the visual habits of a teacher who wears glasses, but the nervous strain of which the defective sight is an expression produces in them a similar condition. In classes of the same grade, with the same lighting, the sight of children whose teachers did not wear glasses has always been found to be better than the sight of children whose teachers did wear them. In one case I tested the sight of children whose teacher wore glasses and found it very imperfect. The teacher went out of the room on an errand, and after she had gone I tested them again. The results were very much better. When the teacher returned she asked about the sight of a particular boy, a very nervous child, and as I was proceeding to test him she stood before him and said, "Now, when the doctor tells you to read the card, do it." The boy couldn't see anything. Then she went behind him, and the effect was the same as if she had left the room. The boy read the whole card.

Still better results would be obtained if we could reorganize the educational system on a rational basis. Then we might expect a general return of that **primitive acuity of vision** which we marvel at so greatly when we read about it in the memoirs of travelers. But even under existing conditions it has been proven beyond the shadow of a doubt that errors of refraction are no necessary part of the price we must pay for education.

There are at least ten million children in the schools of the United States who have defective sight. This condition prevents them from taking full advantage of the educational opportunities which the State provides. It undermines their health and wastes the taxpayers' money. If allowed to continue, it will be an expense and a handicap to them throughout their lives. In many cases it will be a source of continual misery and suffering. And yet practically all of these cases could be cured and the development of new ones prevented by the daily reading of the Snellen test card.

Why should our children be compelled to suffer and wear glasses for want of this simple measure of relief? It costs practically nothing. In fact, it would not be necessary, in some cases, as in the schools of New York City, even to purchase the Snellen test cards, as they are already being used to test the eyes of the children. Not only does it place practically no additional burden upon the teachers, but, by improving the eyesight, health, disposition and mentality of their pupils, it greatly lightens their labors. No one would venture to suggest, further, that it could possibly do any harm. Why, then, should there be any delay about introducing it into the schools? If there is still thought to be need for further investigation and discussion, we can investigate and discuss just as well after the children get the cards as before, and by adopting that course we will not run the risk of needlessly condemning another generation to that curse which heretofore has always dogged the footsteps of civilization, namely, defective eyesight. I appeal to all who read these lines to use whatever influence they possess toward the attainment of this end.

Native American Indians had perfect eyesight and health before they were forced into the white mans culture, schools, religion diet.
Modern Indians are now reclaiming their heritage. An American Indian would be a great U.S. President.
This book is free for Native American Indians to read, distribute, sell.



THE STORY OF EMILY

**Children cured of defective eyesight by Dr. Bates, teach the Bates Method,
cure defective sight; blur, astigmatism, cataract, crossed eyes in other children.**

The efficacy of the method of treating imperfect sight without glasses has been demonstrated in thousands of cases, not only in my own practice but in that of many persons of whom I may not even have heard; for almost all patients when they are cured proceed to cure others. At a social gathering one evening a lady told me that she had met a number of my patients; but when she mentioned their names, I found that I did not remember any of them, and said so.

"That is because you cured them by proxy," she said. "You didn't directly cure Mrs. Jones or Mrs. Brown, but you cured Mrs. Smith and Mrs. Smith cured the other ladies. You didn't treat Mr. and Mrs. Simpkins or Mr. Simpkins' mother and brother, but you may remember that you cured Mr. Simpkins' boy of a squint, and he cured the rest of the family."

In schools where the Snellen test card was used to prevent and cure imperfect sight, the children, after they were cured themselves, often took to the practice of ophthalmology with the greatest enthusiasm and success, curing their fellow students, their parents and their friends. They made a kind of game of the treatment, and the progress of each school case was watched with the most intense interest by all the children. On a bright day, when the patients saw well, there was great rejoicing, and on a dark day there was corresponding depression. One girl cured twenty-six children in six months; another cured twelve in three months; a third developed quite a varied ophthalmological practice and did things of which older and more

experienced practitioners might well have been proud. Going to the school which she attended one day, I asked this girl about her sight, which had been very imperfect. She replied that it was now very good, and that her headaches were quite gone. I tested her sight and found it normal. Then another child whose sight had also been very poor spoke up,

"I can see all right too," she said. "Emily"—indicating girl No. I—"cured me."

"Indeed"" I replied. "How did she do that?"

The second girl explained that Emily had had her read the card, which she could not see at all from the back of the room, at a distance of a few feet. The next day she had moved it a little further way, and so on, until the patient was able to read it from the back of the room, just as the other children did. Emily now told her to cover the right eye and read the card with her left, and both girls were considerably upset to find that the **uncovered eye was apparently blind.** The school doctor was consulted and said that nothing could be done. The eye had been blind from birth and no treatment would do any good.

Nothing daunted, however, Emily undertook the treatment. She told the patient to cover her good eye and go up close to the card, and at a distance of a foot or less it was found that she could read even the small letters. The little practitioner then proceeded confidently as with the other eye, and after many months of practice the patient became the happy possessor of normal vision in both eyes. The case had, in fact, been simply one of high myopia, and the school doctor, not being a specialist, had not detected the difference between this condition and blindness.

In the same classroom, there had been a little girl with congenital **cataract**, but on the occasion of my visit the defect had disappeared. This, too, it appeared, was Emily's doing. The school doctor had said that there was no help for this eye except through operation, and as the sight of the other eye was pretty good, he fortunately did not think it necessary to urge such a course. Emily accordingly took the matter in hand. She had the patient stand close to the card, and at that distance it was found that she could not see even the big C. Emily now held the card between the patient and the light and moved it back and forth. At a distance of three or four feet this movement could be observed indistinctly by the patient. The card was then moved farther away, until the patient became able to see it move at ten feet and to see some of the larger letters indistinctly at a less distance. Finally, after six months, she became able to read the card with the bad eye as well as with the good one. After testing her sight and finding it normal in both eyes, I said to Emily

"You are a splendid doctor. You beat them all. Have you done anything else?"

The child blushed, and turning to another of her classmates, said:

"Mamie, come here."

Mamie stepped forward and I looked at her eyes. There appeared to be nothing wrong with them.

"I cured her," said Emily.

"What of?" I inquired.

"Cross eyes," replied Emily.

"How," I asked, with growing astonishment.

Emily described a procedure very similar to that adopted in the other cases. Finding that the sight of the **crossed eye** was very poor, so much so, indeed, that poor Mamie could see practically nothing with it, the obvious course of action seemed to her to be the restoration of its sight; and, never having read any medical literature she did not know that this was impossible. So she went to it. She had Mamie cover her good eye and practice with the bad one at home and at school, until at last the sight became normal and the eye straight. The school doctor had wanted to have the eye operated upon, I was told, but fortunately Mamie was "scared" and would not consent. And here she was with two perfectly good, straight eyes.

THE CURE OF IMPERFECT SIGHT

By Treatment Without Glasses

By W. H. BATES, M.D., New York

A RESUME of animal experiments and clinical observations which demonstrate that the lens is not a factor in accommodation and that **all errors of refraction are functional and therefore curable.**

METHODS OF TREATMENT whereby such **cures have been effected in thousands of cases.** These methods will enable not only physicians, but parents, teachers, and others who themselves possess normal vision to cure all children under twelve years of age who have never worn glasses, and many children and adults who have. Many persons with minor defects of vision are able to cure themselves.

Thoroughly scientific, the book is at the same time written in language which any intelligent layman can understand. It is profusely illustrated with original photographs and drawings, and will be published shortly at $3, post-paid. Orders may be placed now with the

Central Fixation Publishing Company,
39-45 East 42nd Street, New York.

"Anything else?" I inquired, when Mamie's case had been disposed of. Emily blushed again, and said:

"Here's Rose. Her eyes used to hurt her all the time, and she couldn't see anything on the blackboard. Her headaches used to be so bad that she had to stay away from school every once in a while. The doctor gave her glasses; but they didn't help her, and she wouldn't wear them. When you told us the card would help our eyes I got busy with her. I had her read the card close up, and then I moved it farther away, and now she can see all right, and her head doesn't ache any more. She comes to school every day, and we all thank you very much."

This was a case of compound hypermetropic astigmatism. Such stories might be multiplied indefinitely. Emily's astonishing record cannot, it is true, be duplicated, but lesser cures by cured patients have been very numerous and serve to show that the benefits of the method of preventing and curing defects of vision in the schools which is presented in this number of BETTER EYESIGHT would be far-reaching. Not only errors of refraction would be cured, but many more serious defects; and not only the children would be helped, but their families and friends also.

August, 1919 -

1 - For reports of all the papers quoted, see Jour. Am. Med. Assoc. June 21, 1919.
2 - Bates: The Imperfect Sight of the Normal Eye, N. Y. Med. Jour., Sept. 8, 1917.
3 - The Hygiene of the Eye in Schools, English translation, edited by Turnbull, p. 127.
4 - System of Diseases of the Eye, 1897. Vol. II, p. 361.
5 - Brit. Med. Jour., June 18, 1898.
6 - Die Entstehung der sphärischen Refraktionen des menschlichen Auges, Berlin, 1913, p. 540.
7 - Archiv f. Augenhlk., Vol. LXXIX, 1915, translated in Archives of Ophthalmology, Vol. XLV, No. 6, November 1916.
8 - Bates: The Cause of Myopia, N. Y. Med. Jour., March 16, 1912.
9 - Bates: The Prevention of Myopia in School Children, N. Y. Med. Jour., July 29, 1911.
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BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

September, 1919

THE FLASHING CURE

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and **look at the first word or letter of a sentence for a fraction of a second**. If you have been able to relax, partially or completely, you will have a **flash of improved or clear vision**, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you. When looking at a letter: shift on it part to part. Blink. The letter remains clear. Shift dot to dot (part to part) on the E.



Shift left and right, top and bottom and in any direction on the E.

VISION AND EDUCATION

Poor sight is admitted to be one of the most fruitful causes of retardation in the schools. It is estimated[1] that it may reasonably be held responsible for a quarter of the habitually "left-backs," and it is commonly assumed that all this might be prevented by suitable glasses.

There is much more involved in defective vision, however, than mere inability to see the blackboard, or to use the eyes without pain or discomfort. Defective vision is the result of an abnormal condition of the mind, and when the mind is in an abnormal condition it is obvious that none of the processes of education can be conducted with advantage. By putting glasses upon a child we may, in some cases, neutralize the effect of this condition upon the eyes and by making the patient more comfortable may improve his mental faculties to some extent, but we do not alter fundamentally the condition of the mind and by confirming it in a bad habit we may make it worse.

It can easily be demonstrated that among the faculties of the mind which are impaired when the vision is impaired is the memory; and as a large part of the educational process consists of storing the mind with facts, and all the other mental processes depend upon one's knowledge of facts, it is easy to see how little is accomplished by merely putting glasses on a child that has "trouble with its eyes." The **extraordinary memory of primitive people** has been attributed to the fact that owing to the absence of any convenient means of making written records they had to depend upon their memories, which were strengthened accordingly; but in view of the known facts about the relation of memory to eyesight it is more reasonable to suppose that the retentive memory of primitive man was due to the same cause as his **keen vision**, namely, **a mind at rest**.

The primitive memory as well as primitive keenness of vision have been found among civilized people, and if the necessary tests had been made it would doubtless have been found that they always occur together, as they did in a case which recently came under my observation. The subject was a child of ten with such marvelous eyesight that **she could see the moons of Jupiter with the naked eye**, a fact which was demonstrated by her drawing a diagram of these satellites which exactly corresponded to the diagrams made by persons who had used a telescope. **Her memory was equally remarkable**. She could recite the whole content of a book after reading it, as Lord Macauley is said to have done, and she learned more Latin in a few days without a teacher than her sister who had six diopters of myopia had been able to do in several years. She remembered five years afterward what she ate at a restaurant, she recalled the name of the waiter, the number of the building and the street in which it stood. She also remembered what she wore on this occasion and what every one else in the party wore. The same was true of every other event which had awakened her interest in any way, and it was a favorite amusement in her family to ask her what the menu had been and what people had worn on particular occasions.



When the sight of two persons is different it has been found that their memories differ in exactly the same degree. Two sisters, one of whom had only ordinary good vision, indicated by the formula 20/20, while the other had 20/10, found that the time it took them to learn eight verses of a poem varied in almost exactly the same ratio as their sight. The one whose vision was 20/10 learned eight verses of the poem in fifteen minutes, while the one whose vision was only 20/20 required thirty-one minutes to do the same thing. After palming the one with ordinary vision learned eight more verses in twenty-one minutes, while the one with 20/10 was only able to reduce her time by two minutes, a variation clearly within the limits of error. In other words, the mind of the latter being already in a normal or nearly normal condition, she could not improve it appreciably by palming, while the former whose mind was under a strain was able to gain relaxation, and hence improve her memory, by this means.

When the two eyes of the same person are different a corresponding difference in the memory has been noted according to whether both eyes were open, or the better eye closed. A patient with normal vision in the right eye and half-normal vision in the left when looking at the Snellen test card with both eyes open could remember a period for twenty seconds continuously, but could remember it only ten seconds when the better eye was closed. A patient with half-normal vision in the right eye and one-quarter normal in the left could remember a period for twelve seconds with both eyes open and only six seconds with better eye closed. A third patient with normal sight in the right eye and vision of one-tenth in the left could remember a period twelve seconds with both eyes open and only two seconds when the better eye was closed. In other words if the right eye is better than the left the memory is better when the right eye is open than when only the left eye is open.

Under the present educational system there is a constant effort to compel the children to remember. These efforts always fail. They spoil both the memory and the sight. The memory cannot be forced any more than the vision can be forced. **We remember without effort,**

just as we see without effort, and the harder we try to remember or see the less we are able to do so.

The sort of things we remember are the things that interest us, and the reason children have difficulty in learning their lessons is because they are bored by them. For the same reason, among others, their eyesight becomes impaired, boredom being a condition of mental strain in which it is impossible for the eye to function normally.

Some of the various kinds of compulsion now employed in the educational process may have the effect of awakening interest. Betty Smith's interest in winning a prize, for instance, or in merely getting ahead of Johnny Jones, may have the effect of rousing her interest in lessons that have hitherto bored her, and this interest may develop into a genuine interest in the acquisition of knowledge; but this cannot be said of the various fear incentives still so largely employed by teachers. These, on the contrary, have the effect, usually, of completely paralyzing minds already benumbed by lack of interest, and the effect upon the vision is equally disastrous.

The fundamental reason, both for poor memory and poor eyesight in school children, in short, is our irrational and unnatural educational system. **Montessori has taught us that it is only when children are interested that they can learn. It is equally true that it is only when they are interested that they can see.** This fact was strikingly illustrated in the case of one of the two pairs of sisters mentioned above. Phebe, of the keen eyes, who could recite whole books if she happened to be interested in them, disliked mathematics and anatomy extremely, and not only could not learn them but became myopic when they were presented to her mind. She could read letters a quarter of an inch high at twenty feet in a poor light, but when asked to read figures one to two inches high in a good light at ten feet she miscalled half of them. When asked to tell how much 2 and 3 made, she said "4," before finally deciding on "5"; and all the time she was occupied with this disagreeable subject the retinoscope showed that she was myopic. When I asked her to look into my eye with the ophthalmoscope she could see nothing, although a much lower degree of visual acuity is required to note the details of the interior of the eye than to see the moons of Jupiter.

Short-sighted Isabel, on the contrary, had a passion for mathematics and anatomy, and excelled in those subjects. She learned to use the ophthalmoscope as easily as Phebe had learned Latin. Almost immediately she saw the optic nerve, and noted that the center was whiter than the periphery. She saw the light-colored lines, the arteries; and the darker ones, the veins; and she saw the light streaks on the blood-vessels. Some specialists never become able to do this, and no one could do it without normal vision. Isabel's vision, therefore, must have been temporarily normal when she did it. Her vision for figures, although not normal, was better than for letters.

In both these cases the ability to learn and the ability to see went hand in hand with interest. Phebe could read a photographic reduction of the Bible and recite what she had read verbatim, she could see the moons of Jupiter and draw a diagram of them afterwards, because she was interested in these things; but she could not see the interior of the eye, nor see figures even half as well as she saw letters, because these things bored her. When, however, it was suggested to her that it would be a good joke to surprise her teachers, who were always reproaching her for her backwardness in mathematics, by taking a high mark in a coming examination, her interest in the subject awakened and she contrived to learn enough to get seventy-eight per cent. In Isabel's case letters were antagonistic. She was not interested in most of the subjects with which they dealt and, therefore, she was backward in those subjects and had become habitually myopic. But when asked to look at objects which aroused an intense interest her vision became normal.

When one is not interested, in short, one's mind is not under control, and without mental control one can neither learn nor see. Not only the memory but all other mental faculties are improved when the eyesight becomes normal. It is a common experience with patients cured of defective sight to find that their ability to do their work has improved.

The teacher whose letter was quoted in the first issue of BETTER EYESIGHT testified that after gaining perfect eyesight she "knew better how to get at the minds of the pupils, was "more direct, more definite, less diffused, less vague," possessed, in fact, "central fixation of the mind." In another letter she said, "The better my eyesight becomes the greater is my ambition. On the days when my sight is best I have the greatest anxiety to do things."

Another teacher reports that one of her pupils used to sit doing nothing all day long and apparently was not interested in anything. After the test card was introduced into the classroom and his sight improved, he became anxious to learn, and speedily developed into one of the best students in the class. In other words his eyes and his mind became normal together.

A bookkeeper nearly **seventy years of age** who had **worn glasses for forty years** found after he had **gained perfect sight without glasses** that he could work more rapidly and accurately and with less fatigue than ever in his life before. During busy seasons, or when short of help, he has worked for some weeks at a time from 7 a. m, until 11 p. m., and he reports that he felt less tired at night after he was through than he did in the morning when he started. Previously, although he had done more work than any other man in the office, it always tired him very much. He also noticed an improvement in his temper. Having been so long in the office and knowing so much more about the business than his fellow employees, he was frequently appealed to for advice. These interruptions, before his sight became normal, were very annoying to him and often caused him to lose his temper. Afterward, however, they caused him no irritation whatever. In the case of another patient whose story is given elsewhere symptoms of insanity were relieved when the vision became normal.

From all these facts it will be seen that the problems of vision are far more intimately associated with the problems of education than we had supposed, and that they can by no means be solved by putting concave, or convex, or astigmatic lenses before the eyes of the children.

THE DOCTOR'S STORY

One of the most striking cases of the relation of mind to vision that ever came to my attention was that of a physician whose mental troubles, at one time so serious that they suggested to him the idea that he might be going insane, were completely relieved when his sight became normal. He had been seen by many eye and nerve specialists before he came to me and consulted me at last, not because he had any faith in my methods, but because nothing else seemed to be left for him to do. He brought with him quite a collection of glasses prescribed by different men, no two of them being alike. He had worn glasses, he told me, for many months at a time without benefit and then he had left them off and had been apparently no worse. Outdoor life had also failed to help him. On the advice of some prominent neurologists he had even given up his practice for a couple of years to spend the time upon a ranch, but the vacation had done him no good.

I examined his eyes and found no organic defects and no error of refraction. Yet his vision with each eye was only three-fourths of the normal, and he suffered from **double vision and all sorts of unpleasant symptoms**. He used to see people standing on their heads, and little devils dancing on the tops of the high buildings. He also had other **illusions** too numerous to mention in a short paper. At night his sight was so bad that he had difficulty in finding his way about, and when walking along a country road he believed that he saw better when he turned his eyes far to one side and viewed the road with the side of the retina instead of with the center. At variable intervals, without warning and without loss of consciousness, **he had attacks of blindness**. These caused him great uneasiness, for he, was a

surgeon with a large and lucrative practice, and he feared that he might have an attack while operating.

His memory was very poor. He could not remember the color of the eyes of any member of his family, although he had seen them all daily for years. Neither could he recall the color of his house, the number of rooms on the different floors, or other details. The faces and names of patients and friends he recalled with difficulty, or not at all.

His treatment proved to be very difficult, chiefly because he had an infinite number of erroneous ideas about physiological optics in general and his own case in particular and insisted that all these should be discussed; while these discussions were going on he received no benefit. Every day for hours at a time over a long period he talked and argued. Never have I met a person whose logic was so wonderful, so apparently unanswerable, and yet so utterly wrong.



Central Fixation- Look directly at the dot on the left and see it clear. Look away from it and see it less clear in the peripheral field.

Remember and shift on a small black period.

His eccentric fixation was of such high degree that when he looked at a point forty-five degrees to one side of the big C on the Snellen test card, he saw the letter just as black as when he looked directly at it. The strain to do this was terrific, and produced much astigmatism; but the patient was unconscious of it, and could not be convinced that there was anything abnormal in the symptom. If he saw the letter at all, he argued, he must see it as black as it really was, because he was not color-blind. Finally he became able to look away from one of the smaller letters on the card and see it worse than when he looked directly at it. It took eight or nine months to accomplish this, but when it had been done the patient said that it seemed as if a great burden had been lifted from his mind. He experienced a wonderful feeling of rest and relaxation throughout his whole body.

When asked to remember black with his eyes closed and covered he said he could not do so, and he saw every color but the black which one ought normally to see when the optic nerve is not subject to the stimulus of light. He had, however, been an enthusiastic football player at college, and he found at last that he could remember a black football. I asked him to imagine that this football had been thrown into the sea and that it was being carried outward by the tide, becoming constantly smaller but no less black. This he was able to do, and the strain floated with the football, until, by the time the latter had been reduced to the size of a period in a newspaper, it was entirely gone. The relief continued as long as he remembered the black spot, but as he could not remember it all the time, I suggested another method of gaining permanent relief. This was to make his sight voluntarily worse, a plan against which he protested with considerable emphasis.

"Good heavens!" he said, "Is not my sight bad enough without making it worse."

After a week of argument, however, he consented to try the method, and the result was extremely satisfactory. After he had learned to see two or more lights where there was only one, by straining to see a point above the light while still trying to see the light as well as when looking directly at it, he became able to avoid the unconscious strain that had produced his double and multiple vision and was not troubled by these superfluous images any more. In a similar manner other illusions were prevented.

One of the last illusions to disappear was his belief that an effort was required to remember black. His logic on this point was overwhelming, but after many demonstrations he was convinced that no effort was required to let go, and when he realized this, both his vision and his mental condition immediately improved.

He finally became able to read 20/10 or more, and although more than fifty-five years of age, he also read diamond type at from six to twenty-four inches. His night blindness was relieved, his attacks of day blindness ceased, and he told me the color of the eyes of his wife and children. One day he said to me:

"Doctor, I thank you for what you have done for my sight; but no words can express the gratitude I feel for what you have done for my mind."

Some years later he called with his heart full of gratitude, because there had been no relapse.

LYING A CAUSE OF MYOPIA

I may claim to have discovered the fact that telling lies is bad for the eyes. Whatever bearing this circumstance may have upon the universality of defects of vision, it can easily be demonstrated that it is impossible to say what is not true, even with no intent to deceive, or even to imagine a falsehood, without producing an error of refraction.

If a patient can read all the small letters on the bottom line of the test card, and either deliberately or carelessly miscalls any of them, the retinoscope will indicate an error of refraction. In numerous cases patients have been asked to state their ages incorrectly, or to try to imagine that they were a year older, or a year younger, than they actually were, and in every case when they did this the retinoscope indicated an error of refraction. A patient twenty-five years old had no error of refraction when he looked at a blank wall without trying to see; but if he said he was twenty-six, or if someone else said he was twenty-six, or if he tried to imagine that he was twenty-six, he became myopic. The same thing happened when he stated or tried to imagine that he was twenty-four. When he stated or remembered the truth his vision was normal, but when he stated or imagined an error he had an error of refraction.

Two little girl patients arrived one after the other one day, and the first accused the second of having stopped at Huyler's for an ice-cream soda, which she had been instructed not to do, being somewhat too much addicted to sweets. The second denied the charge, and the first, who had used the retinoscope and knew what it did to people who told lies, said:

"Do take the retinoscope and find out."

"I followed the suggestion, and having thrown the light into the second child's eyes, I asked:

"Did you go to Huyler's?"

"Yes," was the response, and the retinoscope indicated no error of refraction.

"Did you have an ice-cream soda?"

"No," Said the child; but the tell-tale shadow moved in a direction opposite to that of the mirror, showing that she had become myopic and was not telling the truth.

The child blushed when I told her this and acknowledged that the retinoscope was right, for she had heard of the ways of the uncanny instrument before and did not know what else it might do to her if she said anything more that was not true.

The fact is that it requires an effort to state what is not true, and this effort always results in a deviation from the normal in the refraction of the eye. So sensitive is the test that if the subject, whether his vision is ordinarily normal, or not, pronounces the initials of his name correctly while looking at a blank surface without trying to see, there will be no error of refraction; but if he miscalls one initial, even without any consciousness of effort, and with full knowledge that he is deceiving no one, myopia will be produced.

CURED IN FIFTEEN MINUTES

Patients often ask how long it takes to be cured. The answer is that it takes only as long as it takes to relax. If this can be done in five minutes, the patient is cured in five minutes, no matter how great the degree of his error of refraction, or how long its duration. All persons with errors of refraction are able to relax in a few seconds under certain conditions, but to gain permanent relaxation usually requires considerable time. Some persons, however, are able to get it very quickly. These quick cures are very rare, except in the case of children under twelve; but they do occur, and I believe the time is coming when it will be possible to cure everyone quickly. It is only a question of accumulating more facts and presenting them in such a way that the patient can grasp them quickly.

A very remarkable case of a quick cure was that of a man of fifty-five who had worn glasses for thirty years for distant vision and ten years for reading, and whose distant vision at the time he consulted me was 20/200.

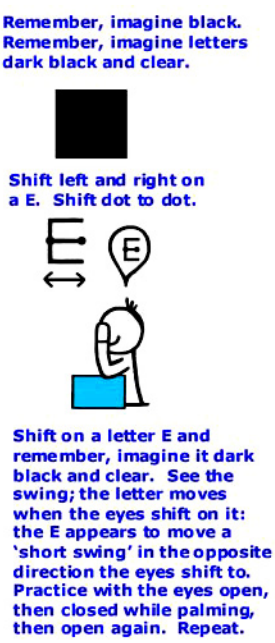
When he looked at the Snellen test card the letters appeared grey to him instead of black. He was told that they were black, and the fact was demonstrated by bringing the card close to him. His attention was also called to the fact that the small letters were just as black as the large ones. He was then directed to close and cover his eyes with the palms of his hands, shutting out all the light. When he did this he saw a perfect black, indicating that he had secured perfect relaxation and that the optic nerve and visual centers of the brain were not disturbed. While his eyes were still closed he was asked:

"Do you think that you can remember with your eyes open the perfect black that you now see?"

"Yes," he answered, "I know I can,"

When he opened his eyes, however, his memory of the black was imperfect, and though able to read the large letters, he could not read the small ones. A second time he was told to close and cover his eyes, and again he saw a perfect black. When he opened them he was able to retain complete control of his memory, and so was able to read the whole card. This was ten minutes after he entered the office.

Diamond type was now given him to read, but the letters looked grey to him, and he could not distinguish them. Neither could he remember black when he was looking at them, because in order to see them grey he had to strain, and in order to remember black he would have had to relax, and he could not do both at the same time. He was told that the letters were perfectly black, and when he looked away from them he was able to remember them black. When he looked back he still remembered them black, and was able to read them with normal vision at twelve inches. This took five minutes, making the whole time in the office fifteen minutes. The cure was permanent, the patient not only retaining what he had gained, but continuing to improve his sight, by daily reading of fine print and the Snellen test card, till it became almost **telescopic.**



September, 1919

1 -School Health News, published by the Department of Health of New York City, February, 1919.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

October, 1919

THE SWINGING CURE

If you see a letter perfectly, you may note that it appears to pulsate, or move slightly in various directions. If your sight is imperfect, the letter will appear to be stationary. The apparent movement is caused by the unconscious shifting of the eye. The lack of movement is due to the fact that the eye stares, or looks too long at one point. This is an invariable symptom of imperfect sight, and may often be relieved by the following method:



Close your eyes and cover them with the palms of the hands so as to exclude all the light, and shift mentally from one side of a black letter to the other. As you do this, the mental picture of the letter will appear to move back and forth in a direction contrary to the imagined movement of the eye. Just so long as you imagine that the letter is moving, or swinging, you will find that you are able to remember it, and the **shorter and more regular the swing, the blacker and more distinct the letter will appear**. If you are able to imagine the letter stationary, which may be difficult, you will find that your memory of it will be much less perfect.

Now open your eyes and look first at one side and then at the other of the real letter. If it appears to move in a direction opposite to the movement of the eye, you will find that your vision has improved. If you can imagine the swing of the letter as well with your eyes open as with your eyes closed, as **short**, as **regular** and as **continuous**, your vision will be normal.

SIMULTANEOUS RETINOSCOPY

Much of my information about the eye has been obtained by means of simultaneous retinoscopy.
The retinoscope is an instrument used to measure the refraction of the eye. It throws a beam of light into the pupil by reflection from a mirror, the light being either outside the instrument—above and behind the subject—or arranged within it by means of an electric battery. On looking through the sight-hole one sees a larger or smaller part of the pupil filled with light, which in normal human eyes is a reddish yellow, because this is the color of the retina, but which is green in a cat's eye, and might be white if the retina were diseased. Unless the eye is exactly focused at the point from which it is being observed one sees also a dark shadow at the edge of

the pupil, and it is the behavior of this shadow when the mirror is moved in various directions which reveals the refractive condition of the eye. If the instrument is used at a distance of six feet or more, and the shadow moves in a direction opposite to the movement of the mirror, the eye is myopic. If it moves in the same direction as the mirror, the eye is either hypermetropic or normal; but in the case of hypermetropia the movement is more pronounced than in that of normality, and an expert can usually tell the difference between the two states merely by the nature of the movement. In astigmatism the movement is different in different meridians. To determine the degree of the error, or to distinguish accurately between hypermetropia and normality, or between the different kinds of astigmatism, it is usually necessary to place a glass before the eye of the subject.

This exceedingly useful instrument has possibilities which have not been generally realized by the medical profession. It is commonly employed only under certain artificial conditions in a dark room; but it is possible to use it under all sorts of normal and abnormal conditions on the eyes both of human beings and of the lower animals. I have used it in the daytime and at night; when the subjects were comfortable and when they were excited; when they were trying to see and when they were not; when they were lying and when they were telling the truth. I have also used it, under varying conditions, on the eyes of many cats, dogs, rabbits, birds, turtles, reptiles and fish.

Most ophthalmologists depend upon the Snellen test card, supplemented by trial lenses, to determine whether the vision is normal or not, and to determine the degree of any abnormality that may exist. This is a slow, awkward and unreliable method of testing the vision, and absolutely unavailable for the study of the refraction of the lower animals and that of human beings under the conditions of life. The test card can be used only under certain favorable conditions, but the retinoscope can be used anywhere. It is a little easier to use it in a dim light than in a bright one, but it may be used in any light, even with the strong light of the sun shining directly into the eye. It is available whether the subject is at rest or in motion, asleep or awake, or even under ether or chloroform. It is also available when the observer is in motion. It has been used successfully when the eyelids were partly closed, shutting off part of the area of the pupil; when the pupil was dilated; also when it was contracted to a pin-point; when the subject was reading fine print at six inches, or at a greater distance; and when the eye was oscillating from side to side, from above downward, or in other directions.

It takes a considerable time, varying from minutes to hours, to measure the refraction with the Snellen test card and trial lenses. With the retinoscope, however, the refraction can be determined in a fraction of a second. With the Snellen test card and trial lenses it would be impossible to get any information about the refraction of a baseball player at the moment he swings for the ball, at the moment he strikes it, and at the moment after he strikes it. With the retinoscope, however, it is quite easy to determine whether his vision is normal, or whether he is myopic, hypermetropic, or astigmatic, when he does these things; and if any errors of refraction are noted, one can guess their degree pretty accurately by the rapidity of the movement of the shadow.

With the Snellen test card and trial lenses conclusions must be drawn from the patient's statements as to what he sees; but the patient often becomes so worried and confused during the examination that he does not know what he sees, or whether different glasses make his sight better, or worse; and, moreover, visual acuity is not reliable evidence of the state of the refraction. One patient with two diopters of myopia may see twice as much as another with the same error of refraction. The evidence of the test card is, in fact, entirely subjective; that of the retinoscope is entirely objective, depending in no way upon the statements of the patient.

By means of simultaneous retinoscopy it has been demonstrated that the refraction of the eye is never constant; that all persons with errors of refraction have, at frequent intervals during the day and night, moments of normal vision when their myopia, hypermetropia, or astigmatism, disappears completely; and that all persons, no matter how good their sight may ordinarily be, have moments of imperfect sight when they become myopic, hypermetropic, or astigmatic. It has also been demonstrated that when the eye makes an effort to see, an error of refraction is always produced, and that when it looks at objects without effort, all errors of refraction disappear, no matter how great their degree, or how long their duration. It has been further demonstrated that when the eye strains to see distant objects myopia is always produced in one or all meridians, and when it strains to see near objects hypermetropia is always produced in one or all meridians.

The examination of the eyes of persons while asleep, or under the influence of ether or chloroform, has shown that the eye is rarely at rest during sleep, or while the subject is unconscious from any cause. Persons whose sight was normal while awake were found to have myopia, hypermetropia and astigmatism when asleep, and if these errors were present when they were awake, they were increased during sleep. This explains why so many people are unable to see as well in the morning as at other times, and why people waken with headaches and pain in the eyes. Under ether or chloroform, errors of refraction are also produced or increased, and when people are sleepy they have invariably been found to have errors of refraction.

Under conditions of mental or physical discomfort, such as pain, cough, fever, discomfort from heat or cold, depression, anger, or anxiety, errors of refraction are always produced in the normal eye, or increased in the eye in which they already exist. In a dim light, in a fog, or in the rain, the retinoscope may indicate no error of refraction in eyes which ordinarily have normal sight; but a pilot on a ship on a rainy night usually has an error of refraction, because he is straining to see, and it is rare to find persons in positions of responsibility under unfavorable conditions with normal vision.

In order to obtain reliable results with the retinoscope it must be used at a distance of six feet or more from the subject. When used at a distance of three feet or less, as it commonly is, the subject becomes nervous and unconsciously strains, thus altering his refraction.

FLOATING SPECKS

A very common phenomenon of imperfect sight is the one known to medical science as *muscae volitantes*, or *flying flies*. These floating specks are usually dark, or black; but sometimes appear like white bubbles, and in rare cases may assume all the colors of the rainbow. They move somewhat rapidly, usually in curving lines, before the eyes, and always appear to be just beyond the point of fixation. If one tries to look at them directly, they seem to move a little farther away. Hence their name of *flying flies*.

The literature of the subject is full of speculations as to the origin of these appearances. Some have attributed them to the presence of floating specks—dead cells or the debris of cells—in the vitreous humor, the transparent substance that fills four-fifths of the eyeball behind the crystalline lens. Similar specks on the surface of the cornea have also been held responsible for them. It has even been surmised that they might be caused by the passage of tears over the cornea. They are so common in myopia that they have been supposed to be one of the symptoms of this condition, although they occur also with other errors of refraction, as well as in eyes otherwise normal. They have been attributed to disturbances of the circulation, the digestion and the kidneys, and because so many insane people have them, have been thought to be an evidence of incipient insanity. The patent-medicine business has

thrived upon them, and it would be difficult to estimate the amount of mental torture they have caused, as the following cases illustrate.

A clergyman who was much annoyed by the continual appearance of floating specks before his eyes was told by his eye specialist that they were a symptom of kidney disease, and that in many cases of kidney trouble, disease of the retina might be an early symptom. So at regular intervals he went to the specialist to have his eyes examined, and when at length the latter died, he looked around immediately for some one else to make the periodical examination. His family physician directed him to me. I was by no means so well known as his previous ophthalmological adviser, but it happened that I had taught the family physician how to use the ophthalmoscope after others had failed to do so. He thought, therefore, that I must know a lot about the use of the instrument, and what the clergyman particularly wanted was some one capable of making a thorough examination of the interior of his eyes, and detecting at once any signs of kidney disease that might make their appearance. So he came to me, and at least four times a year for ten years he continued to come.

Each time I made a very careful examination of his eyes, taking as much time over it as possible, so that he would believe that it was careful; and each time he went away happy because I could find nothing wrong. Once when I was out of town he got a cinder in his eye and went to another oculist to get it out. When I came back late at night I found him sitting on my doorstep, on the chance that I might return. His story was a pitiable one. The strange doctor had examined his eyes with the ophthalmoscope, and had suggested the possibility of glaucoma, describing the disease as a very treacherous one which might cause him to go suddenly blind and would be agonizingly painful. He emphasized what the patient had previously been told about the danger of kidney disease, suggested that the liver and heart might also be involved, and advised him to have all of these organs carefully examined. I made another examination of his eyes in general and their tension in particular; I had him feel his eyeballs and compare them with my own, so that he might see for himself that they were not becoming hard as a stone; and finally I succeeded in reassuring him. I have no doubt, however, that he went at once to his family physician for an examination of his internal organs.

A man returning from Europe was looking at some white clouds one day when floating specks appeared before his eyes. He consulted the ship's doctor, who told him that the symptom was very serious, and might be the forerunner of blindness. It might also indicate incipient insanity, as well as other nervous or organic diseases. He advised him to consult his family physician and an eye specialist as soon as he landed, which he did. This was twenty-five years ago, but I shall never forget the terrible state of nervousness and terror into which the patient had worked himself by the time he came to me. It was even worse than that of the clergyman, who was always ready to admit that his fears were unreasonable. I examined his eyes very carefully, and found them absolutely normal. The vision was perfect both for the near-point and the distance. The color perception, the fields and the tension were normal; and under a strong magnifying glass I could find no opacities in the vitreous. In short, there were absolutely no symptoms of any disease. I told the patient there was nothing wrong with his eyes, and I also showed him an advertisement of a quack medicine in a newspaper which gave a great deal of space to describing the dreadful things likely to follow the appearance of floating specks before the eyes, unless you began betimes (in good time, early) to take the medicine in question at one dollar a bottle. I pointed out that the advertisement, which was appearing in all the big newspapers of the city every day, and probably in other cities, must have cost a lot of money, and must, therefore, be bringing in a lot of money. Evidently there must be a great many people suffering from this symptom, and if it were as serious as was generally believed, there would be a great many more blind and insane people in the community than there were. The patient went away somewhat comforted, but at eleven o'clock—his first visit had been at nine—he was back again. He still saw the floating specks, and was still worried about them. I examined his eyes again as carefully as before, and again was able to assure him that there was nothing wrong with them. In the afternoon I was not in my office, but I was told that he was there at three and at five. At seven he came again, bringing with him his family physician, an old friend of mine. I said to the latter:

"Please make this patient stay at home. I have to charge him for his visits, because he is taking up so much of my time; but it is a shame to take his money when there is nothing wrong with him."

What my friend said to him I don't know, but he did not come back again.

I did not know as much about **muscae volitantes** then as I know now, or I might have saved both of these patients a great deal of uneasiness. I could tell them that their eyes were normal, but I did not know how to relieve them of the symptom, which is simply **an illusion resulting from mental strain**. The specks are associated to a considerable extent with markedly **imperfect eyesight**, because persons whose eyesight is imperfect always strain to see; but persons whose eyesight is ordinarily normal may see them at times, because no eye has normal sight all the time. Most people can see muscae volitantes when they look at the sun, or any uniformly bright surface, like a sheet of white paper upon which the sun is shining. This is because most people strain when they look at surfaces of this kind. The specks are never seen, in short, except when the eyes and mind are under a strain, and they always disappear when the strain is relieved. **If one can remember a small letter on the Snellen test card by central fixation, the specks will immediately disappear, or cease to move; but if one tries to remember two or more letters equally well at one time, they will reappear and move.**

Usually the strain that causes muscae volitantes is very easily relieved. See; April, 1925

Floating specks may be debris in the eyeball. A cleansing diet, improved circulation of blood, fluid to/in the eye can break down floaters and enable them to flow out of the eye. Eyestrain, mental strain, staring, poor diet, sugar, can cause floaters. Shifting, central fixation, relaxation can stop the appearance of floaters.

CORRESPONDENCE TREATMENT

Correspondence treatment is usually regarded as quackery, and it would be manifestly impossible to treat many diseases in this way. Pneumonia and typhoid, for instance, could not possibly be treated by correspondence, even if the physician had a sure cure for these conditions and the mails were not too slow for the purpose. In the case of most diseases, in fact, there are serious objections to correspondence treatment.

But myopia, hypermetropia and astigmatism are functional conditions, not organic, as the text-books teach, and as I believed myself until I learned better. Their treatment by correspondence, therefore, has not the drawbacks that exist in the case of most physical derangements. One cannot, it is true, fit glasses by correspondence as well as when the patient is in the office, but even this can be done, as the following case illustrates.

An old colored woman in the wilds of Honduras, far removed from any physician or optician, was unable to read her Bible, and her son, a waiter in New York, asked me if I could not do something for her. The suggestion gave me a distinct shock which I will remember as long as I live. I had never dreamed of the possibility of prescribing glasses for anyone I had not seen, and I had, besides, some very disquieting recollections of colored women whom I had tried to fit with glasses at my clinic. If I had so much difficulty in prescribing the proper glasses under favorable conditions, how could I be expected to fit a patient whom I could not even see? The waiter was deferentially persistent, however. He had more faith in my genius than I had, and as his mother was nearing the end of her life, he was very anxious to gratify her last wishes. So, like the unjust judge of the parable, I yielded at last to his importunity, and wrote a prescription for convex 3.00 D. S. The young man ordered the glasses and mailed them to his mother, and by return mail came a very grateful letter stating that they were perfectly satisfactory.

A little later the patient wrote that she couldn't see objects at the distance that were perfectly plain to other people, and asked if some glasses couldn't be sent that would make her see at the distance as well as she did at the near-point. This seemed a more difficult proposition than the first one; but again the son was persistent, and I myself could not get the old lady out of my mind. So again I decided to do what I could. The waiter had told me that his mother had read her Bible long after the age of forty. Therefore I knew she could not have much hypermetropia, and was probably slightly myopic. I knew also that she could not have much astigmatism, for in that case her sight would always have been noticeably imperfect. Accordingly I told her son to ask her to measure very accurately the distance between her eyes and the point at which she could read her Bible best with her glasses, and to send me the figures. In due time I received, not figures, but a piece of string about a quarter of an inch in diameter and exactly ten inches long. If the patient's vision had been normal for the distance, I knew that she would have been able to read her Bible best with her glasses at thirteen inches. The string showed that at ten inches she had a refraction of four diopters. Subtracting from this the three diopters of her reading glasses, I got one diopter of myopia. I accordingly wrote a prescription for concave 1.00 D. S., and the glasses were ordered and mailed to Honduras. The acknowledgment was even more grateful than in the case of the first pair. The patient said that for the first time in her life she was able to read signs and see other objects at a distance as well as other people did, and that the whole world looked entirely different to her.

Would anyone venture to say that it was unethical for me to try to help this patient? Would it have been better to leave her in her isolation without even the consolation of Bible reading? I do not think so. What I did for her required only an ordinary knowledge of physiological optics, and if I had failed, I could not have done her much harm.

In the case of the treatment of imperfect sight without glasses there can be even less objection to the correspondence method. It is true that in most cases progress is more rapid and the results more certain when the patient can be seen personally; but often this is impossible, and I see no reason why patients who can not have the benefit of personal treatment should be denied such aid as can be given them by correspondence. I have been treating patients in this way for years, and often with extraordinary success.

Some years ago an English gentleman wrote to me that his glasses were very unsatisfactory. They not only did not give him good sight, but they increased instead of lessening his discomfort. He asked if I could help him, and since relaxation always relieves discomfort and improves the vision, I did not believe that I was doing him an injury in telling him how to rest his eyes. He followed my directions with such good results that in a short time he obtained perfect sight for both the distance and the near-point without glasses, and was completely relieved of his pain. Five years later he wrote me that he had qualified as a sharpshooter in the army. Did I do wrong in treating him by correspondence? I do not think so.

After the United States entered the European war, an officer wrote to me from the deserts of Arizona that the use of his eyes at the near-point caused him great discomfort, which glasses did not relieve, and that the strain had produced granulation of the lids. As it was impossible for him to come to New York, I undertook to treat him by correspondence. He improved very rapidly. The inflammation of the lids was relieved almost immediately, and in about four months he wrote me that he had read one of my own reprints-by no means a short one-in a dim light, with no bad after effects; that the glare of the Arizona sun, with the Government thermometer registering 114, did not annoy him, and that he could read the ten line on the test card at fifteen feet almost perfectly, while even at twenty feet he was able to make out most of the letters.

A third case was that of a forester in the employ of the U. S. Government. He had myopic astigmatism, and suffered extreme discomfort, which was not relieved either by glasses or by long summers in the mountains, where he used his eyes but little for close work. He was unable to come to New York for treatment, and although I told him that correspondence treatment was somewhat uncertain, he said he was willing to risk it. It took three days for his letters to reach me and another three for my reply to reach him, and as letters were not always written promptly on either side, he often did not hear from me more than once in three weeks. Progress under these conditions was necessarily slow; but his discomfort was relieved very quickly, and in about ten months his sight had improved from 20/50 to 20/20.

In almost every case the treatment of cases coming from a distance is continued by correspondence after they return to their homes; and although the patients do not get on so well as when they are coming to the office, they usually continue to make progress till they are cured.

At the same time it is often very difficult to make patients understand what they should do when one has to communicate with them entirely by writing, and probably all would get on better if they could have some personal treatment. At the present time the number of doctors in different parts of the United States who understand the treatment of imperfect sight without glasses is altogether too few, and my efforts to interest them in the matter have not been very successful. I would consider it a privilege to treat medical men without a fee, and when cured they will be able to assist me in the treatment of patients in their various localities.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

November, 1919

THE MEMORY CURE

When the sight is perfect, the memory is also perfect, because the mind is perfectly relaxed. Therefore the sight may be improved by any method that improves the memory. The easiest thing to remember is a small black spot of no particular size and form; but when the sight is imperfect it will be found impossible to remember it with the eyes open and looking at letters, or other objects with definite outlines. It may, however, be remembered for a few seconds or longer, when the eyes are closed and covered, or when looking at a blank surface where there is nothing particular to see. By cultivating the memory under these favorable conditions, it gradually becomes possible to retain it under unfavorable ones, that is, when the eyes are open and the mind conscious of the impressions of sight. By alternately remembering the period with the eyes closed and covered and then looking at the Snellen test card, or other letters or objects; or by remembering it when looking away from the card where there is nothing particular to see, and then looking back; the patient becomes able, in a longer or shorter time, to retain the memory when looking at the card, and thus becomes able to read the letters with normal vision. Many children have been cured very quickly by this method. Adults who have worn glasses have greater difficulty. Even under favorable conditions, the period cannot be remembered for more than a few seconds, unless one shifts from one part of it to another. One can also shift from one period, or other small black object, to another.



Remember, imagine and shift on a small black dot with the eyes closed. With practice it can also be remembered with the eyes open and the vision becomes clear.

REASON AND AUTHORITY

This article describes how eye doctors fought against Dr. Bates, tried to hide the Bates Method from the public so they could continue selling eyeglasses, surgery, drugs.

Some one—perhaps it was Bacon—has said: "You cannot by reasoning correct a man of ill opinion which by reasoning, he never acquired." He might have gone a step farther and stated that neither by reasoning, nor by actual demonstration of the facts, can you convince some people that an opinion which they have accepted on authority is wrong. A man whose name I do not care to mention, a professor of ophthalmology, and a writer of books well known in this country and in Europe, saw me perform an experiment upon the eye of a rabbit which, according to others who had witnessed it, demonstrated beyond any possibility of error that the lens is not a factor in accommodation. At each step of the operation he testified to the facts; yet at the conclusion he preferred to discredit the evidence of his senses rather than accept the only conclusion that these facts admitted.

First he examined the eye of the animal to be experimented upon with the retinoscope and found it normal, and the fact was written down. Then the eye was stimulated with electricity, and he testified that it accommodated. This was also written down. I now divided the superior oblique muscle, and the eye was again stimulated with electricity. The doctor observed the eye with the retinoscope when this was being done and said, "You failed to produce accommodation." This fact, too, was written down. The doctor now used the electrode himself, but again failed to observe accommodation, and these facts were written down. I now sewed the cut ends of the muscle together, and once more stimulated the eye with electricity. The doctor said, "Now you have succeeded in producing accommodation," and this was written down. I now asked:

"Do you think that superior oblique had anything to do with producing accommodation?"

"Certainly not," he replied.

"Why?" I asked.

"Well," he said, "I have only the testimony of the retinoscope. I am getting on in years, and I don't feel that confidence in my ability to use the retinoscope that I once had. I would rather you wouldn't quote me on this."

While the operation was in progress, however, he gave no indication whatever of doubting his ability to use the retinoscope. He was very positive, in fact, that I had failed to produce accommodation after the cutting of the oblique muscle and his tone suggested that he considered the failure ignominious. It was only after he found himself in a logical trap, with no way out except by discrediting his own observations, that he appeared to have any doubts as to their value.

Patients whom I have cured of various errors of refraction have frequently returned to specialists who had prescribed glasses for them, and, by reading fine print and the Snellen test card with normal vision, have demonstrated the fact that they were cured, without in any way shaking the faith of these practitioners in the doctrine that such cures are impossible. A girl of sixteen who had progressive myopia of such high degree that she was not allowed to read, and was unable to go about on the streets without a guide, was assured by the specialist whom her family consulted that her condition was quite hopeless, and that it was likely to progress until it ended in blindness. She was cured in a very short time by means of the methods advocated in this magazine, becoming able to discard her glasses and resume all the ordinary activities of life. She then returned to the specialist who had condemned her to blindness to tell him the good news; but, while he was unable to deny the fact that her vision was normal without glasses, he said it was impossible that she would have been cured of myopia, because myopia was incurable. How he reconciled this statement with his former patient's condition he was unable to make clear to her.

A lady with compound myopic astigmatism[1] suffered from almost constant headaches which were very much worse when she took her glasses off. Every week, no matter what she did, she was so prostrated by eyestrain that she had to spend a few days in bed; and if she went to a theatre, or to a social function, she had to stay there longer. She was told to take off her glasses and go to the movies: to look first at the corner of the screen, then off to the dark, then back to the screen a little nearer to the center, and so forth. She did so, and soon became able to look directly at the pictures without discomfort. After that nothing troubled her. One day she called on her former ophthalmological adviser, in the company of a friend who wanted to have her glasses changed, and told him of her cure. The facts seemed to make no impression on him whatever. He only laughed and said, "I guess Dr. Bates is more popular with you than I am."

In some cases patients themselves, after they are cured, allow themselves to be convinced that it was impossible that such a thing could have happened, and go back to their glasses. A clergyman and writer, aged forty-seven, who had worn glasses for years for distance and reading, had what I should have considered the good fortune to be very quickly cured. By the aid of his imagination

he was able to relax in less than five minutes, and to stay relaxed. When he looked at fine print it appeared grey to him, and he could not read it. I asked him if he had ever seen printer's ink. He replied, of course, that he had. I then told him that the paragraph of printed matter which he held in his hand was printed in printer's ink, and that it was black and not grey. I asked him if he did not know and believe that it was black, or if he could not at least imagine that it was black. "Yes," he said, "I can do that"; and immediately he read the print. It took him only about a minute to do this, and he was not more than five minutes in the office. The cure was permanent, and he was very grateful-for a time. Then he began to talk to eye specialists whom he knew, and thereupon grew skeptical as to the value of what I had done for him. One day I met him at the home of a mutual friend, and in the presence of a number of other people he accused me of having hypnotized him, adding that to hypnotize a patient without his knowledge or consent was to do him a grievous wrong. Some of the listeners protested that whether I had hypnotized him or not, I had not only done him no harm, but had greatly benefited him, and he ought to forgive me. He was unable, however, to take this view of the matter. Later he called on a prominent eye specialist who told him that the presbyopia (old sight) and astigmatism from which he had suffered were incurable, and that if he persisted in going without his glasses he might do himself great harm. The fact that his sight was perfect for the distance and the near-point had no effect upon the specialist and the patient allowed himself to be frightened into disregarding it also. He went back to his glasses, and so far as I know has been wearing them ever since. The story obtained wide publicity, for the man had a large circle of friends and acquaintances; and if I had destroyed his sight I could scarcely have suffered more than I did for curing him.

Other Doctors try to hide Dr. Bates discoveries from the public. Doctors expel Dr. Bates from the Hospital he worked at after Dr. Bates cures patients without glasses, surgery, drugs and proves the facts of Natural Eyesight Improvement.

Fifteen or twenty years ago the specialist mentioned in the foregoing story read a paper on cataract at a meeting of the ophthalmological section of the American Medical Association in Atlantic City, and asserted that anyone who said that cataract could be cured without the knife was a quack. At that time I was assistant surgeon at the New York Eye and Ear Infirmary, and it happened that I had been collecting statistics of the spontaneous cure of cataract at the request of the executive surgeon of this institution, Dr. Henry G. Noyes, Professor of Ophthalmology at the Bellevue Hospital Medical School. As a result of my inquiry I had secured records of a large number of cases which had recovered, not only without the knife, but without any treatment at all. I also had records of cases which I had sent to Dr. James E. Kelly of New York and which he had cured, largely by hygienic methods. Dr. Kelly is not a quack, and at that time was Professor of Anatomy in the New York Post Graduate Medical School and Hospital and attending surgeon to a large city hospital. In the five minutes allotted to those who wished to discuss the paper, I was able to tell the audience enough about these cases to make them want to hear more. My time was, therefore, extended, first to half an hour and then to an hour. Later both Dr. Kelly and myself received many letters from men in different parts of the country who had tried his treatment with success. The man who wrote the paper had blundered, but he did not lose any prestige because of my attack with facts upon his theories. He is still a prominent and honored ophthalmologist and in his latest book he gives no hint of having ever heard of any successful method of treating cataract other than by operation. He was not convinced by my record of spontaneous cures, nor by Dr. Kelly's record of cures by treatment; and while a few men were sufficiently impressed to try the treatment recommended, and while they obtained satisfactory results, the facts made no impression upon the profession as a whole, and did not modify the teaching of the schools. That spontaneous cures of cataract do sometimes occur cannot be denied; but they are supposed to be very rare, and any one who suggests that the condition can be cured by treatment still exposes himself to the suspicion of being a quack.

Between 1886 and 1891 I was a lecturer at the Post Graduate Hospital and Medical School. The head of the institution was Dr. D. B. St. John Roosa. He was the author of many books, and was honored and respected by the whole medical profession. At the school they had got the habit of putting glasses on the nearsighted doctors, and I had got the habit of curing them without glasses. It was naturally annoying to a man who had put glasses on a student to have him appear at a lecture without them and say that Dr. Bates had cured him. Dr. Roosa found it particularly annoying, and the trouble reached a climax one evening at the annual banquet of the faculty when, in the presence of one hundred and fifty doctors, he suddenly poured out the vials of his wrath upon my head. He said that I was injuring the reputation of the Post Graduate by claiming to cure myopia. Every one knew that Donders said it was incurable, and I had no right to claim that I knew more than Donders. I reminded him that some of the men I had cured had been fitted with glasses by himself. He replied that if he had said they had myopia he had made a mistake. I suggested further investigation. "Fit some more doctors with glasses for myopia," I said, "and I will cure them. It is easy for you to examine them afterwards and see if the cure is genuine." This method did not appeal to him, however. He repeated that it was impossible to cure myopia, and to prove that it was impossible **he expelled me from the Post Graduate, even the privilege of resignation being denied to me.** The fact is that, except in rare cases, man is not a reasoning being. He is dominated by authority, and when the facts are not in accord with the view imposed by authority, so much the worse for the facts. They may and indeed must win in the long run; but in the meantime the world gropes needlessly in darkness and endures much suffering that might have been avoided.

THE EFFECT OF LIGHT UPON THE EYES

Although the eyes were made to react to the light, a very general fear of the effect of this element upon the organs of vision is entertained both by the medical profession and by the laity. Extraordinary precautions are taken in our homes, offices and schools to temper the light, whether natural or artificial, and to insure that it shall not shine directly into the eyes; smoked and amber glasses, eye-shades, broad-brimmed hats and parasols are commonly used to protect the organs of vision from what is considered an excess of light; and when actual disease is present, it is no uncommon thing for patients to be kept for weeks, months and years in dark rooms, or with bandages over their eyes.

The evidence on which this universal fear of the light has been based is of the slightest. In the voluminous literature of the subject one finds such a lack of information that, in 1910, Dr. J. Herbert Parsons of the Royal Ophthalmic Hospital of London, addressing a meeting of the Ophthalmological Section of the American Medical Association, felt justified in saying that ophthalmologists, if they were honest with themselves, "must confess to a lamentable ignorance of the conditions which render bright light injurious to the eyes."[2] Since then, Verhoeff and Bell have reported[3] an exhaustive series of experiments carried on at the Pathological Laboratory of the Massachusetts Charitable Eye and Ear Infirmary, which indicate that the danger of injury to the eye from light radiation as such has been "very greatly exaggerated." That brilliant sources of light sometimes produce unpleasant temporary symptoms cannot, of course, be denied; but as regards definite pathological effects, or permanent impairment of vision from exposure to light alone, Drs. Verhoeff and Bell were unable to find, either clinically or experimentally, anything of a positive nature.

The results of these experiments are in complete accord with my own observations as to the effect of strong light upon the eyes.

In my experience such light has never been permanently injurious. Persons with normal sight have been able to look at the sun for an indefinite length of time, even an hour or longer, without any discomfort or loss of vision. Immediately afterward they were able to read the Snellen test card with improved vision, their sight having become better than what is ordinarily considered normal. Some persons with normal sight do suffer discomfort and loss of vision when they look at the sun; but in such cases the retinoscope always indicates an error of refraction, showing that this condition is due, not to the light, but to strain. In exceptional cases persons with defective sight have been able to look at the sun, or have thought that they have looked at it, without discomfort and without loss of vision; but, as a rule, the strain in such eyes is enormously increased and the vision decidedly lowered by sun-gazing, as manifested by inability to read the Snellen test card. **Blind areas (scotomata)** may develop in various parts of the field—two or three or more. The sun, instead of appearing perfectly white, may appear to be slate-colored, yellow, red, blue, or even totally black. After looking away from the sun, patches of color of various kinds and sizes may be seen, continuing a variable length of time, from a few seconds to a few minutes, hours, or even months. In fact, one patient was troubled in this way for a year or more after looking at the sun for a few seconds. Even total blindness lasting a few hours has been produced. Organic changes may also be produced. Inflammation, redness of the conjunctiva, cloudiness of the lens and of the aqueous and viterous humours, congestion and cloudiness of the retina, optic nerve and choroid, have all resulted from **sun-gazing**. These effects, however, are **always temporary**. The scotomata, the strange colors, even the total blindness, as explained in the preceding chapter, are only mental illusions. No matter how much the sight may have been impaired by **sun-gazing**, or how long the impairment may have lasted, a return to normal has always occurred; while prompt relief of all the symptoms mentioned has always followed the relief of eyestrain, showing that the conditions are the result, not of the light, but of the strain. **Some persons who have believed their eyes to have been permanently injured by the sun have been promptly cured by central fixation, indicating that their blindness had been simply functional.**

By persistence in looking at the sun, a person with normal sight soon becomes able to do so without any loss of vision; but persons with imperfect sight usually find it impossible to accustom themselves to such a strong light until their vision has been improved by other means. **One has to be very careful in recommending sun-gazing to persons with imperfect sight; because, although no permanent harm can result from it, great temporary discomfort may be produced, with no permanent benefit. In some rare cases, however, complete cures have been effected by this means alone.**

Diet must also be healthy. No prescription, non-prescription drugs, including sinus sprays, cough/cold medicines...

In one of these cases the sensitiveness of the patient, even to ordinary daylight, was so great that an eminent specialist had felt justified in putting a black bandage over one eye and covering the other with a smoked glass so dark as to be nearly opaque. She was kept in this condition of almost total blindness for two years without any improvement. Other treatment extending over some months also failed to produce satisfactory results. She was then advised to look directly at the sun. The immediate result was total blindness, which lasted several hours; but next day the vision was not only restored to its former condition, but was improved. The sun-gazing was repeated, and each time the blindness lasted for a shorter period. At the end of a week the patient was able to look directly at the sun without discomfort, and her vision, which had been 20/200 without glasses and 20/70 with them, had improved to 20/10, twice the accepted standard for normal vision.

Like the sun, a strong electric light may also lower the vision temporarily, but never does any permanent harm. In those exceptional cases in which the patient can become accustomed to the light, it is beneficial. After looking at a strong electric light some patients have been able to read the Snellen test card better.

It is not light but darkness that is dangerous to the eye. Prolonged exclusion from the light always lowers the vision, and may produce serious inflammatory conditions. Among young children living in tenements this is a somewhat frequent cause of ulcers upon the cornea, which ultimately destroy the sight. The children, finding their eyes sensitive to light, bury them in the pillows and thus shut out the light entirely. **The universal fear of reading or doing fine work in a dim light is, however, unfounded. So long as the light is sufficient so that one can see without discomfort, this practice is not only harmless, but may be beneficial.**

Sudden contrasts of light are supposed to be particularly harmful to the eye. The theory on which this idea is based is summed up as follows by Fletcher B. Dresslar, specialist in school-hygiene and sanitation of the United States Bureau of Education:

"The muscles of the iris are automatic in their movements, but rather slow. Sudden strong light and weak illumination are painful and likewise harmful to the retina. For example, if the eye adjusted to a dim light is suddenly turned toward a brilliantly lighted object, the retina will receive too much light, and will be shocked before the muscles controlling the iris can react to shut out the superabundance of light. If contrasts are not strong, but are frequently made, that is, if the eye is called upon to function where frequent adjustments in this way are necessary, the muscles controlling the iris become fatigued, respond more slowly and less perfectly. As a result, eyestrain in the ciliary muscles is produced and the retina is over stimulated. This is one cause of headaches and tired eyes."[4]

There is no evidence whatever to support these statements. Sudden fluctuations of light undoubtedly cause discomfort to many persons, but far from being injurious, I have found them, in all cases observed, to be actually beneficial. The pupil of the normal eye, when it has normal sight, does not change appreciably under the influence of changes of illumination; and persons with normal vision are not inconvenienced by such changes. I have seen a patient look directly at the sun after coming from an imperfectly lighted room, and then, returning to the room, immediately pick up a newspaper and read it. When the eye has imperfect sight, the pupil usually contracts in the light and expands in the dark, but it has been observed to contract to the size of a pinhole in the dark. Whether the contraction takes place under the influence of light or of darkness, the cause is the same, namely, strain. Persons with imperfect sight suffer great inconvenience, resulting in lowered vision, from changes in the intensity of the light; but the lowered vision is always temporary, and if the eye is persistently exposed to these conditions, the sight is benefited. Such practices as reading alternately in a bright and a dim light, or going from a dark room to a well-lighted one, and vice versa, are to be recommended. Even such rapid and violent fluctuations of light as those involved in the production of the moving picture are, in the long run, beneficial to all eyes. I always advise patients under treatment for the cure of defective vision to go to the movies frequently and practice central fixation. They soon become accustomed to the flickering light, and afterward other lights and reflections cause less annoyance.

In later years Dr. Bates advises closed eyes sunning.

TWO POINTS OF VIEW

Being anxious to know what my colleagues think of BETTER EYESIGHT, I lately sent notes to a number of them asking for their opinion. The following replies were so interesting that I think the readers of the magazine have a right to see them.

Dear Doctor:
As long as you ask for my opinion of your new magazine entitled BETTER EYESIGHT, permit me to give it to you in all frankness. It is what we call in the vernacular, "PUNK."
Meaning no personal offense, I am,
Your colleague.

Dear Doctor
Your little note received this morning and am glad to have the opportunity to tell you what I think of BETTER EYESIGHT.
It is all that you claim for it, and I am always glad to receive it, as I know that I am going to get something beneficial for myself as well as something for the good of my patients.
If the medical bigots had BETTER EYESIGHT on their desks, and would put into practice what you give in each number, it would be a great blessing to the people who are putting eye crutches on their eyes. I first tried central fixation on myself and had marvelous results. I threw away my glasses and can now see better than I have ever done. I read very fine type (smaller than newspaper type) at a distance of six inches from the eyes, and can run it out at full arm's length and still read it without blurring the type.
I have instructed some of my patients in your methods, and all are getting results. One case who has a partial cataract of the left eye could not see anything on the Snellen test card at twenty feet, and could see the letters only faintly at ten feet. Now she can read 20/10 with both eyes together and also with each eye separately, but the left eye seems, as she says, to be looking through a little fog. I could cite many other cases that have been benefited by central fixation, but this one is the most interesting to me. Kindly send me more of the subscription slips, as I want to hand them out to my patients.
Yours very truly,

November, 1919

1 - A condition in which the eye is shortsighted in all meridians, but more so in one than in the others.
2 - Jour. Am. Med. Assn., Dec. 10, 1910, p. 2028.
3 - Proc. Am. Acad. Arts and Sciences, July, 1916, vol. 51, No. 13.
4 - School Hygiene, Brief Course Series in Education, edited by Paul Monroe, Ph.D., 1916, pp. 235-236.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

December, 1919

THE IMAGINATION CURE

When the imagination is perfect the mind is always perfectly relaxed, and as it is impossible to relax and imagine a letter perfectly, and at the same time strain and see it imperfectly, it follows that when one imagines that one sees a letter perfectly one actually does see it, as demonstrated by the retinoscope, no matter how great an error of refraction the eye may previously have had. The sight, therefore, may often be improved very quickly by the aid of the imagination. To use this method the patient may proceed as follows:

Look at a letter at the distance at which it is seen best. Close and cover the eyes so as to exclude all the light, and remember it. Do this alternately until the memory is nearly equal to the sight. Next, after remembering the letter with the eyes closed and covered, and while still holding the mental picture of it, look at a blank surface a foot or more to the side of it, at the distance at which you wish to see it. Again close and cover the eyes and remember the letter, and on opening them look a little nearer to it. Gradually reduce the distance between the point of fixation and the letter, until able to look directly at it and imagine it as well as it is remembered with the eyes closed and covered. The letter will then be seen perfectly, and other letters in its neighborhood will come out. **If unable to remember the whole letter, you may be able to imagine a black period as forming part of it. If you can do this, the letter will also be seen perfectly.**
Imagine the letter is composed of many black periods and shift from period to period (part to part) on the letter.

THE MENACE OF LARGE PRINT

If you look at the big "C" on the Snellen test card (or any other large letter of the same size) at ten, fifteen, or twenty feet, and try to see it all alike, you may note a feeling of strain and the letter may not appear perfectly black and distinct. If you now look at only one part of the letter, and see the rest of it worse, you will note that the part seen best appears blacker than the whole letter when seen all alike, and you may also note a relief of strain. If you look at the small "c" on the bottom line of the test card, you may be able to note that it seems blacker than the big "C." If not, imagine it as forming part of the area of the big "C." If you are able to see this part blacker than the rest of the letter, the imagined letter will, of course, appear blacker also. If your sight is normal, you may now go a step further and note that when you look at one part of the small "c" this part looks blacker than the whole letter, and that it is easier to see the letter in this way than to see it all alike.
If you look at a line of the smaller letters that you can read readily, and try to see them all alike-all equally black and equally distinct in outline-you will probably find it to be impossible, and the effort will produce discomfort and, perhaps, pain. You may, however, succeed in seeing two or more of them alike. This, too, may cause much discomfort, and if continued long enough, will

produce pain. If you now look at only the first letter of the line, seeing the adjoining ones worse, the strain will at once be relieved, and the letter will appear blacker and more distinct than when it was seen equally well with the others.

If your sight is normal at the near-point, you can repeat these experiments with a letter seen at this point, with the same results. A number of letters seen equally well at one time will appear less black and less distinct than a single letter seen best, and a large letter will seem less black and distinct than a small one; while in the case of both the large letter and the several letters seen all alike, a feeling of strain may be produced in the eye. You may also be able to note that the reading of very fine print, when it can be done perfectly, is markedly restful to the eye.

The smaller the point of maximum vision, in short, the better the sight, and the less the strain upon the eye. This fact can usually be demonstrated in a few minutes by any one whose sight is not markedly imperfect; and in view of some of our educational methods, is very interesting and instructive.

Probably every man who has written a book upon the eye for the last hundred years has issued a warning against fine print in school books, and recommended particularly large print for small children. This advice has been followed so assiduously that one could probably not find a lesson book for small children anywhere printed in ordinary reading type, while alphabets are often printed in characters one and two inches high. The British Association for the Advancement of Science does not wish to see children read books at all before they are seven years old, and would conduct their education previous to that age by means of large printed wall-sheets, blackboards, pictures, and oral teaching. If they must read, however, it wants them to have 24- and 30-point type, with capitals about a quarter of an inch in height. This is carefully graded down, a size smaller each year, until at the age of twelve the children are permitted to have the same kind of type as their elders. Bijou editions of Bible, prayer-book and hymnals are forbidden, however, to children of all ages.[1]

In the London myope classes, which have become the model for many others of the same kind, books are eliminated entirely, and only the older children are allowed to print their lessons in one- and two-inch types.[2]

Yet it has just been shown that large print is a strain upon the eyes, while the retinoscope demonstrates that a strain to see at the near-point always produces hypermetropia[3] (commonly but erroneously called "farsight"). We should naturally expect, therefore, to find hypermetropia very common among small children, and it is. Of children eight and a half years old in the public schools of Philadelphia, Risley[4] found that more than eighty-eight per cent were hypermetropic, and similar figures may be found in all statistics of the subject. The percentage declines as the children become older, but hypermetropia, or hypermetropic astigmatism, remains at all ages the most common of all errors of refraction. Hypermetropia is, in fact, a much more serious problem than myopia, or nearsight. Yet we have heard very little about it, for the specialists have concluded, from its prevalence and its tendency to pass away or become less pronounced with the growth of the body, that it is the normal state of the immature human eye and therefore beyond the reach of preventive measures. It is true that many young children are not hypermetropic, but this fact is easily disposed of by the theory that the ciliary muscle alters the shape of the lens in such cases sufficiently to compensate for the shortness of the eyeball.

The baselessness of this theory, as well as the relation of large print to the production of hypermetropia, may be demonstrated by the fact that the condition can be relieved, and has been relieved in numerous cases, by the reading of fine print, combined with rest of the eyes. A child of eight was cured in a few visits by this means. Yet according to the British Association she should not, at this age, have been allowed to read any type larger than 12-point, with capitals more than an eighth of an inch in height. Many grown people have been cured of hypermetropia in the same way, and in all forms of functional imperfect sight the reading of fine print, when it can be done with comfort, has been found to be a benefit to the eyes. Even straining to see fine print is sometimes a benefit in myopia. Large letters are not a strain if central fixation, shifting are applied. Avoid diffusion, eccentric fixation.

SHIFTING AND SWINGING

Correct Appearance of Oppositional Movement



Shift left and right, top and bottom and in any direction on the E and see it move (swing) in the opposite direction.

When the eye with normal vision regards a letter either at the near-point or at the distance, the letter may appear to pulsate, or move in various directions, from side to side, up and down, or obliquely. When it looks from one letter to another on the Snellen test card, or from one side of a letter to another, not only the letters, but the whole line of letters and the whole card, may appear to move from side to side. This apparent movement is due to the shifting of the eye, and is always in a direction contrary to its movement. If one looks at the top of a letter, the letter is below the line of vision, and therefore appears to move downward. If one looks at the bottom, the letter is above the line of vision and appears to move upward. If one looks to the left of the letter, it is to the right of the line of vision and appears to move to the right. If one looks to the right, it is to the left of the line of vision and appears to move to the left.

Persons with normal vision are rarely conscious of this illusion, and may have difficulty in demonstrating it; but in every case that has come under my observation they have always become able, in a longer or shorter time, to do so. When the sight is imperfect the letters may remain stationary, or even move in the same direction as the eye.

It is impossible for the eye to fix a point longer than a fraction of a second. If it tries to do so, it begins to strain and the vision is lowered. This can readily be demonstrated by trying to hold one part of a letter for an appreciable length of time. No matter how good the sight, it will begin to blur, or even disappear, very quickly, and sometimes the effort to hold it will produce pain. In the case of a few exceptional people a point may appear to be held for a considerable length of time; the subjects themselves may think that they are holding it; but this is only because the eye shifts unconsciously, the movements being so rapid that objects seem to be seen all alike simultaneously.

The shifting of the eye with normal vision is usually not conspicuous, but by direct examination with the opthalmoscope[5] it can always be demonstrated. If one eye is examined with this instrument while the other is regarding a small area straight ahead, the eye being examined, which follows the movements of the other, is seen to move in various directions, from side to side, up and down, in an orbit which is usually variable. If the vision is normal, these movements are extremely rapid and unaccompanied by any appearance of effort. The shifting of the eye with imperfect sight, on the contrary, is slower, its excursions are wider, and -the movements are jerky and made with apparent effort.

It can also be demonstrated that the **eye is capable of shifting with a rapidity which the ophthalmoscope cannot measure**. (Saccadic movements) The normal eye can read fourteen letters on the bottom line of a Snellen test card, at a distance of ten or fifteen feet, in a dim light, so rapidly that they seem to be seen all at once. Yet it can be demonstrated that in order to recognize the letters under these conditions it is necessary to make about four shifts to each letter. At the near-point, even though

one part of the letter is seen best, the rest may be seen well enough to be recognized; but at the distance it is impossible to recognize the letters unless one shifts from the top to the bottom and from side to side. One must also shift from one letter to another, making about **seventy shifts in a fraction of a second**.

A line of small letters on the Snellen test card may be less than a foot long by a quarter of an inch in height; and if it requires seventy shifts to a fraction of a second to see it apparently all at once, it must require many thousands to see an area of the size of the screen of a moving picture with all its detail of people, animals, houses, or trees, while to see sixteen such areas to a second, as is done in viewing moving pictures, must require a rapidity of shifting that can scarcely be realized. Yet it is admitted that the present rate of taking and projecting moving pictures is too slow. The results would be more satisfactory, authorities say, if the rate were raised to twenty, twenty-two or twenty-four a second. The human eye and mind are not only capable of this rapidity of action, and that without effort or strain, but it is only when the eye is able to shift thus rapidly that eye and mind are at rest, and the efficiency of both at their maximum. It is true that every motion of the eye produces an error of refraction; but when the movement is short, this is very slight, and usually the shifts are so rapid that the error does not last long enough to be detected by the retinoscope, its existence being demonstrable only by reducing the rapidity of the movements to less than four or five a second. The period during which the eye is at rest is much longer than that during which an error of refraction is produced. Hence, when the eye shifts normally no error of refraction is manifest. The more rapid the unconscious shifting of the eye, the better the vision; but if one tries to be conscious of a too rapid shift, a strain will be produced.

Perfect sight is impossible without continual shifting, and such shifting is a striking illustration of the mental control necessary for normal vision. It requires perfect mental control to think of thousands of things in a fraction of a second; and each point of fixation has to be thought of separately, because it is impossible to think of two things, or of two parts of one thing, perfectly at the same time. The eye with imperfect sight tries to accomplish the impossible by looking fixedly at one point for an appreciable length of time; that is, by staring. When it looks at a strange letter and does not see it, it keeps on looking at it in an effort to see it better. Such efforts always fail, and are an important factor in the production of imperfect sight.

+ One of the best methods of improving the sight, therefore, is to imitate consciously the unconscious shifting of normal vision, and to realize the apparent motion produced by such shifting. Whether one has imperfect or normal sight, conscious shifting and swinging are a great help and advantage to the eye; for not only may imperfect sight be improved in this way, but normal sight may be improved also.

Detailed instructions for improving the sight by this method will be given in my forthcoming book, *The Cure of Imperfect Sight by Treatment without Glasses*.

Rapid and tiny shifts, the eyes ability to shift many times per fraction of a second are called Saccadic eye movements, vibrations. The eye produces many different movements, high frequency…

OPTIMUMS AND PESSIMUMS

In nearly all cases of imperfect sight due to errors of refraction there is some object, or objects, which can be regarded with normal vision. Such objects I have called *optimums*. On the other hand, there are some objects which persons with normal eyes and ordinarily normal sight always see imperfectly, an error of refraction being produced when they are regarded, as demonstrated by the retinoscope. Such objects I have called *pessimums*. An object becomes an optimum, or a pessimum, according to the effect it produces upon the mind, and in some cases this effect is easily accounted for.

For many children their mother's face is an optimum, and the face of a stranger a pessimum. A dressmaker was always able to thread a No. 10 needle with a fine thread of silk without glasses, although she had to put on glasses to sew on buttons, because she could not see the holes. She was a teacher of dressmaking, and thought the children stupid because they could not tell the difference between two different shades of black. She could match colors without comparing the samples. Yet she could not see a black line in a photographic copy of the Bible which was no finer than a thread of silk, and she could not remember a black period. An employee in a cooperage factory, who had been engaged for years in picking out defective barrels as they went rapidly past him on an inclined plane, was able to continue his work after his sight for most other objects had become very defective, while persons with much better sight for the Snellen test card were unable to detect the defective barrels. The familiarity of these various objects made it possible for the subjects to look at them without strain—that is, without trying to seem them. Therefore the barrels were to the cooper optimums; while the needle's eye and the colors of silk and fabrics were optimums to the dressmaker. Unfamiliar objects, on the contrary, are always pessimums.

In other cases there is no accounting for the idiosyncracy of the mind which makes one object a pessimum and another an optimum. It is also impossible to account for the fact that an object may be an optimum for one eye and not for the other, or an optimum at one time and at one distance and not at others. Among these unaccountable optimums one often finds a particular letter on the Snellen test card. One patient, for instance, was able to see the letter K on the forty, fifteen and ten lines, but could see none of the other letters on these lines, although most patients would see some of them, on account of the simplicity of their outlines, better than they would such a letter as K.

Pessimums may be as curious and unaccountable as optimums. The letter V is so simple in its outlines that many people can see it when they cannot see others on the same line. Yet some people are unable to distinguish it at any distance, although able to read other letters in the same word, or on the same line of the Snellen test card. Some people again will not only be unable to recognize the letter V in a word, but also to read any word that contains it, the pessimum lowering their sight not only for itself but for other objects. Some letters, or objects, become pessimums only in particular situations. A letter, for instance, may be a pessimum when located at the end, or at the beginning of a line, or sentence, and not in other places. When the attention of the patient is called to the fact that a letter seen in one location ought logically to be seen equally well in others, the letter often ceases to be a pessimum in any situation.

A pessimum, like an optimum, may be lost and later become manifest. It may vary according to the light and distance. An object which is a pessimum in a moderate light may not be so when the light is increased or diminished. A pessimum at twenty feet may not be one at two feet, or thirty feet, and an object which is a pessimum when directly regarded may be seen with normal vision in the eccentric field—that is, when not directly regarded.

For most people the Snellen test card is a pessimum. If you can see the Snellen test card with normal vision, you can see almost anything else in the world. Patients who cannot see the letters on the Snellen test card can often see other objects of the same size and at the same distance with normal sight. When letters which are seen imperfectly, or even letters which cannot be seen at all, or which the patient is not conscious of seeing, are regarded, the error of refraction is increased. The patient may regard a blank white card without any error of refraction; but if he regards the lower part of a Snellen test card, which appears to him to be just as blank

as the blank card, an error of refraction can always be demonstrated, and if the visible letters of the card are covered the result is the same. The pessimum may, in short, be letters or objects which the patient is not conscious of seeing. This phenomenon is very common. When the card is seen in the eccentric field it may have the effect of lowering the vision for the point directly regarded. For instance, a patient may regard an area of green wall-paper at the distance, and see the color as well as at the near-point; but if a Snellen test card on which the letters are either seen imperfectly, or not seen at all, is placed in the neighborhood of the area being regarded, the retinoscope may indicate an error of refraction. When the vision improves, the number of letters on the card which are pessimums diminishes and the number of optimums increases, until the whole card becomes an optimum.

A pessimum, like an optimum, is a manifestation of the mind. It is something associated with a strain to see, just as an optimum is something which has no such association. It is not caused by the error of refraction, but always produces an error of refraction; and when the strain has been relieved it ceases to be a pessimum and becomes an optimum.

HOME TREATMENT

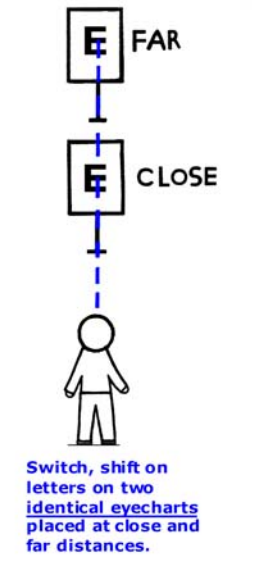
It is not always possible for patients to go to a competent physician for relief. As the method of treating eye defects presented in this magazine is new, it may be impossible to find a physician in the neighborhood who understands it; and the patient may not be able to afford the expense of a long journey, or to take the time for treatment away from home. To such persons I wish to say that it is possible for a large number of people to be cured of defective eyesight without the aid either of a physician or of anyone else. They can cure themselves, and for this purpose it is not necessary that they should understand all that has been written in this magazine, or anywhere else. All that is necessary is to follow a few simple directions.

Place a Snellen test card on the wall at a distance of ten, fourteen, or twenty feet, and devote half a minute a day, or longer, to reading the smallest letters you can see, with each eye separately, covering the other with the palm of the hand in such a way as to avoid touching the eyeball.



Keep a record of the progress made, with the dates. The simplest way to do this is by the method used by oculists, who record the vision in the form of a fraction, with the distance at which the letter is read as the numerator and the distance at which it ought to be read as the denominator. As already explained, the figures above the lines of letters on the test card indicate the distance at which these letters should be read by persons with normal eyesight. Thus a vision of 10/200 would mean that the big C, which ought to be read at 200 feet, cannot be seen at a greater distance than ten feet. A vision of 20/10 would mean that the ten line, which the normal eye is not ordinarily expected to read at a greater distance than ten feet, is seen at double that distance. This is a standard commonly attained by persons who have practiced my methods.

Children under twelve years who have not worn glasses are usually cured of defective eyesight by the above method in three months, six months, or a year. Adults who have never worn glasses are benefited in a very short time—a week or two—and if the trouble is not very bad, may be cured in the course of from three to six months. Children or adults who have worn glasses, however, are more difficult to relieve, and will usually have to practice the various methods of gaining relaxation which have been presented from month to month in this magazine and will be described in more detail in my forthcoming book, *The Cure of Imperfect Sight by Treatment without Glasses*.



It is absolutely necessary that the glasses be discarded. No half-way measures can be tolerated, if a cure is desired. Do not attempt to wear weaker glasses, and do not wear glasses for emergencies. Persons who are unable to do without glasses are not likely to be able to cure themselves.

Modern Natural Vision Improvement teachers state that reduced, weaker eyeglass lenses can be worn, but only when necessary. In later years Dr. Bates stated glasses can be worn if absolutely essential but, glasses will slow vision improvement.

Children and adults who have worn glasses will have to devote an hour or longer every day to practice with the test card and the balance of their time to practice on other objects. It will be well for such patients to have **two test cards, one to be used at the near-point, where it can be seen best, and the other at ten or twenty feet. The patient will find it a great help to shift from the near card to the distant one, as the unconscious memory of the letters seen at the near-point helps to bring out those seen at the distance.** (Switching close and far. Shift on the E on the close card. Switch to the distant card. Shift on the E on that card. Then back to the close card. Repeat. Remember, imagine the E clear.)

If the patient can secure the aid of some person with normal sight, it will be a great advantage. In fact, persons whose cases are obstinate will find it very difficult, if not impossible, to cure themselves without the aid of a teacher. The teacher, if he is to benefit the patient, must himself be able to derive benefit from the various methods recommended. If his vision is 10/10, he must be able to improve it to 20/10, or more. If he can read fine print at twelve inches, he must become able to read it at six, or at three inches. He must also have sufficient control over his visual memory to relieve and prevent pain.

Parents who wish to preserve and improve the eyesight of their children should encourage them to read the Snellen test card every day. There should, in fact, be a Snellen test card in every family; for when properly used it always prevents myopia and other errors of refraction, always improves the vision, even when this is already normal, and always benefits functional nervous troubles. Parents should improve their own eyesight to normal, so that their children may not imitate wrong methods of using the eyes and will not be subject to the influence of an atmosphere of strain.

December, 1919

1 - Report on the Influence of School Books upon Eyesight, second revised edition, 1913.
2 – Pollock: The Education of the Semi-Blind, Glasgow med. Jour., Dec, 1915.
3 – Bates: The cause of myopia, N.Y. Med. Jour., March 10, 1912.
4 – School hygiene, in System of Diseases of the Eye, edited by Norris and Oliver, vol. II, P. 353.

5 - An instrument for viewing the interior of the eye. When the optic nerve is observed with the ophthalmoscope, movements can be noted that are not apparent when only the exterior of the eye is regarded.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

January, 1920

THE PALMING CURE



Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear.

One of the most efficacious methods of relieving eyestrain, and hence of improving the sight, is palming. By this is meant the covering of the closed eyes with the palms of the hands in such a way as to exclude all the light, while avoiding pressure upon the eyeballs. In this way most patients are able to secure some degree of relaxation in a few minutes, and when they open their eyes find their vision temporarily improved.

When relaxation is complete the patient sees, when palming, a black so deep that it is impossible to remember or imagine anything blacker, and such relaxation is always followed by a complete and permanent cure of all errors of refraction (nearsight, farsight, astigmatism and even old sight), as well as by the relief or cure of many other abnormal conditions. In rare cases patients become able to see a perfect black very quickly, even in five, ten or fifteen minutes; but usually this cannot be done without considerable practice, and some never become able to do it until they have been cured by other means. When the patient becomes able after a few trials to see an approximate black, it is worth while to continue with the method; otherwise something else should be tried.

Most patients are helped by the memory of some color, preferably black, and as it is impossible to remember an unchanging object for more than a few seconds, they usually find it necessary to shift consciously from one mental picture to another, or from one part of such a picture to another. In some cases, however, the shifting may be done unconsciously, and the black object may appear to be remembered all alike continuously.

When palming - remember, imagine a happy scene, objects, people in motion, color, clear like a real life movie in the mind.

Shift on objects in the imagination and remember, imagine they are clear. Relax; dynamic and deep relaxation. Famous scientists, artists, and others use this method when awake and before they drift off to sleep, working with the conscious and subconscious mind to visualize, work on a goal; art, science creation, invention, formula, health improvement, new home, job, business…

(Shift part to part on the flower on the right. Shift on the green dots: top and bottom, left and right, middle and in any direction.)



Shift part to part on the object to remember, imagine, see the object clear with the eyes open and in the mind with eyes closed.

THE VARIABILITY OF THE REFRACTION OF THE EYE

The theory that errors of refraction are due to permanent deformations of the eyeball leads naturally to the conclusion, not only that errors of refraction are permanent states, but that normal refraction is also a continuous condition. As this theory is almost universally accepted as a fact, therefore, it is not surprising to find that the normal eye is generally regarded as a perfect machine which is always in good working order. No matter whether the object regarded is strange or familiar, whether the light is good or imperfect, whether the surroundings are pleasant or disagreeable, even under conditions of nerve strain or bodily disease, the normal eye is expected to have normal refraction and normal sight all the time. It is true that the facts do not harmonize with this view, but they are conveniently attributed to the perversity of the ciliary muscle. This muscle is believed to control the shape of the lens, and is credited with a capacity for interfering with the refraction in some very curious ways. In hypermetropia (farsight), it is believed to alter the shape of the lens sufficiently to compensate, in whole or in part, for the shortness of the eyeball. In myopia, or nearsight, on the contrary, we are told that it actually goes out of its way to produce the condition, or to make an existing condition worse. In other words, the muscle is believed to get into a more or less continuous state of contraction, thus keeping the lens continuously in a state of convexity, which, according to accepted theories, it ought to assume only for vision at the near-point. This theory serves the purpose of explaining to the satisfaction of most eye specialists why persons who at times appear to have myopia, or hypermetropia, appear at other times not to have them. After people have reached the age at which the lens is not supposed to change it does not work so well, while in astigmatism it is available only to a limited extent even at the earlier ages; but these facts are quietly ignored.

When we understand how the shape of the eyeball is controlled by the external muscles, and how it responds instantaneously to their action, it is easy to see that no refractive state, whether it is normal or abnormal, can be permanent. This conclusion is confirmed by the retinoscope, and I had observed the facts long before my experiments upon the eye muscles of animals, reported in 1915[1] and to be described again in my forthcoming book, had offered a satisfactory explanation for them. During thirty years devoted to the study of refraction, I have found few people who could maintain perfect sight for more than a few minutes at a time, even under the most favorable conditions; and often I have seen the refraction change half a dozen times or more in a second, the variations ranging all the way from twenty diopters of myopia to normal.

Similarly I have found no eyes with continuous or unchanging errors of refraction, all persons with errors of refraction having, at frequent intervals during the day and night, moments of normal vision, when their myopia, hypermetropia, or astigmatism, wholly disappears. The form of the error also changes, myopia even changing into hypermetropia and one form of astigmatism into another.

Of twenty thousand school children examined in one year more than half had normal eyes, with sight which was perfect at times; but not one of them had perfect sight in each eye at all times of the day. Their sight might be good in the morning and imperfect in the afternoon, or imperfect in the morning and perfect in the afternoon. Many children could read one Snellen test card with perfect sight, while unable to see a different one perfectly. Many could also read some letters of the alphabet perfectly, while unable to distinguish other letters of the same size under similar conditions. The degree of this imperfect sight varied within wide limits, from one-third to one-tenth, or less. Its duration was also variable. Under some conditions it might continue for only a few minutes, or less; under others it might prevent the subject from seeing the blackboard for days, weeks, or even longer. Frequently all the pupils in a classroom were affected to this extent.

Among babies a similar condition was noted. Most investigators have found babies hypermetropic. A few have found them myopic. My own observations indicate that the refraction of infants is continually changing. One child was examined under atropine on four successive days, beginning two hours after birth. A three per cent solution of atropine was instilled into both eyes, the pupil was dilated to the maximum, and other physiological symptoms of the use of atropine were noted. The first examination showed a condition of mixed astigmatism. On the second day there was compound hypermetropic astigmatism, and on the third compound myopic astigmatism.[2] On the fourth one eye was normal and the other showed simple myopia. Similar variations were noted in many other cases.

What is true of children and infants is equally true of adults of all ages. Persons over seventy years of age have suffered losses of vision of variable degree and intensity, and in such cases the retinoscope always indicated an error of refraction. A man eighty years old, with normal eyes and ordinarily normal sight, had periods of imperfect sight which would last from a few minutes to half an hour or longer. Retinoscopy at such times always indicated myopia of four diopters or more.

During sleep the refractive condition of the eye is rarely, if ever, normal. Persons whose refraction is normal when they are awake will produce myopia, hypermetropia and astigmatism when they are asleep, or, if they have errors of refraction when they are awake, they will be increased during sleep. This is why people waken in the morning with eyes more tired than at any other time, or even with severe headaches. When the subject is under ether or chloroform, or unconscious from any other cause, errors of refraction are also produced or increased.

When the eye regards an unfamiliar object an error of refraction is always produced. Hence the proverbial fatigue caused by viewing pictures, or other objects, in a museum. Children with normal eyes who can read perfectly small letters a quarter of an inch high at ten feet always have trouble in reading strange writing on the blackboard, although the letters may be two inches high. A strange map, or any map, has the same effect. I have never seen a child, or a teacher, who could look at a map at the distance without becoming nearsighted. German type has been accused of being responsible for much of the poor sight once supposed to be peculiarly a German malady; but if a German child attempts to read Roman print, it will at once become temporarily myopic. German print, or Greek or Chinese characters will have the same effect on a child, or other person, accustomed to Roman letters. Cohn repudiated the idea that German lettering was trying to the eyes.[3] On the contrary, he always found it "pleasant, after a long reading of the monotonous Roman print, to return to 'our beloved German'." Because the German characters were more familiar to him than any others he found them restful to his eyes. "Use," as he truly observed, "has much to do with the matter." Children learning to read, write, draw, or sew, always suffer from defective vision, because of the unfamiliarity of the lines or objects with which they are working.

[2]In astigmatism the eye is lopsided. In simple hypermetropic astigmatism one principal meridian is normal, and the other, at right angles to it, is flatter; hence the eye is farsighted in one curvature and normal in another. In simple myopic astigmatism the contrary is the case, one principal meridian is normal and the other, at right angles to it, more convex, making the refraction normal in one curvature and shortsighted in another. In mixed astigmatism one principal meridian is too flat, the other too convex. In compound hypermetropic astigmatism, both principal meridians are flatter than normal, one more so than the other. In compound myopic astigmatism both are more convex than normal, one more so than the other.

This is one of footnotes on the bottom page of Better Eyesight Magazine.
All footnotes have been typed into this book.

A sudden exposure to strong light, or rapid or sudden changes of light, are likely to produce Imperfect sight in the normal eye, continuing in some cases for weeks and months.

Noise is also a frequent cause of defective vision in the normal eye. All persons see imperfectly when they hear an unexpected loud noise. Familiar sounds do not lower the vision, but unfamiliar ones always do. Country children from quiet schools may suffer from defective vision for a long time after moving to a noisy city. In school they cannot do well with their work, because their sight is impaired. It is, of course, a gross injustice for teachers and others to scold, punish, or humiliate, such children.

Under conditions of mental or physical discomfort, such as pain, cough, fever, discomfort from heat or cold, depression, anger, or anxiety, errors of refraction are always produced in the normal eye, or increased in the eye in which they already exist.

The variability of the refraction of the eye is responsible for many otherwise unaccountable accidents. When people are struck down in the street by automobiles or trolley cars, it is often due to the fact that they were suffering from temporary loss of sight. Collisions on railroads or at sea, disasters in military operations, aviation accidents, etc., often occur because some responsible person suffered temporary loss of sight.

HOW LONG WILL IT TAKE?

This question is asked so constantly by persons who wish to be cured of Imperfect sight that it seems worth while to devote a little space to its consideration. It is impossible, of course, to answer the question definitely. Cure is a question of the mind, and people's minds are different.

While patients who have worn glasses are usually harder to cure than those who have not, elderly persons who have worn them for the better part of a lifetime are sometimes cured as quickly as children under twelve who have never worn them. These cases are very rare, but they do occur. Some patients can look at the letters on the test card, or in a paragraph of fine print, and imagine them at once to be perfectly black, with the result that they immediately become able to read them. Some patients are able to palm almost perfectly from the start, and nearly all can do it well enough to improve their sight; some never become able to do it until

their sight has been improved by other means.

Most patients, when they look from one side of a large letter to another, or from one side of the card to another, can imagine that the letter, or the card, is moving in a direction opposite to the movement of the eye. Others, whose condition may be no worse, take a week, or a month, or longer, to do the same thing. A patient recently treated was able to do almost everything I asked her to at the first visit. I began, as I always do, by directing her to close and rest her eyes, and, as in the case of most other patients, she was able to improve her sight materially by this method. Then she went on to do a lot of other things, some of which very few patients can do at the first visit, while no one but herself, so far as I can remember, was ever able to do all of them. She was able to stare at a letter and make her sight worse, and she was able to look from one side of it to another and imagine that it was moving in a direction opposite to the movement of the eye. If the letter was seen perfectly, the movement was short, rhythmical and easy; if it was seen imperfectly, it was longer, and irregular. She could not imagine a letter stationary, and if she tried to imagine it so, it blurred. When she looked at a line of letters that she could read, she realized at once that one letter was seen best and the adjoining ones worse; and when she looked at a line that she could not read, she noted that they were seen all alike. She demonstrated at once-which was very remarkable-that a perfect memory is quick and easy, and an imperfect memory slow, difficult and even impossible; that the first relieves fatigue and the second induces discomfort. She also demonstrated that while it was easy to imagine that a letter remembered perfectly was swinging, she either could not imagine such a swing in the case of an imperfectly remembered letter, or else the swing was longer and irregular. It is hardly necessary to say that this patient became able at once to read the whole card, even in a dim light. It was only when she came to fine print that she failed. She could not imagine that the letters of diamond type were swinging. She could imagine the universal swing[4] when she looked two inches away from the letters, but she could not imagine it when she looked between the lines.



Shift dot to dot on the E - left and right, top and bottom and see the E move: oppositional movement.

These peculiarities of the mind cannot be known in advance, and therefore it is seldom possible, in any given case, to make predictions as to the length of time that will be required for a cure. This much can be stated, however: that marked improvement is always obtained in a few weeks and that all patients obtain some benefit at the first visit. If there are any exceptions to this rule, they are so rare that I do not remember them.

As more facts are accumulated and better ways of presenting things learned, it becomes possible to cure people more quickly. I can cure people more quickly today than I did a year ago, and I expect to cure them next year more quickly than I do today. In the last three months, seven or eight patients have been cured in one visit, with a little additional help over the telephone.

When patients can give considerable time to the treatment they naturally get on faster than those who cannot or will not do this. When they follow instructions and do not waste time in discussion, or in carrying out theories of their own, they also get on faster. One of the advantages that children have over adults is that there heads are not so full of erroneous ideas, and that they are accustomed to doing as they are told.

The chief cause of delay seems to be that people will not believe the truth after it is demonstrated to them. You can demonstrate to anyone in a few minutes that rest improves the vision, but the idea that everything worth while must be gained by effort is so deeply ingrained in the average mind that you may not in a year be able to get it out, and so long as the patient believes that his sight can be improved by effort, be will make little progress.

In most cases it is necessary, in order to retain what has been gained, to continue the treatment for a few minutes every day. When a cure is complete it is always permanent. The patient need never think of the matter again, and may even forget how he was cured. But **complete cures**, which mean the attainment, not of what is ordinarily called normal sight, but of a measure of **telescopic and microscopic vision**, are very rare; and even in these cases the treatment may be continued with benefit, for it is impossible to set limits to the visual powers of man, and no matter how good the sight, it is always possible to improve it.

RELIEF AFTER TWENTY-FIVE YEARS

While many persons are benefited by the accepted methods of treating defects of vision, there is a minority of cases, known to every eye specialist, which gets little or no help from them. These patients sometimes give up the search for relief in despair, and sometimes continue it with surprising pertinacity, never being able to abandon the belief, in spite of the testimony of experience, that somewhere in the world there must be some one with sufficient skill to fit them with the right glasses. The rapidity with which these patients respond to treatment by relaxation is often very dramatic, and affords a startling illustration of the superiority of this method to treatment by glasses and muscles cutting. In the following case relaxation did in twenty-four hours what the old methods, as practiced by a succession of eminent specialists, had not been able to do in twenty five years.

The patient was a man of forty-nine, and his imperfect sight was accompanied by continual pain and misery, culminating twenty years before I saw him, in a complete nervous breakdown. As he was a writer, dependent upon his pen for a living, his condition was a serious economic handicap, and he consulted many specialists in the vain hope of obtaining relief. Glasses did little, either to improve his sight, or to relieve his discomfort, and the eye specialists talked vaguely about disease of the optic nerve and brain as a possible cause of his troubles. The nerve specialists, however, were unable to do anything to relieve him. One specialist diagnosed his case as muscular, and gave him prisms, which helped him a little. Later, the same specialist, finding that all of the apparent muscular trouble was not corrected by glasses, cut the external muscles of both eyes. This also brought some relief, but not much. At the age of twenty-nine the patient suffered the nervous breakdown already mentioned. For this he was treated unsuccessfully by various specialists, and for nine years he was compelled to live out of doors. This life, although it benefited him, failed to restore his health, and when he came to me on September 13, 1919, he was still suffering from neurasthenia. His distant vision was less than 20/40, and could not be improved by glasses. He was able to read with glasses, but could not do so without discomfort. I could find no symptom of disease of the brain or of the interior of the eye. When he tried to palm he saw grey and yellow instead of black; but he was able to rest his eyes simply by closing them, and by this means alone he became able, in twenty-four hours, to read diamond type and to make out most of the letters on the twenty line of the test card at twenty feet. At the same time his discomfort was materially relieved.

He was under treatment for about six weeks, and then he left the city.

On October 25 he wrote as follows:

"I saw you last on October 6, and at the end of the week, the 11th, I started off on a ten-day motor trip as one of the officials of the Cavalry Endurance Test for horses. The last touch of eyestrain which affected me nervously at all I experienced on the 8th and 9th. On the trip, though I averaged but five hours sleep, rode all day in an open motor without goggles and wrote reports at night by

bad lights, I had no trouble. After the third day the universal slow swing seemed to establish itself, and I have never had a moment's discomfort since. I stood fatigue and excitement better than I have ever done and went with less sleep. My practicing on the trip was necessarily somewhat curtailed, yet there was noticeable improvement in my vision. Since returning I have spent a couple of hours a day in practice, and have at the same time done a lot of writing.

Fine print - Directions

"Yesterday, the 24th, I made a test with diamond type, and found that after twenty minutes' practice I could get the lines distinct, and make out the capital letters and bits of the text at a scant three inches. At seven I could read it readily, though I could not see it perfectly. This was by an average daylight-no sun. In a good daylight I can read the newspaper almost perfectly at a normal reading distance, say fifteen inches. I seem able now to read ordinary print at a little distance from my eyes without straining; but **I practice bringing it so close that it is not quite clear, and after closing and opening my eyes and thinking of the text as clear and black, or of a perfect black letter, it clears up. I am confident now that in a few weeks I shall be able to read the fine print at three inches. Now that the swing has established itself so well I seem to get the best results on close work by consciously relaxing as much as I can, avoiding all conscious effort to see better, and imagining words or letters perfectly clear and black.** All soreness has gone from the eyeballs, but there are little muscle twitches that catch me when consciously opening or closing the lids. The last few days these almost ceased at the end of twenty minutes practice, and my sight was better.

"I feel now that I am really out of the woods. I have done night work without suffering for it, a thing I have not done in twenty-five years, and I have worked steadily for more hours than I have been able to work at a time since my breakdown in 1899, all without sense of strain or nervous fatigue. You can imagine my gratitude to you. Not only for my own sake, but for yours, I shall leave no stone unturned to make the cure complete and get back the child eyes which seem perfectly possible in the light of progress I have made in the eight weeks since I first went to you.

"I have just been trying the big card for distance in the out-of-door light of an overcast day at two in the afternoon. At twenty feet I get all the bottom line, but the "5" and "6." The "B" also is black. But I think I have done a little better than this. The halos (5) begin to come out spontaneously both on the fine print and on the big card at a distance. I am sure that I only have to keep on to win."

See the Halos, 'White Glow' on the white paper near/ around the edge of the ink of the black letters. Imagining and seeing this brings clear vision.



FACTS VERSUS THEORIES

Reading fine print is commonly supposed to be an extremely dangerous practice, and reading print of any kind upon a moving vehicle is thought to be even worse. Looking away to the distance, however, and not seeing anything in particular is believed to be very beneficial to the eyes. In the light of these superstitions the facts contained in the following letter are particularly interesting:

"On reaching home Monday morning I was surprised and pleased at the comments of my family regarding the appearance of my eyes. They all thought they looked so much brighter and rested, and that after two days of railroading. I didn't spare my eyes in the least on the way home. I read magazines and newspapers, looked at the scenery; in fact, used my eyes all the time. My sight for the near-point splendid. Can read for hours without tiring my eyes. . . . I went downtown today and my eyes were very tired when I got home. The fine print on the card (diamond type) helps me so. . . I would like to have your little Bible (a photographic reduction of the Bible with type much smaller than diamond). I'm sure the very fine print has a soothing effect on one's eyes, regardless of what my previous ideas on the subject were."

It will be observed that the eyes of this patient were not tired by her two days railroad journey, during which she read constantly;—they were not tired by hours of reading after her return; they were rested by reading extremely fine print; but they were very much tired by a trip downtown during which they were not called upon to focus upon small objects. Later a leaf from the Bible was sent to her, and she wrote:

"The effect even of the first effort to read it was wonderful. If you will believe it, I haven't been troubled having my eyes feel 'crossed' since, and while my actual vision does not seem to be any better, my eyes feel a great deal better.

January, 1920

1 - Bates: The Cure of Defective Eyesight by Treatment Without Glasses, N. Y. Med. Jour., May 8, 1915.
2 – In astigmatism the eyes is lopsided. In simple hypermetropic astigmatism one principle meridian is normal, and the other, at right angles to it, is flatter; hence the eye is farsighted in one curvature and normal in another. In simple myopic astigmatism the contrary is the case, one principal meridian is normal and the other, at right angles to it, more convex, making the refraction normal in one curvature and shortsighted in another. In mixed astigmatism one principal meridian is too flat, the other too convex. In compound hypermetropic astigmatism, both principal meridians are flatter than normal, one more so than the other. In compound myopic astigmatism both are more convex than normal, one more so than the other.
3 - Eyes and School-Books, Pop. Sci. Monthly, May, 1881, translated from Deutsche Rundschau.
4 - When the patient becomes able to imagine that the letters on the test card are swinging, everything else thought of also seems to be swinging. This is the universal swing.
5 - When the sight is normal, the margins and openings of letters appear whiter than the rest of the background, and the lines of fine print seem to be separated by white streaks.

BETTER EYESIGHT

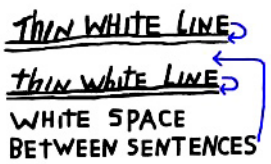
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

February, 1920

HALOS



When the eye with normal sight looks at the large letters on the Snellen test card, at any distance from twenty feet to six inches or less, it sees, at the inner and outer edges and in the openings of the round letters, a white more intense than the margin of the card. Similarly, when such an eye reads fine print, the spaces between the lines and the letters and the openings of the letters appear whiter than the margin of the page, while streaks of an even more intense white may be seen along the edges of the lines of letters. These "halos" are sometimes seen so vividly that in order to convince people that they are illusions it is often necessary to cover the letters, when they at once disappear. Patients with imperfect sight also see the halos, though less perfectly, and when they understand that they are imagined, they often become able to imagine them where they had not been seen before, or to increase their vividness, in which case the sight always improves. This can be done by imagining the appearances first with the eyes closed, and then looking at the card, or at fine print, and imagining them there. By alternating these two acts of imagination the sight is often improved rapidly. It is best to begin the practice at the point at which the halos are seen, or can be imagined best. Nearsighted patients are usually able to see them at the near-point, sometimes very vividly. Farsighted people may also see them best at this point, although their sight for form may be best at the distance.



NEW EYES FOR OLD

By GRACE ELLERY CHANNING

EDITOR'S NOTE.—*We are constantly hearing of patients who have been able to improve their sight by the aid of information contained in this magazine, or in other publications on the same subject, without personal assistance. The following is a very remarkable example of these cases, as the improvement was made while the patient was handicapped by having to wear her glasses a great part of the time.*

There was once a gentleman who attempted to sell new lamps for old ones. And another who tried to exchange, on Waterloo Bridge, perfectly good new shillings for sixpence. In both cases the wares were as advertised, but both fell under suspicion.

It is perhaps, then, not to be wondered at that an offer of new eyes for old should meet with a similar fate at the hands of a public early trained to suspect the worst—in a world where few things are as represented and nothing is to be had for nothing.

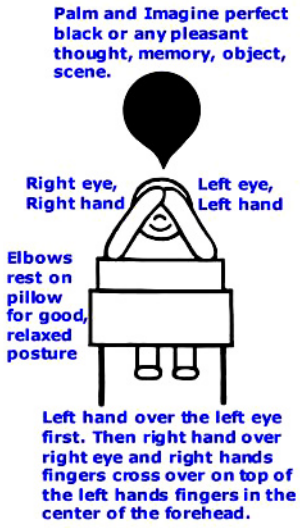
In no other way, at least, can I account for the fact that so much of the world is still in glasses, after a brief experience of my own. This is the story:

Something over a year ago, in one of those periodic fits of dejection common to those who abuse their eyes and then wonder at their failure. I chanced to take up a copy of the *New York Tribune*, open exactly at an article on Eyes, in the column devoted to scientifico-medical truth.

I may as well confess at once that I read this column chiefly to scoff: it is a privilege reserved to those born in doctor's families. Moreover the condition of my own eyes at the moment, after years of oculists and opticians, was one to make me particularly from Missouri in my mental attitude towards anything calling itself a new "cure." Still—I ran through the article.

It was brief, a mere review of another which had appeared in the *Scientific American*, and I grasped but a fragment of the principle—that defects of vision were not necessarily integral, but might result from defectively controlled muscles distorting the eyeball-pulling it out of shape. Hence nearsight, farsight, astigmatism, etc., might be curable through muscle-control. The treatment consisted in relaxation and re-education, intelligently applied.

As I grasped it, not being hampered by scientific pre-possesions, the thing appeared so simple that I exclaimed to myself: "How sensible!"—hastily qualifying it with, "How much too good to be true!" For here was something rational—something you could do for yourself without either being cut up or poisoned. The article mentioned that patients went home and taught their families—it was so simple. There was nothing to prevent one's at least trying it on oneself.



The only detail of treatment set forth—or which I grasped—was that the eyes could be relaxed most conveniently by looking at black, and that by covering the eyes with the palms of the hands ("palming") black could be retained as a mental vision, or memory, during which the eye was at rest. By practice, one could learn to "remember black" with the eyes opened, at will, and when it was not there. Thus muscular control could be re-established.

It was at least worth trying, and I tried. (Here it is interesting to remark that the moment you look at a black thing, you realize it isn't. A really black object is hard to find, but not necessary to success; the approximate will serve. Later I discovered that a black period—of printer's ink—was sufficient, but I am giving by preference the tale of my first blundering efforts.)

My first discovery was one which anyone may make for himself; it contains the crux of the whole. This is, that after looking at black, "palming," and seeing black with the eyes shut (at first one may see grey or red), and then opening the eyes, there is an appreciable instant of clear vision, in which letters or images previously blurred and hazy come out sharp and definite. For that brief instant I could read clearly; then immediately the old habit of muscular strain set in again and vision lapsed. But *that instant was enough*. For, if for any fraction of time at all vision could be reconquered, clearly the organ of vision was intact; the trouble was extraneous, functional, might be removable. All that was needed was to *make that instant permanent*, and that, evidently, was a mere matter of reeducating the exterior muscles of the eye and fixing a habit.

So far as I was concerned that first experiment was final. I was as convinced then as I am convinced now that I, or anyone else in my case, can recover vision virtually whole, with time, patience and training. The demonstration was, for me, complete. Nobody had proved it to me, I had, proved it to myself. Relaxed, eyes could return to the normal and see without glasses.

How to take advantage of my discovery was another matter. My days are largely spent in typing; my nights (too largely) in reading, both in glasses, which of course are framed to perpetuate the errors they confirm, so that every pair of glasses has to be farther from the normal than the one before. With a war on, I could neither stop working nor reading newspapers. Yet the first requisite for the new cure I assumed to be the abandonment of the glasses. (I have since heard of cases cured even while in glasses.)

I postponed, then, all hope of my own cure to some date "after Peace." But I was too interested and fascinated to quite let the matter drop. Accordingly I began to play with the small fragment of theory I had assimilated (very inaccurately, I now realize), in the scant leisure of my daily outings. I practiced "seeing black" on the coat-backs of pedestrians, and "central fixation" (which means seeing what you look at *where* you look at it, and not its edges instead,) on the street signs and advertising bill-boards. My companions began to recognize my "seeing black" expression. As a skeptic, I am something of a trial to them and they enjoyed, perhaps, seeing the biter bit. But I was getting results-undoubing the long-doubled stars, making one moon grow where the proverbial two had grown before. Blurred letters of fantastic height I was reducing to neat, clear rows, half as high; I who had not read a headline, with just *eyes*, for years, was reading them all. Thence I passed to the higher literature; probably nobody has ever been so stirred by the genius of Mr. Shonts as I, when first I could untangle his lines. Next came the gems of verse in street-car advertisements. Now I read them all alike, indifferently, negligently, as being no great thing, down to the quite fine ones, if the vehicle is moderately light.

The first really startling intimation of gain, however, came to me one hurried morning when, taking my mail from the box, I read my letters one after another, on the way to the bus, and only realized later, as I was rolling downtown, that I had read them all without glasses—and without noticing it. It was fully ten years since I had been able to read a line of a letter without glasses, frequently to my extreme inconvenience.

This is as far as I have gone—except that I am still going. Month by month, I recover a little and a little more of my ability to see normally, and meanwhile, as a most important by-product of the gain, I lose the old fatigue and ache which, with its accompanying depression, made my hours without glasses periods of strain. Here I should explain that my eyes are always under a twofold strain—for I listen with them. Only the partly deaf will fully understand this, but it makes the importance of this new treatment, for them, incalculable. And the deaf are as the sands of the sea.

Now, if gains so real and so appreciable can be made in quarter-hour and casual applications of a partially-grasped theory, and while with both hands one is engaged in undoing for the remainder of the hours what one has done in the quarters, is it not fair to believe that a proper, steadfast, continuous application of the theory would work miracles for those multitudes of mankind who suffer every form of disability and handicap now covered by the term "eyestrain"? We are told that pretty much everything from flat feet to baldness can proceed from eyestrain, and for my part I believe it; I know what earstrain can do. We are also assured that children in our schools suffer, by tens of thousands, from defective vision, and are turned into truants, invalids and criminals. Almost the largest percentage of physical disqualifications in our Army were optical-and that under an incredibly low standard. Eyes, then, are not an academic but a vital issue. How is it possible that we fail to investigate to the last point any and every possible means of relief from an evil well-nigh universal?

This is the question I have naturally been asking, north, south, east and west, for a year past. It seems time now to ask it out loud—in print. Of course I have found excellent people to tell me that my discovery "isn't so," and other excellent people to tell me that "everybody has always known it" anyway, which does not explain to me why "everybody" is still wearing glasses. I was sufficiently interested myself to go and talk with a few of the cured enthusiasts; their attitude is about what mine would be in their case—that of those who were present at the Pool Bethesda and *saw* the miracle effected. I also had the curiosity to go and talk with the author of the revolutionary theory that eyes can be cured without glasses, himself—Dr. Wm. H. Bates.

I went to Dr. Bates through streets filled with people wearing glasses, and punctuated at intervals by the signs of oculists, opticians, and makers of optical devices for the near-blind. My own oculist's and optician's offices are usually thronged with a waiting list; it occurred to me that I might find cordons of troops keeping order about Dr. Bates'. I found neither the cordon nor the crowds. Why?

Here is a man who is either an absolute benefactor of humanity, or who makes an unfounded claim. He should be given, not for his own sake but for ours, the widest opportunity and the heartiest encouragement to prove or disprove his theory, past all possibility of question. It is indeed so extraordinary that he has not been forcibly summoned to do this before now, by an impatient public, that it can only be accounted for by that ancient disability of the human mind to accept new things if strange—new lamps for old, real shillings sold for sixpence, or truth that is as simple as a lie. Yet, actually, of course, truth is always simple-the only simple thing there is.

New eyes for old, ladies and gentlemen! Who wants them?

STORIES FROM THE CLINIC

1. Joey and Patsy

By EMILY C. LIERMAN

EDITOR'S NOTE.—*Mrs. Lierman wore glasses for thirteen years. She was cured six years ago, and has since acted as a very enthusiastic assistant in the laboratory and clinic of the editor. She is not a physician, but obtains results, having never failed to improve the sight of any patient whom she has treated—a wonderful record.*

Joey is a little Italian boy who was struck on the head a few months ago in an automobile accident, and injured in such a way that he became almost totally blind in the left eye. Patsy is Joey's brother, and from him it was learned that when the accident occurred Joey was at the head of his troops, conducting a strategic retreat after a fierce conflict in which he had been obliged to yield to adverse fortune. His face was to the foe and the automobile was behind him. Hence the catastrophe.

A week later he was brought to the clinic of the Harlem Hospital by his aunt. Dr. Bates examined him and found that he was suffering from optic neuritis and retinal hemorrhages of the left eye, as a result of which the vision of this eye had been reduced to mere light perception.

The child was now brought to me for treatment, and never have I seen a more forlorn little specimen of humanity. I did not know then that a gang of street boys had once looked up to him as their leader, and I never should have suspected it. There was not the shadow of a smile upon his face, and he had not a word to say. Both his face and his clothes were dirty. The latter were also ragged,

while his shoes were full of holes. His teeth were wonderful, however, and beneath the grime on his small countenance one could catch glimpses of the complexion of perfect health. I told him to rest his eyes by closing and covering with the palms of his hands, and after a few minutes he was able to see the largest letter on the test card with his blind eye. I told him to do this six times a day for five minutes at a time, and to come back on the next clinic day.

The next time I saw him he not only had made no progress, but was as blind as he had been at the beginning. His aunt said:

"You scold him. Tell him you will keep him here, because he will not palm or do anything he is told to do at home."

I answered: "You do not wish me to lie to him, do you?" Joey looked up into my face, so sad and worried, waiting for me to defend him again, as his aunt replied: "Well, I will leave him here and not take him home again."

"All right," I said. "I live in the country, and perhaps Joey would like to go home with me and play in the fields, and watch the birds build their nests, and learn how to smile as little boys should."

Well now, you should have seen that dirty little face flush up with excitement and pleasure.

"Joey," I said, "you are going to love me a whole lot, because I love you already; but you must mind what I say, because if you don't you will go blind."

Joey then consented to palm for a few minutes, and his sight improved so that he was able to see the large letter of the test card three feet away. He now made an effort to see the next line of two letters, but not only did he fail to do so, but he also lost the large letter. The strain had made him blind again.

How I wish I had more time to spend on a case like this I But the room was full of patients, and more were coming continually. I had to attend to them. So I asked Joey, very gently, to palm and not take his hands from his eyes until I came back. After ten minutes I returned and asked what he could see. To my surprise he read five lines of the test card with the blind eye. Much encouraged I sent him home, and he promised to palm six times a day. He stayed away almost a week and I worried about him, for I knew he would forget what I had told him to do. Then one day he turned up with his brother Patsy, who, I believe, is twelve years old. My, how Patsy did talk! Joey had not a word to say, and did not smile until I asked him to. Patsy said that Joey did not practice, and that his father hit him on the head and threatened him with all sorts of things to make him do so. It was quite evident that he had not practiced. When I asked him to read the card, all he could see was the big letter at the top at three feet.

Poor little Joey! I gathered him in my arms, patted his dirty face, and told him that if he would count six fingers for me and practice palming as many times a day I was sure Santa Claus would have some toys for him at Christmas time. Joey was all smiles, and stood with his eyes covered for a long time. When he again looked at the card he read the fifth line. Meantime Patsy was telling me all about the accident in which Joey had been injured, and also all about the rest of the family. His big brother was going to be married, he said, but not until another brother, eighteen years old, was out of prison. Patsy talked like a man and his voice sounded like a foghorn; but I saw that he had a gentle nature and I enlisted him as my little assistant. I asked him if he would not try to get Joey to palm more, and told him that he must always, speak kindly to him. I also asked him to ask his father not to hit Joey on the head again, because that made the hemorrhages worse and Joey would go blind. Bless Patsy's heart! He promised to help me all he could, and I am sure he deserves much of the credit for what I was afterward able to do for Joey.

After this Joey's progress was steady. He responded to kindness as a flower responds to the sun. But if I ever forgot myself and spoke to him without the utmost gentleness—if I even raised my voice a little—he would at once become nervous and begin to strain. One day I remonstrated with him because he had not done what I had told him, and a few moments later when I asked him to read the test card with his left eye, he said, "I can only see the large letter." I began to pet him, telling him what a great man he might be some day and how important it was for him to see with both eyes. He smiled and palmed, and in a short time he again read five lines of the card.

At a recent visit he was very conspicuous because he had had his face washed. I could see that he wanted me to notice this, which of course I did, giving him high praise for his improved appearance. He smiled and started to palm without being told to, and his sight improved more rapidly than at any previous visit.

His last visit was a happy one. He saw all of the bottom line at ten feet without palming.

One day Patsy appeared at the clinic wearing spectacles. "Patsy, for heaven's sake, what are you wearing those things for?" I asked.

"The nurse in school said I needed glasses and my father paid four dollars for them—but I can see without them."

His vision without glasses was 20/100. After palming five minutes it improved considerably.

"Do you want to be cured without glasses?" he was asked.

"Sure, I don't want to wear them."

"Well, you ask father's permission and I will cure you." Fortunately, father had no objection, and now Patsy sees much better without glasses than he ever did with them. He says that the blackboard looks blacker than it used to, and that his lessons do not seem so hard. His vision is not normal yet, but after he has rested his eyes for part of a minute, simply by closing them, he can read the bottom line of the test card easily at ten feet.

SEEKING A MYOPIA CURE

By L. MEHLER

When the *Lusitania* was sunk I knew that the United States was going to get into trouble, and I wanted to be in a position to join the Army. But I was suffering from a high degree of myopia, and I knew they wouldn't take me with glasses. Later on they took almost anyone who wasn't blind, but at that time I couldn't possibly have measured up to the standard. So I began to look about for a cure.

I tried osteopathy, but didn't go very far with it. I asked the optician who had been fitting me with glasses for advice, but he said that myopia was incurable. I dismissed the matter for a time, but I didn't stop thinking about it. I am a farmer, and I knew from the experience of outdoor life that health is the normal condition of living beings. I knew that when health is lost it can often be regained. I knew that when I first tried to lift a barrel of apples onto a wagon I could not do so, but that after a little practice I became able to do it easily, and I did not see why, if one part of the body could be strengthened by exercise, others could not be strengthened also. I could remember a time when I was not myopic, and it seemed to me that if a normal eye could become myopic, it ought to be possible for a myopic eye to regain normality. After a while I went back to the optician and told him that I was convinced that there must be some cure for my condition. He replied that this was quite impossible, as everyone knew that myopia was incurable. The assurance with which he made this statement had an effect upon me quite the opposite of what he intended, for

when he said that the cure of myopia was impossible I knew that it was not, and I resolved never to give up the search for a cure until I found it. Shortly after I had the good fortune to hear of the editor of this magazine, and lost no time in going to see him. At the first visit I was able, just by closing and resting my eyes, to improve my sight considerably for the Snellen test card, and in a short time I was able to make out most of the letters on the bottom line at ten feet. I am still improving, and when I can see a little better I mean to go back to that optician and tell him what I think of his ophthalmological learning.

MENTAL EFFECTS OF CENTRAL FIXATION

A man of forty-four who had worn glasses since the age of twenty was first seen on October 8, 1917, when he was suffering, not only from very Imperfect sight, but from headache and discomfort. He was wearing for the right eye: concave 5.00D.S. with concave 0.50D.C. 180 degrees, and for the left concave 2.50D.S. with concave 1.50D.C. 180 degrees. As his visits were not very frequent and he often went back to his glasses, his progress was slow. But his pain and discomfort were relieved very quickly, and almost from the beginning he had flashes of greatly improved and even of normal vision. This encouraged him to continue, and his progress, though slow, was steady. He has now gone without his glasses entirely for some months. His wife was particularly impressed with the effect of the treatment upon his nerves, and in December, 1919, she wrote:

"I have become very much interested in the thought of renewing my youth by becoming like a little child. The idea of the mental transition is not unfamiliar, but that this mental, or I should say spiritual, transition should produce a physical effect, which would lead to seeing clearly, is a sort of miracle very possible indeed, I should suppose, to those who have faith.

"In my husband's case, certainly, some such miracle was wrought, for not only was he able to lay aside his spectacles after many years constant use, and to see to read in almost any light, but I particularly noticed his serenity of mind after treatments. In this serenity he seemed able to do a great deal of work efficiently, and not under the high nervous pressure whose after-effect is the devasting scattering of forces.

"It did not occur to me for a long time that perhaps your treatment was quieting his nerves. But I think now that the quiet periods of relaxation, two or three times a day, during which he practiced with the letter card, must have had a very beneficial effect. He is so enthusiastic by nature, and his nerves are so easily stimulated, that for years he used to overdo periodically. Of course, his greatly improved eyesight and the relief from the former strain must have been a large factor in this improvement. But I am inclined to think that the intervals of quiet and peace were wonderfully beneficial, and why shouldn't they be? We are living on stimulants, physical stimulants, mental stimulants of all kinds. The minute these stop we feel we are merely existing, and yet if we retain any of the normality of our youth do you not think that we respond very happily to natural simple things?"

BETTER EYESIGHT

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March, 1920

INFLUENZA—A QUICK CURE

When the muscles of the eyes are perfectly relaxed all errors of refraction are not only corrected, but abnormal conditions in other parts of the body are also relieved. It is impossible to relax the muscles of the eyes without relaxing every other muscle in the body. When people have colds or influenza the muscles that control the circulation in the affected parts are under a strain, the arteries are contracted, and the heart is not able to force the normal amount of blood through them. The blood consequently accumulates in the veins and produces inflammation. Hence any treatment which relaxes the muscles of the eyes sufficiently to produce central fixation and normal vision will cure colds and influenza. When one palms perfectly, shifts easily, or has a perfect universal swing, not only the muscles which control the refraction, but the muscles of the arteries which control the circulation of the eyes, nose, lungs, kidneys, etc., are relaxed, and all symptoms of influenza, disappear. The nasal discharge ceases as if by magic, the cough is at once relieved, and if the nose has been closed, it opens. Pain, fatigue, fever and chilliness are also relieved. The truth of these statements has been repeatedly demonstrated.

The Editor is very proud of this discovery which is now published for the first time.

EDITOR'S NOTE.—*The writer of this article, a young man of twenty, was wearing, when first seen, the following glasses, prescribed three years earlier: both eyes, concave 6.50 D. S. combined with concave 3.00 D. C. 180 degrees. He also brought with him, from the Mayo Clinic, a later prescription—right eye, concave 9.00 D. S. combined with 4.50 D. C. 180 degrees; left eye, concave 8.00 D. S. combined with concave 3.00 D. C.—which indicated that there had been a very rapid advance in his myopia. The progress he made in the brief period of six weeks was very unusual.*

PROGRESSIVE MYOPIA RELIEVED

By E. E. AGRANOVE

I was only eight years old when the teacher told me that I couldn't come to school if I didn't get glasses. So, of course; I had to get them, and of course, I hated them. They kept me out of all the games that a boy really likes, such as baseball, and they made me terribly self-conscious.

Every little while I had to get new and stronger glasses. They were changed eight times in the course of the next nine years, by the end of which time I had what the specialists pronounced to be a very bad case of progressive myopia. After that I refused to make any more changes, for I had lost faith in glasses and wasn't interested in trying new ones.

Although my eyes kept getting worse all the time, and the specialists said there wasn't a chance of a cure, I always felt sure that sometime I would find a cure, and I tried and investigated everything that seemed to offer any hope of relief. One specialist said that while I couldn't be cured, it would help me to live out of doors. So I gave up my job as a telegrapher, went west and got work in the open air. It didn't do me a bit of good. Then I went in for physical culture; but, while this improved my general health, it didn't help my eyes. I tried osteopathy and chiropractic, but they didn't help either. I read all the literature on the subject that I could find, and the invariable assertion of the authorities that my condition was hopeless did not shake my conviction to the contrary. I even made a trip to Rochester, Minnesota, for the sake of visiting the famous Mayo Clinic, where I expected to find all medical wisdom concentrated. All I got was a prescription for a stronger pair of glasses and a confirmation of the statements of my previous medical advisors, and of the medical books, that myopia was incurable. I remained unconvinced, however.

I now happened to run across an article in the *Literary Digest* about a method of curing shortsight by squeezing the eyeball, said to have been used successfully in Paris. I wrote for further information but was told that the article was merely a reprint from *La Nature* and that the office knew nothing more about it. The editor suggested, however, that I write to Dr. Bates who was making a special study of this problem. I had already heard of Dr. Bates through another source, and I lost no time in following this advice. He assured me that my condition was curable, and as I did not want to go to the expense of going to New York I asked him if he could treat me by correspondence. He replied that while he had cured many patients by correspondence, such treatment was slow and at a little uncertain, and in a case as serious as mine had better not be relied upon. As soon as I was able, therefore, I gathered together all the money that I had and went to New York, in spite of a tremendous amount of opposition and no encouragement whatever. Every doctor and every layman to whom I mentioned my purpose said I was crazy to suppose that shortsight could be cured, when all the books said it was incurable. My brother, who is an optician, was so strong in his opposition that I don't think I should ever have got to New York if I hadn't pretended that I was going for some purpose other than the real one-and even after I got there and was able to write to him that my sight was improving, he kept urging me to come home, telling me that any man who pretended to cure shortsight must be a quack, and that if I imagined I was getting any benefit it was because I had been hypnotized.

I arrived in New York on December 17, 1919, and went at once to Dr. Bates. When my eyes were tested with the Snellen test card, I found that at twenty feet I could see only the large letter at the top. I could read large print at five and a half inches, but could not read it any nearer or any farther, and could not see diamond type distinctly at any point.

I put in six hours a day at the office, practicing constantly with the Snellen test card, and at first found it rather discouraging and tiresome. When I tried to palm I saw all the colors of the rainbow instead of black. As I could not see anything perfectly, either at the near-point or the distance, I could not remember anything I saw perfectly. Even my own signature I was unable to visualize. Neither could I imagine that the letters on the card were moving when I shifted from one to another, or from one side of a letter to another.

At the end of a week, however, I succeeded in getting the swing, becoming able to imagine not only that the letters on the card were swinging, but that my body and everything that I thought of was swinging also. This **universal swing** soon established itself so thoroughly that I was unable to stop it and the Doctor had to tell me how. I did it by staring at a letter of fine print for a few seconds. After this things began, to go better. As long as I imagined the universal swing I could see black when I palmed and remember it with my eyes open. When I imagined it on the street it was as if a fog had lifted, or the sun had come out from behind a cloud. My sight improved rapidly, and I began to find the practice extremely interesting. I never got bored or sleepy, and, in fact, never had such a good time in my life.

Besides improving my sight the swing did many other things for me. I had never done any running before coming to New York, but I now began to experiment with that form of exercise, not expecting in the least to distinguish myself. In a week, however, I was **able to run eleven miles, without fatigue or loss of breath, and without even feeling sore or stiff afterward. This I attributed to the swing, which I kept up all the time I was running. When I did not do this, I quickly became tired.** One day I had to visit a chiropodist to have an ingrowing nail treated. The first touch was excruciatingly painful. Then the chiropodist turned away to get an instrument, and I began to swing. When he resumed work I felt no pain, and the operation was finished painlessly. Even loneliness seemed to flee before this imaginary rhythmical movement, and it has now become so necessary to my existence that I would even be willing to go back to the hated glasses rather than be without it.

When I left New York on December 31 I was able to make out some of the letters on the bottom line of the test card at twenty feet and to read diamond type at from four to eighteen inches, while my eyes, which had previously been inflamed and partly closed, were clear and wide open. Incidentally my memory, which had previously been so poor as to cause me great inconvenience, and for which I had taken several memory courses in vain, had improved as much as my eyesight.

STORIES FROM THE CLINIC

2. A Case of Cataract

By EMILY C. LIERMAN

One day as I entered the clinic I found a little white haired woman waiting patiently to be treated. I had not seen her before, and did not know what her trouble was. The usual crowd of patients was waiting for Dr. Bates and myself, so when he said to me, "See what you can do for this woman," I did not ask any questions, for I knew that whatever the condition of her eyes relaxation would help her.

I placed her four feet from the test card, at which distance she read the forty line (read by the eye with normal vision at forty feet), and told her how to rest her eyes by palming and how to avoid staring by shifting from one side of a letter to another. These practices helped her so much that before she left she was able to read the thirty line.

Later I learned that she had first seen Dr. Bates in March, 1919, and that she had incipient cataract of both eyes. In October, 1916, she had visited another dispensary where an operation was advised when the cataracts were ripe. I also learned that in spite of her seventy-three years she worked hard every day for her living, being employed in an orphan asylum where she mended the children's clothes. The fact that she was very deaf I saw for myself, of course, at the first interview, for I had to scream to make her hear. Her courage and cheerfulness under circumstances that might have daunted the bravest spirit were amazing. Her face was always radiant with smiles, and she was so witty, and so appreciative of everything that was done for her, that each one of her visits to the clinic was a pleasure to me.

"I have so much to be thankful for," she said one day. "I know I will see all right again. They are waiting to operate at the other dispensary, and I am waiting to fool them."

The orphanage is about two miles from the clinic, and often she walks the entire distance rather than bother waiting for a car. She insists after these feats that she isn't a bit tired. One day there were no cars running and the walking was so bad that a friend urged her not to go out unless she was prepared to swim. She came just as usual, however. Why should she stay in, she asked, because other people were afraid to go out. She wasn't tired either, and she hadn't even got her feet wet. She just dodged the snowdrifts.

Most patients frown when they cannot see a letter, but my little cataract patient smiles instead and remarks cheerfully, "That's the time you got me."

One day she did not do as well as usual, and I found that the people in the place where she worked had been saying unpleasant things. I told her she must try not to let things of this sort disturb her, because that made her strain and made the cataracts worse.

"Well," she said, "it is mighty hard not to worry; but I'll try not to."

At a recent visit she explained that she wouldn't he able to do very well because she hadn't had time to practice.

"Never mind," I said. "Just do as well as you can." Without her knowing it I placed her two feet farther from the card than usual. Then I told her to palm, and after a short time I pointed to a small letter on the bottom line and asked her if she could see it. She recognized it immediately. Then I pointed to another, but she was so eager to see it that she tried too hard and failed. She closed her eyes for a few minutes without palming, and when she opened them she read the whole line. I then told her that she was two feet farther away from the card than she usually was. She was very happy about this and said, "That's the time you fooled me."

She has since become able to read the bottom line at ten feet, and one day she read it at eleven feet, without knowing it and without having done any practicing at home. On sunshiny days she can read the "W. H. Bates, M.D." on Dr. Bates' card, and for over a month she has done all her sewing without glasses. There is no doubt that she is going to fool them at the other dispensary.

Along with the improvement in her eyes has gone a considerable improvement in her hearing. Noises in her ears which she describes as a "ringing and a singing" are promptly relieved by palming, and she says that the relief, which at first was only temporary, is now becoming more constant. She also says that she hears conversation better than she used to.

HOW I WAS CURED

By VICTORIA COOLIDGE

EDITOR'S NOTE.—*This is the first of a series of articles by the same author. Next month she will tell us how she cured other people. Owing to her high degree of hypermetropia, her own cure is particularly interesting.*

When I went to see Dr. Bates I had been wearing glasses for twenty-six years. A prescription for glasses given to me in 1899 read: right eye, convex 5.00 D. S. combined with convex 0.50 D. C. 180 degrees; left eye, convex 5.00 D. S. combined with convex 1.00 D. C. 180 degrees. Another given to me in 1917 read nearly the same. I had consulted five different eye specialists, some of them several times, and they all told me the same thing—very poor sight caused by malformation of the eyeball and no possibility of cure.

Fortunately, I was only a child when I first put on glasses, and these statements, instead of discouraging me, made me feel that I was very important and should be the envy of all my schoolmates. As I grew older, however, I began to have headaches; so I had my glasses changed and my home study was reduced to one hour. As the changing of my glasses meant, at that time, a trip out of town, both parts of the treatment were very pleasant-more pleasant than effective, for the headaches continued.

Each time the eye specialist gave me stronger glasses, and gradually my vision for distant objects became worse and worse. When I went to the theatre I could not see the faces of the actors distinctly unless I sat as near as the fifth or sixth row from the stage; and when I discussed the play with the persons who accompanied me, the accuracy with which they could describe the features and expressions of the actors, without the aid of eyeglasses or opera-glasses, seemed unbelievable. The feeling of depression which I experienced on these occasions, however, was only momentary, and on the whole I was resigned to my fate.

But resignation was not so complete as to dull entirely my sense of ocular deformity; and, especially when I had had some fresh reminder of it in the shape of a headache, or inability to finish a book because of tired eyes, I searched the magazines eagerly for discoveries about the eye. I felt sure that science had not said the last word about that subject. In January, 1915, my attention was called to an article entitled *New Light Upon Our Eyes*, in the *Scientific American*, and I lost no time in reading it. you may be sure the article stated that Dr. Bates, who was already well known to the scientific world as the discoverer of adrenalin, had made a series of experiments on animals, the results of which struck at the very foundations of the present method of treating errors of refraction. They indicated, in short, that the **lens is not a factor in accommodation, and that the deviations from the normal in the**

shape of the eyeball which produce errors of refraction are caused by a strain of the extrinsic muscles. As soon as the strain is removed, by perfect relaxation, the eyeball resumes its normal shape and there is no error of refraction. The remedy, therefore, was not to put glasses before the eyes, but to remove the strain which caused the abnormal action of the outside muscles.

The morning after reading the article I took off my glasses, and tried to knit, but put them on more quickly than I had taken them off, for my sight was so poor without them that I made several mistakes and experienced a feeling of nausea. I believe that I had never until that moment realized how very poor my sight had become. I began to leave off my glasses whenever I had no close work to do, in spite of the fact that I had been warned by one eye specialist never to let them leave my nose during waking hours, and I determined to see Dr. Bates the very next time I came to New York.

The following August I called on Dr. Bates. I was prepared to make any sacrifice, or to spend any amount of time—five years, ten years—it didn't matter, if my eyes were only getting better all the time instead of worse. The only thing that troubled me was the fear that he might tell me that my case was hopeless. This thought was so prominent in my mind, in fact, that I told him at once that I was afraid he could do nothing for me. I wanted him to know that I was prepared, so that if I must hear my doom I might hear it without delay.

After making a careful examination of my eyes, Dr. Bates asked me what was the lowest line that I could read on the test card. I found that I could read the thirty line at a distance of fourteen feet. Then he asked me if I could see anything on the line below. I said I could see the hollow square. Then he directed me to close my eyes, remembering how the square looked, I was able to do that, and he next directed me to look at the blank wall, still remembering the square; while I was doing so, he examined my eyes again with a retinoscope and found them normal. When the strain was removed from my eyes by remembering the square perfectly and looking at the blank wall without trying to see anything, my vision became normal. The impossible had evidently been accomplished. For a few moments, at least, the lopsided eyeballs with their consequent errors of refraction had been miraculously rounded out. Dr. Bates now asked me to close my eyes, and then left me for about fifteen minutes. When he returned, he handed me one of his professional cards and asked me if I could read anything on it. It seemed to me, I remember, a very foolish question because I had previously told him that I could read nothing without glasses. A newspaper looked like a big gray blur, and the harder I tried to see it the more blurred it became. However, I took the card and tried to read it, but, as I expected, without success. So he asked me to close my eyes again, this time covering them with the palms of my hands, and thinking of the blackest thing I could remember, which happened to be black paint. I did this for perhaps twenty minutes. After this he gave me the same card again, and directed me to hold it close to my eyes, about six inches, and to look alternately at the top and bottom of the letters. Much to my amazement and joy, a "B" came out clearly enough for me to recognize it. I kept on in this way, occasionally closing my eyes, until I could see "Bates," "Dr. W. H. Bates." and finally the telephone numbers printed in small type. I felt as if I were in a dream, or as if I must be some one else. I lived in the clouds for the rest of the day, but somehow managed to get in some palming and some practice with the Snellen card.

The next day I did better, and I have kept on improving ever since. The best of it is that every gain is permanent. Dr. Bates told me that I would never have to wear glasses again, but I kept them near me for two or three weeks in case of emergency, just as Dr. Manette, in Dickens' *Tale of Two Cities*, used to keep his shoemaking tools and bench at hand in the event of his relapsing into his disordered state of mind. I never had to use them, however, and about six months ago I sold them for old gold. My vision is now 20/20 in a good light and 20/30 in any light, and I can read diamond type at six inches.

AFTER GLASSES FAILED

By Florence Miller

I began to wear glasses when I was fifteen years old, and wore them unchanged for seven years. Then I went to another specialist who gave me new ones—stronger, I suppose. I wore these for a year, and then, not feeling quite comfortable in them, I consulted a third specialist, who changed them again. These lenses I wore for four years, by the end of which time I had begun to have constant though not severe **headaches**. I went back to the third specialist a second time, but he said he could not improve upon the lenses I was wearing, and I went on having the headaches, which gradually became worse until sometimes I had to go to bed with them.

One day my son, ten years old, came home and said that the teacher had told him that he needed glasses. Naturally I did not wish to see him wearing spectacles if there was any way of avoiding it, and as my husband, who is a physician, had recently heard Dr. Bates read a paper at a medical society on his method of curing errors of refraction without glasses. I took my boy to see him. Dr. Bates not only assured me that the child could be cured, but improved his sight markedly at the first visit. Then he turned to me and said:

"I can cure you, too."

"But I couldn't possibly go without glasses," I said; "I get such awful headaches when I do."

"Do you want to be cured very much?" he asked.

"I would do anything in this world," I said, "to be cured."

"If so," he answered, "I can cure you, and you will be able to go without your glasses without getting headaches."

"What do you want me to do?" I asked.

"I want you to take off your glasses," he said, "and come and see me every day for a while."

I took the glasses off, and have never worn or wanted them since. Just what became of them I don't know. My impression is that I gave them to the doctor and that he put them in a cabinet where he deposits treasures of that kind. He says he told me to throw them in the ash-can, and that I afterwards said I had done so. At any rate I am sure that I never put them or any other glasses before my eyes since that day.

This was on July 14, 1914, and my vision, as tested by the Snellen test card without glasses, was 20/200 in each eye. The doctor said I had compound myopic astigmatism and that my glasses were concave 0.50 D. S. combined with concave 1.50 D. C. 180 degrees. It was troublesome and tedious learning to see. For two months I went to see Dr. Bates nearly every day, and he spent half an hour or more with me. For another two months I went twice a week. Since then I have continued to practice more or less regularly with the test card. But the results have been worth all the trouble.

Most of the practice time I spent simply resting my eyes by closing them, or by covering them with the palms of my hands, then looking at the test card for a moment and resting again. The doctor told me that when I looked at a letter on the test card and did not see one part of it better than the rest I was immediately to look away and rest my eyes. He also recommended me to imagine that I saw one part of a letter best with the eyes open and closed alternately. In this way I finally became able to look at each and every letter on the card and see one part of it best, when my vision became normal, and even double what is ordinarily considered normal.

On July 20, less than a week after I began to take the treatment, I was able to read most of the letters on the bottom line of the test card at twenty feet (20/10), and in two weeks I could read all of them. At first I was able to do this only temporarily, but gradually I became able to hold the letters longer. On August 12 I was able to report that for the first time in years I had not had a headache for a whole week. By September 2 I was able to read and sew as much as I liked without any discomfort in my eyes. When I wore glasses the theatre and movies had always hurt my eyes terribly, but instead of advising me to stay away from these places, Dr. Bates urged me to go to the movies and look at them just as I did at the test card—that is, by alternating vision with rest. I was to look first at the corner of the screen, then off to the dark, then a little nearer the center, and so forth. In this way I soon became able to look directly at the pictures without discomfort.

For the last five years my sight has steadily improved. My form of astigmatism was such as to positively obliterate all horizontal lines. To see such lines at all I had to turn my head, or the object. Lines of music would hold only a minute or less. I have gradually become able to hold these lines longer and longer, and now I never lose them unless very tired. As for headaches I have had none at all during these years that could not be accounted for by indigestion or neuralgia, and very few even of these.

Last Spring I went to see Dr. Bates about an ulcer on my cornea. He tested my sight and found it, even under these conditions, better than normal.

In later issues of Better Eyesight Magazine Dr. Bates states that glasses can be worn, only if necessary for emergencies and the vision can still improve, but glasses will slow and can block, reverse vision improvement.

Modern teachers state; if eyeglasses are necessary for work, driving… wear reduced weaker lenses, continually reducing the eyeglass strength until the vision is clear enough to discontinue use of the glasses. Wear only when necessary.

Continue shifting, central fixation, Bates Method bas when wearing the glasses and when without glasses.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

April, 1920

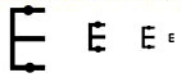
REST

All methods of curing errors of refraction are simply different ways of obtaining rest.

Different persons do this in different ways. Some patients are able to rest their eyes simply by closing them, and complete cures have been obtained by this means, the closing of the eyes for a longer or shorter period being alternated with looking at the test card for a moment. In other cases patients have strained more when their eyes were shut than when they were open. Some can rest their eyes when all light is excluded from them by covering with the palms of the hands; others cannot, and have to be helped by other means before they can palm. Some become able at once to remember or imagine that the letters they wish to see are perfectly black, and with the accompanying relaxation their vision immediately becomes normal. Others become able to do this only after a considerable time. Shifting is a very simple method of relieving strain, and most patients soon become able to shift from one letter to another, or from one side of a letter to another in such a way that these forms seem to move in a direction opposite to the movement of the eye. A few are unable to do this, but can do it with a mental picture of a letter, after which they become able to do it visually.

Patients who do not succeed with any particular method of obtaining rest for their eyes should abandon it and try something else. The cause of the failure is strain, and it does no good to go on straining. Different treatments are needed for certain individuals. Each person has their own thoughts, experiences. Certain treatments work best that match the personality, mind of the patient.

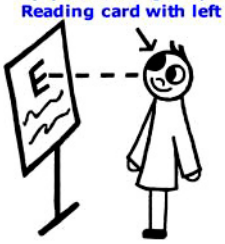
Shift on letters to see them clear -
Top and bottom, left and right, diagonally, middle, to any part, direction. Blink.



Shift on fine print letters.
Shift on a period.

Shift on letters on the Snellen Test Card with:
+Both eyes together.
+One eye at a time.
+Both eyes together.

Eyepatch on right eye.
Reading card with left eye.



HOW I HELPED OTHERS

By VICTORIA COOLIDGE

When I had become able to read without glasses, and my headaches had become less and less frequent, and less severe each time, I was so enthusiastic over my experience that I was anxious to help others. My brother was my first patient. He was so much interested in what had been done for me that he wanted to try it himself; but I never dreamed of being able to help him, because his eyes were almost as bad as my own had been, his glasses being: right eye convex 3.25 D.S.; left eye, convex 3.75 D.S. combined with 0.50 D.C., 180 degrees. However, I knew the treatment could do no harm, so I decided that I would try to show him as nearly as I could what Dr. Bates had done for me. Imagine my surprise, then, when I found that he, too, by holding the fine print six inches from his eyes and looking alternately at the top and bottom of the letters, became able to read it just as I had become able to do so. He proved to be a model pupil as soon as he had demonstrated to his own satisfaction that he must leave off his glasses all the time if he wanted to make any appreciable progress. He has now done without them for about a year, and has made remarkable progress in that time, the secret of his success being a great desire to be cured, an intelligent grasp of the idea of central fixation, and perseverance in practicing central fixation at every possible opportunity.



The next person I was able to help was a friend who, while visiting me, happened to notice the Snellen test card hanging on the

wall. She asked me what I was doing with it, and I explained, adding that she was very fortunate in having normal vision. "I thought I had," she said, "but I have had so many headaches that I consulted an eye specialist the other day and he gave me glasses." She was so displeased to think she had to wear them, and had found it so difficult to get used to seeing with them, that I asked her if she would like to try Dr. Bates' treatment without glasses. She said that she would jump at the chance. I told her to read the card every day at ten, fifteen, and twenty feet, and to palm whenever she had a headache. That was in August. On December 19 she telephoned that she had practiced reading the card every day, that she had had no trouble with headaches, and that she was reading 20/10 easily with the better eye, and fairly well with the other. Shortly after she began the treatment herself, she was able to improve the vision of a child nine years old from 20/50 to 20/20.

It has been many times pointed out in this magazine that children under twelve years of age who have never worn glasses are easily cured; and so for the past month I have been trying to see what I could do for such children, and for some who were older—including two who had worn glasses, one some time previously and the other up to the time I began to treat her. I have worked with six and they have all improved. One girl, fifteen, who had worn glasses a few years ago for imperfect sight in one eye, but who had discarded them, improved in a half hour from 20/70 to 20/50, by alternating palming, or sometimes just closing her eyes, and then reading the Snellen test card. This improvement was permanent.

Another girl, sixteen, had worn glasses for a year, chiefly for headache, she said, although her vision in both eyes was but 20/200. As she could read without her glasses without much difficulty, she was only too glad to take them off, as most girls of that age are, but she was afraid of the headaches. I asked her to try it, and she has done so for about three weeks, during which time her vision improved to 20/70 and she had no headaches.

The following is the record of four little girls who have improved by reading the Snellen test card daily, and palming:

Name	Age	Vision Sept., 1919 Phys. Rec. Card	Dec. 11	Dec. 31
Catherine	10	R. 20/50	20/40	20/40
		L. 20/50	20/40	20/40
Blanche	10	R. 4/50	6/40	6/30
		L. 4/50	6/40	6/30
Vinnie	9	R. 20/50	20/40	
		L. 20/40	20/30	absent
Sylvia	10	R. 20/40	20/15	20/10
		L. 20/40	20/15	20/10

Catherine's vision afterwards (January 22) improved to 20/20. The case of Sylvia was so interesting that it will be treated in more detail next month.

Catherine's vision afterwards (January 22) improved to 20/20. The case of Sylvia was so interesting that it will be treated in more detail next month.

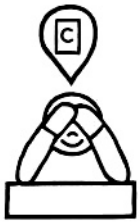
STORIES FROM THE CLINIC
3. Retinitis Pigmentosa
By EMILY C. LIERMAN

I am not a physician, and I know very little about the disease of the eyes known as *retinitis pigmentosa* except how to relieve it. I have been told that in this condition spots of black pigment are deposited in the retina, that parts of the retina are destroyed, and that the nerve of sight is diseased. Eye books which describe the disease say that it usually begins in childhood, and progresses very slowly until it ends in complete blindness. The field of vision is contracted, and, because they cannot see objects on either side of them, patients frequently stumble against such objects. In most cases the vision is much worse at night than in the daytime. The books say further that no treatment is known which helps these cases. Nevertheless Dr. Bates reported, in the *New York Medical Journal* of February 3, 1917, a case of retinitis pigmentosa which had been materially benefited through treatment by relaxation, and by the use of the same methods, I have been able to greatly improve the sight in several cases of the same kind.

My first case of retinitis pigmentosa was Pauline, a little girl of twelve who came to the clinic in October, 1917. At five feet from the card she could read only the seventy line, and her eyes vibrated continually from side to side, a condition known as *nystagmus*. She was very shy and extremely nervous, and appealed to me pathetically for glasses, so that she could see the blackboard, and the teacher would not think her stupid and make fun of her. I have noticed that eye patients often suffer from extreme nervousness; but this poor child had the worst case of nerves I ever saw, and the slightest agitation made her sight worse. If, in asking her to read a line on the test card, I raised my voice and spoke a little peremptorily, her face would flush, and she would say, "I cannot see anything now." But just as soon as I lowered my voice and took pains to speak gently, her sight cleared up.

I began her treatment by telling her to cover her eyes with the palms of her hands and remember the letters she had seen on the card. This improved her sight so much that before she left she was able to see all the fifty line at five feet, and—what thrilled me most of all—the dreadful movement of her eyes had stopped. She came quite steadily to the clinic, and every time she came I was able to improve her sight, so that at last she became able to read the writing on the blackboard at school.

Palm and remember the letters on the test card. Shift on the letters in the mind. Imagine the letters dark black, clear.



Then I did not see her again for six months. When she came back she told me that she had been working in a laundry during the summer because she hated school. She had also been ill during the summer, and her mother had taken her to a hospital for treatment. While she was there an eye specialist had looked at her eyes, and this made her so nervous that they had started to vibrate from side to side. He said to her:

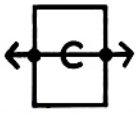
"You ought to have your eyes treated; they are very bad."

"I am having them treated at the Harlem Hospital Clinic," she answered. "I know how to stop that vibration."

Then she palmed for a while and when she uncovered and opened her eyes the doctor looked at them again.

"Why they seem all right now," he said. "You had better go to that doctor until you are cured. He can do more for you than I can."

I was very much pleased to find that in spite of having stayed away so long, she had not forgotten what I had told her, and was able to stop her nystagmus. I tested her sight, and found that it was no worse than when I had last seen her. In fact, in some ways, it was better. She was not so nervous, and she said that her family and friends noticed that her eyes looked better. She herself was now very enthusiastic and anxious to have me help her. I told her to palm as usual, and left her to treat other patients. Five minutes later she read the thirty line at thirteen feet. I now told her to look first to the right of the card and then to the left, and to note that it appeared to move in a direction opposite to the movement of her eyes, then to close her eyes and remember this movement. She did this, and when she opened her eyes she read two letters on the twenty line. At a later visit she read the whole of the twenty line at thirteen feet.



Shift to the right and left of the card (dot to dot) and see the card move opposite the movement of the eyes. Then, close the eyes/palm and remember the card, imagine shifting right and left on the card and remember/imagine the movement: Oppositional Movement, 'The Swing'. Open the eyes and read the card with clear vision. Repeat.

The last patient I treated for this dreadful disease was an old man of seventy. He came to the clinic on January 14, 1920, and when I first saw him, he was standing with many others, waiting patiently for Dr. Bates to speak to him. Our work has to be done very rapidly, because of the very short time we have to treat so many patients, and I very seldom have time to observe individuals as I would like to do. But because of his unusual appearance, I at once singled this dear old man out from the crowd. Most men of his age who come to our clinic are unkempt, dirty and ragged—pitiable objects generally. But this man was well groomed. His clothes, though worn and old, were well brushed; his shoes were polished, his collar clean, his tie neatly adjusted. He had a great abundance of snow-white hair, neatly parted and brushed, and his skin was like a baby's, "pink and white."

Dr. Bates asked me to treat him with the usual remark, "See what you can do for this man," and I placed him four feet from the card, asking him to read what he could.

"I'm afraid I can't see so well, ma'am," he said; "my eyes bother me a good deal."

"I'm going to show you how to rest your eyes so that they won't bother you," I answered.

The best he could do at this distance was to read the fifty line. I told him to palm, and in less than five minutes he saw a number of letters on the forty line. The next time he came I put him nine feet from the card, and at this distance he read all the letters on the thirty line. He was so happy and excited over this that I became excited too. I forgot that I had other patients waiting for me and encouraged him to talk, a thing which I am seldom able to do with the patients. I was glad afterward that I did so for he had a wonderful story to tell.

"Do you know, ma'am," he said, "for two nights I palmed and rested my eyes for a long time before I went to bed—and what do you think?—I slept all the night through without waking up once. Now I think that's great, ma'am, because for years I have had insomnia. I would sleep only a little while; then I would get up and smoke my pipe to pass the time."

At a later visit I put him twelve feet from the card, and at this distance also he was able to read the thirty line. When I told him what he had done he was again greatly pleased and excited.

"You know I'm so much better," he said, "that I didn't even notice that I was further away than usual. Thank you, ma'am. God bless you, ma'am."

During the practice, when he failed to see a letter I was pointing to, I said:

"Close your eyes and tell me the color of your grandchild's eyes."

"Blue. ma'am." he said.

"Keep your eyes covered, keep remembering the color of baby's eyes."

He did this, and after a few minutes his sight cleared up and he saw the letter. After we had finished the practice I again encouraged him to talk, and he told me more about his insomnia.

"Do you know, ma'am," he said, "after I had had two night's sleep without waking up I didn't dare tell any of my family about it, for fear that it wouldn't last and I would only disappoint them. So I waited. Now, do you know, ma'am, it is just two weeks that I have slept the night through without waking up once, and so I told my wife about it. She is so happy, ma'am, I just can't tell you, for it has been many years since I was able to do that."

I wish I could have a picture of his face when he is telling of the improvement in his eyesight and general health. It would be a picture of gentleness, love, kindness and gratitude.

Recently he looked up into my face and said: "I am seeing you better now, ma'am. You look younger."

In two months his vision improved from 10/200 to 10/30. As he made but eight visits in this time, I feel that this record is remarkable. I also feel that the statements in the books about the impossibility of doing anything for patients with retinitis pigmentosa are in need of modification.

PERFECT SIGHT WITHOUT GLASSES

By EVELYN CUSHING CAMPBELL

EDITOR'S NOTE.—*The author of the following article is engaged in literary work which compels her to use her eyes constantly for reading and writing. When first seen she was wearing the following glasses: right eyes, convex 1.50 D.S.; left eye, convex 1.25 D.C.*

One of several problems which long disturbed my mind, both consciously and subconsciously, was whether the distressing condition of my eyes was caused by bodily ailments, or my general state of ever-present weariness was due to trouble with the eyes. Without glasses, my eyes felt blurred and strained; after wearing them for a time, the immediate relief was succeeded by increased weariness and a desire to throw them far away. Often I thought, "How happy would I be if I never again had to put on my glasses!"

My problem has now been solved. The haunting spectre of anxiety which stalked ever at my side has vanished, and I have entered upon a state of beatific bliss and satisfaction with life in general. I have acquired perfect vision without glasses, and at the same time a relaxed state of once over-strained nerves which gives me a glimpse of what heaven may hold in store for world-weary mortals.

A visit to Dr. Bates wrought this seeming miracle, so far beyond any hope or expectations in which I had ever dared to indulge that I now confess, as an article of faith, that hereafter I shall always believe that everything is possible.

The first treatment occupied not more than half an hour, but in that brief time I passed from inability to read type of medium size, except at arm's length, to reading type less than half the size and at a proximity to the eye which formerly had made the letters absolutely illegible.

My recollections of the entire treatment are by no means consecutive nor complete, but the results were more than conclusive that the basic principle must be sound.

After some preliminary tests with charts, Dr. Bates informed me that there was nothing wrong with my eyes. This in itself was a tremendous relief, as it immediately suggested the possibility of benefit by means other than the wearing of nerve-racking eyeglasses.

"Close your eyes and rest them," I was told.

The closing was at once accomplished, but the resting process proved to be more elusive. Almost at once the eyelids began to twitch so constantly that only with great difficulty was I able to keep the eyes closed at all. Upon opening them, the letters on the test card were very much blurred, and suggestive of little dancing figures.

Instructions followed to close the eyes again and, first, to remember the white of starch; then the black of coal. When the eyes were reopened from the blackness, they felt distinctly rested and it was possible to read lines upon the card which previously had been very unclear.

"Now close your eyes and remember an agreeable color—the green of trees, of grass, the color of flowers."

This I did, seeing the green leaves of oak trees with sunlight upon them, the blue of a river glimmering beyond; brighter green of grass on a hillside; yellow flowers with fine-fringed petals upon which had alighted a butterfly of deeper yellow; reddish-yellow tiger-lilies; pink roses, red roses, yellow roses; blue sky with cumulus cloud masses.

Upon opening my eyes, the first line of printing on a card which had been much blurred at a distance of, say nine inches, could now be read with ease. The card was then brought three inches nearer, with the result that the printing once more became indistinct.

Directions now followed to close the eyes and again remember a color. After some hesitation, I brought to my mind yellow, but the eyes did not feel rested, as on the former occasion. This I thought might be due to the effort to concentrate upon an object of that color - a curtain of yellow hanging in my apartment. My comment to this effect met the response that I must not make any effort, that all effort was bad for the eyes.



Palm and remember a black period. Shift on it left and right and see it swing left and right like a pendulum.

Another instruction was to close the eyes, covering them with the cupped palm, fingers crossed lightly upon the brow, with no pressure upon the eye itself, and to remember black. This is called "palming." The blackness at first was filled with swirling, grayish, elongated globules, and the eyelids twitched. No other color was visible, and these swirling particles gradually became less apparent.

"Now remember a black point, or period, and imagine it swinging like a pendulum."

My first attempt was a failure, but I finally succeeded and, to my amazement, found upon opening the eyes that I was able to read diamond type on a small card held at a distance of six inches from the eyes. This really surpassed everything else, for formerly the person who held anything before my eyes at this close range had inflicted positive suffering upon me, and was usually greeted with an expression of ill-suppressed irritation, for the attempt to focus the eyes at this point produced at once a feeling of nausea.

A peep into the mirror showed my eyes much clearer and less filled with weariness than I had been accustomed to see them after hours of sleep. Completely convinced of the uselessness of wearing aids to eyes that did not aid but only irritated, I went home to consign the hated glasses to the darkest and deepest corner of my "Botany Bay" trunk. They have lain there undisturbed for over a year. I have never since that day felt the need of them, and my eyes have performed without fatigue tasks which would have been quite beyond them in the days when I depended on eye-crutches. One day recently when I had to finish a piece of work in a limited time, I worked at my typewriter from nine in the morning until four the following morning, only stopping for meals, and my eyes were just as fresh when I finished as when I began.

"BETTER EYESIGHT" APPRECIATED

The testimony of the following letter to the value of the experiences of patients recently published in this magazine is very interesting. The statements about the effect of central fixation upon the desire for sleep are also significant, and the facts have been duplicated in many other cases.

I am keenly interested in this medium through which your discoveries and the experiences of your patients are made known to the public. My eyesight is improving steadily, and I find that I am grasping and applying the principles set forth in your magazine more intelligently every day.

I have improved physically and mentally since I started the exercises. Ever since I can remember, I have had the greatest difficulty in rousing myself from a very heavy sleep in the morning into which I seem to fall after a night of constant dreaming. As a

result, I feel heavy with fatigue and positively stupid mentally. One doctor whom I consulted said that these nocturnal disturbances were due to indigestion, or a bad conscience! I told him I guessed it was both!

As soon as I awaken in the morning now, I start my exercises and after palming, flashing and swinging, I feel as if a fog had lifted and as if I were suddenly released from a weight that had held me down. I start the day with a clear mind and a buoyant energy that enables me to accomplish twice as much as I used to. This has been a very interesting experience to me, and a very curious one. I suppose some mental scientists would say that I forget my fatigue because I focus my attention and interest on something else, which may be true to a certain extent, but not wholly, because it does not explain the sudden clear vision and physical freedom of which I immediately become conscious.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

May, 1920

Fine Print a Benefit to the Eye

Its Effect the Exact Contrary of What Has been Supposed

Seven Truths of Normal Sight

1—Normal Sight can always be demonstrated in the normal eye, but only under favorable condition.
2—Central Fixation: The letter or part of the letter regarded is always seen best.
3—Shifting: The point regarded changes rapidly and continuously.
4—Swinging: When the shifting is slow, the letters appear to move from side to side, or in other directions, with a pendulum-like motion.
5—Memory is perfect. The color and background of the letters, or other objects seen, are remembered perfectly, instantaneously and continuously.
6—Imagination is good. One may even see the white part of letters whiter than it really is, while the black is not altered by distance, illumination, size, or form, of the letters.
7—Rest or relaxation of the eye and mind is perfect and can always be demonstrated.
When one of these seven fundamentals is perfect, all are perfect.

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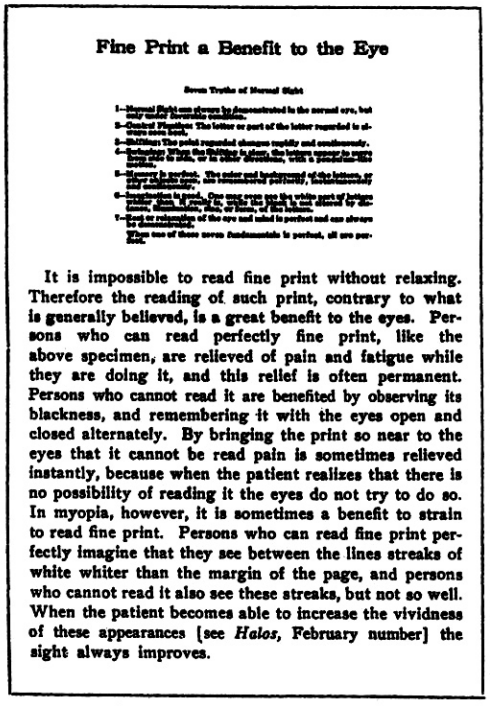
When one of these seven fundamentals is perfect, all are perfect.

It is impossible to read fine print without relaxing. Therefore the reading of such print, contrary to what is generally believed, is a great benefit to the eyes. Persons who can read perfectly fine print, like the above specimen, are relieved of pain and fatigue while they are doing it, and this relief is often permanent. Persons who cannot read it are benefited by observing its blackness, and remembering it with the eyes open and closed alternately. By bringing the print so near to the eyes that it cannot be read pain is sometimes relieved instantly, because when the patient realizes that there is no possibility of reading it the eyes do not try to do so. In myopia, however, it is sometimes a benefit to strain to read fine print. Persons who can read fine print perfectly imagine that they see between the lines streaks of white whiter than the margin of the page, and persons who cannot read it also see these streaks, but not so well. When the patient becomes able to increase the vividness of these appearances [see *Halos*, February number] the sight always improves.



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MY HEADACHES

By R. Ruiz Arnau, M.D.



Migraine Headache causes Zig-Zag patterns of flashing, moving lights with temporary partial blind spots in the visual field and impaired memory.

From my childhood until about three years ago—I am now forty-six—I suffered from headaches, periods of intense supraorbital pain lasting from twenty-four to thirty-six hours, unless relieved by repeated doses of some derivative of antipyrin. A notable feature of these attacks was their regularity; every six days—seven at the most—I would awake with a feeling of discomfort near the right temple, the forerunner of immediate torment. Unless relieved by the use of a sedative, varying according to the time and also the results or lack of results obtained from previous doses, the painful paroxysm, with all its train of nausea, eructation, polyuria, excessive sensitiveness to light and noise, and complete incapacity for physical or mental activity, would run its course, producing a condition truly unbearable for one or two days. In the intervals between the attacks I was absolutely normal, and even accomplished more, perhaps, than the ordinary person, thus compensating for the time lost by headache. Under these conditions I went through my studies at the high school and took my medical course. Thereafter, for a period of about twenty years, I followed the profession of an active general practitioner, wrote many articles and several books, always subject to the terrible prospect of the period of **migraine**, which unfailingly appeared with invariable regularity.

As I enjoyed, or thought I enjoyed, perfect vision, I lived to the age of thirty-three accepting the idea of hereditary rheumatic migraine; my mother suffered from similar headaches all her life, and so also did my sisters. I had been told that if the headaches were due to such a cause, they would be modified, or disappear, after thirty years of age, some other indisposition, perhaps, taking their place. With that hope I almost wished the years to pass quickly, so that I might not only be free from an excessively painful malady, but be able to devote myself to the intense mental labor to which my vocation and tastes had always inclined me. My thirtieth birthday came and went, however, with no cessation of the headaches and no diminution in their severity.

With the passing of the years, too, came a desire to cultivate a specialty requiring deep, constant and careful theoretical and practical work. For this purpose it was necessary for me to read a number of books printed in small type, and as my professional work, then very arduous, left me but little free time, I had to read them at all hours and in all places, often in moving vehicles. In the space of a few months, my age being then thirty-four, I found my sight ruined, constituting a new factor in my (supposedly) inherited disorders. Immediately on beginning to read I would experience ocular fatigue and a feeling of discomfort in the eyeballs, and this aggravated the headaches, although I was now in the fourth decade of my life, the period at which I had hoped for relief.

I had recourse, naturally, to an oculist, a friend of mine to whom I was accustomed to send special cases, and with whose aptness and efficiency I had always been satisfied. He examined my eyes with great care, and concluded that I had a slight hypermetropic error in both, with a slight degree of astigmatism in one. He prescribed lenses to correct only half my defect, as is customary in such cases, and after several changes, owing to the difficulty of fitting the astigmatic eye, I secured a pair of glasses which I was able to endure for a year.

Their use convinced me that the head troubles from which I had suffered during my whole life, in spite of their mathematical regularity and their supposedly rheumatic origin, had never been anything but an eloquent expression of what Anglo-Saxons term "eyestrain." As soon as I began to wear the glasses all the features of the old pains were radically modified. Their regularity ceased, and they were converted into painful disturbances of irregular occurrence, connected with work requiring use of the eyes at the near-point and completely independent of other causes. If I did not read, I would be all right indefinitely; if I used my eyes for close work for even a short time, I knew that I would suffer for it, some hours later, with a period of ocular pain or headache. In a word, the trouble became a necessary consequence of visual activity and lost its old appearance of a syndrome, established, recurrent, classical, only remotely connected with the use of the eyes. Glasses can change a headache into other types of headaches.

But the fact remained that the wearing of glasses had not cured my malady. I had, it is true, got rid of the old periodical migraine, but I was left with perpetual attacks of ocular and supraorbital pain, almost continuous, though never very intense. This change I almost regretted; for when I suffered from periodical headaches I had had five good consecutive days, during which it was possible for me to do sustained intellectual work. Now prolonged application was impossible, and I feared that an ailment resulting in almost continuous pain would, in time, lead to a serious state of neurasthenia.

At thirty-eight years of age my trouble began to be complicated with presbyopia; and here began, if I may say so, the second Odyssey of my ocular problem. In order to read I had to increase the strength of my glasses, and this involved the use of hideous bifocals. With three different pairs of glasses in my pocket and one on my nose—one for distance, one for reading, a tinted pair to moderate the intense sunlight of the tropics where I lived, and bifocals for special occasions—I found my troubles daily increasing. I could not escape from the optician, who was continually changing the refractive power of the lenses, as none of them ever suited me, and I did not cease to annoy my good friend, the oculist, who, with singular patience, listened to my complaints and tried to help me.

Once during this time I had occasion to visit New York, and while there I consulted a famous eye specialist. In no way was he able to mitigate my sufferings, and I returned, more confused than ever, to my country, Porto Rico, and almost decided, in view of the increasing difficulty of keeping up the struggle, to give up professional life and devote myself to some work of a rural nature which would not require of my poor eyes the insupportable effort of reading the small print of periodicals and medical books.

I must add that at this time I suffered from several attacks of **swelling of the upper eyelid of one or the other eye**, lasting for four or five days and having no appreciable cause; that on two occasions I had an inflammation of the margins of the lids, followed the second time by a combined inflammation of both eyes and lids; while the last condition left after it a **little ulcer of the right cornea**, near the pupil, which required more than two months treatment on the part of my patient and capable oculist.

Another detail which I do not wish to forget is that during the whole time that I wore glasses, about nine years, and even for some months after discarding them, I frequently noticed the phenomenon known as "**floating specks**." These I never noticed before wearing glasses. Glasses cause all these eye problems!

I had reached a state bordering on desperation when, in September, 1916, professional work took me again to New York, accompanying one of my patients to whom I had recommended X-ray treatment by a well-known specialist of the great city. On the occasion of our visits the old doctor and I used to discuss the latest advances in electrotherapy, and he called my attention to some notable cases of cure brought about by this means. One day it occurred to me to say to him:

"Well, friend doctor, all that is very fine, but the wonder that is to cure my particular ill has not yet been discovered."

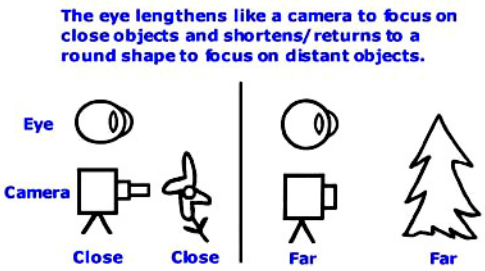
"What do you mean? What is the matter with you?"

I recounted at great length the history of my eyes.

The doctor laughed, left his office for a few minutes, and on returning said to me:

"Why, yes, it has been discovered. Read this pamphlet, take my card, and go to see the author."

It was an article by Dr. William H. Bates, of New York, published a few months previously in the *New York Medical Journal*, and entitled: *The Cure of Defective Sight by Treatment Without Glasses, or Radical Cure of Errors of Refraction by Means of Central Fixation*. The reader can understand the eagerness with which I read this pamphlet, but I must confess that it caused me both surprise and disappointment. The author affirmed, as the readers of this magazine already know, that errors of refraction—myopia, hypermetropia, and astigmatism—so far from being permanent conditions due to deformities of the eyeball, congenital or acquired, and only to be corrected by glasses, are caused by a vicious contraction of the outside muscles of the ocular globe and may be cured by treatment leading to the relaxation of these muscles. In a word the eyeball is not inextensible, and the lens is not a factor in accommodation. Thus two fundamental dogmas of the doctrine established by Helmholtz and others fall to the ground. This, I reflected, could only be the work of an unbalanced mind or of a genius, and unbalanced minds are so abundant and geniuses so rare, nowadays, that the latter did not seem probable. Imbued, like all doctors, with the idea that accommodation is brought about by a change in the curvature of the crystalline lens, I felt, as I read, the tremendous influence of the old school of physiological optics, with all the authority of its founders, and all the weight of things long established, accepted by the great majority and sustained by the immense mass of vested interests developed under their shadow; and I said to myself: "All this seems to me anatomically impossible."



And yet it inspired me with hope. After all, I thought, why should things not be accomplished in the eye as they are in the photographic camera, in which, in order to obtain pictures at different distances, the distance between the lens and the sensitive plate is shortened or lengthened. If, in a kodak, one were to imitate that which, according to the accepted theory, occurs in the eye, it would be necessary to put in a new lens every time one desired to change the focus, since there is no known device that can modify the power of a lens. Leaving the accepted theories out of consideration for the moment, it seemed to me more logical to conceive of accommodation as Bates described it than as it had appeared to Helmholtz. After some hesitation, therefore, I decided to consult the author of the revolutionary pamphlet.

I gave him a detailed account of my ailment, begging him, on finishing the tale, to tell me frankly if he considered it incurable, as in that case I would give up my career definitely, and live in the country. I expected that my case, which I supposed to be exceptional, would present to him a most difficult clinical problem, and I was astonished when he said:

"Is that all?"

"What! You don't think that is much, Dr. Bates?" I replied, somewhat provoked, as I remembered my long years of suffering.

"You will be cured, and soon," was his reply; a reply firm, decided, categorical, which for the moment increased my confusion.

Dr. Bates then explained to me that my eyes were in no way abnormal, except for having lost the power of central fixation many years before. Mental strain had brought with it ocular strain. I had contracted the muscles of the eyeball abnormally in doing close work, and with the commencement of the presbyopic age the trouble had been considerably accentuated.

It required only a few treatments by means of rest, practice with the Snellen test card, and the cultivation of the memory of a black period with the eyes alternately closed and open (glasses having, of course, been discarded), to convince me of the truth of this diagnosis, and naturally, of its logical basis. By a continuation of the same treatment my headaches were soon cured, and after many months of practice my lost power of central fixation was restored and I regained the normal vision I have since enjoyed. I can now read diamond type at six inches, and can devote to reading or writing as much time as I wish. The intense rays of electric light, which formerly were unbearable to me, no longer cause me any inconvenience, and I even enjoy looking at them for long periods. I can also look at the sun itself for some seconds without the least discomfort, to the great admiration of my friends, who, although they believe their sight to be normal, cannot do this.

I have, in short, learned to look at things without staring, so that every object seen seems to have a slight movement, caused by the unconscious shifting of the eye, a phenomenon discovered by Bates and by virtue of which the point regarded changes rapidly and continuously.

I have been able to demonstrate in myself the seven truths of normal sight, formulated by Bates; truths in the light of which the old ideas of the refraction of the eye crumble irremediably; truths completely verifiable by every truly impartial and scientific mind which is emancipated from the tendency to persist in error solely because it is supported by authority, even such an authority as the immortal Helmholtz; truths demonstrated by careful, repeated and varied observations—by scientific experiments upon animals, and above all by the study of images, obtained, after much labor and many failures, from the lens, cornea, iris and sclera. The powerful electric light employed for the latter purpose is evidently more adequate than the candle used by Purkinje for the study of the celebrated images to which his name has been given, and it suffices to compare—with an open mind—two photographs of images upon the lens, obtained with the eye focused, respectively, at the distance and the near-point, to become convinced that accommodation is accomplished by the lengthening of the eyeball—through the unmistakable action of the oblique muscles—and that we have here one of the most beautiful and significant achievements of the century.

And not only have I demonstrated these truths in myself, but I have cured some patients and improved many. Among the former was the very notable case of a young printer, who, although only slightly hypermetropic, was easily fatigued by the close work demanded by his calling. Half an hour of such work brought on a severe frontal headache, growing in intensity up to midday, when he was obliged to suspend his labors. After only three weeks of treatment by the methods described his troubles completely disappeared. To-day he not only works all day without inconvenience, but even works overtime, with great economic advantage to himself.

Another case was that of a lady, a lawyer, who had been told that the sight of one eye was almost lost, and who could practically do no continuous work without severe headaches. She wore a pair of large dark-tinted lenses constantly, in order to protect her eyes from the tropical sunlight, and these were so disfiguring that they made her very conspicuous and, naturally, caused her much annoyance. Treatment by relaxation soon cured her headaches and other ailments, and she became able to fulfill her duties efficiently as secretary to a high judicial officer in Porto Rico. At present she occupies an important position as a lecturer in one of the Y. W. C. A.'s of the United States, and according to recent advices her sight and general health continue very satisfactory.

Many of my friends who witnessed and sympathized with my sufferings and saw me wear numerous spectacles, are now for the

most part presbyopic, and use glasses for reading. Overcome by the evidence of my case, they only await a period of leisure in order to take the treatment, in which they believe, but which they erroneously suppose to demand effort and time. They find their problems solved temporarily by glasses and continue to wear them. But the patients who never find a pair of lenses satisfactory, and who pass half their lives in the optician's office, who suffer from troublesome ailments of various kinds resulting from their eye troubles; these have no choice but to have recourse to the new truth and the new methods, which are certain to solve their problems, not temporarily but permanently. It is they, above all, who will publish the glad tidings—they and the school children under twelve, who having, as a rule, not accustomed their eyes to glasses, and being free from the misconceptions that handicap older patients, respond with incredible rapidity to the new methods—methods as simple as they are effective, and both preventative and curative of visual defects.

In spite of indifference, in spite of the coldness with which new truths are received—the great majority not deigning even to discuss them—I have absolute confidence in the early acceptance of this wonderful discovery, so simple, and, in its practical application, so fruitful. There will not be lacking dispassionate and impartial minds to verify and propagate it. The number of the cured, constantly increasing, will become at last like a tidal wave, overwhelming all opposition. Truth must conquer in the end, removing the mountains of error and prejudice.

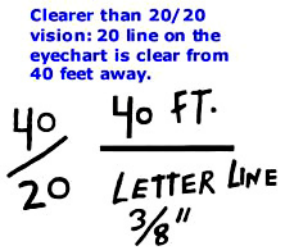
THE STORY OF SYLVIA

By Victoria Coolidge

Sylvia is a little girl, ten years old, in the fourth grade in school. She has a good brain and is an energetic worker, but until she learned to see with central fixation, she was handicapped by defective eyesight. According to her physical record card, her vision in September, 1919, was 20/40 in each eye. On November 4, 1919, I tested her eyes and found that 20/40 was the best that she could see with either eye at that time.

On this day I gave her the first lesson in central fixation. By alternately reading the Snellen card and closing her eyes to rest them, she improved to 20/30. When she had demonstrated what an improvement she could make by resting her eyes in this way, I showed her how she could rest them even more by palming, that is, covering her eyes with the palms of her hands laid gently over them, excluding all light, but not pressing on the eyeballs. I asked her to do this as many times as she could during the day, five minutes at a time, and I gave her a piece of paper on which to write her name, the date, and the number of times she palmed each day for a week.

The next week I went to visit Sylvia's school, and she showed me her paper. She had palmed about eight times each day, except Saturday and Sunday, when she had palmed fourteen times. I could see by the expression on her face that she had a surprise in store for me, but I was not prepared for such a surprise as followed. I had her stand six feet from the Snellen card, and she read every letter on it perfectly. Then she stood ten feet away and read it just as well. "Now stand back here," I said, pointing to a line twenty feet from the card. Nothing daunted, and with the triumphant expression still lighting up her face, she walked to the twenty-foot mark and read every letter correctly through the fifteen line and some letters on the ten line. I looked at Sylvia and then at her teacher; "Is this Sylvia?" I asked, thinking I had been teaching the wrong child. The teacher assured me that it was. Still skeptical, I looked up her physical record card, and my own record, to be sure that I had read the figures correctly. There they were, 20/40 on both.



At my next visit, December 18, Sylvia scorned to stand at ten feet, and instead, walked immediately to the twenty-foot mark with all the confidence in the world. This time she was able to read all the letters so quickly and so confidently that her teacher began to suspect that she had memorized them, and I must confess that I began to think so, too. Therefore, I hung up the Snellen card which belonged to the school and which had entirely different letters. Sylvia had not seen this card since September when her eyes were tested. She read the twenty line, which happened to be the last line on the card, at twenty, twenty-six, and thirty-two feet. Another day I took her out into the hall and she read the twenty line on the same card, at forty feet, in a dim light, with only two errors. In addition to this, she read diamond type, first at nine inches, the nearest distance at which she could see it clearly, and at fifteen inches, the farthest; and later at six and at twenty inches. She also read writing on the blackboard from the back of the room without any difficulty.

To sum up Sylvia's case, then, she was able in two weeks' time to improve her vision from 20/40, which is only half what is ordinarily considered normal, to 20/10, which is double this standard. In five weeks she was able to read a card having unfamiliar letters with a vision of 40/20, and to read diamond type clearly at six inches and also at twenty inches. The remarkable cure had been accomplished through resting the eyes by palming for five minutes at a time about nine times a day, by reading the Snellen test card every day from her seat in the schoolroom, and from a point twenty feet from the card.

Sylvia, now looking for more worlds to conquer, has undertaken, with characteristic energy, the cure of one of her schoolmates. She has already succeeded in improving this child's vision from 20/30 to 20/20.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

June, 1920

SUN-GAZING

In all abnormal eye conditions sunlight is beneficial

Light is necessary to the health of the eye, and darkness is injurious to it. Eye shades, dark glasses, darkened rooms, weaken the sight and sooner or later produce inflammations. Persons with normal sight can look directly at the sun, or at the strongest artificial light, without injury or discomfort, and persons with imperfect sight are never permanently injured by such lights, though temporary ill effects, lasting from a few minutes to a few hours, days, weeks, months, or longer, may be produced. In all abnormal conditions of the eyes, light is beneficial. It is rarely sufficient to cure, but is a great help in gaining relaxation by other methods.

No Sunglasses, tinted, UV blocking lenses.
Dark glasses block healthy full spectrum sunlight resulting in unclear vision, eye disease.



The quickest way to get results from the curative power of sunlight is to focus the rays with a burning glass on the white part of the eye when the patient looks far downward, moving the light from side to side to avoid heat. This may be done for part of a minute at frequent intervals.

Looking at the sun, while slower in its results, has often been sufficient to effect permanent cures, sometimes in a very short time. There is a right way and a wrong way to do this. Persons with imperfect sight should never look directly at the sun at first, because, while no permanent harm can come from it, great temporary inconvenience may result. Such persons should begin by looking to one side of the sun, and after becoming accustomed to the strong light, should look a little nearer to its source, and so on until they become able to look directly at the sun without discomfort.

Dr. Bates states to: shift/move the eyes, head continually to the left and right sides, top and bottom… of the sun and blink to move the light evenly upon/fully activate all areas of the eyes: cornea, lens, retina. Moving the eyes, head is done to prevent too strong a concentration of the suns light on one area of the eye. Staring, eyes immobile at the sun must be avoided.
Staring strains the eyes, activates abnormal eye function, results in uncomfortable effects from the sunlight and a too strong concentration of the light onto one area of the eye. This can result in a colored spot of light (scatoma) that lasts for days, weeks…
Due to depletion of the ozone layer other eye problems might develop from staring directly into the sun.
Modern teachers advise only closed eyes sunning and to keep the head/eyes moving side to side, up, down… when facing the sun.

A person that is blind or definitely going blind might regain his/her vision by short term open eyed sun-gazing when done correct. For this reason I keep this older information in this book.
Never look into the sun or near it during a Eclipse.

chapter, are only mental illusions. No matter how much the sight may have been impaired by sun-gazing, or how long the impairment may have lasted, a return to normal



Fig. 46.—Woman With Normal Vision Looking Directly at the Sun. Note That the Eyes are Wide Open and That There Is No Sign of Discomfort.

has always occurred; while prompt relief of all the symptoms mentioned has always followed the relief of eye-strain, showing that the conditions are the result, not of the light, but of the strain. Some persons who have



Fig. 47. Woman Aged 37, Child Aged 4, Both Looking Directly at Sun Without Discomfort

It is not light but darkness that is dangerous to the eye. Prolonged exclusion from the light always lowers the vision, and may produce serious inflammatory conditions. Among young children living in tenements this is a somewhat frequent cause of ulcers upon the cornea, which ultimately destroy the sight. The children, finding their eyes sensitive to light, bury them in the pillows

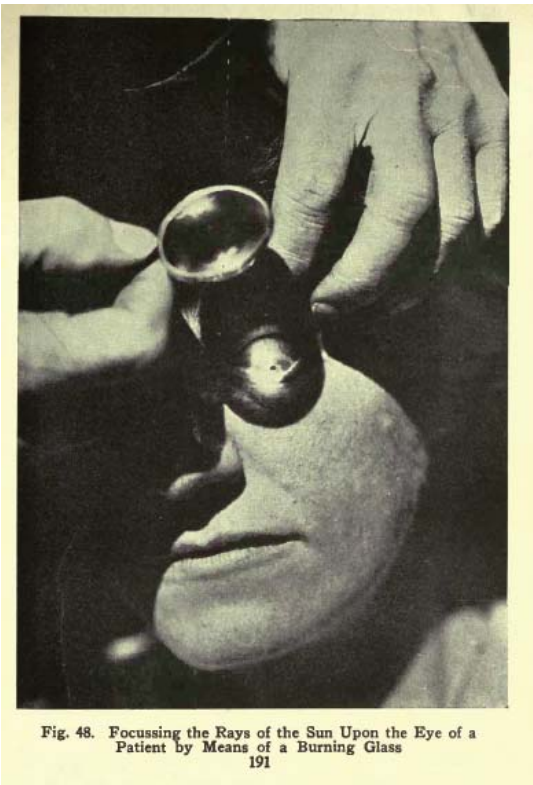


Fig. 48. Focussing the Rays of the Sun Upon the Eye of a Patient by Means of a Burning Glass
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A LESSON FROM THE GREEKS

By W. H. BATES, M.D.

The failure of the muscles of the eyes to function normally under the conditions of civilization is not an isolated phenomenon. As Diana Watts, in her remarkable book, *The Renaissance of the Greek Ideal* (Frederick A. Stokes Company, New York), points out, the entire muscular system of modern civilized peoples works under such a condition of jar and strain that all muscular labor is accomplished with a maximum of effort. So far, indeed, have we drifted from our normal physical possibilities that the positions of the ancient statues seem impossible to us, and we have been forced to attribute many descriptions of the feats of heroes in the Iliad and Odyssey to poetic license. Mrs. Watts, by reproducing the positions of these statues, and doing other things that are beyond the power of even the strongest gymnasts and dancers trained under present methods, has fairly established her claim to have discovered the secret of Greek physical supremacy.

Greek athletics, according to Mrs. Watts, was very far from being a matter of mere muscle development. Its aim was to produce a condition in which all the muscles worked harmoniously together and responded instantly to the mind's desire, thus securing a maximum of activity with a minimum expenditure of energy.

The secret she found to be very simple. It consists in each a perfect balancing of the body that whether it is at rest or in motion its centre of gravity is always kept exactly over its base. This perfect equilibrium involves in turn a condition of the muscles in which they are transformed from a dead weight to a living force. In this condition there is said to be a complete connection of all the muscles with the center of gravity; independent motions and independent reactions are eliminated, and a combined force is instantly brought to bear upon whatever work is required. The spine is perfectly straight, the waist muscles firm, and the weight, in the standing posture, is supported upon the balls of the feet. Extraordinary precision and beauty of movement results, and all sense of fatigue is said to be abolished.

To attain this equilibrium in its perfection requires much study and practice, but it can be approximated simply by keeping the spine straight and the weight over the balls of the feet, or upon the thighs, if seated. By this means a large degree of relaxation is often obtained, and the effect upon the eyesight has, in several cases, been most marked.

A patient suffering from **retinitis pigmentosa** found that when he **straightened his spine**, in walking or sitting, **his field at once became normal**, remaining so as long as the erect position was maintained. His field had already improved considerably by other methods, but was still very far from normal. **In the evening the position had the further effect of relieving his night blindness**.

Another patient who had been under treatment for some time for a high degree of myopia without having become able to read the bottom line of the test card, read it for the first time when her body was in the position described. She was able, moreover, to maintain the position for a considerable length of time, whereas ordinarily she was extremely restless, and could not remain still for more than a moment. A third patient, who could not rest her eyes by closing them or by palming, was relieved at once by this means, as was shown, not only by her own feelings, but by the expression of her face.

Sleeping with a straight spine has also been found to be a very effective method of improving the vision and relieving fatigue. The patient with retinitis pigmentosa whose case has just been referred to, suffered continual relapses in the morning. No matter how well he saw in the afternoon, or in the evening, he would wake up unable to distinguish the big C and with his memory so impaired that it would take him the whole morning to get it back. After **sleeping on his back, with his lower limbs completely extended and his arms lying straight by his sides**, he was able to see the fifty line at ten feet when he woke and

his memory was much better than usual at that time. Further improvement resulted from further sleeping in this posture. The patient with myopia had been in the habit of waking up tired after ten or twelve hours' sleep. One night she shared her bed with a guest, and in order not to disturb the latter she tried to keep her body straight. Although she had staid up until a very late hour talking, she awoke feeling perfectly refreshed. Another myopic patient who had been at a standstill for six months, gained two lines after sleeping on his back for one night.

SAVED FROM BLINDNESS

By Patricia Palmer

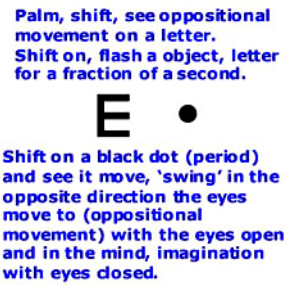
It is very hard for an active young girl to suddenly learn that in a short time she may lose her eyesight. I had always felt a great deal of pity for blind people, but I never stopped to realize how many beautiful things they missed until I knew that I was going blind myself. I only wore glasses for three years, but in that short time I developed a very bad case of progressive myopia. In the summer of 1918 my sight became so poor that I had to stop reading altogether and even a moderately bright day hurt my eyes so much that I kept them bandaged a great part of the time. Finally I had to put on a dark Krux lens, and the goggle-like glasses that I wore shut out all light. In the fall I started school, but as I could not see to read I was working under great difficulties. Then, through an article published some months before in the *Scientific American*, we learned of Dr. Bate's work and it seemed the last possible hope. I declared that there was no use in taking the trip to New York, because I knew he could do nothing for me, but in the end I went.

The first time I looked at the test card I could not see the big "C" until I stood within four feet of it, but in two hours I was able to flash all the letters of the third line and part of the fourth at ten feet. In four weeks I had 10/10 vision and my hearing, which had been bad, was normal.

Some weeks after I returned home a friend, who was calling, complained of a bad headache. I persuaded him to take off his glasses and showed him how to palm and swing the letters on the chart. A short time later he discovered, to his surprise, that his headache was entirely gone.

This incident made me realize that if I showed others what Dr. Bates had shown me I could relieve, if not cure, their troubles. The next person that I worked with was a little girl with progressive myopia which had not become very serious. She worked very conscientiously, and about a month after we started, when she visited Dr. Bates, her sight was nearly perfect.

I have helped a number of people, some successfully, others not so successfully. One of my most interesting cases was a chauffeur who thought that he was unusually farsighted, but who could not see to read the paper. When I tested his eyes I found that he had only 10/20 vision. In a short time, however, he attained normal sight by palming and swinging the letters. I then told him to close his eyes and count ten, then open them for a fraction of a second. I held a book in front of him and in a short time, by closing his eyes and then glancing at it, he read parts of it. He practices on signboards, automobile licenses, or anything that he sees, and now he reads the entire paper every evening. He has noticed, too, that he is not blinded by bright lights at night as he used to be.



As to the value of swinging the little black period I am very decided. I find it my best friend, especially in a test. One time in a French examination, in the excitement of the moment, I could not think of a certain word which I knew well enough and which was very important to me. I closed my eyes and palmed for a second and remembered the period. In a flash my self-control returned to me and with it the word. I have tried this several times since, usually with success.

I often wonder now how I could possibly have managed without my eyes, even with glasses. It is such a joy to be able to read from morning to night if I want to. Reading music is supposed to be a terrible thing for the eyes, but I do an endless amount of it and never know the difference. I find, too, that since my eyes have been well I memorize remarkably quickly, and that when I study I can grasp the contents of the text more easily than before. In the old days of glasses I had to read my history assignment two or three times before I knew what it was about, while now once is quite enough.

My greatest regret is that so few people know how to prevent eye troubles, or how to care for them after they develop. Perhaps, however, if the movement to establish Snellen test cards in the schools grows, thousands of children may be saved the agony which I and many others suffered with headaches as well as being freed from the inconvenience of glasses.

STORIES FROM THE CLINIC

4. Three of a Kind.

By Emily C. Lierman.

George, Gladys and Charlie are three children who came to the eye clinic of the Harlem Hospital at about the same time. They were all of the same age, nine years; they were all suffering from about the same degree of defective sight; they all had headaches; and they got into a very interesting three-cornered contest in which each one tried to beat the others at getting cured. George and Gladys are colored, and Charlie is a white boy of a most pronounced blonde type, with fair curls and blue eyes.

George was the first of the trio to visit us. He had been sent from his school to get glasses because of his headaches, and it was easy to see from his half-shut eyes and the expression of his face that he was in continual misery. My first impulse was to try to make him smile, but my efforts in that direction did not meet with much success.

"Won't you let me help you?" I asked.

"Maybe you can and maybe you can't," was his discouraging reply.

"But you are going to let me try, aren't you?" I persisted, stroking his woolly head.

He refused to unbend, but did consent to let me test his vision, which I found to be 20/70, and to show him how to palm and rest his eyes. He also continued to come to the clinic, but for three weeks I never saw him smile, and he complained constantly of the pain in his head.

Then came Gladys, accompanied by her mother who gave me a history of her case very similar to that of George. Her vision was 20/100, and in a very short time I improved it to 20/40. At her next visit it became temporarily normal, and this fact made a great impression upon George. I saw him roll his black eyes and watch Gladys while I was treating her, and later, when he thought I was

not looking, I saw him walk over to her, and heard him say:

"You ain't going to get ahead of me. I came before you. I wanna get cured first. See?"

I separated the two children very quickly, for I foresaw trouble; but all the time I was very grateful to Gladys for having, however unintentionally, stirred George up.

Next week Charlie came. He looked very sad, and his mother, who came with him, was sad also. His headaches were worse than those of the other children had been, and were actually preventing him from going on with his studies. Promotion time was near, and both mother and child were very anxious for fear the latter would be left behind. They hoped that by the aid of glasses this tragedy would be averted. Of course I explained to the mother that we never gave glasses at this clinic, but cured people so they did not need them. Then I tested Charlie's sight, and found it to be 20/100. Next I told him to close his eyes and remember a letter perfectly black, just as he saw it on the test card. He shook his head in dismay, and said:

"I can't remember anything, the pain is so bad."

"Close your eyes for part of a minute," I said, "then open them just a second and look at the letter I am pointing at, then quickly close them again. Do this for a few minutes, and see what happens."

What happened was that in a few minutes Charlie began to smile, and said:

"The pain is gone."

I now showed him how to palm, and left him for a while. When I came back his sight had improved to 20/70. I was very happy about this, and so was Charlie's mother. She was also very happy to think that he did not have to wear glasses.

Charlie continued to come regularly, and was an apt pupil. One day he told me that he had been out sleigh-riding with the boys, and that the sun had been shining so brightly upon the snow that he couldn't open his eyes, and, his head ached so that he had to go home and go to bed.

"Why didn't you palm for a while and remember one of those letters on the card?" I asked.

"That's right," he said. "I wonder why I didn't think of it."

The next time he came there had been another snowstorm, and he could hardly wait to tell me what had happened.

"I went sleigh-riding some more with the boys," he said, as soon as he could get my ear, "and the pain came back while I was having fun. But this time I didn't go home and go to bed. I remembered what you said, covered my eyes with the palms of my hands right in the street, and in a little while the pain all went away, I could look right at the snow with the sun shining on it, and I didn't mind it a bit."

From the start, the two colored children were greatly interested in Charlie, and thinking that a little more of the competition that had proved so effective in George's case would do no harm, I said, "See who beats." They needed no urging from me, however. Every clinic day, an hour before the appointed time, the black and white trio was at the hospital door. If there was a crowd there, the children forced their way through without much ceremony, and then started on a dead run for the eye room. There they practiced diligently until Dr. Bates and I arrived, and I fear they also squabbled considerably. There was no lack of smiles now in the case of any of the children, and as for George, he had a grin on his face all the time.

Charlie was the first to be cured. In just a month from the time of his first visit his vision had improved to 20/10. Usually patients do not come back after they are cured, but this boy kept on with the practice at home, and returned to show me, and incidentally his two rivals, what progress he had made. We had a visiting physician at the clinic that day, and I rather suspected Charlie of trying to show off when he walked to the very end of the room, a distance of thirty feet from the card. To my astonishment, and the great annoyance of George and Gladys, he read all the letters on the bottom line correctly. The colored children made haste to suggest that he had probably memorized the letters; so I hung up a card with pothooks on it, such as we use for the illiterate patients, and asked him to tell me the direction in which those of the bottom line were turned. He did not make a single mistake. There seemed no room for doubt that his vision had actually improved to 30/10, three times the accepted standard of normality. Not more than one other patient at the clinic has ever become able to read the card at this distance. Charlie returned several times after this, not from the best of motives, I fear, and I took great pleasure in exhibiting, his powers to the nurses and to visitors.

George and Gladys were cured very soon after Charlie, both of them becoming able to read 20/10. I was sorry that they could not have done as well as Charlie, but since their vision is now twice what is ordinarily considered normal, I think they ought to be satisfied.

A CASE OF CATARACT

By VICTORIA COOLIDGE

After I had made one visit to Dr. Bates, I was so much encouraged that I asked him if he could do anything for my father, **eighty-one years old, who had cataract in each eye**. He said he could, provided the patient had all his faculties and would follow directions. I replied that he was not only in full possession of his faculties but that he was blest with vigorous health besides, and I felt sure that he would be willing to do anything to restore his sight.

When I went home, I told my father what Dr. Bates had said, but the treatment seemed so simple for such a difficult case, and his mind was so thoroughly imbued with the idea that nothing but an operation would help him, that he did not make up his mind to see Dr. Bates until four months later.

He remembered having had remarkably keen vision as a young man, and in 1862 passed as normal the **army eye test**, which was very strict at the beginning of the **Civil War**. When he was about fifty years old, however, he began to have trouble in reading and other near work, so he put on glasses to correct this difficulty, and seems to have had the same experience that so many people have—they were nearly, but not quite right. He went from one doctor to another, but the result was always the same. Finally, in 1907, he consulted a well-known specialist in Albany, who, in 1919, at his request, sent him the following record of his case as it was at the time of that visit:

R. V.—20/200 corrected by glasses to 20/50
L. V.—20/50 corrected by glasses to 20/30

Ophthalmoscopic examination showed in each eye incipient cataractous changes, which were more marked in the right eye. Otherwise the interior of the eye appeared normal. Nothing was said to him personally regarding this condition, for frequently it remains unchanged for years.

He was well pleased with the glasses obtained at this time, and for a few years had more comfort with them than with any he had

ever worn; but after a while he began to have trouble with his right eye again. In 1917 he noticed that there seemed to be hard deposits in his eyes. He consulted a prominent specialist in his own locality and learned from him that he had a fairly well developed cataract in the left eye, and an incipient cataract in the other. The doctor prescribed glasses for him, and asked him to visit him once a month so that he might watch the progress of the cataracts. He said that nothing but an operation would help the left eye, but he would advise an operation only in the event of a loss of sight in both eyes, as would be the case if the cataract in the right eye should also progress, because unless both eyes were operated on at approximately the same time, they would not focus together. He called on the doctor faithfully every month for about a year and a half, when he finally became tired of hearing the same discouraging story: the left cataract was rapidly developing, but the doctor would not operate unless both cataracts were ripe. And so he discontinued his visits.

It was about six or seven months after his last visit to this doctor that he called on Dr. Bates. The sight in the left eye had become so dim by this time that he could not recognize the members of his family across the table. He could see that there were people there, but he could not distinguish them. Dr. Bates made the following report of his condition at the time of his first visit:

January 1, 1918:
R. V.—20/100
L. V.—Perception of light—unable to count his fingers.

At subsequent visits the following records were made:

January 2.
R. V.—20/200, artificial light.
L. V.—Counted fingers at six inches.
Improved by shifting, swing, rest, palming (best).
January 4.
R. V.—14/30.
L. V.—14/200.
Reads large print.
January 8.
R. V.—14/15.
L. V.—14/200+.
Reads some words fine print continuously.
January 13.
R. V.—14/10.
L. V.—14/40.
He reads in flashes the fine print with the right eye and some larger print with the left. His improved sight helps his hearing at times.
January 18.
R. V.—14/10.
L. V.—14/20 in more continuous flashes.
He is reading large print more continuously with the left eye.
April 30.
Obtains flashes of the fine print with the left eye better than with the right.

Cataract Cure

The treatment prescribed was as follows:

+Palming six times a day, a half hour or longer at a time;
+reading the Snellen test card at five, ten, and twenty feet;
+reading fine print at six inches, five minutes at a time, especially soon after rising in the morning and just before retiring at night, and
+reading books and newspapers.
+Besides this, he was to subject his eyes, especially the left, to the sunlight whenever an opportunity offered,
+ to drink twelve glasses of water a day,
+walk five miles a day,
+and later, when he was in better training, to run half a mile or so every day.

The results of this treatment have been most gratifying. Not only have his eyes improved steadily, but his general health has been so much benefited that at eighty-two he looks, acts and feels better and younger than he did at eighty-one.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

July, 1920

SEE THINGS MOVING

When the Sight Is Normal all Objects Regarded Have An Apparent Motion

When the sight is perfect the subject is able to observe that all objects regarded appear to be moving. A letter seen at the near point or at the distance appears to move slightly in various directions. The pavement comes toward one in walking, and the houses appear to move in a direction opposite to one's own. In reading the page appears to move in a direction opposite to that of the eye. If one tries to imagine things stationary, the vision is at once lowered and discomfort and pain may be produced, not only in the eyes and head, but in other parts of the body.

This movement is usually so slight that it is seldom noticed till the attention is called to it, but it may be so conspicuous as to be plainly observable even to persons with markedly imperfect sight. If such persons for instance, **hold the hand within six inches of the face and turn the head and eyes rapidly from side to side, the hand will be seen to move in a direction opposite to that of the eyes.** If it does not move, it will be found that the patient is straining to see it in the eccentric field. By observing this movement it becomes possible to see or imagine a less conspicuous movement, and thus the patient may gradually become able to observe a slight movement in every object regarded. Some persons with imperfect sight have been cured simply by imagining that they see things moving all day long.



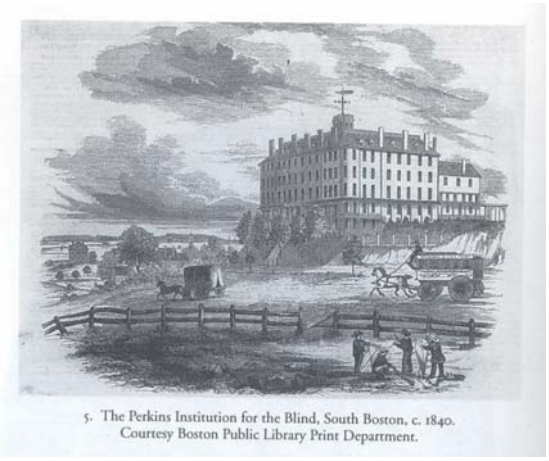
The world moves. Let it move. All objects move if you let them. Do not interfere with this movement, or try to stop it. This cannot be done without an effort which impairs the efficiency of the eye and mind.

THE MISSION OF "BETTER EYESIGHT"

With this number *Better Eyesight* enters upon its second year. It was started in July, 1919, for the purpose of diffusing a knowledge of the truth about central fixation, and it has accomplished all that was hoped for it. It has carried the message that errors of refraction are curable to thousands of people, and many of these people have been able to cure these conditions in themselves and others solely by means of the information which it has contained.

The magazine is modest in its appearance. One can get many times the amount of reading matter which it contains at any newsstand for the same money, but the value of truth cannot be estimated by the number of words required to state it, and it is the object of the editor to give the public the truth about central fixation as briefly and simple as possible. The truth can usually be stated briefly and simply. It is error which is hard to understand and which requires a multitude of words for its presentation.

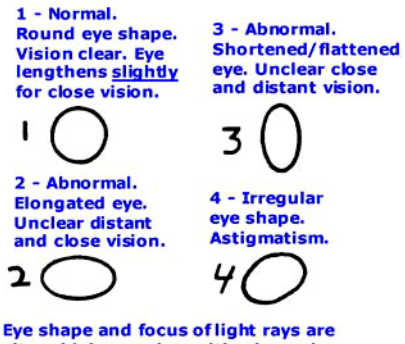
The editor believes that no one who values his or her eyesight can afford to be without this magazine. It has a message not only for those whose sight is imperfect, but for those whose sight is normal. No one, however good his sight may ordinarily be, has perfect sight all the time.


5. The Perkins Institution for the Blind, South Boston, c. 1840.
Courtesy Boston Public Library Print Department.

No one has as good sight as he might have. Therefore everyone can be benefited by practicing the principles presented in this magazine. While persons with imperfect sight may thus gain normal vision, persons with so-called normal sight can always improve it, and may even double the accepted standard of normality, or gain a measure of **telescopic or microscopic vision**. It is not a good thing to be satisfied with just normal sight. Not only is keen sight a great convenience, but it reflects a condition of mind which reacts favorably upon all the other senses, upon the general health and upon the mental faculties.

Even the blind can get some help from *Better Eyesight*. Not all blind persons are curable, but the editor believes that an increasing number of blind persons may expect help from **central fixation**, for already it has been found possible to relieve or cure such conditions as **cataract, glaucoma, conical cornea, retinitis pigmentosa, cyclitis, opacities of the cornea,** and **atrophy of the optic nerve.**
(Photo – Perkins Institute for the blind.)

The magazine will continue to publish during the coming year, as it has in the past, the latest discoveries of the editor, the experiences of cured patients—which have proven to be very valuable—and practical instructions for the improvement of the eyesight. On page 2 of each issue we will continue to give specific directions for self-treatment in language as simple as possible, so that persons who are not physicians can understand it. We have had much testimony to the value of this page, and the editor strongly urges every subscriber, no matter what the condition of his or her eyesight, to demonstrate these truths as they appear.



Better Eyesight stands for a revolution in the treatment of eye troubles, and has had to meet the difficulties that always beset the path of the revolutionist. For seventy-five years we have believed that errors of refraction—by which is meant the inability of the eye to focus light rays accurately upon the retina—were due to organic and irremediable causes. The editor of *Better Eyesight* has proved that these troubles are functional and curable, that the elongated eyeball of myopia (shortsight) the flattened eyeball of hypermetropia (farsight), and the lopsided eyeball of astigmatism, can he made to resume their normal shape, temporarily in a few minutes, and more continuously by further treatment. The world has been slow to receive this message.

The editor is practically alone in advocating central fixation. A small number of physicians, including a few eye specialists, who have been cured or seen members of their families cured of eye troubles, without glasses, operations, or medication, have been convinced that the old theories about the eye and the treatment of defects of vision are wrong; but very few have had courage to endorse the new treatment publicly.

This is not to be wondered at, and is not a cause for discouragement. The editor now wonders at his own slowness in seeing the truth. The facts conquered his conservatism at last only because they were irresistible, and for the same reason they must ultimately conquer all conservatism. Physicians and others who refuse to accept them, or even to investigate them, will be swept aside to make room for those of more open mind.

In the meantime, *Better Eyesight* needs friends, it needs encouragement, it needs subscribers. The editor appeals to present subscribers to continue their support, and to advertise whenever and wherever they have an opportunity the good news that the eye is not a blunder of nature, as the textbooks teach, but an instrument as perfectly adapted to the needs of civilized man as to those of the savage. Persons who have cured themselves should utilize every opportunity to improve the sight of relatives and friends. All parents should be told that they have it in their power to prevent and cure defects of vision in their children and at the same time to improve their health and increase their mental efficiency. The same message should be carried to teachers and school boards. The blind should be told of this new hope for the sightless, and societies for the blind should be urged to investigate it. If everyone who has demonstrated the truth of central fixation does his or her duty in the matter, defective eyesight will soon cease to be, as it has so long been, the curse of civilization.

STORIES FROM THE CLINIC

5. The Jewish Woman

By EMILY C. LIERMAN

Just before the war a Jewish woman, sixty-three years of age, came to the clinic and begged me to help her just a little.

"Please don't bother trying to cure me," she said. "That is too much to expect, and anyhow I am an old lady, so what does it matter?"

Her eyes were half shut, because the light bothered her and she felt more comfortable with the lids lowered. She told me that she was suffering great pain both in her eyes and head, and when I had her look at the test card at ten feet it was all a blur to her. I showed her how to palm, but the position tired her, and she said she was not accustomed to praying so long—she was quite a sinner. As she weighed over two hundred pounds and was sick in both mind and body, I asked her how much she ate every day.

"Oh, I don't eat much—nothing to speak of at all," she said. "In the morning I eat eggs, or something like that, and rolls and butter and coffee. Then about ten I have a few slices of bread with more butter and more coffee. At noon I have soup, bread and butter and more coffee. For supper I have bread, butter, meat, vegetables and more coffee. That's all."

She took more food in one day than I did in three, and when I told her she ate too much, it appeared to frighten her, for she staid away for two weeks. Eating, no doubt, was one of the few pleasures she had in life, and she did not wish to be deprived of it.

When she returned I had her palm again, and this improved her sight from 20/100 to 20/50. It also relieved her pain markedly, and when I told her that she would get still more help, both for her eyes and her body generally, if she would eat less, she agreed to do so.

In spite of her pain and misery, my patient had always been full of humor, and her witty remarks had been a source of much amusement to me; but one day, just after the declaration of war, I found her in a corner weeping. When I asked her to read the test card for me, she said with tears:

"Please, nurse, I can't see anything today. My two sons have enlisted, one as a marine, and the other as an aviator, and they are never coming back, I am afraid. I cannot sleep. I am suffering great pain all over my body. My heart is breaking."

From the beginning I had felt that she had been a devoted mother, and as I am always drawn to good mothers, I now felt a great pity for her grief. In order to get her mind off her pain, I encouraged her to talk about her boys.

"How proud you must be to have two sons to fight for your country, and for you!" I said. "I wish I had ten sons I would give them all for my country."

These remarks were not very consoling, I admit, in the presence of a sorrow like this, and the stricken mother refused to he comforted. But when I said, "You wouldn't be proud of them if they were cowards, and Uncle Sam wouldn't want them if they were criminals in a jail," she straightened up and said:

"You are right. They are brave boys all right, and I am proud of them."

I now tested her sight with the card, and found it better than ever before.

"You have the right medicine," she said, "I am coming again. I do not understand why I can see so well now after being so blind a few minutes ago."

I squeezed her arm above the elbow and asked:

"Do you feel that?"

"Yes," she replied.

"Well, that is just what you are doing to the muscles of your eyes, and the strain blinded you. When you relaxed, the pressure was relieved and your sight improved. It was the pressure that lowered the vision."

Positive emotions, thoughts=relaxed mind, eyes=clear vision.

At a later visit she brought a package for me, explaining that she had no money and wanted to express her gratitude. I took the package home, and when I opened it I found a loaf of delicious real bread—not Hoover bread. My neighbors were very envious of me, because the only bread they could obtain had a flavor like that of sawdust. At the time I appreciated that bread more than a five dollar bill.

Every time the patient came to the clinic we talked about her boys for a few minutes, and it certainly had a good effect upon her eyesight. When the war ended and the boy came home, every one who would listen heard of the great things they had done "over there." One would have thought one was attending an annual convention of some sort instead of an eye clinic.

During the war and up to about six months ago, the patient came more or less regularly to the clinic. Palming always helped her, but as she complained that it made her arms ache to hold her hands over her eyes, I had her simply close her eyes without palming. This also helped her. One day I placed her two feet further from the card than usual, and asked her how much she could see. She replied:

"Now, you know I am an old woman, and I guess my eyes are getting old too. I cannot see so far."

I told her to close her eyes and rest them, forget that she had eyes, and think of black velvet, or her black hat. Ten minutes later she read 10/20, and her eyes had a natural appearance. She became very much excited and asked me what I did to her.

Dieting also helped her eyesight and nerves very much, but she could not always bring herself to forego the pleasure of eating what she wanted. She forgot most of the things I told her to do at home, but I don't think she ever forgot a meal, nor did she realize the quantity of food she consumed when she gave free rein to her appetite. If she had always done as she was told, I am sure she would have been completely cured long ago. As it was, her improvement was very remarkable. Not only did she become able to read 10/20, but at the time she stopped coming to the clinic she said that the pain and discomfort in her eyes had entirely ceased. She was sleeping better, and her general physical condition was greatly improved.

Her case made me realize more clearly than ever the **relation of mental strain to defective vision**. I could not help her until I found out what she had on her heart, and when by means of a little sympathy—I could give her nothing else—I was able to get her **mind off her trouble, or make it seem less to her, her nerves always relaxed**. It was very remarkable the way a pleasant conversation, without further treatment, would improve her sight. The experience was afterward a great help to me in treating other patients. In the rush of work at the dispensary it has often seemed that I could not take the time to talk to the patients, to get acquainted with them, to let them tell me about their troubles. I know now that this is not a waste of time, but a very necessary part of the treatment.

WHAT GLASSES DO TO US

By W. H. Bates, M. D.

On a tomb in the Church of Santa Maria Maggiore in Florence was found the following inscription: "Here lies Salvino degli Armati, Inventor of Spectacles. May God pardon him his sins."[1]

The Florentines were doubtless mistaken in supposing that their fellow citizen was the inventor of the lenses now so commonly worn to correct errors of refraction. There has been much discussion as to the origin of these devices, but they are generally believed to have been known at a period much earlier than that of Salvino degli Armati. The **Romans** at least must have known something of the art of supplementing the powers of the eye, for Pliny tells us that **Nero used to watch the games in the Colosseum through a concave gem set in a ring for that purpose**. If, however, his contemporaries believed that Salvino of the Armati was the first to produce these aids to vision, they might well pray for the pardon of his sins; for while it is true that eyeglasses have brought to some people improved vision and relief from pain and discomfort, they have been to others simply an added torture, they always do more or less harm, and at their best they never improve the vision to normal.

That glasses cannot improve the sight to normal can be very simply demonstrated by looking at any color through a strong convex or concave glass. It will be noted that the color is always less intense than when seen with the naked eye; and since the perception of form depends upon the perception of color, it follows that both color and form must be less distinctly seen with glasses than without them. **Even plane glass lowers the vision both for color and form, as everyone knows who has ever looked out of a window.** All glass, plain and colored disrupts the healthy full spectrum light of the of sun.

That glasses must injure the eye is evident from the fact that one cannot see through them unless one produces the degree of refractive error which they are designed to correct. But refractive errors, in the eye which is left to itself, are never constant.[2] If one secures good vision by the aid of concave, or convex, or astigmatic lenses, therefore, it means that one is maintaining constantly a degree of refractive error which otherwise would not be maintained constantly. It is only to be expected that this should make the conditions worse, and it is a matter of common experience that it does. **After people once begin to wear glasses their strength, in most cases, has to be steadily increased in order to maintain the degree of visual acuity secured by the aid of the first pair.**

That the human eye resents glasses is a fact which no one would attempt to deny. Every oculist knows that patients have to "get used" to them, and that sometimes they never succeed in doing so. Patients with high degrees of myopia and hypermetropia have great difficulty in accustoming themselves to the full correction, and often are never able to do so. **The strong concave glasses required by myopes of high degree make all objects seem much smaller than they really are while convex glasses enlarge them.** These are unpleasantnesses that cannot be overcome. Patients with high degrees of astigmatism suffer some very disagreeable sensations when they first put on glasses, for which reason they are warned by one of the *Conservation of Vision* leaflets published by the Council on Health and Public Instruction of the American Medical Association to "get used to them at home before venturing where a misstep might cause a serious accident."[3]

All glasses contract the field of vision to a greater or less degree. Even with very weak glasses patients are unable to see distinctly unless they look through the center of the lenses, with the frames at right angles to the line of vision; and not only is their vision lowered if they fail to do this, but annoying nervous symptoms, such as dizziness and headache, are sometimes produced. Therefore **they are unable to turn their eyes freely in different directions**.
This results in eye, neck, head, body muscle tension, immobility, impaired eye shifting, central fixation and other functions of the visual system.

It is true that glasses are now ground in such a way that it is theoretically possible to look through them at any angle, but practically they seldom accomplish the desired result.

The difficulty of keeping the glass clear is one of the minor discomforts of glasses, but nevertheless a most annoying one. On damp and rainy days the atmosphere clouds them. On hot days the perspiration from the body may have a similar effect. On cold days they are often clouded by the moisture of the breath. Every day they are so subject to contamination by dust and moisture and the touch of the fingers incident to unavoidable handling that it is seldom they afford an absolutely unobstructed view of the objects regarded.

Reflections of strong light from eyeglasses are often very annoying, and in the street may be very dangerous. Soldiers, sailors, athletes, workmen and children have great difficulty with glasses because of the activity of their lives, which not only leads to the breaking of the lenses, but often throws them out of focus, particularly in the case of eyeglasses worn for astigmatism.

The fact that glasses are very disfiguring may seem a matter unworthy of consideration in a medical publication; but mental discomfort does not improve either the general health or the vision, and while we have gone so far toward making a virtue of what we conceive to be necessity that some of us have actually come to consider glasses becoming, huge round lenses in ugly tortoise-shell frames being positively fashionable at the present time, there are still some unperverted minds to which the wearing of glasses

is mental torture and the sight of them upon others far from agreeable. Most human beings are, unfortunately, ugly enough without putting glasses upon them, and to disfigure any of the really beautiful faces that we have with such contrivances is surely as bad as putting an import tax upon art. As for putting glasses upon a child it is enough to make the angels weep.

Up to about a generation ago glasses were used only as an aid to defective sight, but they are now prescribed for large numbers of persons who can see as well or better without them. The hypermetropic eye is believed to be capable of correcting its own difficulties to some extent by altering the curvature of the lens, through the activity of the ciliary muscle. The eye with simple myopia is not credited with this capacity, because an increase in the convexity of the lens, which is supposed to be all that is accomplished by accommodative effort, would only increase the difficulty, and this, it is believed, can be overcome, in part, by alterations in the curvature of the Lens. Thus we are led by the theory to the conclusion that an eye in which any error of refraction exists is practically never free, while open, from abnormal accommodative efforts. In other words, it is assumed that the supposed muscle of accommodation has to bear, not only the normal burden of changing the focus of the eye for vision at different distances, but the additional burden of compensating for refractive errors. Such adjustments, if they actually took place, would naturally impose a severe strain upon the nervous system, and it is to relieve this strain—which is believed to be the cause of a host of functional nervous troubles—quite as much as to improve the sight, that glasses are prescribed.

It has been demonstrated, however, that the lens is not a factor, either in the production of accommodation, or in the correction of errors of refraction. Therefore under no circumstances can there be a strain of the ciliary muscle to be relieved. It has also been demonstrated that when the vision is normal no error of refraction is present, and the extrinsic muscles of the eyeball are at rest. Therefore there can be no strain of the extrinsic muscles to be relieved in these cases. When a strain of these muscles does exist, glasses may correct its effects upon the refraction, but the strain itself they cannot relieve. On the contrary, as has been shown, they must make it worse. Nevertheless persons with normal vision who wear glasses for the relief of a supposed muscular strain are often benefited by them. This is a striking illustration of the effect of mental suggestion, and plane glass, if it could inspire the same faith, would produce the same result. In fact, many patients have told me that they had been relieved of various discomforts by glasses which I found to be simply plane glass. One of these patients was an optician who had fitted the glasses himself and was under no illusions whatever about them; yet he assured me that when he didn't wear them he got headaches.

When glasses do not relieve headaches and other nervous symptoms it is assumed to be because they were not properly fitted, and some practitioners and their patients exhibit an astounding degree of patience and perseverance in their joint attempts to arrive at the proper prescription. A patient who suffered from **severe pains in the base of his brain** was **fitted sixty times by one specialist alone, and had besides visited many other eye and nerve specialists in this country and in Europe. He was relieved of the pain in five minutes by the methods recommended by this magazine, while his vision at the same time became temporarily normal.**

As refractive abnormalities are continually changing, not only from day to day and from hour to hour, but from minute to minute, even under the influence of atropine, the accurate fitting of glasses is, of course, impossible. In some cases these fluctuations are so extreme, or the patient so unresponsive to mental suggestion, that no relief whatever is obtained from correcting lenses, which necessarily become, under such circumstances, an added discomfort. At their best it cannot be maintained that glasses are anything more than a very unsatisfactory substitute for normal vision.

July, 1920

1 - Nuova Encyclopedia Italiana, sixth edition.
2 - Bates: The Imperfect Sight of the Normal Eye. N. Y. Med. Jour., Sept 8, 1917.
3 - Lancaster: Wearing Glasses, p. 15.

School Number
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

August, 1920

THE CURE OF IMPERFECT SIGHT IN SCHOOL CHILDREN

While reading the Snellen test card every day will, in time, cure imperfect sight in all children under twelve who have never worn glasses, the following simple practices will insure more rapid progress:

1. Let the children rest their eyes by closing for a few minutes or longer, and then look at the test card for a few moments only, then rest again, and so on alternately. This cures many children very promptly.

2. Let them close and cover their eyes with the palms of their hands in such a way as to exclude all the light while avoiding pressure on the eyeballs (palming), and proceed as above. This is usually more effective than mere closing.

3. Let them demonstrate that all effort lowers the vision by looking fixedly at a letter on the test card, or at the near point, and noting that it blurs or disappears in less than a minute. They thus become able, in some way, to avoid unconscious effort.

The method succeeds best when the teachers do not wear glasses.

Supervision is absolutely necessary. At least once a year some person whose sight is normal without glasses and who understands the method should visit the classrooms for the purpose of answering questions, testing the sight of the children, and making a report to the proper authorities.

The Snellen test card is a chart showing letters of graduated sizes, with numbers indicating the distance in feet at which each line should be read by the normal eye. Originally designed by Snellen for the purpose of testing the eye, it is admirably adapted for use in eye education.

SAVE THE CHILDRENS' EYES

Editorial

With this issue of BETTER EYESIGHT we are again urging measures to prevent and cure imperfect sight in school children. A very simple method by which this can be done was discovered by the author while studying the vision of the school children of Grand Forks, N. D., and tested over a period of eight years in the schools of this city. It consists merely, as has been frequently stated in this magazine, of exposing a Snellen test card in each classroom, and having the children read the lowest line they can see from their seats once a day, or oftener.

Six or seven years ago this system was tried in some of the public schools of New York City with the most gratifying results. In every case in which the card was used properly the vision of the children improved, regardless of whether the classroom was well or poorly lighted; and in every case in which it was not used the vision declined, being worse at the end of the year than it was at the beginning, regardless also of the lighting of the room. Not only was myopia (shortsight) prevented and cured by this method, but hypermetropia (farsight), a much greater curse than myopia and one the prevention of which had not previously been seriously considered, was also prevented and cured. So also was astigmatism, while the sight of those children whose sight had been normal to begin with was improved. Headaches and fatigue were relieved. The mentality of the children improved. Truants and incorrigibles were reformed. The teachers were enthusiastic about the results. So also were the children.

But unfortunately the method was contrary to the teachings of a hundred years, and hence was condemned without trial by every eye specialist consulted by the Board of Education. And thus the children, not only of New York, but of the whole country, have been deprived for years of the blessing of perfect sight, for if New York had led the way, the whole country would have followed.

Through the efforts of this magazine, however, a few schools here and there have introduced the system, and we hope that before another year has elapsed there will be many more of them. An interesting report from one of these schools appears on page 14.

IMPERFECT SIGHT CONTAGIOUS

By W. H. BATES, M. D.

The question of whether or not errors of refraction are hereditary is one about which the medical profession has exercised itself greatly. An immense amount of work has been done for the purpose of throwing light upon it, and all the time the very plain fact that these conditions are contagious has escaped observation. **For an error of refraction is simply a nervous condition,** and there is **nothing more contagious than nervousness**. A person with myopia, hypermetropia, or astigmatism, is a person under a strain. This strain shows in his voice, his walk, his manner, and makes the people with whom he comes in contact nervous. These people then develop errors of refraction, temporarily if the influence is temporary, and permanently if the influence is permanent, as in the case of **children who cannot escape from their nervous teachers and parents**. Endless illustrations of this fact could be given. A few must suffice.

A very nervous woman wearing glasses for astigmatism brought me her very nervous child who had been wearing glasses for six months, also for astigmatism, three diopters in one eye and three and a half in the other. The child's eyes were red, strained, and partly closed, and it was quite evident that the glasses did not make her comfortable. I talked to her pleasantly for a while so as to disarm any fears of the doctor that she might entertain, and then told her to close her eyes and rest them for fifteen minutes. When she opened them she had perfect sight for the Snellen test card in both eyes, and she read diamond type at from six inches to eighteen. I said to the mother:

"There is nothing wrong with your child's eyes. When they were tested she must have been nervous."

The mother answered that this was true. She had been trying to play a duet with her sister, and got so nervous that she could not see the notes. The family was so alarmed at this sudden failure of sight that she was taken immediately to an oculist, and the result was glasses for astigmatism. As children have an astonishing power of adapting their eyes to different kinds of lenses, she had adapted her eyes to these very strong glasses sufficiently so that she could see through them, but was not able to be comfortable in them, nor in any of the others that were subsequently given to her.

Mother and child left the office in a very happy frame of mind, but a few days later the mother returned, very much discouraged and somewhat incensed. The child was just as bad as ever, she said. She couldn't read half the card.

"The reason she can't read the card," I said, "is because you test her. Let her younger sister test her, and you will find that she will read it perfectly. The strain in your eyes is reflected in your voice and walk, in everything about you; you make the child nervous, and when you try to test her sight she becomes astigmatic. If you want her to get cured and stay cured, you should get cured yourself."

She took my advice, and is now under treatment.

In my studies of the eyesight of school children this experience was frequently repeated. When I went into a classroom where the teacher wore glasses I knew I would always find a large percentage of imperfect sight. When the teacher did not wear glasses I knew the percentage would be below the average. When the teacher tested the sight of a child it was often found to he very imperfect, but when I tested it, it might be perfect. In one case a teacher wearing glasses told me that a certain boy was very nearsighted. He could not read writing on the blackboard, he could not tell the time by the clock, and he could not recognize people across the street. I tested his sight and found it normal. The teacher was incredulous and suggested that he must have memorized the letters. Then I wrote letters and words on the blackboard which he read just as well as he had read the letters on the card.

One day my own children came home from school with a note to the effect that they could not read the writing on the blackboard and needed glasses, and later a nurse called to reinforce the message. I tested their sight and found it normal. Then I called on the principal, told him that I was an eye specialist, and after testing the sight of the children I could find nothing wrong with it. I asked if there would be any objection to their having a test card in their classrooms so that they could read it frequently. He said he could see no reason why this should not be done, and it was. But soon after the younger child, a little girl, came home from school in tears. The teacher and the nurse and the other children had made fun of the card, and said it was absurd to suppose that such a simple thing as reading it every day could keep one from having trouble with one's eyes. Of course I knew it could do her no good to read the card under these conditions, and so I had her read it at home. The sight of both children has remained perfect, but I have no doubt that if the circumstances had been different they would have been wearing glasses today.

Children are very sensitive to nervous influences, these influences often produce temporary imperfect sight, and unfortunately they are often, in these states, fitted with glasses. Fortunately most children hate to wear glasses, and after trying them for a while

frequently discard them. They also break and lose them. Thus they are saved much injury. But if the teacher or parent is conscientious and insists on the wearing of the glasses, and on their renewal when lost or broken, the temporary error of refraction becomes a permanent one.

The atmosphere of the average schoolroom is extremely irritating. It makes the children nearsighted, farsighted and astigmatic. But if they have a familiar Snellen test card which they can read every day they are always able to overcome this adverse influence. When they can read the letters on the test card which they know by heart, they are also able to read the writing on the blackboard and see other strange objects at the distance or the near-point with normal sight.

STORIES FROM THE CLINIC

6. The School Children

BY EMILY C. LIERMAN

A great many children visit our clinic. Some are sent by their teachers or the school nurse. Others hear from their friends that we cure people without glasses and come of their own accord. They are a most interesting class of patients; for they respond so quickly to treatment that one's work becomes a succession of thrills, and as a rule they are very grateful for what we do for them.

Grown people are often annoyed when they find that we do not prescribe glasses, but the children, with rare exceptions, are delighted, for they usually hate to wear glasses. Only occasionally do they insist that they must have them, because the teacher or the nurse said so. Before they leave the clinic, however, they are always convinced that whoever told them they needed glasses made a mistake.

One day a colored girl tried to work me for a pair of glasses. Dr. Bates, after examining her eyes, turned her over to me with the remark that she would be an easy case. I placed her at ten feet from the card and asked her to read what she could. She said she could not read anything. I brought her to within one foot of it, and she still insisted that she could not see a letter. It occurred to me that perhaps she did not know the letters, but she said she did. I told her to palm for a while, and then I tried her again at ten feet. She looked very mournful, and said, "I can't see." Then I realized at last what was the matter with her.

"Well, if you want glasses," I said, "you will have to go elsewhere, we do not give glasses here."

I never saw a patient's sight improve as quickly as hers did now. She started at once to read the test card, and went right down to the bottom, missing only two letters on the last line.

In most cases the children, after they are cured, prove to be enthusiastic missionaries in the cause of better eyesight. On the same day that I cured the case just mentioned another colored girl, ten years old, who was as anxious to be cured as the other one had been to avoid it, came to the clinic. The school nurse had sent her to get glasses, but she said:

"I just hate glasses and I won't wear them."

I improved her sight in ten minutes from 15/70 to 15/30, and the next clinic day she brought with her fourteen other children and the school nurse, all colored, including the nurse, who was a mulatto. That was a thrilling day at the clinic. The nurse was thrilled and I was thrilled, for in an hour's time I improved the sight of every one of those children from about 15/50 to 15/20.

The first child I treated, was very cross, and did not wish to be annoyed by palming or anything else. The nurse explained to me that she was a very nervous child and never still a minute.

"That doesn't matter," I said; "I'm not going to make her nervous,"

I then asked the child what her name was, and she told me that it was Helen.

"Now Helen," I said, "the first thing you are going to do for me is to smile," which she did.

"Now I wonder if you can read that test card for me?" I asked.

"Oh, sure," she replied. "I'm not a baby!"

She read 15/50.

"Be a nice girl now and cover your closed eyes with your palms," and I showed her how to do it.

She followed my instructions, and by alternately flashing the letters and palming, her vision rapidly improved to 15/20.

The next girl was one of the prettiest mulattos I have ever seen. She had closely watched Helen, and from the look on her face I could see that she would be more ready to do as I wished her to do than Helen had been. Her name was Clarice, and her vision was about the same as Helen's, namely 15/50. I told her to palm, and while she was doing this I went to the next patient, a girl who reminded me of Topsy in *Uncle Tom's Cabin*, for her head was just covered with pigtails. After I had started her to palming, I went back to Clarice, and found that she could now read 15/20. And so it went through the whole fourteen. The nurse asked me a great many questions about the treatment, and said she would treat the children the same way at school. At a later date she came to me again for more instructions, and said that so far she had been getting such good results that she had not found it necessary to send any more of her charges to the clinic. She studied BETTER EYESIGHT very carefully and found that it enabled her to give the treatment correctly. Clarice and Helen also came back, not because it was necessary, since they and the other children were doing so well under the instructions of the nurse, but because they liked to come. After palming for a short time both of them became able to read 15/10.

The influence of the school in producing imperfect sight is sometimes startlingly illustrated by these child patients. A dear little blue-eyed girl of twelve who came to us because she had severe headaches seemed to be suffering mainly from fear of her teacher. In the morning before school she felt perfectly well; after playing in the street with the other children she also felt well; but when she went into her classroom and began work her head began to ache. It also ached when she was doing her home work, but not so badly. I asked her to read the test card at twelve feet, and unconsciously I raised my voice a little. Immediately I saw her start as if someone had scared the very life out of her. I guessed at once just what was the matter, and lowering my voice I told her as gently as possible that there was nothing to be frightened about.

"What you are not able to read on that card today, you will read next time," I said.

Then I showed her how to palm and left her for a time, as there were many other children waiting to he treated. Coming back in fifteen minutes I told her to take her hands down and tell me what she could read; and I made my voice as low as I could, not much above a whisper. At once, with each eye she read 15/10, more than normal vision, and she said she had no pain. I asked her if she could guess how many children there were in her class.

"Yes, about sixty," she replied.

"My," I said, "if your poor mother had sixty children, wouldn't she be nervous and worried! And wouldn't you want to help her all you could! Suppose you make believe the teacher is your mother, and try to help her all you can."

This had a great effect on her. The next time she came her attitude toward her teacher seemed to have completely changed, and at every subsequent visit she always had something to say about her wonderful teacher. I feel sure that her fear of her teacher had been unnecessary, and also that it had had much to do with her condition. She had little trouble with the headaches after her first visit, for when she felt one coming on, as sometimes happened when she had a hard example to do, she was able to get quick relief simply by closing her eyes.

While the work with the children is always thrilling, we sometimes have a case that is so wonderful that it stands out from all the others. A boy of ten came to us one day in a very had condition. He did not want to look at anyone, and did not even want to raise his head, because the light bothered him so. After testing his sight and finding it to be about 15/70 I placed him on a stool, which, by the way, is a very precious piece of furniture in the clinic. All our poor patients have to stand while they palm and practice with the test card. No comfortable chairs for them. But most of them are willing to do anything so that they may not need glasses, and they do not complain. For this boy, however, I was able to find a stool on which he could sit while he palmed. I told him not to open his eyes for a moment, and after I had attended to a few patients I came back and asked him to take his hands from his eyes. What happened then seemed like a miracle. He didn't look like the same boy. His formerly half-shut eyes were wide open, and without any trouble he read the bottom line of the test card at fifteen feet. When I praised him for what he had done he smiled and said:

"When shall I come again?"

At the next visit he read 20/10 with both eyes, and he told me that when the light bothered him he closed his eyes and covered them with the palms of his hands, and in a few minutes he was all right.

This boy brought a friend, aged twelve, who had been wearing glasses for two years or more. When he came into the room he did not wait for his turn (I guess he never thought about it in his eagerness), but placed himself right in front of me, took off his glasses, and said:

"You cured Jimmie's eyes. Will you cure me, too?"

"Surely," I said, "if you wait your turn," and as soon as I could I tested his sight.

I found that he could see just as well without his glasses as with them—15/20. So I asked Dr. Bates to examine him and his glasses, and it turned out that he was wearing far-sighted glasses for near-sight. I told him to palm, and before he left the clinic that day he saw distinctly some of the letters on the bottom line at fifteen feet. This was an even more remarkable cure than Jimmie's, for patients who have worn glasses are usually much harder to cure than those who have never worn them.

Sometimes the mothers come with the children, and then I always try to enlist them as my assistants, and if they wear glasses I try to persuade them to cure themselves, so that the children will not copy their bad visual habits, and will not be subjected to the influence of people who strain. Not long ago a mother who had trouble with her eyes brought a child for treatment, and said that she would help the latter at home. I said that would be fine, and then I asked the child to help me cure her mother.

"After mother has given you a treatment," I said, "tell her to close her eyes and cover them with the palms of her hands, and to stay so until everything is black. Be very quiet so that she will not he disturbed, and when she opens her eyes you will surely find that she can see better."

Both mother and child made rapid progress. At the first visit the child's vision, which had been 15/50, improved to 15/30, and in six weeks it became 20/15. The mother now exhibits to her friends, with much pride, her ability to thread a needle without glasses.

Only one thing about this work with the children makes me sad and that is, we can do so little of it. Many children come from other districts, and are, of course, turned away by the dispensary clerk. But even if the hospital rules did not require him to do this, we could not admit all who come. There is a limit to the number we can treat, and there is so little space in our little eye room that already we are obliged to treat the overflow in the outside general waiting room. I wish that there could be such clinics in every hospital, and that the teachers and the nurses in the schools could be instructed in the very simple art of preserving the eyesight of the coming generation.

THE SNELLEN TEST CARD IN NEWTON

By U. G. WHEELER

Superintendent School Department, Newton, Mass.

We are greatly indebted to Superintendent Wheeler for sending us the following report of the use of the Snellen test card in one of the public schools of Newton, and we hope that the success which attended his experiment will encourage other schools to try this method of preventing and curing imperfect sight in school children.

Last fall we purchased several copies of the school number of BETTER EYESIGHT, and have been trying the suggested method for the prevention and cure of imperfect sight in one building in the city. The following is a copy of the report I received at the end of the school year from the principal of that school regarding the result of this trial:

In the fourth grade the teacher began using the Snellen eye chart last October. There was one case where the child tested very low in one eye. One of the children in the grade worked with her four times a day as was suggested in the booklet. The child lost the fear of using her eye, and after some time could read the card fifteen feet away. At that time her mother requested that we do no more work with her, as the oculist was afraid that she might strain her eyes.

The class as a whole used the card for months. Their eyes seem to be strengthened by the constant use of it.

In the fifth grade the teacher used the card with her class and gained definite results. One interesting case was that of a girl who had trouble with her eyes. It seemed to be hereditary, as the father had the same trouble. The girl used the Snellen test card and finally was able to read it across the room. If she neglected to practice for a few days, she found it necessary to begin all over again. There was no chance for memorizing the card, as the teacher cut letters from newspapers and used them while testing her, and found that she had been helped a great deal. It is thought the children's eyes were really strengthened.

In the other grades—I, II, VI, VII and VIII—the card was used, and in some cases it helped; in others the eye defects were too serious. However, the teachers believe that if the card is put to the right use wonderful results may be reaped.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

September, 1920

MAKE YOUR SIGHT WORSE

This is an excellent method of improving it

Learn how to cure/avoid unclear vision by experiencing how strain and unclear vision are caused.

Strange as it may seem there is no better way of improving the sight than by making it worse. To see things worse when one is already seeing them badly requires mental control of a degree greater than that required to improve the sight. The importance of these facts is very great.

+ When patients become able to lower their vision by conscious staring, they become better able to avoid unconscious staring.

+ When they demonstrate by increasing their eccentric fixation that trying to see objects not regarded lowers the vision, they may stop trying to do the same thing unconsciously.

+ What is true of the sight is also true of the imagination and memory. If one's memory and imagination are imperfect, they can be improved by consciously making them worse than they are.

+ Persons with imperfect sight never remember or imagine the letters on the test card as perfectly black and distinct, but to imagine them as grey and clouds is very difficult, or even impossible, and when a patient has done it, or tried to do it, he may become able to avoid the unconscious strain which has prevented him from forming mental pictures as black and distinct as the reality.

+ To make imperfect sight worse is always more difficult than to lower normal vision. In other words, to make a letter which already appears grey and indistinct noticeably more cloudy is harder than to blur a letter seen distinctly. To make an imperfect mental picture worse is harder than to blur a perfect one. Both practices require much effort, much hard disagreeable work; but they always, when successful, improve the memory, imagination and vision.

EXPERIENCES WITH CENTRAL FIXATION

By M. H. STUART, M.D.

Moultrie, Ga.

We are greatly indebted to Dr. Stuart for sending us this remarkable story of his own cure and that of his patients, all of which was accomplished without personal assistance by means of the information presented in this magazine.

Some sixteen years ago, when working as a stenographer, I developed indigestion and became extremely nervous, one of my symptoms being a tension in the spinal cord between the shoulder blades which was extremely uncomfortable. In the late afternoon and evening I would become so nervous that I could scarcely sit still, and I have walked five miles into the country and back again to get relief. I tried dieting for the indigestion, but after two months failed to get any relief. A medical student then suggested that the trouble might be due to my eyes. I went to an oculist, who fitted me with glasses, and all my troubles ceased.

The glasses given to me were convex 0.25, axis 90. A few years later, when I was in New York doing post-graduate work at the Polyclinic, they were changed to concave 0.25, axis 180, my refraction having changed from hypermetropia to myopia. In succeeding years the myopic astigmatism increased to concave 0.75, axis 180, and finally, after I had worn glasses for some fourteen years, to concave 1.00, axis 180. The last correction I had worn for about two years when I discarded glasses for good.

Slight as my error of refraction was, I was not able to leave off my glasses for more than an hour or two without suffering from nervousness and the feeling of tenseness in the spinal cord alluded to above. At other times I was perfectly comfortable except for the last year or two, during which I had so much to do that I suffered at times from the old nervous trouble. I had no pain in my head or eyes, but the trouble in my back was so bad last fall that I had to have the services of a masseur in order to do my work.

Five years ago I first read about Dr. Bates' experiments upon the eye muscles of animals. While interested I was not prepared to abandon the accepted teachings on the subject, and I waited to hear more. Recently I read, in the May (1920) number of BETTER EYESIGHT, Dr. Arnau's story of how, his headaches were cured, and I was so impressed by it that I determined to try the relaxation method upon myself. I palmed for five minutes and then read the card three times with each eye as far as I could without effort. I did this six times a day for five days, and at the end of this time I had gained a very decided degree of relaxation. I had, of course, discarded glasses, and, although this caused me a little discomfort at first, I was able about a week later, to perform, without them, three tonsilectomies and one operation for cataract, and to remove two blind eyes. At the same time I went through my daily routine of treating ten to thirty patients, examining eyes, ears, noses and throats, much of which work requires extra good vision. At noon I lay down to rest as usual and read the Atlanta paper. At night I read the Moultrie daily paper and anything else that I wanted to.

After the first five days of systematic relaxation I have never done anything in a routine way for myself, but if I feel nervous, or my eyes feel drawn, I swing twenty times and palm. In this way I am always able to get relief. Another method of gaining relaxation that I have resorted to is to look at an imaginary period in any dark distant object. In this pine-woods district there are thousands of stumps, many of which have been burned and blackened. The third day after I discarded my glasses I had to drive about twenty-eight miles, and whenever my eyes felt drawn I would look in an easy relaxed way at a small point on one of these stumps and

always got relaxation.

Nearly every afternoon at half past four I go out for a game of golf, and often I palm before going, as I find it gives me better control of my nervous system, and enables me to play a more consistent game.

I was so pleased with the results of the new treatment in my own case that I have since taught central fixation to about forty of my patients, and in only about two did I fail to improve the vision at the first sitting.

The following are some of my more notable cases.

Mr. S, an automobile mechanic, had been mentally deranged for two weeks, following an attack of flu, after which he gradually became rational, only to find that he saw double and his vision was imperfect in each eye. At the first examination he read with his right 20/120, and with the left 20/60. I suggested that he palm at least six times a day for five minutes, and on the second day he was greatly improved, reading with the right eye 20/80, left 20/40. On the third day he read with the right eye 20/40, left 20/30, an increase of vision in the right eye of 200 per cent, and in the left of 100 per cent. He is now at work, and when, occasionally, he has to lay off, it is not on account of any trouble with his eyes, but because of weakness in his knees.

A year ago a Mr. B consulted me about the sight of his right eye, the left having been blind for years. His vision was 10/40, and could not be improved by any lens. I advised him to have the left eye removed, since it was a menace to the other eye. He would not consent to this and I did not see him again until May 5 of this year, when he came to my office practically blind in his right eye from **sympathetic opthalmia**. At one foot he could only count fingers. I advised the immediate removal of the blind eye and of a few teeth that had pus about them; but I could not promise that his vision would be saved. That afternoon I removed the eye, and the following day I was gratified to find that he could count fingers at three feet. I sent him home with some large letters to use for the practice of central fixation, and by the fifteenth he was able to count fingers at five feet. I then told him how to practice the universal swing, and on the twenty-second he could count fingers at seven feet. On the twenty-ninth he could read the small type on the 20 line of the test card at four inches, whereas he had been entirely unable to see them previously. He states that he can now see the small chickens running about near his feet, and can see small cotton plants seven feet away. I am confident that in a year, or some such matter, he will have sufficient vision to attend to the necessary work of his farm.

I have treated three cases of squint, all of them with success. One of them, Delia S, aged twelve, came to me on May 15, with her right eye turned in to such a degree that the cornea was partly hidden. The sight of this eye was so imperfect that at three feet she could only count fingers. With her left eye she could read 20/30. She was told to palm, and when she returned on May 24 she was able, with the squinting eye, to count fingers at six feet, twice as far as at her first visit, and the eye was straighter. On June 5 she came again, and counted fingers at eight feet, an increase of vision since the beginning of 700 per cent. On July 3, while I was writing this report, she came in, and I found that her right eye had improved to 20/60, one third of normal, while her left had become entirely normal, 20/20. Her right eye was entirely straight at times, and I feel sure that in a few months this condition will have become permanent.

Palming corrects crossed/wandering eyes.



Another case of squint was that of a young girl of fourteen with rather large, pretty blue eyes, one of which, the right, was slightly crossed inwardly. Her sight was very imperfect—half normal in the right eye and one-third normal in the left—while, like most cross-eyed people, she was troubled with double vision. I asked her to **palm at least six times a day**, and she came back with her eyes straighter and able to read 20/30 with both. The next week showed normal vision, the eyes being at times perfectly straight.

I was particularly pleased to be able to relieve these little girls of a disfigurement which means so much more to them than it would mean to a boy, and I was much interested to note how much prettier their eyes were, apart from the disappearance of the squint, after a few treatments. They were wide open, softer-looking, in short, relaxed.

HOW I IMPROVED MY EYESIGHT

By Pamela Speyer

This patient was wearing when first seen the following glasses: each eye, concave 5.00 D.S. combined with concave 1.00 D.C. A number of competent men had said that her myopia was progressive, and that her vision was certain to become very imperfect even with glasses. They all insisted that she must wear glasses constantly. Yet after she had discarded them her vision improved in two days from 6/200 to 20/100.

Palming



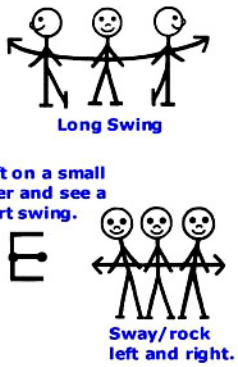
Treatment steps

+Palm
+Swing
+Shift and see oppositional movement. Blink, relax.
+Long Swing
+Sway and shorter sway.
+Shift on a small or fine print letter and see a small, very short swing, (small oppositional movement).
+'Flash' letters, objects for a fraction of a second: Shift on a letter for a fraction of a second, then palm.
+Close the eyes and remember, imagine the letter clear and shift on it, see the swing in the mind.

I have always been near-sighted. When I was six years old, my father took me to a famous oculist in London, and he prescribed and fitted me with my first glasses. With these lenses I was able to distinguish things at a distance which before I had not been able to see. I found that I could read or see objects at close range just as well without the glasses. The only difference that they made to my sight in this case was that print appeared smaller and less black.

Every year stronger lenses were given to me, and I visited several oculists in England and America, in the hope of improvement. When I was fifteen an oculist told me that my eyesight, instead of improving each year as I had hoped, would gradually become worse. By this time I was wearing glasses all the time.

Then, quite by chance, my father heard of Dr. Bates through a friend whose eyesight had been cured by him. I was taken there at once. The first thing Dr. Bates did was to take away my glasses. I sat down in a chair, opposite which was a Snellen test card, fifteen feet away. I could not see the largest letter, a "C" about four inches by three, which people with normal vision are supposed to read at two hundred feet. He brought the card five feet nearer and then I read the "C." It appeared very blurred and indistinct. The smaller letters were so blurred that I could not see them at all.



The most helpful thing I learned was how to "palm." This I did by closing my eyes and then covering them with the palms of my hands, so that I saw black and remembered it perfectly. This perfect black rested my eyes a great deal. After doing this for some ten or fifteen minutes, I looked at the card and found that I could read the two letters on the next line.

After I had learned to "**palm**," I learned to "**swing**." The reason I strained my eyes so when looking at the card was that I stared at one place. So by **imagining the letter was swinging like a pendulum, I moved my eyes instead of staring** as I had done before. **At first the swing was a long one, but after practicing for some weeks, I began getting it shorter until it was only half an inch on each side of the letter**. **The short swing was more difficult to do than the long one, but it helped more in the end.**

Flashing

Then I learned to "**flash**." I looked at a small letter at fifteen feet distance and could not read it. The longer I looked the worse it grew. So by **closing my eyes, remembering the swing for a few seconds, I just glanced at the letter and closing my eyes at once, I saw the letter in a flash.**

All these things must be practiced every day, and even now I have to "palm" every morning and night. **Palming, swinging and flashing** were the three fundamentals. As soon as they were mastered only practice remained. I have now been going to Dr. Bates for over a year, and my eyesight is almost cured. I often have flashes of perfect sight. Dr. Bates has certainly helped me in a remarkable degree, more indeed than I ever thought possible when I first went to him wearing strong glasses. The above article contains many of the main Natural Vision Improvement treatments: Palm, Shift, See the Swing/Oppositional Movement, Long Swing, Sway, Short Sway/Tiny Shift, Flash letters, objects, Memory, Imagination, Relaxation.

SLEEPINESS AND EYESTRAIN

By W. H. Bates, M.D.

How much sleep is necessary to maintain health? This is a question which has never been satisfactorily answered. Theoretically, mental or physical work should increase the need for sleep, but it is a matter of common knowledge that many inactive persons seem to need just as much sleep as those who work, or even more.

Much time has been devoted to the investigation of the symptoms of fatigue. Analyses have been made of the blood of fatigued subjects; the action of the muscles, nerves and brain, the changes in the structure of the cells, under the influence of fatigue, the changes following sleep, have all been carefully studied. But so far very little light has been thrown upon the nature of either fatigue or sleep.

This is a fact, however: that eyestrain has always been demonstrated when fatigue was present, and that fatigue has always been relieved when eyestrain was relieved. Perfect sight is perfect rest, and cannot coexist with fatigue. Even the memory or imagination of fatigue is accompanied by the production of eyestrain and imperfect sight, while the memory of perfect sight will relieve both eyestrain and fatigue. Sleepiness is a common symptom of habitual eyestrain, and when the sight improves the need for sleep is often markedly reduced.

One patient reports that after gaining normal sight without glasses she was able to get on comfortably with seven hours sleep, whereas she had formerly not been able to avoid continual sleepiness and yawning even on nine and ten hours. The inclination to yawn on all occasions had been so overpowering, she stated, that it often subjected her to great embarrassment. On one occasion she yawned so incessantly during a call made in the early evening that the visitor concluded, not unnaturally, that her presence was a burden and departed in high dudgeon, no explanations sufficing to convince her that the yawning was not the result of boredom. The patient was made very unhappy by this condition, but finally became reconciled to it in a measure, thinking that what could not be cured must be endured. Great was her surprise and delight, therefore, when, after discarding her glasses and beginning to practice central fixation, she found herself sleeping less and not yawning so much. She made no conscious effort, she said, to check the yawning, and had indeed almost forgotten about it. She now gets sleepy only at bedtime.

Another patient, although he never had any desire to sleep in the daytime, found it very difficult to keep awake in the evening. At the opera or theatre, at lectures and social gatherings, and at church, he was always sleepy and often went to sleep. It was naturally more difficult for him to keep awake when he was not interested, but whether he was interested or not he was sure to become more or less sleepy. He never went to a lecture without going to sleep, and the world's most famous song-birds were not always able to keep him awake at the opera. In the case of dull papers or sermons, it did no good to think of something else, for the sound of the speaker's voice acted like an opiate. When he learned how to **relax by the aid of the memory, imagination, shifting, swinging and palming** the trouble gradually became less, and now he can stay awake at all times and in all places where people are supposed to stay awake.

STORIES FROM THE CLINIC

The Woman with Asthma

By Emily C. Lierman

*When eyestrain is relieved all other strain is relieved, and therefore patients relieved of eyestrain are often relieved of many other symptoms. **Asthma** belongs to a large class of diseases with symptoms which may result from nervous disturbances instead of from organic changes. They have been called functional neuroses. It was not strange, therefore, that this patient should note an immediate improvement in her breathing after palming, and that this treatment, in combination with hygienic measures, should have permanently relieved the trouble. Many similar cases could be reported, and even when organic disease has been present, the subjective symptoms have been relieved.*

One day during the summer of 1919, a woman suffering from asthma came to the clinic. She was only forty years of age, but looked fifty, and it was evident, from the wrinkles in her forehead and her half-shut eyes, that her vision was very poor. She told me

that she suffered from continual pain, and I could see that she had great difficulty in breathing; but her spirit was unbroken, and her exuberance was something of a problem to me. She talked continually as long as she could find anyone to listen to her, and in order to preserve any order in the clinic I had to keep her as much as possible by herself. I was sorry to do this, because her good humor was contagious, and made the patients forget their pain and other troubles, but I could not have the work brought to a standstill, even for such a desirable end as this.

The state of her eyesight did not seem to trouble her.

It was her asthma about which she was concerned. When I asked her to read the test card she said:

"Please ma'am, help me to breathe first; never mind my eyes."

"You are in the wrong room for asthma", I replied, "just let me do something for your eyes, and then I will send you to another room where a good doctor will treat you for the asthma."

She smiled, evidently pleased that I had not sent her away, and proceeded to read the card, as I had asked her to do. Her vision was 20/30 in each eye. I told her to palm and on no account to remove her hands from her eyes until I came back. It was fully half an hour before I was able to do this, and when I told her to uncover her eyes, she asked:

"What makes me breathe so easy?"

"The palming has helped you", I replied.

Her vision was now 15/20, and she said the pain in her chest and back had gone. I gave her some advice about her diet, told her to drink plenty of water, and asked her to come to the clinic three days a week.

On the next clinic day, to my great disappointment, I did not see her. I concluded that she did not care to bother about her eyes, and was not willing to give up the foods and drinks I had told her not to take, including meats, pastry, strong tea and other liquids much stronger than tea. Other patients were continually coming in, however, so the poor woman with asthma went completely out of my mind until two months later when she rushed into the clinic like a cyclone. Most of these poor people do not think about waiting for their turn, and are so anxious to tell me about their relief from eyestrain and other troubles that I have to forgive them when they break the rules. This woman not only did not wait her turn but did not think it necessary to wait till I had finished with the patient I was attending to. As soon as she saw me she yelled in a loud excited voice:

"Please, ma'am. I didn't forget you. I didn't forget myself either. I felt so good after you treated me, I just palmed and palmed, and I began to breathe so much better I went out and got a job right away. During the day my madam allowed me to rest my eyes, and I ate very sparingly. Sure, ma'am, it was no joke either, for I just love to eat good and lots of it; but I remembered what you said, and so I behaved myself. I must have starved the asthma all away."

"I am very glad to hear all this" I said. "Now let me see what the palming did for your eyes."

Her vision had improved to 15/10. And it had all happened in two months. She did it and not I. When I told her this and praised her for it, she replied:

"God bless you! You don't know how happy I am. I am working and supporting myself now for the first time in four years. But what surprises me the most is that I have not been drowned by this time with all the water I have been drinking."

QUESTIONS AND ANSWERS.

The editor has received so many questions from the readers of BETTER EYESIGHT that he feels it sufficiently important to open a new department which will start next month. All persons are invited to send in questions which will be answered as promptly as possible by mail or the questions and answers will be published in the magazine. Kindly enclose a stamped, self-addressed envelope.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

October, 1920

GO TO THE MOVIES

This can help you to improve your sight

Cinematograph pictures are commonly supposed to be very injurious to the eyes, and it is a fact that they often cause much discomfort and lowering of vision. They can, however, be made a means of improving the sight. When they hurt the eyes it is because the subject strains to see them. If this tendency to strain can be overcome, the vision is always improved, and, if the practice of viewing the pictures is continued long enough, nearsight, astigmatism and other troubles are cured.

If your sight is imperfect, therefore, you will find it an advantage to go to the movies frequently and learn to look at the pictures without strain. If they hurt your eyes, look away to the dark for a while, then look at a corner of the picture; look away again, and then look a little nearer to the center; and so on. In this way you may soon become able to look directly at the picture without discomfort. If this does not help, try palming for five minutes or longer. Dodge the pain, in short, and prevent the eyestrain by constant shifting, or by palming.

If you become able to look at the movies without discomfort, nothing else will bother you.

THE PROBLEM OF IMPERFECT SIGHT

By W. H. Bates, M. D.

The problem of imperfect sight is such a tremendous one that few, even of those who specialize in such matters, realize its proportions, while outside this circle there is not the remotest conception of what it means.

The literature of the subject is very confusing and contradictory; but from the facts available there can be no doubt that the great majority of school children suffer from some degree of imperfect sight, while among adults normal vision is a rare exception.

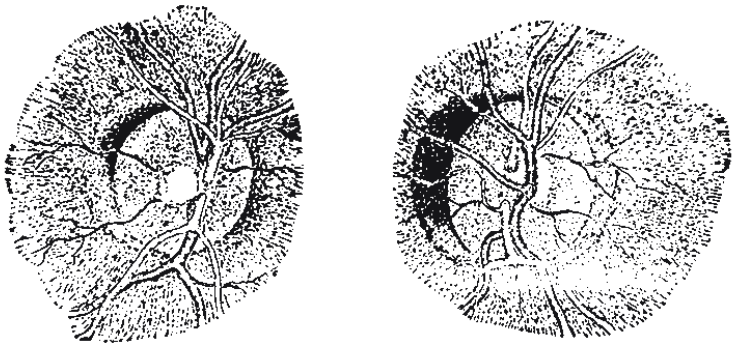
The very careful investigation of Risley showed that in the public schools of Philadelphia, among children between eight and a half and seventeen and a half, the proportion of imperfect sight was about ninety per cent,[1] other investigators report lower figures, but in many cases this simply means a lower standard. The findings of Risley agree with those obtained by myself in a study of 100,000 children made under all sorts of conditions in both city and country schools.

As to the sight of the adult population the operation of the draft law has supplied us with some unimpeachable data. It was found impossible to raise an army with even half normal vision in one eye, and in order to get the number of soldiers required it was necessary to accept for general service men whose vision could be brought up to half normal with glasses.[2]

Such figures as the foregoing, terrible as they are, by no means exhaust the subject. In fact they are only the beginning.

Errors of refraction are so common that we have learned to take them lightly. They are usually reckoned among minor physical defects, and the average lay person has no idea of their real character. It is well known, of course, that they sometimes produce very serious nervous conditions, but the fact that they also lead to all sorts of eye diseases is known only to specialists, and not fully appreciated even by them. The complications of myopia (nearsight) constitute a large and melancholy chapter in the science of the eye, but most eye specialists say that no organic changes occur in hypermetropia (farsight). That this is very far from being the case was proven by Risley in the investigation alluded to above, and it is strange that his report on the subject has attracted so little attention. His studies also showed that these organic changes occurring in all states of refraction, are very common among children and have often progressed to an extent that would be expected only after long years of eyestrain.

In the case of myopic astigmatism the percentage of diseased eyes among all the children examined ran as high as eighty-seven per cent, and in the secondary schools not a single myopic eye was found with a healthy eyeground. The condition known as *conus* in which the choroid, or middle coat of the eye, is destroyed in the neighborhood of the optic nerve exposing the white outer coat (sclera) and forming first a crescent and later even a complete circle is commonly regarded as one of the symptoms of myopia and attributed to the tension resulting from the lengthening of the globe, but Risley's statistics show that while it is somewhat more common in this state of refraction than in hypermetropia it is by no means peculiar to it. In hypermetropia it was found in twenty per cent of the cases, and in hypermetropic astigmatism in forty-five per cent. In simple myopia it was present in forty-one per cent of the cases, and in myopic astigmatism it reached sixty per cent. It is a terrible thing to think that the eyes of our children should show a symptom of this character in such a large proportion of cases.



CONUS IN HYPERMETROPIA

The eyegrounds of a brother and sister aged respectively ten and twelve years. Both had hypemetropic astigmatism. "The conditions here represented," says Risley, "were repeated in scores of their fellows at school."

My own experience is that errors of refraction are always accompanied by some organic change. It may be only a slight congestion, but this may be sufficient to lower the vision.

By wearing glasses, avoiding poor lights and limiting the use of the eyes for near work, it is supposed that we can do something to prevent the development of these organic diseases and to check their progress; but for none of the traditional methods of treatment is it even claimed that they can be depended upon to preserve the sight as long as it may be needed, and Sidler Huguenin, in a paper several times referred to in this magazine, has stated that in the thousands of cases of myopia that have come under his observation they never were of any material benefit.[3]

That imperfect sight is a fruitful cause of retardation in school is well known. According to the New York City Board of Health it is responsible for a quarter of the habitually left backs.[4] But that this condition cannot be remedied by glasses has not been generally observed. By making the patient more comfortable glasses do often improve his mental condition, but since they cannot relieve the mental strain that underlies the visual one, they cannot improve it to normal and by confirming it in a bad habit they may make it worse.

From the foregoing facts it will be seen that in the condition of the eyesight of our people we have a health problem, an educational problem, and a military problem, of the first magnitude, and one would think that if any method of either prevention or cure that was even tolerably successful had been found it would immediately be put into general use.

STORIES FROM THE CLINIC

8: Atrophy of the Optic Nerve

By Emily C. Lierman

About twenty-five years ago a patient came to the New York Eye Infirmary with well-marked atrophy of the optic nerve. According to all that we know of the laws of pathology he should have been totally blind; yet his vision was normal. The case was considered so remarkable that it was exhibited before a number of medical societies, but it was by no means an isolated one. On February 8, 1917, the editor published in the "New York Medical Journal," under the title, "Blindness Relieved By a New Method of Treatment," a report of a case in which the vision was improved from perception of light to normal. He has had quite a number of such cases.

Some time ago a colored woman was led into the clinic by a friend. She had heard of Dr. Bates, and had come to him in the hope that he might be able to restore her sight. The doctor examined her eyes, and found that she had atrophy of the optic nerve complicated with other troubles. She could not count her fingers, nor had she any perception of light whatever. The doctor turned her over to me saying:

"Help her, will you?"

"She was the real "mammy" type of negro, very good-natured and motherly. She greeted me with a smile and said:

"May de good Lor' bless you, ma'am, of you can gives me again de light ob day."

The words came from a very humble heart, and were very hopeful. When I heard them I can tell you that I lost some of my courage. It might turn out that I could do nothing for her, and I dreaded to disappoint her. My work is not always easy; yet I like the hard cases to come my way, because when I can help them I feel that I have done something worth while.

"Won't you tell me how long you have been blind?" I asked.

"Yes, ma'am," she replied. "I's hasn't seed nothin' for two years, I's been in the hospital all dat time an' de doctors says dat mebbe I's nebber see again. Some friend ob mine says to me, `You jes goes to de Harlem Hospital Clinic. Dere you find de doctor what makes you see.' So I jes come; dat's all."

I told her to cover her eyes with the palms of her hands and asked if she could remember anything black.
She replied:

"Yes, ma'am, I 'member stove polish black, all right."

"That's fine," I said. "Now, keep remembering the black stove polish, and that will stop the strain in your eyes. When your eyes first began to trouble you, you strained to see, and every time you did that your eyes became worse. Now let us see what will happen when you stop the strain."

I stood her against the wall to make things easier for her, for we have few chairs at the clinic, and left her to treat other patients, telling her not to open her eyes, nor to remove her palms from them, not for a moment, till I came back. Presently I became aware of a strange sound, a sort of mumbling. I was greatly puzzled, but tried not to show it for fear I would disturb the patients. All of a sudden, as I approached my blind patient, I discovered where the sound came from. She was saying in a low tone, "Black polish, black polish," just as fast as she could. I now held a test card covered with E's of various sizes turned in different directions a foot away from her eyes, and told her to take her hands down and look at it. The doctor, the other patients and myself were quite scared at the outburst that followed.

"Ma'am, dat's a E; dat's a sure-nough E. I's sure dat's a black E on some white paper."

This was a large letter on the first line, read by the normal eye at two hundred feet.

But the next moment it faded from her eyes. That was my fault. I was not quick enough. What I should have done was to have her close her eyes and palm again the moment she saw the E. But I was greatly encouraged, not only because the patient had had a flash of vision, but because Dr. Bates had said he was sure I would help her to see again. I again told her to palm and remember black, and when, in a few moments, I asked her to take down her hands and look at the card, she again saw the E, and blacker than the first time. I now told her to close her eyes for a minute and open them for just a second, alternately, remembering the stove polish as she did so. She did this for a time, and was able to see the E each time she opened her eyes.

"Now," I said, as I raised my hand and held it one foot from her eyes, "how many fingers can you see?"

"Three," she replied, which was correct.

I told her to rest her eyes by palming many times a day, and to come and see me three times a week. I also gave her some advice about her diet, and told her that enemas were quite necessary to relieve her constipation.

Next clinic day she saw the seventy line of letters at one foot, and they did not fade away as did the E the first time she saw it. I told her to palm some more, and in a few minutes she counted my fingers correctly every time I asked her to, with only one exception.

"If dis here seein' keeps up, ma'am," she remarked, "I sure will be able to earn mar livin' again. De Lor' bless you ma'am."

She continued to come and made slow but sure progress for a time. Then came a time when she stayed away for several months. As I was very anxious to cure her, I worried about her considerably during this time. Then one day she turned up again. She seemed to be very much frightened about something, but her eyes looked much better. I was so glad to see her, and she seemed so much upset, that I refrained from scolding her, as I felt like doing, and in course of time I discovered the reason for her absence. She had been under treatment for some other troubles, and some doctor or nurse had scared her into discontinuing her visits to our clinic. She had, however, continued to palm several hours a day with most gratifying results.

"Do you know, ma'am," she said, "I's can see every house number as I go visitin', an' I goes out to a day's work once in a while."

She continued to come quite regularly, and her improvement continued. Sometimes I would find that she did not see as well as at her previous visit, but immediate improvement always followed palming. Her gratitude was pathetic, and every little while she would bring a bundle, saying:

"Dis here is fo' you, ma'am. You sabe me from blindness. Yes, you did, an' I's mighty grateful."

These bundles contained gifts of various kinds—a cocoanut from the West Indies at one time, grapefruit and cucumbers at another, and a third a necklace made of tropical beans of various colors.

The greatest day of her life came a few weeks ago when she washed a full set of Dresden china for her employer, without breaking a single piece, and earned four dollars and twenty cents by her day's work. If she continues to practice the palming, which she now forgets sometimes, I have no doubt that she will, in time, obtain normal vision. She now sees the largest letter on the card twenty feet away, and reads the headlines in the newspapers. Recently Dr. Bates examined her eyes with the ophthalmoscope, and found the appearance of the optic nerve very much improved, more blood-vessels being visible in the papilla, or head of the nerve.

HOW I LEARNED TO SEE

By Irma Meyers

This patient was fourteen years old when first seen, and was wearing the following glasses: Right eye, concave 3.12 D. S. combined with concave 0.75 D. C., 90 degrees; left eye, concave 3.25 D. S. combined with concave 0.50 D. C., 90 degrees. At the second treatment her sight had improved temporarily to 20/20, and at the third she had a flash of perfect sight.

The time had come for me to consult an oculist again. I had been wearing glasses for over a year, and they had always been a torment to my parents.

We were discussing the question of oculists at table. My father contended that if there were physicians who could correct defective sight with glasses, there must be those who could cure such defects so that glasses would not be necessary. He had heard of a Dr. Bates who had cured people so that they no longer had to wear glasses.

So instead of going to an eye specialist who would probably have prescribed new glasses, father and I went to see Dr. Bates. While waiting for admission to his private office a number of questions came to my mind. Could he cure me? Would I be able to get along without glasses for the rest of my life? It seemed too good to be true. My eyesight had been so poor that I had given up hope of ever leaving off my glasses.

Finally we were ushered into Dr. Bates' office. He examined my eyes. I could just barely read the second line of letters on the Snellen chart—which shows how defective my eyesight was. The doctor impressed upon me that to improve my sight depended largely upon myself, and I determined to follow his directions conscientiously. I must never wear my glasses again, I was told, and that day, in the doctor's office, was the last time I did wear those hated glasses.

Then the doctor told me to palm—that is, to put my hands over my eyes in such a way as to exclude all the light from them. In this way my eyes became rested. I was not looking at anything, and therefore my eyes were not undergoing any strain. Next the doctor showed me some fine print on a card and called my attention to the fact that while these letters looked perfectly black to me, those on the Snellen chart, at a distance of ten feet, were gray. The difference was due to my imagination, he said, and proved that my eyesight was not normal, because the letters on the test card were just as black as those on the small card in my hand. Then he told me how to improve my imagination. In reading letters like O, D, and S, which had open spaces in them, I was to imagine the white openings (the card is white, the letters black) whiter than the margin of the card, which is the way the normal eye sees them. When I became able to do this the black letters stood out more clearly.

Besides my imagination I had also to exercise my memory. This was accomplished in this way: I looked at a certain letter on the chart. Then I closed my eyes and remembered it better than I saw it. I could not do this very well at first, but my memory improved with practice.

These and many other methods of improving the sight I learned from Dr. Bates. I visited him three times each week, and soon began to read much more on the chart than I had at my first visit. At the same time I noticed that stores, signs, houses, cars, all material objects, began to come out more clearly than before. I discovered, too, that I was not so shaky on my feet as I had been when I first discarded my eyeglasses. I felt then as if I would fall at every step I took. In school I did not have to go up to the blackboard to read what was on it, and did not have to sit as near the front as I formerly did.

After six or seven months I began to enjoy the movies. I no longer had to sit and view a picture that I could not see. (I never, as I said before, used my glasses after my first visit to Dr. Bates.) I began to enjoy the pictures as much as the people around me who had never worn glasses. In school I could sit in the last rows and read the blackboard without any trouble.

I have now been under treatment about a year, with some interruptions, and my eyesight is considered normal. At a recent test by the visiting physician at school I stood second among forty pupils. The girl who was first read just one letter more than I did, and I am sure that if I had had an opportunity to palm I would have been able to do better than she did.

I cannot express in words what I owe to Dr. Bates. I shall always be grateful to him, and I wish I could show my appreciation for his work.

At a recent visit Dr. Bates told me that my cure was not yet permanent, but I shall continue to follow his instructions and teachings implicitly until it is permanent. I sincerely hope that I shall never go back to wearing glasses, and that this recital of my experiences may help others similarly afflicted.

QUESTIONS AND ANSWERS

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible. Kindly enclose a stamped addressed envelope.

Q - 1 When objects at a distance clear up they are double. Can you suggest a remedy for this double vision?
2. When I open my eyes after palming my sight gradually clears, but an intense pain often comes in my eyes, so that they close. The pain always starts with very clear vision. Is this eyestrain?—H. M.

A - 1 If the objects are double when they clear up, relaxation is not complete, and the only remedy is to secure a greater degree of relaxation. This may be done in many ways. Use the method you have found most effective.
2. Yes. Your sight should be best when you open your eyes. If it clears up afterward, it is because you are making an effort to see. This produces the pain.

Q - 1 How long should one palm and how often?
2. How young a patient can you treat by this method, and up to what age can you expect results? How would you handle a child that did not know its letters?
3. Is astigmatism curable by this method?
4. How long has the method?—J. H. W.

A - 1 As often and as long as possible.
2. The age is immaterial. It is a matter of intelligence. Patients as old as eighty-two have been relieved. Children can be treated as soon as they are able to talk. Any small object can be used for eye training, and in the case of children who do not know their letters, kindergarten and Montessori equipment is often useful.
3. Yes.
4. Its evolution began thirty-five years ago. It has improved as experience was gained, and is still improving.

October, 1920

1 - School Hygiene, System of Diseases of the Eye, edited by Norris and Oliver.
2 - Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917.
Second Report of the Provost Marshal General to the Secretary of War on the Operations of the Selective Service System to December 20, 1918.
3 - School Health News, February, 1919.
4 - Archiv. f. Augenh, vol. IXXIX, 1915, translated in Arch. Ophth., vol. XLV, Nov. 1916.

Squint Number
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
November, 1920

MAKE YOUR SQUINT WORSE
This will help you to cure it

Crossed, Wandering Eyes, Strabismus Cures

There is no better way of curing squint than by making it worse, or by producing other kinds of squint. This can be done as follows:

+ To produce convergent squint, strain to see a point about three inches from the eyes, such as the end of the nose. To produce divergent squint, fix a point at the distance to one side of any object, and strain to see it as well as when directly regarded.

+ To produce a vertical squint, look at a point below an object at the distance, and at the same time strain to see the latter.

+ To produce an oblique divergent squint, look at a point below and to one side of an object at the distance while straining to see the latter.

When successful two images will be seen arranged horizontally, vertically, or obliquely, according to the direction of the strain.
The production of convergent squint is usually easier than that of the other varieties, and most patients succeed better with a light as the object of vision than with a letter, or other non-luminous object.



Fig. 55
No. 1.—Convergent squint of the right eye.
No. 2.—The patient is temporarily cured by the memory of a black period.

SQUINT AND AMBLYOPIA: THEIR CURE

By W. H. BATES, M. D.

Squint, or strabismus, is that condition of the eyes in which both are not directed to the same point at the same time. One eye may turn out more or less persistently while the other is normal (divergent squint), or it may turn in (convergent squint), or it may look too high or too low while deviating at the same time in an outward or inward direction (vertical squint). Sometimes these conditions change from one eye to another (alternating squint), and sometimes the character of the squint changes in the same eye, divergent squint becoming convergent and vice versa. Sometimes the patient is conscious of seeing two images of the object regarded, and sometimes he is not. Usually there is a lowering of vision in the deviating eye which cannot be improved by glasses, and for which no apparent or sufficient cause can be found. This condition is known as ***amblyopi****a*, literally ***dim-sightedness***, and is supposed to be incurable after a very early age, even though the squint may be corrected.

Operations, which are now seldom advised, are admitted to be a gamble. According to Fuchs,[1] "their results are as a rule simply cosmetic. The sight of the squinting eye is not influenced by the operation, and only in a few instances is even binocular vision restored." This is an understatement rather than the reverse, for a desirable cosmetic effect cannot be counted upon, and in not a few cases the **condition is made worse**. Sometimes the affected eye becomes straight and remains straight permanently, but often, after it has remained straight for a shorter or a longer time, it suddenly turns, in the opposite direction.

I myself have had both failures and successes from operations. In one case the eyes not only became straight, but binocular single vision—that is, the power of fusing the two visual images into one—was restored, and when I last saw the patient, thirty years after the operation, there had been no change in these conditions. Yet when I reported to the ophthalmological section of the New

York Academy of Medicine that I had cut away a quarter of an inch from the tendon of the internal rectus of each eye, the members were unanimous in their opinion that the eyes would certainly turn in the opposite direction in a very short time. In other cases the eyes, after remaining straight for a time, have reverted to their old condition, or turned in the opposite direction. The latter happened once after an apparently perfect result, including the restoration of binocular single vision, which had been permanent for five years. The consequent deformity was terrible. Sometimes I tried to undo the harm resulting from operations, my own and those of others, but invariably I failed.

Glasses, prescribed on the theory that the existence of errors of refraction is responsible for the failure of the two eyes to act together, sometimes appear to do good; but exceptions are numerous, and in many cases they fail even to prevent the condition from becoming steadily worse.

The fusion training of Worth is not believed to be of much use after the age of five or six, and often fails even then, in which case Worth recommends operations.

Fortunately for the victims of this distressing condition, their **eyes often become straight spontaneously, regardless of what is or is not done to them**. More rarely the vision of the squinting eye is restored. If the sight of the good eye is destroyed, the amblyopic eye is very likely to recover normal vision, often in an incredibly short space of time. In spite of the fact that the text-books agree in assuring us that amblyopia is incurable, many cases of the latter class are on record.

The fact is that both **squint and amblyopia, like errors of refraction, are functional troubles, originating entirely in the mind**. **Both can be produced in normal eyes by a strain to see, and both are immediately relieved when the patient looks at a blank surface and remembers something perfectly.** A permanent cure is a mere matter of making this temporary relaxation permanent.

Permanent relaxation can be obtained by any of the methods used in the cure of errors of refraction, but in the case of young children who do not know their letters these methods have to be modified. Such children can be cured by encouraging them to **use their eyes on any small objects that interest them**. There are many ways in which this can be done, and it is important to devise a variety of exercises so that the child will not weary of them. For the same reason the presence of other children is at times desirable. **There must be no compulsion and no harshness, for as soon as any exercise ceases to be pleasant it ceases to be beneficial.**

The needle, the brush, the pencil, kindergarten and Montessori material, picture books, playing cards, etc., may all be utilized for purposes of eye training. At first it will be necessary to use rather large objects and forms, but as the sight improves the size must be reduced. A child may begin to sew, for instance, with a coarse needle and thread, and will naturally take large stitches. As its sight improves a finer needle should be provided, and the stitches will naturally be smaller. Painting the openings of letters in different colors is an excellent practice, and as the sight improves the size of the letters can be reduced. Map drawing and the study of maps is a good thing, and can be easily adapted to the state of the vision. With a map of the United States a child can begin by picking out all the states of a particular color, and as its sight improves it can pick out the rivers and cities. In drawing maps it can proceed in the same way, beginning with the outlines of countries or states, and with improved vision putting in the details. A paper covered with spots in various colors is another useful thing, as the child gets much amusement and benefit from picking out all the spots of the same color. With improved vision the size of the spots can be reduced and their number increased.

Many interesting games can be devised with playing cards. "**Slap Jack**" is a good one, as it awakens intense interest and great quickness of vision is required to slap the Jack with the hand the moment its face appears on the table.

These ideas are only suggestions, and any intelligent parent will be able to add to them.

Both children and adults are greatly benefited by making their squint worse or producing new kinds of squint (see page 2). The voluntary production of squint is a favorite amusement with children, and if they show an inclination to indulge in it, they should be encouraged. Most parents fear that the temporary squint will become permanent, but the fact is just the contrary. Anyone who can squint voluntarily will never squint involuntarily.

Avoid using effort, force to keep a squint eye straight. This leads to more strain, eye muscle tension, abnormal eye movement. Use relaxation.

HOW I CURED MY CHILD OF SQUINT

By Mrs. B. F. Glienke

The following remarkable story is published in the hope that it may help other parents in the treatment of squinting children. The patient was first seen on April 24, 1920, her age being four years. When her sight was tested with pothooks her eyes were straight and her vision normal. When tested with the letters of the Snellen test card, which she could not read, or with figures, which she did not know, her eyes turned, and the retinoscope showed that she had compound myopic astigmatism. When she looked at a blank wall without trying to see, her eyes were again straight and her vision normal.

When my little daughter was quite young I noticed that her eyes were crossed at times, while at others they were perfectly straight. Later the squint became more continuous, and when she was four years old she was taken to Dr. Bates. **He said the trouble was entirely a nervous one**, and called my attention to the fact that **when the child was comfortable and happy her eyes were straight, and when she was nervous they turned.** He said that she should be **encouraged to use her eyes as much as possible on objects that interested her**, and that she **must never be scolded or punished**. He also recommended a cold sponge bath and **massage** first thing in the morning, for the purpose of quieting and strengthening her nerves and improving her general health.



Shift on the moon.

As I had been a teacher of drawing before my marriage and understood something of kindergarten methods, I did not find it difficult to follow his instructions. I drew pictures of animals, and asked Marie to tell me if they were running, walking, or standing still, whether they were looking at her, or facing in some other direction, whether they had four legs or two. I showed her a picture of the moon, and asked her to tell me whether the horns were pointing upward, downward, or sideways. We played that the moon was full of water and had to be held right side up so that the water would not run out. She became very much interested in these pictures, and as long as the interest lasted her eyes were straight. When they ceased to interest her the squint returned.

Sometimes I would ask her to look at the windows and tell me whether they were open at the top or bottom, whether the shades

were partly down, or all the way down. Then we would look at the windows across the street and do the same thing. We also watched the passing motors, and I asked her to tell me how many people there were in them and whether these people were men, women or children. We studied the patterns of the wall paper, and when visitors came I asked her after they had gone to tell me what kind of clothes they had on. **I taught her to sew and paint, to match colors, and braid mats, to thread beads, and do things with building blocks. Her father, who is a printer, showed her specimens of diamond type, and of minion which is even smaller than diamond. She enjoyed picking out the smallest letters, and when she did so her eyes were straight.**

Threading beads was the most beneficial work undertaken, its tediousness being overcome by the fact that the child's doll and all her stuffed animals, Teddy bear, bunny, dog, etc., each received its own particular necklace of beads. The cold baths and massage were also a great help.

The combined results of the treatment were wonderful. Her eyes began to be straight all the time. Her nervous condition and her appetite improved, and she slept better. Then we had some set-backs. First she had an attack of grippe with cough, headaches and fever. The squint came back and stayed with her for several weeks, until she was well. Then her eyes became straight again.

Later on when she was playing with her little brother they disagreed about something, and Marie got so nervous that her eyes became worse than on any previous occasion since she had been under treatment. The squint alternated from one eye to the other, the left eye being the worse, and next day we were very much worried when we found that the left eye was practically blind. But we went on encouraging her to use her eyes, and in ten days she was as well as ever.

STORIES FROM THE CLINIC

9: Three Cases of Squint

By EMILY C. LIERMAN

One day as I entered the clinic I saw two mothers standing side by side, each holding a little boy by the hand. The children were both about the same age, five years, and both were cross-eyed; but there the resemblance ceased. One seemed happy and contented, and it was quite evident that he was much loved and well cared for. Although cheap and plain, the clothes of both mother and child were clean and neat, and often the boy would look at the mother for a smile, which was always there. The other boy was plainly unhappy and neglected. I could read the mind of the mother, who was anything but clean, as she stood there grasping his hand a little too tightly, and even without her frequent whispered threats of dire things to happen if the child did not keep still, I would have known that she considered him a nuisance, and not a precious possession as boy No. 1 plainly was to his mother.

I was at a loss to know which child to treat first, but decided upon Nathan, the clean one, and tried to keep the other interested while he waited. Nathan had beautiful black curls, and should have been pretty, but for the convergent squint of his right eye, which gave him a very peculiar appearance. His vision was very poor. With both eyes together he could read at ten feet only the fifty line of the test card, and with the squinting eye he read only the seventy line. I showed him how to palm, and while he was doing so I had time to talk to his mother. She said that his right eye had turned in since he was two years old and that all the doctors she had taken him to had prescribed glasses. These, however, had not helped him. I now asked Nathan to read the card again, and was delighted to find that the vision of the bad eye had become equal to that of the good one, namely 10/50. I had difficulty in keeping his head straight while I was testing him, for **like most children with squint, he tried to improve his sight by looking at the object of vision from all sorts of angles. After he had palmed for a sufficient length of time, however, he became able to correct this habit.** The extraordinary sympathy which existed between mother and child came out again during the treatment, for no matter what I said or did, the child would not smile until the mother did.

Nathan came to the clinic very regularly for a year, and for the first six months he always wore a **black patch** over his better eye, the left, while atropine was also used in this eye to prevent its use in case the patch was not worn constantly. Nathan did not like the patch, and his mother had to promise all sorts of things to keep it on. After it was removed the atropine was continued. Dr. Bates had told me what to expect when the patch was removed, and so I was not shocked to see the eye turn in. I knew the condition would be temporary, and that in time both eyes would be straight. Treatment was continued for six months, and now the boy reads at times 10/15 with both eyes, and always with a smile.

The dirty little boy, to whom we must now go back, was called George, and his condition was worse than that of Nathan, for he had squint in both eyes. At ten feet he read the fifty line, but complained that he saw double. I showed him how to palm, and while he was doing so his mother told me how very bad he was, adding that I must spank him if he did not mind me.

"I think he gets enough of that already," I said, but I was careful to say it with a smile, fearing that she might lose her temper and say more than I would like.

George had now been palming five minutes, and I asked him to uncover his eyes and look at the card. He was much surprised to find that he could read the forty line without seeing the letters double. I asked his mother very quietly to be a little patient with him and help him at home, and I gave her a test card for him to practice with.

"Madam," she replied, "I am the mother of six, and I haven't time to fuss with him."

"No wonder the kiddy is cross-eyed," I thought, and seeing I could get no help in that quarter, I appealed to George.

When I revealed to him the possibility of a Christmas present if he came to the clinic regularly and did what I told him he became interested. I did not know how much could be done for his eyes in the eight weeks that remained before the holidays, but I felt sure that with his co-operation we could at least make a good start. This he gave me in full measure. Never did I have a more enthusiastic patient. He came to the clinic regularly three days a week, and often when I came late I would find him waiting for me on the hospital steps and yelling:

"Here she is. I saw her first."

After he had been practicing faithfully for two weeks—**palming six times a day**, and perhaps more, according to his own report—he was able to keep his eyes straight while he read the test card at twelve feet.

After he had done this I asked him to spell a word with four letters, and instantly his eyes turned. I had him palm again, and then I asked him to count up to twenty. **His eyes remained straight, because he could do this without strain.**

Two days before. Christmas I brought my bundle of presents for the children. George was there bright and early, and with him had come three of his brothers, to get their share too, "if there was any," as George explained. Fortunately a little fairy had prepared me for this, and I had gifts for everyone. That day George was able to keep his eyes straight both before and after his treatment,

and to read 15/10 with each eye separately. I have never seen him since, and can only hope that he kept up the treatment until permanently cured.

When little Ruth, aged three, first came to us Dr. Bates suggested to her mother, who was nearsighted, that she should have her own eyes cured, because her condition had a bad effect on the child. She consented, and now has nearly normal vision. Ruth had squint and was so tiny that I had to put her on a table to treat her. As she could not, of course, read the letters on the test card, I held before her a card covered with E's of various sizes turned in different directions. Her mother was quite positive that she couldn't understand what I wanted her to do, but Ruth, as often happens in such cases, had more intelligence than her mother gave her credit for. I asked her to tell me whether a certain E pointed upward, or to the right or left, by merely indicating the direction with her finger, and it did not take an instant for her to show Mother how bright she was. I showed her how to palm, and in a little while she indicated correctly the direction of the letters on several lines. When the letters became indistinct, as I moved the card further away, she became excited and wanted to cry, and her left eye turned in markedly. She palmed again and while she was doing so, I asked her all about her dolly, whether her eyes were blue, or some other color, what kind of clothes she wore, and so on. When she removed her hands from her eyes both were straight. Her mother was instructed to practice with her many times a day at short intervals, so that she would not tire of it, and in three months her eyes were straight every time I tested her sight. I was much interested to learn from her mother that if Ruth's daddy raised his voice in the slightest degree when he spoke to her, her eyes were sure to turn in. This merely confirmed my own experience that it is necessary to treat children who have defects of vision with the utmost gentleness if one wants to cure them. Ruth is not cured yet, but she hopes to be before Christmas, because Santa Claus is sure to visit Room 6, Harlem Hospital Clinic, and he does not like to see children squinting.

QUESTIONS AND ANSWERS

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible. Kindly enclose a stamped addressed envelope.

Q - Can opacity of the cornea be cured?—E. B.
A - Yes. A patient with opacity of the cornea came to the eye clinic of the Harlem Hospital with a vision of 20/70, and in half an hour became able to read 20/40. Later his vision became normal, much to my surprise. Other cases have also been cured.

Q - Is retinitis pigmentosa curable?—R. V.
A - Yes. See *Better Eyesight*, for April, 1920.

Q - My eyes are weak, and cannot stand the light. Can anything be done for them?—Mrs. W. T
Close vision cure
Q - Is it possible to regain the ability to read without glasses when it fails after the age of forty, the sight at the distance being perfect? If so how can this be done?—H. C.
A - The failure of the sight at the near-point after forty is due to the same cause as its failure at any other point and at any other age, namely strain. The sight can be restored by practicing at the near-point the same methods used to improve the vision at the distance—palming, shifting, swinging, etc. The sight is never perfect at the distance when imperfect at the near-point, but will become so when the sight at the near point has become normal.
A - Yes. Stop wearing dark glasses, and go out into the bright sunshine. As they get stronger accustom them to the direct light of the sun. Let the sun shine on the closed eyelids. Then gradually open them until able to keep them wide open while the sun shines directly into them. Be careful not to overdo this, as much discomfort and lowered vision might result temporarily from a premature exposure of the eyes to strong light. See *Better Eyesight* for November, 1919.

November, 1920

1 -Textbook of Ophthalmology, authorized translation from the twelfth German edition by Duane, p. 795.

Glaucoma Number
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
December, 1920

VOLUNTARY PRODUCTION OF EYE TENSION A SAFEGUARD AGAINST GLAUCOMA

It is a good thing to know how to increase the tension of the eyeball voluntarily, as this enables one to avoid not only the strain that produces glaucoma, but other kinds of strain also. To do this, proceed as follows:

+ Put the fingers on the upper part of the eyeball while looking downward, and note its softness. Then do any one of the following things:
+ Try to see a letter, or other object, imperfectly, or (with the eyes either closed or open) to imagine it imperfectly.
+ Try to see a letter, or a number of letters, all alike at one time, or to imagine them in this way.
+ Try to imagine that a letter, or mental picture of a letter, is stationary.
+ Try to see a letter, or other object, double, or to imagine it double.

When successful the eyeball will become harder in proportion to the degree of the strain; but, as it is very difficult to see, imagine, or remember, things imperfectly, all may not be able at first to demonstrate the facts.

GLAUCOMA: ITS CAUSE AND CURE

By W. H. BATES, M. D.

GLAUCOMA is a condition in which the eyeball becomes abnormally hard, and theories as to its cause are endless. The hardness is supposed to be due to a rise in intraocular pressure, and the other symptoms, chief among which is an excavation of the optic nerve, forming in advanced cases a deep cup with overhanging edges, are supposed to be the results of this pressure. Yet all the symptoms commonly associated with increased tension have been found in eyes in which the tension was normal.

The increased tension is supposed to be due to an excess of fluid in the eyeball, and this is commonly attributed to an impeded outflow. **The aqueous humor, which is secreted very rapidly, is supposed to escape at the angle formed by the junction of the iris with the cornea, and in glaucoma it is believed that the iris adheres to the cornea so that the angle is obstructed. Yet it is a well-known fact that in many cases no such obstruction can be found.**

For more than fifty years iridectomy held the field as the only treatment which gave any hope of relief in glaucoma. The operation, which means the removal of a piece of the iris, was introduced by von Graefe, and often gives relief for a longer or shorter time. If the patient lives long enough, however, the condition always returns. I have seen this happen after the tension had been normal for fifteen years. It is a fact mentioned by all the text-books, moreover, that it often fails to give even temporary relief, and sometimes the condition is made worse than it was before.

The beneficial results of the operation, when it does succeed, have never been satisfactorily explained, but the accepted opinion at the present time is that they are due to the formation of a scar which is more pervious to the fluids of the eye than the normal tissue, and the object of modern operations is to obtain such a scar. For this reason sclerotomy, usually performed by the method of Elliott has gained great vogue. A piece of the entire thickness of the sclera is removed, and thus a permanent fistula covered only by the conjunctiva is formed. Through this the fluids of the interior escape. Like iridectomy this operation sometimes succeeds temporarily, but, according to Elliott himself, it may fail to check the optic atrophy and decline of vision even when the relief of tension is complete.

Although it is the concensus of medical opinion that a glaucomatous eye must eventually be operated upon, and that the sooner this is done the better, some men have attempted to hold the process at bay by the use of myotics. These drugs, by contracting the pupil and thus stretching the iris, are believed to draw the latter away from the "filtration angle" and allow the excess of fluid to escape. They are commonly employed for the purpose of giving temporary relief, but some specialists advise their continuous use. Posey claims that such treatment gives a larger proportion of successes than iridectomy.

Until a few years ago I always treated glaucoma by the old methods, not knowing anything better to do; but I never used the Elliot operation, having early learned that it is very dangerous to allow the fluids of the eyeball to escape, and having seen glaucoma produced by fistula of the cornea. I would not have ventured to predict that the condition could be relieved by relaxation, and only learned by accident that it was amenable to such treatment.

On May 9, 1915, a patient (mentioned in *Blindness Relieved by a New Method*, N. Y. Med. Jour. Feb. 3, 1917) came to me with a complication of diseases which had reduced the vision of the right eye to light perception and that of the left to 20/100 (the field being also contracted). She was fifty-four years of age, and had been wearing since 1910 the following glasses: both eyes, convex 2.00 D.S. combined with convex 1.50 D.C., axis 90. As her pupils were much contracted, I prescribed atropine to dilate them, two grains to an ounce of normal salt solution, one drop three times a day.

On the afternoon of May 10, she had an attack of acute glaucoma in the left or better eye. As atropine and other mydriactics are thought sometimes to produce glaucoma, the fact that the disease attacked only one eye and that the better of the two is interesting. The condition got worse as the day advanced, and during the night the pain was so intense that the patient vomited repeatedly. The next morning she came to the office, and I noted that there was blood in the anterior chamber. The vision had been reduced to light perception, and the pain again produced vomiting. I prescribed eserine-two grains to the ounce, one drop three times a day. Afterward I visited her three or four times a day in her home, and as there had been no improvement, I increased the strength of the eserine solution to four grains to the ounce and alternated it with a three per cent solution of pilocarpine, both of these drugs being myotics. Still there was no improvement, and after a few days I decided upon an operation. It was performed on May 15, and was accompanied by considerable hemorrhage. Mild hemorrhages also occurred at different times during the following week. When the blood cleared away an opaque mass was left covering the pupil. On May 23, the tension was normal and there was no pain; but, owing to the opaque matter covering the pupil, there had been no improvement in the vision.

Palming helps cure Glaucoma

After the operation the patient resumed the relaxation treatment. Under its influence the vision of the right eye improved, and when a few weeks after the operation there was an **increase of tension in this eye, it was at once relieved by palming**. For some months the vision of the left eye remained unchanged, owing to the opacity of the pupil. Then the obstruction began to clear away, and the vision improved. In a year there was normal vision in both eyes. From time to time during this period, and up to the present time, the patient had attacks of increased tension in both eyes; but they were always relieved in a few minutes by palming.

Since then I have used the same treatment in many cases, and I have never seen one in which the pain and tension could not be relieved in a few minutes by palming, while permanent relief was obtained by more prolonged treatment.

One of the worst cases of glaucoma I ever met with came to me on Feb. 2, 1920. The patient was sixty years of age, and his vision in the right eye or better eye was only 20/100, with marked contraction of the field on the nasal side. In the left he had only light perception. The eyeballs felt as hard as the glass shell of an artificial eye, which, technically, is tension plus 3. The glaucomatous excavation of the optic nerve was so marked that it seemed as if the whole nerve had been pushed backward. The patient had been under treatment a long time, but had received no benefit.

On March 2, after swinging and palming, the vision of the right eye was 20/20w—while that of the left was 20/100 in the eccentric field. On March 4, the field of the left eye had improved, and by alternating the universal swing with palming he became able, for short periods, to read diamond type with the right eye at six inches. This was twelve days after he had begun the treatment. On March 7, he flashed 20/40 with the left eye, and by the aid of the universal swing read fine print at five inches with the right, while the field of both eyes was normal. For the first time in several years he became able to see the food on his plate. Previously he had had to be fed, which was very humiliating to him. He also became able to go about without an attendant, to attend to his

correspondence at the office, and to read his letters without glasses. At this point he stopped the treatment against my advice, and I have not seen him since. He was **greatly helped by the universal swing,** which he **practiced all day**.

The truth about glaucoma is that it is a functional neurosis caused by strain, and as such is curable. You can produce hardness in a normal eye by having the patient strain to see (see page 2), and you can soften a glaucomatous eyeball by relief of strain. These changes are so rapid that no change in the contents of the eyeball could account for them. I therefore concluded, before I had any experimental evidence of the fact, that they were due to muscular action. Later I was able to produce glaucoma in a rabbit's eye by operations upon the muscles. I shortened the superior rectus by tucking, and thereby produced a tension of plus 1. I repeated the operation upon the superior oblique, and the tension increased to plus 2. I did the same to the inferior oblique, and the tension increased to the maximum, plus 3. All this time the tension of the other eyeball remained normal.

GETTING CURED OF GLAUCOMA

By F. C. STEWART

This patient when first seen was able to read 20/50 with each eye, but the right eye was absolutely blind on the nasal side, a vertical line dividing the seeing from the blind area. The tension of the right eye was usually greater than that of the left, but at times the reverse was the case, and for short periods the tension of both eyes was normal. He had been using myotics (drops which contract the pupil) for some time, but had obtained no benefit from them. His age was fifty-eight, and he was wearing the following glasses: distance, both eyes, convex 2.75 D.S.; reading, both eyes, convex 5.00 DS. The improvement in his field since he has been under treatment has been very remarkable, as the accepted methods of treatment, even when the results are most favorable are not expected to enlarge the field, or even to prevent a further loss.

In the summer of 1917 1 had the first symptoms of glaucoma in the form of an attack of rainbow vision. I did not know what the symptoms meant, and was not alarmed; but I went to an optician and had my glasses changed, thinking the trouble was the consequence of eyestrain. The symptoms continued, however, and I went to another optician and had the glasses changed again. Still I was no better. Then I went to a succession of oculists, some six or seven, all of them being men of considerable eminence in the profession. The first two put drops in my eyes and examined my field, but did not tell me that I had glaucoma. It was only from the third, about a year and a half after the first symptoms appeared, that I learned what was the matter with me. The last began to talk operation, but I let him talk. I think I may claim to be as game as anyone about operations. When the doctors told me that they wanted to take my stomach out and put it back again, I said, "Go ahead." If they had told me that they wanted to take off my leg, I would probably have said the same thing. But when it came to letting anyone cut into my eye it was a different matter. About the first of last July the oculist in whose care I then was told me that my field was getting less. He asked me to come back in October, and said if the field continued to contract he would talk operation again.

Sometime previous to this an acquaintance who said that Dr. Bates had cured him of glaucoma gave me a copy of *Better Eyesight*. I did not become seriously interested at the time, but later I asked the man for details. He told me something about Dr. Bates' methods, and said he not only had great faith in Dr. Bates, but that he was the only eye specialist in whom he did have any faith.

Finally, on September 11, of this year, I went to Dr. Bates. He told me to stop the eye drops and take off my glasses, which I did. Having worn the latter for twenty-five years, I had considerable difficulty at first in getting on without them; but after three or four days things began to go better, and before the end of the month I read the address on the Doctor's card without artificial aid. I could not have done this when I took off my glasses if a hundred million dollars had been at stake. I can now, six weeks after the beginning of the treatment, read ordinary print at twelve inches, and under favorable conditions can read diamond type at six inches or less. There has also been a considerable improvement in my field.

My progress has been slow, but it is sure, and I see no reason why it should not continue until I get a complete cure. I have spent **many hours a day palming**, and this, when it is successful, **softens the eyeball and improves the sight very materially**. I am **also able to soften the eyeball simply by a thought—that is, by the memory of some object or incident. A white cloud, the blue sky, some incident of my boyhood, or of a more recent period—anything so long as it is remembered perfectly—has this extraordinary effect.** Often when I wake in the morning my eyeballs are hard, but by the aid of my memory I am always able to soften them. One morning I woke at two o'clock, and went to the bathroom. There, in accordance with a habit of mine, I washed my face in cold water. As I touched my eyeballs I was shocked to find how hard they were. They were like two rocks. Immediately I paid a mental visit to Van Cortland Park and began to examine the trees, noticing the texture of the bark, the gum oozing out of it, the outlines of the leaves, etc., and before I had reached the second tree the eyeballs were soft. Often since then I have resorted to the same expedient, and always with the same result. Fortunately I know the different kinds of trees very well, and my visits to the park are interesting as well as profitable.

On the streets and elsewhere I try to imagine that everything is moving, (the swing) and as long as I am able to do this the eyeballs remain soft. Since I have been under treatment I have been trying to learn to **sleep on my back**, as the Doctor says that the **body is always under a strain unless the spine is straight**. When I am able to do this I waken without pain or hardness in the eyeballs.

Recently I sent one of Dr. Bates' reprints to the specialist who wanted to operate on me, and he said he was much interested.

STORIES FROM THE CLINIC

10: Absolute Glaucoma

By EMILY C. LIERMAN

In absolute glaucoma there is no perception of light, and the condition is considered to be incurable. It may or may not be accompanied by pain, and in the latter case the only remedy is believed to be the enucleation, or removal of the eye. So far as the editor is aware there is no case of absolute glaucoma on record in which the pain has been relieved, or any measure of sight restored, by any method except the one described below.

A few months ago there came to the clinic a woman of seventy-nine. At first glance one could see that she was a lady, and I guessed that at one time she had been very well off. As she stood apart from the rest of the patients waiting to be attended to she took not the slightest notice of what was going on around her, and occasionally I heard her moan with pain.

When at last Dr. Bates was able to examine her he found that she had glaucoma in both eyes, and that the right was stone blind, possessing not even light perception. He turned her over to me, asking me to do what I could to help her and stop her pain. Fortunately I was able to find a stool for her, a rare thing at the clinic, and placing it before a table upon which she could rest her elbows, I showed her how to **palm**, which she did very readily. After a few minutes the **pain ceased and the eyeballs became soft**. I now told her to take down her hands, but she still kept her eyes shut. I thought this was because I had not told her to open them, but when I told her she might do so she asked:

"Are you sure the pain will not come back if I open them. For many days I have suffered such constant pain that I cannot sleep at night, and now I feel such a sense of relief that I would really like to keep my eyes closed."

"I don't think the pain will come back," I said, "and if it does you can palm again."

I now held a test card about two feet from her eyes, and told her to cover her better eye and look at the card with the blind one. We had several visiting doctors at the clinic that day, and Dr. Bates had told them about this case of absolute glaucoma. They were all standing by, with Dr. Bates himself, when I asked the patient to look at the card, and the excitement was intense when she said that she saw the large letter at the top.

"Oh, Doctor," I said, "she sees it!"

"Yes, I see it, I really see it," added the patient, scarcely able to credit her senses.

After a little more treatment I told her she must keep her eyes shut as much as possible when she was at home, and **palm** every minute she could get. I also told her **never to look at any point more than a second**, but to keep constantly **shifting**. She went away very happy and grateful, for the pain had not come back.

The next time she came Dr. Bates treated her, and was able to improve the vision of the right eye to 9/200, while that of the left eye improved to 9/40. He then turned her over to me again. She was very happy and wanted to talk, which I let her do. She said she was living in a furnished room and that I hadn't any idea how worried she had been about going blind, because she had no one to look after her.

"But now," she added, "I have all sorts of hopes for the relief of my trouble, because you and Dr. Bates have done so much for me. Palming helps me so much that I am now able to sleep at night. I like to do it for hours at a time, because it takes the terrible pain away."

I now told her to **use her imagination to improve her sight and relieve the pain**. Most of the clinic patients become confused when I ask them to do this, but this dear old lady did not find it a bit difficult. I told her to palm, and then imagine a florist's window filled with flowers. Next I told her to imagine that she had entered the shop and was observing the flowers, and I called to her mind the red rose and the white rose, the carnation, the violet and other blossoms. Then I asked her if she could imagine the green fields in the country where the daisies grow, and she said:

"Yes, and I can imagine that I am picking the daisies also."

I now told her to remove her hands from her eyes, and Dr. Bates was thrilled when she saw the T on the thirty line at ten feet. The patient herself laughed out loud and said:

"I cannot believe it."

She came to the clinic regularly, three days a week, for quite a while, and always happy because she was steadily improving. I was not prepared, therefore, to find her one day looking very much depressed. The trouble was that she had had a visitor who talked to her—or at her, I should say—for two long hours; this had upset her nerves so that the pain had returned and her vision had been lowered. I pictured to myself what it must mean to listen to a steady stream of gossip for two hours, and my sight at once became imperfect. I told her what a dangerous thing it was for her to allow herself to be tortured in this way, and said that if her friends insisted upon talking to her for such a length of time she must keep her eyes closed as much as possible. Otherwise the strain would cause her to go blind.

For a time she got along nicely. Then I left the city for a much-needed vacation, and while I was away I got word that she was getting worse. I came back to town, and, as she was not able to come to the clinic, I called upon her.

"Oh, nurse," she said, as soon as she saw me, "my right eye pains me so that I think of nothing but death."

Her thin face was lined with pain, and I could see that she was in agony. I began to talk to her about the days when she did not suffer, and how she had stopped the pain by remembering the daisies. She began to palm without my telling her to, and became able to imagine the daisy waving in the breeze. I asked her to imagine that her body was swinging with the flower. She did this, and in a few minutes her pain left her and she smiled.

"Now, isn't it strange," she remarked, "but I forgot all about using my imagination."

She said that I had worked a miracle; but I explained that when she used her imagination she had to relax enough to relieve the strain in her eyes, and that had stopped the pain.

We often hear the remark, "This person makes me sick," or "That person makes me nervous," but it remained for my glaucoma patient to make me realize that these observations are literal statements of fact. All about the walls of her little room, which was very clean and sunshiny, were photographs of her children and their families. With great pride she named each one in turn, but when she came to the picture of a man and woman hanging a little apart from the rest her tone changed.

"This is my daughter," she said of the woman, and I could see that she was very fond of her, but when she pointed to the man she said:

"I cannot bear him. He makes me nervous and sick, because he is not a good man."

She began to strain at once, and had to do some palming before I left to relieve her pain. Evidently it is important, if we want to

avoid eyestrain, that we should keep away from the people we dislike, and think of them as little as possible.

I called on her a few times more, and by resting her eyes between each line of letters she became able to read 10/20 with the once blind eye and 10/10 with the other. The last time I saw her she was happy and comfortable.

Cataract number
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

January, 1921

THE TREATMENT OF CATARACT

A Report of a Case

From "A Case of Cataract," by Victoria Coolidge, in "Better Eyesight" for June, 1920.

The treatment prescribed was as follows:

+ Palming six times a day, a half hour or longer at a time.

+ Reading the Snellen test card at five, ten, and twenty feet.

+ Reading fine print at six inches, five minutes at a time, especially soon after rising in the morning and just before retiring at night, and reading books and newspapers.

+Besides this, he was to subject his eyes, especially the left, to the sunlight whenever an opportunity offered, to drink twelve glasses of water a day, walk five miles a day, and later, when he was in better training, to run half a mile or so every day.

The results of this treatment have been most gratifying. Not only have his eyes improved steadily, but his general health has been so much benefited that at **eighty-two** he looks, acts and feels better and younger than he did at eighty-one.

CATARACT: ITS CAUSE AND CURE

By W. H. BATES, M. D.

Cataract is a condition in which the lens becomes opaque. It is commonly associated with advancing years, but may occur at any age. It may also be congenital (present at birth). The opacities take many different forms, and may occur in a hard or a soft lens. According to the orthodox teaching the condition is incurable except by the removal of the lens, although in the earlier stages it is sometimes ameliorated by means of drops that expand the pupil and by glasses. The text-books are full of statements to this effect.

Yet it is perfectly well known that cataract does sometimes recover spontaneously. Many such cases are on record, and probably most ophthalmologists who have been practicing for any length of time have seen them. Fifteen or twenty years ago, when I was assistant surgeon at the New York Eye and Ear Infirmary, I collected, at the request of the surgeon, Dr Henry D. Noyes, a large number of records of such cases.

The removal of the lens, when it is soft, is usually accomplished by the operation of needling, whereby the tissues are broken up so that they may be absorbed. A hard lens is extracted through an opening at the margin of the cornea, and the best results are believed to be obtained when the opacity has become complete. Otherwise part of the lens substance is liable to be left behind and cause trouble. Thus the patient may be kept for years in a condition of semi-blindness.

The results of the operation are not always as satisfactory as might be desired. A considerable proportion of patients regain what is considered to be normal acuteness of vision with very strong glasses, and the results are considered good when they become able to read large print at the near-point and 20/50 at the distance. The patient is obliged, usually to have two sets of glasses, one for distant vision to replace the focusing power of the lost lens, and the other for reading to compensate for the impairment of the accommodative power which usually follows the operation.

This impairment of accommodative power is not due to the removal of the lens, which has nothing to do with accommodation, but to the fact that the patient strains so to see that the muscles that control the shape of the eyeball fail to act properly. In some cases it is regained, after the patient becomes accustomed to the new situation, without treatment, and in rare cases patients have become able to do without glasses entirely, because the eyeball elongated sufficiently to compensate for the loss of the lens.

I began to treat cataract by the operative method, because I did not know anything better to do. Then I learned from Dr James E. Kelly of New York that incipient cases would yield to hygienic treatment. My first inkling of the value of central fixation in such conditions came to me through a patient who had incipient cataract in one eye and hypermetropia (farsight) in the other. By the time the error of refraction had been relieved the cataract had disappeared. After this I had many similar experiences, but it did not occur to me that a ripe cataract, or a congenital cataract, could by cured by this or any other treatment.

In 1912, however, a young girl of seventeen came to my clinic with the left eye enucleated and a congenital cataract in the right. The left had been operated upon for the same condition, and, having become infected, was taken out to save the better eye. The latter having recently become worse, the patient had come to have it operated upon. Before performing the operation I thought it best to treat her by the method of relaxation, for the purpose of improving the condition of the eye as much as possible so that the

operation might have a better chance of success. To my surprise the vision improved and kept on improving, until in three months it was normal and the cataract had disappeared.

One day, some half a dozen years later, a lady, fifty-five years of age, came to me to be cured of presbyopia (old-age sight.) Her distant vision in the right eye was 20/20, and in the left she had only light perception. This was due to the presence, in this eye, of a mature cataract. I began to treat her by the aid of the memory and imagination for presbyopia, and, in order to prove to her the relation between these mental faculties and the state of the vision, I asked her to cover her right eye and note that she could not remember or imagine a black period as well as when it was open. She replied that she could, and I said it was impossible. She insisted that, nevertheless, she did it. Thinking that at the near-point she would realize the imperfection of the sight of the left eye more clearly than at the distance, I brought the card closer and said:

"You cannot remember the period looking at this card with your good eye covered."

She replied: "I can, and what is more, I can read the card," which she did, both at two feet and at twenty.

This was naturally a shock to me. It did not seem to me possible that a mature cataract could melt away in such a short time, but the ophthalmoscope confirmed the statements of the patient. **When she remembered a period perfectly I could see the optic nerve and other details of the eye-ground.** Since then I have cured a great many similar cases, one of the most remarkable having been reported in *Better Eyesight* for June, 1920.

I had another shock when a few months ago a traumatic cataract began to melt away under the influence of relaxation treatment. The patient came to my clinic with an eye which had been **completely blind for four years from traumatic cataract complicated with detachment of the retina.** The opacity completely covered the pupil, and with the ophthalmoscope no red reflex (light reflected from the retina) could be seen. After a few treatments the patient became able to see the movements of his hand on the temporal side. Later he became able to see the hand in all parts of the field. Now he is beginning to read.

Another case of the cure of traumatic cataract is reported in the following article.

These cures are very remarkable. A **traumatic cataract** is one which follows an injury (trauma) to the lens, the opacity being due largely to the formation of connective tissue in the pupil, and, in advance of the event, I should have pronounced the cure of such a condition impossible, although I had previously **demonstrated that when patients practice central fixation connective tissue is absorbed in the optic nerve, retina and cornea. In the retina and optic nerve the circulation can be seen to improve as the connective tissue disappears, and I can only assume that this is the cause of its disappearance.**

Equally remarkable is the cure of diabetic cataract without relief of the disease. A patient with such a cataract came to me on April 29, 1918, her vision being 10/200 — in the right eye and 20/30 — in the left. She had been seen a year and a half previously by a well-known ophthalmologist who had advised several operations, but, fortunately, she had not submitted to them. By the aid of palming, swinging, imagination and memory, her vision improved rapidly. On May 15 that of the left eye was 20/70, while later it became normal. On May 22 the vision of the right became normal temporarily. Since then she has had slight relapses in the right eye, but few or none in the left. The general diabetic condition has not changed, and it is remarkable that when it is at its worst there is very little lowering of the vision.

It is quite evident from the foregoing facts that the cause of cataract (other than traumatic) is strain, and I have found much evidence, both clinical and experimental, to the same effect. I have not been able to produce cataract in a normal eye by strain, but **in a cataractous eye I have seen the opacity come and go according as the mind of the patient was relaxed or under strain**. In one of these cases the opacity was so dense that no red reflex could be seen. Another doctor who was present looked at the eye and made the same observation. I asked the patient to remember a swinging O perfectly black, with a perfectly white center. This meant perfect relaxation, and when she did it I saw some of the details of the retina and the optic nerve, while the other doctor again confirmed my observation. I then asked her to think of the O as stationary, with grey outlines and a clouded center. This meant great strain, and while she did it neither I nor my colleague could see the red reflex. In experimental animals I have produced cataract by operating upon the external muscles in such a way as to increase their pressure, and have then relieved it by cutting these muscles.

TRAUMATIC CATARACT DISAPPEARS

By MARGARET DOWNIE

This patient was first seen on October 18, 1920, when her vision in the right eye was 20/100 and in the left 14/200. She had compound myopic astigmatism in the right eye, and the pupil of the left eye was covered by a traumatic cataract which prevented ophthalmoscopic examination of the eye-ground. On December 6, the cataract had been absorbed except for a spot about the size of a pin-head, and I was able to see the optic nerve and the retina clearly. With a glass to replace the focusing power of the lens—convex 7.00D.S. combined with convex 3.00 D.C., 75 degrees—she was able with this eye to read 20/40, and on the same day, after palming and swinging, she obtained temporary normal vision in both eyes, the left eyeball having elongated sufficiently to compensate for the loss of the lens. The fact that astigmatism should have developed in the right eye after the injury to the left is interesting, as astigmatism has been supposed, until recently, to be congenital.

When I was thirteen years of age a bullet from an air-gun, rebounding from a tree, struck my left eye and injured the lens. This resulted in the formation of a cataract which was operated upon three times. After the third operation about one third of the cataract remained, but the doctor was afraid to operate again. I was now able with this eye to distinguish, with the aid of a strong glass, only the outline of near-by objects.

Previous to the accident my eyes had been straight, and the vision of both normal, so far as I was aware. After the last operation, however, I found myself unable to read writing on the blackboard at school. I went to the specialist who had performed the operations and he was astounded to find that I had a bad case of astigmatism in the good eye. He gave me the following glass: convex 3.00 D.C., 105 degrees, combined with concave 2.50 D.C., 15 degrees. Later my left eye began to turn out.

I wore my glasses constantly, putting them on the first thing in the morning, and taking them off the last thing at night. I went swimming with them, and if they were lost or broken, I remained in my room until they were found or repaired. My condition caused me much unhappiness, and I was particularly disturbed about the squint. I wrote to every medical journal that I knew about and to many other publications, asking if there was any cure for squint; but none of them was able to suggest anything but an operation. A few months ago I happened to hear about Dr. Bates, and I resolved to see him as soon as an opportunity offered. At the beginning

of the season I came to New York from my home in Texas to study music, but with Dr. Bates in the background of my mind. Nevertheless I did not look him up immediately.

One day in the elevator of a department store my glasses were swept from my face, disappearing as completely as if they had never existed. I went to the Lost Property Office, but after waiting there a long time failed to recover them. It was a horrible experience, and the realization of my helplessness without glasses depressed me terribly. However, it resulted in my looking up Dr. Bates immediately, it was a good thing.

I went to him with the hope that he might be able to cure my squint and astigmatism, but I never dreamt that he could cure cataract also. When he told me he could do so I hardly knew what to think, but I resolved to do everything I could to help him cure me. I carried out the swinging treatment so vigorously that I used to get dizzy, and fall over on my bed. Of course I was not doing it right, but the doctor had told me to swing, and I was determined to do so. I was positively terrified when he told me to palm and remember all sorts of strange things, such as the letter F on a piece of white starch, because I thought he was trying to hypnotize me, but I did my best, nevertheless, to carry out his instruction. Later I bought and read all the back numbers of the magazine, and learned the scientific principles on which the treatment is based.

My eyesight is now steadily improving, and I intend to keep up the treatment until I have normal vision. I have given up the music for the time being—my eyes are more important, ten times more important—and the ridicule of my friends does not disturb me. As long as that old cataract continues to melt away nothing else matters.

In addition to the improvement in my eyesight I have noticed an improvement in my memory. My memory for the things I learned out of books at school was always poor, while my memory for music has always been exceptionally good. I suppose the difference was due to the fact that one set of impressions reached me through my eyes, and the other though my ears. Now that my vision is improving I can remember the things that I see better.

I wish everyone could know of this remarkable method of curing defects of vision. I know in the end it must surmount all opposition, but meantime how many persons as afflicted as I once was will remain unhelped! It is right that we should be dubious of the new, but to hang so tightly to tradition as the medical profession seems to do makes progress unnecessarily hard.

INCIPIENT CATARACT RELIEVED

By C. L. STEENSON, M. D.

New York.

This patient when first seen had a vision of 20/200 in each eye, and was wearing, for distant vision, the following glasses: right eye, concave 6.00 D.S. combined with 1.00 D.C., 90 degrees; left eye, 10.00 D.S. combined with 1.00 D.C., 60 degrees. Owing to the presence of incipient cataract in each eye these lenses improved his vision only 20/50 in the right eye and 20/100 in the left. For reading his glasses were three diopters weaker. He now has flashes of normal vision. He was helped most by the use of his imagination.

Since boyhood—I am now sixty-five—I have had myopia and astigmatism, for the correction of which I have worn glasses and spectacles. About two years ago cataract developed in my right eye, and a few months later in my left eye. Both were in mild degree, but still bad enough to seriously obscure the field of vision. I had previously been annoyed by vitreous opacities which made little black spots dance in the field of vision. I also suffered from frequent severe headaches. My glasses were often changed without much relief.

About November 1st of this year (1920) I consulted Dr. Bates, of whom I had heard much and favorably. His methods of treatment seemed exceedingly rational, and he gave me great hopes of getting rid of my eye troubles. First of all he made me discard my glasses, which, at first, seemed rather hard, but to which I have gradually become reconciled. Through what I would call a system of progressive education of sight, I have now almost got rid of the myopia, the vitreous opacities do not bother me any more, and, apparently, the cataracts are disappearing by degrees. The headaches have also disappeared. I have resumed, to a great extent, the literary and research work on which I have been engaged since my retirement from active practice, and I have no doubt that, ultimately, I shall be in possession of full visual power. Upon my future progress I will report at a later date.

No. 122 West Ninety-ninth Street

STORIES FROM THE CLINIC

10: A Case of Cataract

By EMILY C. LIERMAN

Bates Method Improves Hearing

One day last July a man of forty came to the clinic suffering from cataract and a complication of other troubles. As I approached him he was palming. This was an unusual thing for a stranger to do, but he evidently thought that if covering the eyes with the palms was good for others it might help him also. I stood before him and said:

"Can I help you?"

He paid no attention to me whatever, and I soon discovered that he was **deaf**, so deaf that one had almost to scream into his left or better ear to make him hear. When I had at last succeeded in making him understand me he asked:

"Is it possible that you will be able to do anything for me?"

I answered: "I am going to try, with your help."

Then I said I wanted to know something about the history of his case, and this is what he told me:

At the age of six he fell down a flight of stairs, and struck his forehead on a newel post, severing an artery in the head. Later, when it was noted that his sight was deficient, physicians attributed the condition to this fall. During the thirty-four subsequent years he had been treated by many New York physicians, both at their offices and clinics. During that period he had been blind three

times, and surgical treatment had been repeatedly necessary. As a boy he could never see a blackboard at school, and could read but little. Between his twenty-first and his thirty-fifth year he had enjoyed the best vision of his life; but for the past five years his sight had been steadily declining, and several doctors had told him that this would continue until he became completely blind. He was now practically blind in one eye so far as useful vision was concerned. I tested his sight, and found that he could count fingers at about three feet with the right eye, and with the left could see only the movements of his hand. Dr. Bates had previously examined him, and had found that he had an inflammatory cataract in the left eye, together with other inflammatory conditions.



+Look at, shift on the letter E.
+Close the eyes, remember the E, shift on it in the imagination.
+Open, look at, shift on the E.
+Close the eyes and repeat:open, closed, open.
+Practice until the memory of the E with eyes open and closed is equal, perfect, clear and the E is seen clear.

I told him to palm again, and he complained that he saw all sorts of bright colors, and that these disturbed him very much. I then told him to remove his hands from his eyes and look at the large letter on the test card, which I held a foot away from him. After he had tried a few times he was able to remember the letter with his eyes closed; then the bright colors faded away, and after palming for fifteen minutes his vision improved from 1/200 to 1/50 in the right eye, while in the left he became able to count my fingers at three feet. Next clinic day he became able to read 3/30 with the right eye and 1/10 with the left, while at the end of two weeks the vision of the right eye had improved to 3/10 and of the left to 3/70. At the same time his general health had improved so much that he asked me if I had time to let him tell me about it. I told him that I would be very glad to hear the story, and what he had to say interested me so much that I thought the readers of *Better Eyesight* might be interested also.

"For many years," he related, "I have suffered from **insomnia**, and in recent months it has been nothing unusual for me to remain awake the entire night. Frequently I stay up all night, realizing the futility of trying to induce sleep. A short time ago I did this twice in a single week. When I do sleep my slumber has been very light and disturbed by the **wildest imaginable dreaming—fires, murders, hairbreadth escapes, etc.** As a result of the insomnia and eyestrain I had frequently **splitting headaches**, sometimes every day, and sometimes twice a day. From these I could secure relief only by the use of what I knew to be harmful medicines. Since I came to you I have been sleeping very much better, the dreams have become much less disturbing, and the headaches have practically ceased."

Hearing this, I was encouraged to try to do even more for him; so I handed him a test card, and asked him to look at a small letter, close his eyes and remember it, and then imagine it blacker and clearer than he saw it. He was able to do this, and the constant twitching of his eyelids ceased. For a moment I forgot that he was deaf and said in an even voice: "How do your eyes feel now?"

He heard me, and answered:

"They feel so rested just now I do not feel that I have eyes at all, but am seeing without them."

He came three days every week for three months, and then as he improved he came less frequently. When I last saw him he was able, with his left eye, to read 3/10 at times, and with his right 5/10, while his hearing had improved so much that I was able to talk into his better ear without raising my voice much above my ordinary conversational tone. At the same time he had been **relieved of head noises, including a drumming in the ears**, which, he said, had often continued for from three to ten days. When he first came he could not go about alone, and always walked like an intoxicated person, for which he was frequently taken. When he left the clinic I noticed that he bumped against the benches and he told me that the condition had been attributed by physicians whom he had consulted to incipient **locomotor ataxia**. After his first visit, however, he never bumped into the furniture, and before he left us his walk was almost normal.

Pain Number
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

February, 1921

THE PREVENTION AND CONTROL OF PAIN BY THE MIND

Anyone who has normal vision can demonstrate in a few moments that when the memory is perfect no pain is felt, and can produce pain by an attempt to keep the attention fixed on a point. To do this proceed as follows:

+ Look at a black letter, close the eyes and remember it.
+ Look at the letter again and again close the eyes and remember it.
+ Repeat until the memory is equal to the sight.
+ Now press the nail of one finger against the tip of another. If the letter is remembered perfectly, no pain will be felt.
+With practice it may become possible to remember the letter with the eyes open.

+Remember the letter imperfectly, with blurred edges and clouded openings, and again press the nail of one finger against the tip of another. In this case it will be found impossible to continue the pressure for more than a moment on account of the pain.
+Try to remember one point of a letter continuously. It will be found impossible to do so, and if the effort is continued long enough pain will be produced.
+Try to look continuously at one point of a letter or other object. If the effort is continued long enough, pain will be produced.

PAIN: ITS CAUSE AND CURE

By W. H. Bates, M. D.

Pain is supposed to be a beneficent provision on the part of Nature for advising us of injurious processes going on in the body, but, like many of Nature's arrangements, it is a very clumsy one. Many of our most serious diseases are quite painless in their early stage (the only time when the warning of pain would be of any use), while a physiological process like childbirth is accompanied by such severe pain that the pangs of the woman in travail have become proverbial. **Pain also occurs with no local cause whatever, being purely a creation of the mind, and it has, besides a very destructive effect upon the body, not infrequently causing death and more often handicapping the organism in its attempts to recover from the condition that caused it.** Nature's protective mechanism is, in fact, a two-edged sword striking both ways, and its control is one of the most serious problems that the medical profession has to deal with.

There has been much discussion as to the nature of pain, and the mode by which it is produced, one school holding that there are special nerves for its transmission and another that it is merely the expression of a certain grade of irritation. Whatever may be said in favor of either of these points of view, it can be demonstrated that **pain occurs only when the mind is under a strain and is immediately relieved when the strain is relieved.** This strain may be due to a local cause, or it may occur without any local cause whatever.

That pain can be produced voluntarily by the mind has long been known. When I was a student at the College of Physicians and Surgeons, Dr. T. Gaillard Thomas used to tell us that pain could be produced in the little finger, or any other part of the body, simply by concentrating the mind upon it. Since then I have repeatedly demonstrated that pain can be produced by such a simple thing as imagining a letter or object imperfectly, or trying to look at a point for an appreciable length of time. I never knew these experiments to fail when patients could be induced to make them; but they are so uncomfortable that few are willing to do so. A physician under treatment for imperfect sight boasted that he had never had a headache or pain in his eyes in his life. I told him that I could easily show him how to produce such a pain, and that it would do him good to have one. After a week of talk he consented to make the experiment, and in a few minutes he had acquired a headache that was more interesting than pleasant. He did it by trying to look fixedly at a point. This effect was purely mental. It was not the physical strain of looking at a point that produced the pain, because there was no physical strain, the eye being incapable of looking at a point. It was the mental effort of trying to do what was impossible.

As pain can be produced by the mind without any local cause, so it can be prevented or relieved by the mind, no matter how great the local irritation may be. In other words pain is a mental interpretation of certain stimuli, and under certain circumstances such stimuli are not interpreted as pain. This, too, has long been known, there being cases on record in which individuals have possessed the power of preventing pain to an extraordinary extent. I may claim to have discovered, however, that everyone may become the possessor of this power.

It is only when the mind is in an abnormal condition that pain can be felt, or even imagined, and irritations of the nerves are followed by pain only when such irritations produce mental strain. If the mind is not disturbed by them, there is no pain, and therefore, by learning to avoid this disturbance pain can be prevented, or relieved.

As the mind is always at rest when the memory is perfect, the mental condition necessary for the prevention and relief of pain can be obtained by the use of the memory. One of the simplest things to remember is a small black spot or period, and under certain circumstances anyone may become able to remember such an object. This cannot be done, it is true, at the actual moment of suffering, but, fortunately, pain is never continuous. One can see, or hear, or smell, continuously; but one cannot feel pain continuously. There are always moments of freedom, and during these intermissions one can get control of the memory. In this way the **pain of glaucoma**, one of the most terrible conditions known to medical science, has been repeatedly relieved (see *Better Eyesight*, December 1920). Many cases of trigeminal neuralgia have been cured after various operations commonly resorted to for the relief of this condition had failed, and the pain of childbirth and of operations has been prevented.

Persons with perfect sight never have any difficulty in preventing pain by the aid of the memory. Persons whose sight is not normal have more difficulty, because imperfect sight is the result of mental strain, and it is sometimes very difficult to relieve this strain. With the help of a person who has normal sight and understands the use of the memory for this purpose, however, it can always be done.

RELIEF OF TIC DOULOUREUX

By Evelyn M. Thomson

I do not remember a time when I was able to see comfortably. At fifteen, following an attack of grippe, I began to have so much trouble with my eyes that I was taken out of school, and the late Dr. H. D. Noyes gave me my first glasses. From that time on I wore glasses constantly, with many changes ordered by many different specialists, until I came to Dr. Bates. Sometimes they helped me; but I never was able to do any near work without discomfort, and I could not play tennis because it hurt my eyes to follow the ball.

When I was eighteen a polyp in the right middle ear broke through the drum, and a great quantity of pus poured out. This was the beginning of a long series of treatment and operations, during which I suffered increasing pain on the right side of my head, and which left me with no bones in the middle ear and an opening in the drum. After the last operation I was ill for nine months, and for a much longer time there was weakness and loss of sensibility on the left side of the body.

In 1905 I had trouble with the antrum on the left side of the face, and in order to release the pus which had collected here, a wisdom tooth was extracted, the wound being kept open for three months. A second tooth was then extracted, and one by one all the teeth on the left side of the upper jaw were taken out. Then the dentist declined to extract any more, saying that it was only increasing the trouble, instead of relieving it.

From the beginning of this condition I had a continual pain in the left side of the face, and this developed into what is known as *tic douloureux*, a painful contraction of the facial muscles, which continued for fifteen years. Everything possible was resorted to for the relief of this trouble except drugs, which I refused to take, and nerve-cutting which I refused to submit to. Spinal treatment gave me more help than anything else.

From 1914 to 1918, in spite of the discomfort resulting from the use of my eyes at the near-point, I read aloud for many hours every day. At the end of this time my eyes went to pieces completely. All winter I went every week to a specialist for treatment, but

received no benefit. Then I went to another specialist. He gave me new glasses, but these seemed only to make the condition worse. I could not read without pain in my eyes and a contraction of the nerves and muscles on the left side of my face. At night the lid of the left eye became partially paralyzed, so that I had to force the eye open when I wakened and was afraid the time might come when I would not be able to keep it open. On the street the muscles on the left side of the face contracted all around the eye, across the bridge of the nose, and toward the temple. This I attributed to the increase of eyestrain by the wind and light.

On April 22 of last year I went to Dr. Bates in despair. My eyesight was getting worse from month to month, and the facial condition seemed also to be getting worse. In addition I suffered from noises in my left ear so loud and continuous that it seemed at times as if the top of my head would blow off.

Palming was the first thing Dr. Bates told me to do. At first I saw all sorts of lights. Then I saw grey, and at last I became sufficiently relaxed to see black. I found the use of the imagination and memory a great aid in palming. I visualized the out-of-doors and the things I had seen in my travels. This produced relaxation, and I forgot the pain and the noise in my ear. I also found it a help to be read to while palming. The universal swing relieved the tension which I had always experienced on the street.

For some months my eyes did not seem to respond to the treatment. The first intimation of gain was the natural opening of my left eye at night. **Next my right eye, which had been very numb and blurred, began to have a feeling of life. Later I experienced an increase of pain in the center of both eyes. Strange to say this encouraged me; for the new pain was quite different from the dull ache I had had before, and made me feel that life was returning to my eyes.** (Healing Crisis: Normal occurrence during healing.)

One day, when the pulling of the facial muscles was very severe, Dr. Bates asked me to flash a little card which he held close to my nose. This was very unpleasant at first; but suddenly the muscles relaxed, the pain in my face and eyes ceased, and I saw things at the distance clearly. It was only a flash; but after that I seemed to understand better the goal toward which I was working. Since then I have often obtained relief in this way. These glimpses of paradise are what has sustained me through months of treatment which would otherwise have been unbearably monotonous.

My vision has improved slowly, but the progress has been a constant source of excitement to me. When I first saw the faces of my friends clearly I rejoiced, and I cannot describe the feeling of relief that came to me when the dishes on the table ceased to hurt me, as all near objects had previously done. The light and the color I now see are a revelation to me. I had been told that printer's ink was black, but until I went to Dr. Bates I never saw it so. Neither did I ever see anything like the white I see now. I have a delightful time reading the signs in the subway and enjoying their colors. Not only in color, but in form, things look different to me. Instead of being flat, as they once were, they seem to have a fourth dimension. Natural Eyesight Improvement students experience a return to perfect 3-D vision. Eyeglasses impair 3-Dimensional vision. Distant objects appear surprisingly near. Sitting in the balcony at a concert one afternoon, the orchestra seemed to be almost in my lap. In the dress circle at the opera I seemed to be almost on the stage. When I wore glasses the stage was always miles away. My vision is not normal yet; I cannot read print with comfort. But after such marvelous improvement I feel sure that this will soon come. As for the facial pain and contraction, they are practically cured. When the trouble returns, as it sometime does, I know how to relieve it.

I am very glad to have an opportunity to tell this story, and I wish I knew how to make it known to all who are suffering from the pain of defective eyesight, or of facial neuralgia, that these conditions can be cured by relaxation, and that the dreadful operations which are resorted to in the case of the neuralgia are unnecessary.

STORIES FROM THE CLINIC

12: The Relief of Pain

By EMILY C. LIERMAN

In March, 1919, an Austrian woman, thirty-seven years of age, came to the clinic. She was suffering from myopia, with great pain in her eyes and head, and looked so sad that one could not imagine her smiling. At the age of two years she had become totally blind after a fever, and had remained so for a year and a half, during all of which time she suffered continual pain in her eyes. When her sight returned strong glasses were given to her, but they did not relieve her pain. Neither did the glasses given to her later by various physicians. Finally an optician, finding that the glasses he had given her did not help her, suggested that she should try Dr. Bates and our clinic.

At her first visit her pain was relieved by palming, and her vision improved from 5/70 to 5/40. She was so pleased that she smiled and kissed my hands. The pain had made her sick at her stomach most of the time, she said, so that she was often unable to retain her food, and no day was she ever free from it.

I told her to continue the palming at home, and to keep it up for an hour at a time whenever possible. For a while she got on very nicely. Her vision improved to 10/40, and whenever she felt the pain coming on she palmed, invariably obtaining relief.

Then came a day when I found her with tears in her eyes. She had had a sleepless night, she explained, and had suffered so intensely that her family were frightened. Her eyes felt as though sand was pouring out of them onto the pillow. I asked her if her eyes were still paining her, and she answered tearfully, "Yes".

I placed her comfortably on a stool, and while her eyes were covered I began to talk to her about her children. She soon forgot her pain in telling me what beautiful eyes her baby had, how thrilled the family had been when the first tooth appeared, and so on. When she uncovered her eyes the most remarkable change had come over her face. All traces of pain had disappeared, and she smiled.

One day after she had been coming to the clinic for a year or more she was arranging to send some money to Austria and trying to fill out the necessary papers. As she was about to write her mother's name everything before her became a blank, and she experienced an intense pain accompanied by a burning sensation in her eyes. She was so frightened that she wanted to cry, but suddenly she thought about the clinic and how her pain had been relieved by the palming. She covered her eyes with the palms of her hands for a little while, and then the pain became less and the questions on the blank began to clear up. When she tried to write, however, everything became a blank once more. Again she palmed, and this time her sister, who was with her, reminded her that she must palm for a longer time if she wanted to get results. She then palmed for fifteen minutes, her sister encouraging her as she did so. When she removed her hands from her eyes the print before her appeared perfectly distinct, she wrote the necessary answers without any difficulty, and had no more trouble with her eyes that day. She was extremely happy when she told me this. To think that she had been able to improve her sight and relieve her pain without assistance thrilled her.

When I last saw her, six months ago, her vision was 10/10 without glasses, and she had no pain.

BACKACHE CURED BY CENTRAL FIXATION

By Bessie T. Brown

The editor is much pleased to be able to publish Mrs. Brown's report of the simultaneous relief of her astigmatism and the backache from which she had suffered so long. It was from her he learned the value of central fixation in relieving pain in parts of the body other than the head and eyes, and he takes great pleasure in giving her credit for the discovery.

It is about six, or perhaps seven, years ago that I first consulted Dr. Bates concerning my eyes. I had been wearing glasses to correct astigmatism for five years. During those years of "correction" my eyes seldom gave me a comfortable day. I spared them in every way, using them as little as possible. My sight was not noticeably impaired, but I will cite a few of the many discomforts from which I suffered.

A smarting sensation in the eyes was nearly always present; also a general lassitude and a dull ache in the back. The last mentioned was never attributed to eyestrain, but to many other causes, and was treated accordingly by a physician; but without results. I was obliged to retire early every night in order to forget my pains in sleep, only to wake in the morning with eyes which felt as though a cinder from every chimney in New York City had dropped into them. **This was because we can strain our eyes during our sleep as well as during waking hours**. To watch a stage or moving picture performance was torture; and when driving, or riding on railroad trains, I would keep my eyes closed, only taking occasional peeps at the passing landscape. I could not endure the glare of the sunlight on the beach or pavements, and artificial lights on the streets, in the shops or theatre, were an abomination.

My first glasses were prescribed by an optometrist, and I received no relief while wearing them. Friends advised me to consult an eye specialist of high standing in New York. I did so. He said after examination that he was not surprised that I had received no benefit from the glasses which I was wearing, and proceeded to fit me with what he considered to be the correct lenses. I was supremely happy for a few days, in the anticipation of enjoying perfect comfort as soon as I should become accustomed to the new lenses.

But alas! my happiness was short-lived. The glasses prescribed by the eminent physician gave no more satisfaction than those from the optometrist.

I returned to see the doctor after a few weeks, and complained that his glasses had not helped me. He made another examination and said that he could make a slight change in the lenses, but it would not be worthwhile to do so. He also said that my eyes were not working together properly, but this condition would improve with my general health. However my health did not improve under his treatment; I felt that I was doomed to a life of suffering, and tried to become reconciled to my fate.

Hope was revived a few months later when I heard of Dr. Bates and his cure of eyestrain without glasses. Dr. Bates took possession of my glasses upon my first visit to him, and I have not worn them since.

He told me to do, or attempt to do, the most amazing things. Looking at the sun was one treatment. I protested, saying that even the reflected sunlight was intolerable; but Dr. Bates insisted, and I found that I could look at a point near the sun with one eye, covering the other with my hand, then alternating. After practicing this for several days, I was able to look directly at the sun with both eyes wide open. The glare of sunlight on the ground ceased to worry me and became as delightful as the pale moonlight. When the sun failed to shine, or was not convenient, I practiced looking at a large incandescent electric light, and very soon the artificial lights troubled me no more than the stars which twinkle in the heavens at night; and this reminds me that Dr. Bates told me that the apparent **twinkle of the stars** is only in the eye of the beholder.

After a few weeks of treatment I forgot to spare my eyes, as had been my habit for years. I could read or sew until midnight if I wished, and began to go out evenings and enjoy life like a normal human being. As I write tonight, the clock is striking eleven; and my eyes are feeling fine and dandy, although I have been using them constantly all day sewing and embroidering.

My animation and efficiency have greatly increased. Friends have remarked that I am a new woman, and continue to congratulate me upon my youthful appearance. An acquaintance of mine whom I had not met since I stopped wearing glasses failed to recognize me a few days ago at the house of a mutual friend. "Why," she exclaimed, "the Mrs. Brown whom I used to know was an extremely pale and worn-looking creature." Through relaxation the expression of eyes and face have become greatly changed.

I had been under treatment with Dr. Bates about three months when suddenly one day I noticed that my old and constant companion the backache was no longer with me, and it has never returned.

At the present time when I feel the strain coming into my eyes I rest them by palming and remembering or recalling different familiar objects—the colors of my frocks, recalled one at a time, or the forms and shapes of pieces of china which are in constant use in my home, or the color of the eyes of members of the family. It seems marvelous to be able to go about in the shops for a good part of the day and then keep my eyes open and enjoy to the fullest extent a performance or social affair in the evening. Also what a delight to ride through the country and feast my eyes with comfort upon the beauty of the passing landscape!

Blindness Number
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

March, 1921

HOW TO OBTAIN PERCEPTION OF LIGHT IN BLINDNESS

Two things have always brought **perception of light to blind patients**. One is **palming**, and the other is the **swing**. The swing may take two forms:

1. Let the patient stand with feet apart, and sway the body, including the head and eyes, from side to side, while shifting the weight from one foot to the other.

2. Let him move his hand from one side to the other in front of his face, all the time trying to imagine that he sees it moving. As soon as he becomes able to do this it can be demonstrated that he really does see the movement.

Simple as these measures are, they have always, either singly or together, brought relaxation and with it perception of light, in from fifteen minutes or less to half an hour.

In palming, the patient should remember that this does not bring relief unless mental relaxation is obtained, as evidenced by the disappearance of the white, grey and other colors which most blind people see at first with their eyes closed and covered.

BLINDNESS: ITS CAUSE AND CURE

By W. H. Bates, M. D.

As ordinarily used, the word *blindness* signifies a degree of defective sight which unfits the patient for any occupation requiring the use of the eyes. Scientifically it means a state in which there is no perception of light. Speaking of this condition in his *Cause and Prevention of Blindness* Fuchs tells us that except in extraordinarily rare cases it is incurable, and this is the accepted opinion of ophthalmology today

The facts that have come to me during thirty-five years of ophthalmological practice have convinced me that the above statement should be reversed, and made to read: "Except in extraordinarily rare cases blindness is curable." In fact, unless the eyeball has been removed from the head, I should be unwilling to set any limits whatever to the possibility of relieving this greatest of human ills, for I have never seen a case of injury or disease of the eye which was sufficient to prevent improvement of vision. In all cases of blindness, whatever their cause, a mental strain has been demonstrated, and when this strain has been relieved perception of light has always been obtained.

Even when the eyeball has been so shrunken that the patient scarcely seemed to have an eye, sight has been restored. In one such case the cornea of the left eye had shrunk to an eighth of an inch in diameter and only a suggestion of the sclera was visible, while the right eye was reduced to a quarter of its normal size and showed only a hazy cornea and a blurred piece of iris with no pupil. The patient was ten years old and the condition of her right eye was congenital (present at birth): that of the left was due to an inflammation which she suffered when she was a year old. From that time, she had had no perception of light; but in fifteen minutes she became able to see the furniture of the room indistinctly and to imagine that it was swinging. In spite of this remarkable demonstration of what could be accomplished by relaxation, her parents did not bring her again.

Atrophy of the optic nerve is one of a considerable number of diseases, like detachment of the retina, irido-cyclitis and absolute glaucoma, which have been placed beyond the pale of hope by the science of ophthalmology. Yet persons with atrophy of the optic nerve sometimes have normal vision, and persons blind from this cause sometimes recover spontaneously. At the New York Eye and Ear Infirmary thirty years ago, a patient was exhibited who had all the symptoms of atrophy of the optic nerve, but who nevertheless possessed perfect sight. The case was exhibited later at the Manhattan Eye and Ear Hospital, the New York Ophthalmological Society, and the Ophthalmological Section of the New York Academy of Medicine. Later I saw several similar cases; but when a colored woman came to my Clinic a few years ago with atrophy of the optic nerve, it did not occur to me that it would be possible to help her. Not knowing what to do, I asked her to sit down while I attended to some other patients, and meanwhile my assistant, Mrs. Lierman, who tells the rest of the story in a later article, got hold of her and made her see. Later many cases were relieved. A few obtained normal vision, but most of them did not have the courage to continue the treatment long enough for this purpose.

A few weeks ago a patient came to me **completely blind in both eyes from atrophy of the optic nerve.** Before he left the office he had become able, by the aid of the swing, to see the light with both eyes. He went away greatly encouraged, and promised to come again as soon as he returned from a neighboring city. Later he sent me a statement, signed by an oculist and witnessed by a notary public, to the effect that he was completely and incurably blind from primary optic atrophy. I have not seen him since.

The following remarkable story of a spontaneous cure was told me recently by a patient: A commercial traveler, a friend of the man who told me the story, was treated for two years in a Chicago Hospital for total blindness from atrophy of the optic nerve. Although the doctors told him that his case was quite hopeless, he refused to believe it. He talked much of a grey cloud that he had seen before his eyes at the time he became blind, and said that if he could only remember how it looked he was sure it would help him. One day he had a perfect mental picture of that grey cloud, and at once he found that he could see. He is now back in his old position, doing his usual amount of work, attending to his correspondence, and reading as well as he ever did. Doctors who have examined his eyes since say he still has atrophy of the optic nerve and ought still to be blind.

Irido-cyclitis, a combined inflammation of the iris and ciliary body, is a frequent cause of blindness. Often it results from an injury to the adjoining eye, and in that case is known as sympathetic ophthalmia. In severe cases it is believed to lead inevitably to blindness, which is, of course, thought to be incurable. Yet in all cases in which blindness has resulted from this disease I have seen perception of light, and even normal vision, restored.

One day a young girl came to my Clinic with one eye as soft as mush from irido-cyclitis (the other having been removed four years before). **The iris and pupil were covered by a white scar and she had no perception of light**. After **palming**, **swinging**

and **using her imagination** for about fifteen minutes, **the scar cleared up** sufficiently for me to see the iris and pupil indistinctly, and two visiting doctors also saw them, while the patient saw the light. Later she became able to see people on the street and to see the pavement and imagine that it was swinging. At that point she ceased coming to the Clinic.

A case of practical blindness from this cause was cured within a month by the use of the imagination. When the patient looked at the large letter at the top of the card at one foot and was told what it was, he was able to imagine that he saw it, and thus he became able to see it actually. Then he did the same thing at ten feet. Next he imagined that he saw the first letter of the second line at ten feet, and became able to recognize the second letter. The same method was used with all the other lines until he became able to imagine the first letter of the bottom line, and then go on and read the other letters.

When his eye was examined with the ophthalmoscope the vitreous was so opaque that one could not distinguish the optic nerve and retina. He said that the light bothered him, and prevented him from imagining any of the letters on the Snellen test card. With the retinoscope at six feet, however, he stated that the light did not bother him so much, and he was able to imagine, while it was being used, that he saw a letter on the bottom line perfectly. The refraction was then normal, and a clear red reflex (light reflected from the retina) was obtained, indicating that the vitreous was now quite clear. When he failed to imagine that he saw the letter, the reflex was much blurred, indicating **cloudiness of the vitreous**. These are facts. I cannot offer any explanation for them.

Of detachment of the retina Fuchs says, "It is generally possible in recent and not too excessive cases of separation of the retina to obtain an improvement of the sight by a partial attachment, and in especially favorable cases even to cause the **detachment to disappear completely**. Unfortunately it is only in the rarest cases that these good results are lasting. As a rule, after some time, the separation develops anew, and ultimately, in spite of all our therapeutic endeavors, becomes total … In inveterate cases of total detachment it is better to abstain from any treatment." **Compare this statement with the results obtained by central fixation, as told in the following article. In many other such cases useful vision has been obtained.**

The incurability of blindness resulting from glaucoma is taken so completely for granted that Nettleship defines absolute glaucoma as "glaucoma that has gone on to permanent blindness." Yet in the December 1920 issue of *Better Eyesight*, and again in this issue, is reported a case in which light perception was restored in an eye stone blind with glaucoma after a few minutes of palming. This was witnessed by several visiting doctors. Later the patient became able to read the twenty line at ten feet with this eye. As nearly half of our blind population at the present time is believed to be over sixty years old, and a great part of the blindness of later life is attributed to glaucoma, the curability of this condition is a fact of immense importance.

Statistics indicate that in this country, at the present time, external injury is the most frequent cause of loss of vision between the ages of twenty and thirty-four. I believe that a great part of this blindness could be relieved, for, as I have already stated, I have never seen an eye so badly injured that its vision could not be improved. To cite only one of many similar cases, a patient injured in an automobile accident became suddenly and completely blind, either from hemorrhage into the orbit, or from injury to the optic nerve. By palming and the use of his imagination, he at once became able to count his fingers.

Perhaps the most remarkable cures of blindness are those in which the loss of vision is supposed to be due to general disease. These have frequently been relieved, partially or completely, without relief of the disease. Thirty years ago a man stone-blind with what I diagnosed to be albuminuric retinitis was led into my Clinic at the New York Eye and Ear Infirmary. This condition is so closely associated with disease of the kidneys that its existence is considered sufficient evidence of the existence of the latter. Yet the patient regained normal vision and held it up to the time of his death without any improvement in the condition of the kidneys. On the contrary the disease of these organs became worse, and when he died a few years later the physicians who performed the autopsy wondered how he had been able to live so long. The evidence seems to me complete that the blindness was not due to the kidney trouble but to strain.

Many diseases of the eye are attributed to syphilis. Yet in every case these conditions have been relieved by rest, and often the sight has become normal without any improvement in the syphilis.

In spite of the very prompt improvement which patients obtain in these cases, they often, as the cases mentioned in the foregoing pages show, fail to continue the treatment. The weight of public and professional opinion is too much for them, and they are practically compelled to take this course. Such dogmatism is both unwise and unscientific. The causes of disease are obscure and variable, and we do not know it all. It does not seem to me that a doctor is justified in telling a patient that he is incurable just because he has never seen such a case cured, or has forgotten, because it was contrary to rule, any case that he has seen. This may cause the patient to accept as inevitable a condition which might have been cured and may even prevent nature, because of the depressing effects of discouragement, from doing what the doctor has failed to do. Still less is it justifiable for the medical profession to assume, as it now seems to do, that we have learned all there is to be known about blindness. Such an attitude throttles research and actually exposes to the suspicion of being a quack any man who tries to help these unfortunates.

RELIEF OF RETINAL DETACHMENT

By Clara E. Crandall

Twenty-five years ago Samuel D. was struck in the left eye by a nail thrown carelessly from a roof, and nineteen years later, while he was chopping wood, a stick flew up, hitting him in the face and injuring the same eye.

There were, apparently, no serious consequences from either of these accidents, but about a year after the second one the patient noted that his sight was getting dim. He consulted an oculist, thinking that he probably required glasses, and was told that he had iritis. He was given drops for this condition and had been using them for a month when, on May 12, 1916, while digging in the garden, he went suddenly and completely blind in his left eye. The cause proved to be a **detached retina**, and the oculist whom he consulted sent him to a hospital where he underwent a thorough examination. His teeth were X-rayed, and it was thought best to remove his tonsils. He was then kept for eight weeks motionless, flat upon his back.

At the end of this time it was found that the retina, as a result of the complete rest, had become partially reattached and the vision was, to some extent, improved. Hoping to improve it still further, the doctors operated upon the eye, but without success. Two weeks later a second operation was performed, after which the eye became totally blind again. The condition of the left eye was complicated by a traumatic cataract, and senile cataract now developed in the right. He was sent to another hospital in the autumn where he was again thoroughly examined, but the doctors decided that nothing more could be done for him.

And so, with one eye totally blind and cataract rapidly obscuring the sight of the other, Samuel went back to his work as a gardener, trying to resign himself to the dark future before him. From month to month he struggled on; but he found it increasingly

difficult to do his work, and felt that the time would soon come when he would have to give it up. He suffered greatly from the strain of trying to see and complained of a constant yellow glare in the blind eye, together with many other painful and unpleasant symptoms which, he said, interfered with the sight of his right eye also.

From a time several years antedating his sudden attack of blindness Samuel has been in the employ of my family. After he became blind I went to Dr. Bates to have some eye troubles of my own treated, and, hearing of the many remarkable cures that were effected by his method of treatment, it occurred to me that he might be able to do something for Samuel. It seemed to Samuel a forlorn hope, but as it was the only one, he allowed me to take him last May to Dr. Bates' Clinic in the Harlem Hospital.

At this time he was still without light perception in the left eye, and with the right was unable to make out the smaller letters on the test card when it was held a foot from his face, while even the largest letters appeared gray and blurred. Dr. Bates told him that the cataracts could be cured, and encouraged him to hope for improvement in the condition of the detached retina also. He told him to **leave off the dark glasses** he had been wearing, to **palm** as often and as long as possible, to drink **twelve glasses of water a day**, to **imagine and flash the letters on the Snellen test card**, and to **imagine everything, himself included, as swinging**.

Samuel followed these instructions conscientiously, and in a short time the strain and other distressing symptoms from which he had previously suffered were greatly relieved. The sight of the blind eye improved gradually. At the first visit he became able to distinguish light, and later he saw the shadowy image of a moving object, at first only when held close to the left side of his head, but afterward in all parts of his field of vision. The perception of light in the blind eye has grown steadily and the vision has so improved that now, at a distance of fourteen feet, he can see a moving object against a strong light, while at the near point he even thinks that he can sometimes catch a glimpse of the large letter on the Snellen test card. With the right eye he can read the smallest letters on the test card at the near point, and they appear black and distinct. At fourteen feet he can flash them.

Among those who have benefited by Dr. Bates' remarkable discoveries, there is no one who owes more to them than Samuel D.; for now, instead of having to look forward to blindness and utter dependence on others, he has been enabled to take up his life with renewed courage and interest, confident that if he faithfully continues the treatment he will eventually obtain good vision in both eyes.

STORIES FROM THE CLINIC

No. 13: The Relief of Blindness

By Emily C. Lierman

Clinic day is always a happy day for me. It is true one sees at the hospital a great deal of suffering, sorrow and poverty; but it is a pleasure to be able to relieve some of the suffering, and sometimes things happen which are very amusing.

Some time ago a blind man was led into the Clinic by a friend. This was a case which really ought to have been very sad, but it turned out, instead, to be very amusing. In spite of his affliction the patient seemed to be in a happy mood and very well-pleased with himself. He was neatly dressed and his shoes, though worn, were carefully shined, while over them he wore spats. His tie was a very bright red, and his hat was a light shade of tan. A cane, which his blindness compelled him to carry, completed a costume which I am sure he considered to be that of a real swell gentleman. When I approached him he said in a very gracious manner:

"Glad to see you, ma'am! Glad to see you, ma'am!"

And yet he could not see me, as I soon found out. I held my fingers before his eyes and asked him if he could see them. He answered that he could not. Further tests showed that he had no light perception whatever, and Dr. Bates said that his condition was due to atrophy of the optic nerve. I showed him how to palm, and after five minutes he pointed to an electric light in the ceiling and said:

"It looks light there."

I told him at once to palm again, and when he opened his eyes he saw the shadow of my fingers moving from side to side before his face. In a few moments, however, the blindness returned. Again I told him to palm, and while he was doing so I asked him if he could remember something black, or something else that he had seen before he became blind, such as a beautiful sunset, or white clouds. He thought a while, and then remembered that in the days when he had been a house-painter he had used black paint. I told him to remember the black paint while he was palming, and then I left him to attend to other patients. When I came back to him I held two of my fingers close to his face, and asked him if he could see them.

"Ma'am " he said, "I'm not at all sure, but I think I see two fingers."

I think the man must have been quite popular with the ladies, for he now remarked that one of his lady friends would be pleased if he could see her. He came quite regularly for a time, and each time I noted improvement in his vision. Sometimes this was not very marked, and then I knew that he had not been palming very much at home. He was greatly helped by the focusing of the sun's rays upon the white of his eyes with a sun glass. This had a very soothing effect.

He was soon able to dispense with his guide and, when leaving the Clinic, used to use his cane to obviate collisions with the benches, nurses and patients. One day as he was leaving the room Dr. Bates called my attention to him, and I noted that instead of tapping with his cane upon the floor he was carrying it on his arm. With head erect, he walked down the long corridor, opened the door and left the hospital, with apparently no more difficulty than a person with perfect sight. A little later he came with the cane. He became able at last to read the fifty line at five feet with both eyes, and then he stopped coming. Probably he thought he would be able to continue the treatment by himself.

In the October (1920) number of *Better Eyesight* I wrote about another case of blindness from atrophy of the optic nerve, the patient having no light perception. Unlike the preceding patient she was very much depressed by her condition, and begged me piteously to give her back the light of day. She had heard of our Clinic through some of the patients, and had confidence that Dr. Bates or myself would give her some relief. But I was very far from feeling this confidence. Sometimes I am a doubting Thomas. I always try, however, not to reveal this fact to the patients, but simply go ahead and do the best I can. After this woman had palmed for ten minutes or longer, all the time remembering black stove polish, she became able to see the 200 letter a foot in front of her eyes. Since my previous article was written she has become able to read the ten line at this distance. She is able to go out to work during the day, and to work for herself at night, and she says she sleeps better.

In the December (1920) number I told the story of a woman who had absolute glaucoma of the right eye. This meant that she was stone blind. She was also suffering terrible pain in this eye. I had to do a great deal of coaxing to get her to palm, but I was willing to give her more time than I do to most of the patients, because her age was seventy-nine. With the exception of one or two relapses she got on nicely, and the last time I saw her she had half-normal vision for distance in the once blind eye and normal vision in the other. She had learned how to keep her eyes at rest by palming and using her imagination for flowers and other

objects, and this relieved the strain which had been the cause of all the trouble.

We have had many cases of total blindness at the Clinic, most of them due to glaucoma and atrophy of the optic nerve, a few to detachment of the retina and irido-cyclitis, and all have gained at least perception of light, while many have been more materially benefited. But most of them did not come more than a few times. It is unfortunate that the blind, as a rule, consider their condition so hopeless that it is difficult to convince them that any treatment is worthwhile, even after they have received some benefit from it.

Presbyopia Number
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
April, 1921

METHODS THAT HAVE SUCCEEDED IN PRESBYOPIA

The cure of presbyopia, as of any other error of refraction, is rest, and many presbyopic patients are able to obtain this rest simply by closing the eyes. They are kept closed until the patient feels relieved, which may be in a few minutes, half an hour, or longer. Then some fine print is regarded for a few seconds. By alternately resting the eyes and looking at fine print many patients quickly become able to read it at eighteen inches, and by continued practice they are able to reduce the distance until it can be read at six inches in a dim light. At first the letters are seen only in flashes. Then they are seen for a longer time, until finally they are seen continuously. When this method fails, palming may be tried, combined with the use of the memory, imagination and swing. Particularly good results have been obtained from the following procedure:

+ Close the eyes and remember the letter "o" in diamond type, with the open space as white as starch and the outline as black as possible.
+ When the white center is at its maximum, imagine that the letter is moving and that all objects, no matter how large or small, are moving with it.
+ Open the eyes and continue to imagine the universal swing.
+ Alternate the imagination of the swing with the eyes open and closed.
+ When the imagination is just as good with the eyes open as when they are closed, the cure will be complete.

PRESBYOPIA: ITS CAUSE AND CURE

By W. H. Bates, M. D.

PRESBYOPIA is the name given to the loss of power to use the eyes at the near point, without the aid of glasses, which usually occurs after the age of forty.

The textbooks teach that this change is a normal one: but it is a noteworthy fact that many other eye troubles often date from the time of its appearance, or develop a little later. Many cases of glaucoma start about this time, and so do many cases of cataract and inflammation of the interior of the eye. Patients with presbyopia are very likely to have conjunctivitis. They are also subject to congestion and hemorrhages of the interior of the eye. One patient developed a lot of muscular trouble and a marked degree of double vision at the time he became presbyopic, and suffered three nervous breakdowns in quick succession. He was operated on for the muscular condition and took prism exercises, but obtained very little relief. In another case a patient began to suffer, at the time she became unable to read without glasses, from a contraction of the muscles of the face, congestion of the conjunctiva and continual headaches. The strain was so great that she had to keep her eyes partly closed, and glasses did nothing to relieve her discomfort. Up to the time when her presbyopia appeared she had had none of these troubles.

The accepted explanation for the loss of near vision with advancing years is that it is due to the hardening of the lens, but it is quite impossible to reconcile the facts with this theory; for not only does presbyopia occur much below the age of forty and even in childhood, but it is often delayed beyond the age of fifty, and sometimes does not occur at all. There are also cases in which near vision is restored after having been lost. We are told that presbyopia comes early in the hypermetropic (farsighted) eye, and late in the myopic (nearsighted) eye; that premature hardening of the lens and weakness of the ciliary muscle (supposed to control the accommodation) may cause it to appear in youth; and that the swelling of the lens in incipient cataract may account for the restoration of near vision after it has been lost; but there are still many cases to which these explanations cannot be made to apply.

Man Cures Presbyopia

It is true that hypermetropia (farsight) does hasten and myopia (nearsight) prevent or postpone the advent of presbyopia, and as **myopia may exist in only one eye without the patient's being aware of it, he may think that his vision is normal both for the near point and the distance**. There are cases, however, in which the vision has remained absolutely normal in both eyes long after the presbyopic age, and a considerable number of these cases have been brought to my attention. One of them, a man of sixty-five, examined in a moderate light indoors, was found to have a vision of 20/10. In other words he could see twice as far as the normal eye is expected to see. He also read diamond type at less than six inches, and at other distances, to more than eighteen inches. In reply to a query as to how he came to possess visual powers so unusual at his age or, indeed, at any age, he said that when he was about **forty** he began to experience difficulty, at times, in reading. He consulted an optician who advised glasses. He could not believe, however, that the glasses were necessary, because at times he could read perfectly without them. The matter interested him so much that he began to observe facts, a thing that people seldom do. He noted, first, that when he tried hard to see either at the near point or at the distance, his vision invariably became worse, and the harder he tried the worse it became. Evidently something was wrong with this method of using the eyes. Then he tried looking at things without effort, without trying to see them. He also tried resting his eyes by closing them for five minutes or longer, or by looking away from the page that be wished to read, or the distant object he wished to see. These practices always improved his sight, and

by keeping them up he not only regained normal vision but retained it for twenty-five years.

"Doctor," he said, in concluding his story, "when my eyes are at rest and comfortable, my vision is always good and I forget all about them. When they do not feel comfortable I never see so well, and then I always proceed to rest them until they feel all right again."

The fact is that **presbyopia is due to a strain**. It is a strain similar to the one that produces hypermetropia, but differs from it in the fact that it affects chiefly vision at the near-point. This can be demonstrated with the retinoscope. When a person with presbyopia tries to read, the retinoscope will show that he has hypermetropia, but when he looks at a distant object the retinoscope will show either that his eyes are normal, or that the hypermetropia is less. Simultaneous retinoscopy is difficult in the case of a reading patient, for not only is the pupil small, but in order to find the shadow it is necessary for the patient to look in one general direction all the time, and this is not easy. It is also difficult to hold a glass at one side of the eye for the measurement of the refraction in such a way that the observer can look through it while the patient does not. With a sufficient zeal for the truth, however, these difficulties can be overcome.

The strain which produces presbyopia is accompanied by a strain, more or less pronounced, of all the other nerves of the body. Hence, the many distressing symptoms from which presbyopic patients suffer. **Glasses**, by neutralizing the effect of the imperfect action of the muscles, may enable the patient to read, but they cannot relieve any of these strains. On the contrary, they usually make them worse, and it is a matter of common experience that the **vision declines rapidly after the patient begins to wear them**. When people put on glasses because they cannot read fine print, they often find that in a couple of weeks they cannot, without them, read the coarse print that was perfectly plain to them before. Occasionally the eye resists the artificial conditions imposed upon them by glasses to an astonishing degree, as in the case of a woman of seventy who had worn glasses for twenty years, in spite of the fact that they tired her eyes and blurred her vision, but was still able to read diamond type without them. This however is very unusual. As a rule, the eyes go from bad to worse, and, if the patient lives long enough, he is almost certain to develop some serious disease which ends so frequently in blindness that nearly half of our blind population at the present time is believed to be over sixty years old. Persons with presbyopia who are satisfied with the relief given to them by glasses should bear this fact in mind.

Presbyopia is cured just as any other error of refraction is cured, by rest. But there is a great difference in the way patients respond to this treatment. Some are cured very quickly, even in as short a time as fifteen minutes; others are very slow; but as a rule relief is obtained within a reasonable time.

One of my earliest cures of presbyopia was accomplished in less than fifteen minutes by the aid of the imagination. The patient had worn glasses for reading for ten years. When I showed him a specimen of diamond type and asked him to read it without glasses he said he knew the letters were black but they looked grey.

"If you know they are black and yet see them grey," I said, "you must imagine that they are grey. Suppose you imagine that they are black. Can you do that?"

"Yes," he said," I can imagine that they are black," and immediately he proceeded to read them.

In another case a patient was cured simply by closing his eyes for half an hour. His wife was cured in the same way, and when I saw the couple six months later they had had no relapse. Both had worn reading glasses for more than five years.

Old Gentleman Cures Presbyopia by Reading, Writing Fine Print

While it is sometimes very difficult to cure presbyopia it is, fortunately, very easy to prevent it. Oliver Wendell Holmes told us how to do it in *The Autocrat of the Breakfast Table*, and it is astonishing, not only that no attention whatever should have been paid to his advice, but that we should have been warned against the very course which was found so beneficial in the case he records.



"There is now living in New York State," he says, "an old gentleman who, perceiving his sight to fail, immediately took to exercising it on the finest print, and in this way fairly bullied Nature out of her foolish habit of taking liberties at the age of forty-five or thereabouts. And now this old gentleman performs the most extraordinary feats with his pen, **showing that his eyes must be a pair of microscopes**. I should be afraid to say how much he writes in the compass of a half-dime, whether the Psalms or the Gospels, or the Psalms and the Gospels, I won't be positive."

Persons whose sight is beginning to fail at the near point, or who are approaching the presbyopic age, should imitate the example of this remarkable old gentleman. Get a specimen of diamond type and read it every day in artificial light, bringing it closer and closer to the eye until it can be read at six inches or less. Or get a specimen of type reduced by photography until it is much smaller than diamond type, and do the same. You will thus escape, not only the necessity of wearing glasses for reading and near work, but all of those eye troubles which now so often darken the later years of life.

Reading fine print with relaxation cures presbyopia - unclear close vision

HOW I WAS CURED OF PRESBYOPIA

By Francis E. McSweeny

This patient was first seen on March 11, 1919. His right vision was 20/50 and his left vision 20/70 and, although he was fifty-one years old, he read diamond type at eight inches. He had not worn glasses for some months, and with the help of a cured patient had been able to improve his sight considerably. His last prescription for reading glasses was: right eye, convex 3.00 D. S.; left eye, convex 3.75 D. S. with convex 0.50 D. C. 180 degrees.

I am a church organist, choir director and music teacher. Those familiar with the duties of my profession will understand what an important part good vision plays in its successful practice. I realized this and from the first, consulted the best oculists periodically in order to preserve and protect my eyesight. I was told upon reaching the "deadline" of forty-five that I had presbyopia and would henceforth be obliged to wear at least two pair of glasses, one for near and one for distant vision. I rebelled at this, but submitted for some years to the annoyance with as good grace as possible.

I knew that braces and crutches never cured weak limbs, but that exercise and use of the weak muscles, when the patient had

the necessary perseverance, had often made them strong and vigorous. I began to think that glasses were like the braces and crutches, and I expected some day a method of treatment would be found that would strengthen and build up the eyes instead of weakening them.

I was in this mood when Dr. Bates' treatment of imperfect sight without glasses was brought to my attention. My father and sister had received benefit from the treatment, and I believed that I could be benefited too.

When I first took off my glasses I could see nothing on the front page of the newspaper but the larger headlines. I could read down to the 30 line of the Snellen test card at 5 feet. My sister showed me how to "shift" from the top to the bottom of the letters on Dr. Bates' professional card. I read a column of the *Saturday Evening Post* that day by this method.

At first I tried to wear my glasses for close work, but after a few months I felt that this was retarding my cure and I left them off altogether. That was in January 1919. With the exception of a few Sundays at the beginning, I have done all my work without putting on my glasses even once.

It would be well for anyone who would follow my example to understand, however, that this result was not accomplished without many mistakes. I often misunderstood and lost valuable time doing things wrong. There were many discouragements, too. So many to tell me how foolish I was to try to do the impossible. I had the consolation, on the other hand, of knowing that my vision was improving all the time.

The exercises which I found most helpful were:

+1. Palming—I think that nothing so relieves strain as this exercise does.

+2. Flashing—This exercise helps particularly when one has been straining or using the eyes wrongly.

+3. Memory practice—This has been my best exercise. One remembers a letter, picture, or other familiar object, at first with the eyes closed, then with the eyes open. If he can retain the memory of the object while looking in the direction of the test card, he will be able to read the letter easily.

+4. Imagination—Imagining that the white part of a certain letter is whiter than the margin of the card. This has helped me greatly.



Shift top and bottom, left and right on the E. (Shift dot to dot). Blink.





Flash a letter -
+Shift on the E for a fraction of a second then +look away from it to another object or close the eyes, palm and remember the E, shift on it in the mind. Or just think any pleasant thoughts with the eyes closed.
+Open, shift on the E fraction of a second,
+Close, repeat...

+Use the memory, imagination:
Remember, imagine the E is clear when the eyes are open and when closed. Practice on any objects, at any distance.

My present vision is: Distance (both eyes): 10/10, 15/15, some of 15/10, 20/20 and 30/30. Fine print (both eyes): best at 12 inches, some at 20 inches, can see a period at 20 inches.

I should advise anyone who contemplates taking up this treatment to first see Dr. Bates personally for diagnosis and to get right ideas in the beginning. By doing this, one would save much time and many missteps.

To those who cannot do this I should say that the first thing to do is to discard glasses altogether. Relax the mind and eyes by palming. Learn to know how the eyes feel when relaxed and when doing your accustomed tasks try to keep this feeling of relaxation (lack of effort) present at all times. Do not allow the eyes to become strained. Let objects that you wish to see come to you, do not try to go to them. You will fail sometimes. If you persist, however, your failures will be less and less frequent and, as your vision improves, which it surely will, you will gain confidence. The exercises which I refer to are described in Dr. Bates' book, which contains many valuable suggestions, besides interesting matter bearing on his experiments and achievements.

STORIES FROM THE CLINIC

14: Three Cases of Presbyopia

By EMILY C. LIERMAN

As a rule, more children than adults come to the Clinic. They are sent to us by the schools, usually because they cannot see the blackboard. But during the war it was astonishing how many women came to us. Many of them were employed in factories where American flags were manufactured and could not see to do the work properly, although their sight at the distance seemed to be satisfactory. Some had trouble in threading their needles. Others complained that they saw double. One told me that she sometimes stitched her fingers to the blue field of the flag along with the stars. They all asked for glasses, of course, but were very glad to learn that they could be cured so that they could see without them.

Among these very interesting patients was a woman of about fifty who had great trouble in threading her needle, and who begged me to help her because she had her living to earn. Her distant vision was quickly improved by palming and flashing the letters on the Snellen test card. Then I suggested that she practice with fine print six inches from her eyes. Even though she did not see the letters, I told her it would help her to alternately rest her eyes by closing for a few minutes and then look at the small letters for a couple of seconds. She got immediate results from this, and was enthusiastic in her expressions of appreciation.

"Sure, ma'am, may the good angels bless you for that!" she exclaimed. "I think this very minute I would be threadin' a needle if I had one. Me old man and the young ones at home will think it fine to have meself threadin' a needle."

It seemed that members of her family had been called upon to thread her needles, and had found the task somewhat irksome.

The next Clinic day she came again and, although it was afternoon, greeted me vociferously with the Irish salutation:

"Top o' the mornin' to you!"

"Top o' the morning to yourself!" said I, and then suggested that she should not speak so loud, as I was afraid she would disturb the other patients.

I am not sure that she did any harm, however. The patients all smiled at her remark. It does me good to see these poor unfortunates smile a little, and I think it must do them good also.

She soon became able to thread her needle without any trouble, and she wanted everyone in the room to know it. The last time I saw her she said:

"Sure, ma'am, me eyes are very sharp now, for the minute I set eyes on me man when he comes home at night, I can tell by the twinkle in his eye whether he has had anything stronger than water or tea."

Another woman, forty-eight years old, told me that the first time she came to the Clinic she thought she had got into the wrong place. Half a dozen people had their eyes covered with the palms of their hands to rest them, and she thought it was a prayer meeting. It was she who sewed her fingers to the flag along with the stars.

"What I need is glasses," she said, "and that's what I am here for"; but I soon convinced her that the glasses were unnecessary.

By having her alternately close and open her eyes I improved her sight for the Snellen test card from 15/40 to 15/20. Then I gave her some fine print to read, but it was only a blur to her. I now told her to palm, and imagine that she was sewing stars to the flag. When she opened her eyes her sight was worse. The very thought of those stars increased her strain and made her vision worse. This convinced her that her trouble was due to strain, and that all she needed was to get rid of the strain. I now asked her to imagine more agreeable objects at the near point. She at once became able to read the fine print, and her sight for the distance also improved. After four visits to the Clinic her vision both for the distance and the near point had become almost normal. It was quite easy for her to thread a needle and to do her work without glasses.

A woman of seventy-four, who has been coming to the Clinic for some time, works every day in an orphanage where she mends the children's clothes and does other sewing. She complained that her glasses did not fit her and she could no longer see to sew with them. I gave her a small card with some fine print on the back.

"Do you mean to tell me," she asked, "that I will ever read that?"

"It is possible," I said.

Her smiling face was good to see as she tried to do as I instructed her. The print was larger on one side of the card than on the other, and I asked her to read the name printed in the larger letters. She could not do so at first. I told her to close her eyes, count ten, then open them and look at the card while she counted two, then repeat. In a few minutes she saw the name on the card and also the phone number, I then had her do the same thing with the diamond type on the reverse side, and after a while she became able to see some of the letters. At later visits she obtained further improvement, and after some months she had no difficulty in sewing the buttons on the children's clothes without her glasses, although as she said, there were a lot of them and they kept her busy. Once during the treatment I asked her to remember the daisy in the green field as she saw it in the country last summer.

"There weren't any daisies but me while I was there," she answered. "I was the only daisy."

QUESTIONS AND ANSWERS

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Q - While I can see the letters on the Snellen test card distinctly with both eyes down to the 50-line, the right eye sees double below that point What is the reason? J. C. H.

A - While you see the letters down to the 50-line singly and well enough to recognize them, you do not see them perfectly. Otherwise you would see them perfectly below that point. The double vision of the right eye below that point is not due to its error of refraction, but to imagination. With both eyes closed, imagine the letters single. Then look at the test card for a moment. Repeat until the letters can be regarded continuously without doubling. Practice first with both eyes together, then with the right eye separately.

Q - I have conical cornea. Can it be cured or relieved without glasses or operation? A. R.

A - Yes One such case secured normal vision in six weeks by the aid of the methods presented in this magazine. Another case was cured in two weeks. Corneal cornea is simply an anterior staphyloma, or bulging of the front of the eyeball similar to the posterior staphyloma which so often occurs in myopia. Both are curable by the same methods.

Imagination Number
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
May, 1921

HOW TO IMPROVE THE SIGHT BY MEANS OF THE IMAGINATION

+ Remember the letter *o* in diamond type, with the eyes closed and covered. If you are able to do this, it will appear to have a short, slow swing, less than its own diameter.

+ Look at an unknown letter on the test card which you can see only as a gray spot, at ten feet or more, and imagine that it has a swing of not more than a quarter of an inch.

+ Imagine the top of the unknown letter to be straight, still maintaining the swing. If this is in accordance with the fact, the swing will be unchanged. If it is not the swing will become uneven, or longer, or will be lost.

+ If the swing is altered, try another guess. If you can't tell the difference between two guesses, it is because the swing is too long. Palm and remember the *o* with its short swing, and you may become able to shorten the swing of the larger letter.



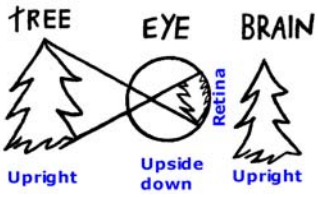
The size of the swing (oppositional movement) is less than the size of the object. No larger than the size of the eyes shift on the object and shorter than that is best. Example: Eyes shift left and right on the O - The perfect swing is less than the size of the O. Less than the width of the arrow.

+ In this way you can ascertain, without seeing the letter, whether its four sides are straight, curved, or open. You may then be able to imagine the whole letter. This is easiest with the eyes closed and covered. If the swing is modified, you will know that you have made a mistake. In that case repeat from the beginning.

+When you get the right letter, imagine it alternately with the eyes closed and open, until you are able to imagine it as well when you look at it as when your eyes are closed and covered. In that case you will actually see the letter.

IMAGINATION ESSENTIAL TO SIGHT

By W. H. BATES, M. D.



IT is a well-known fact that vision is a process of mental interpretation. The picture which the mind sees is not the impression on the retina, but a mental interpretation of it. **To the mind, objects seen appear to be in an upright position, but the picture on the retina is upside down.** When the sight is normal the margins and openings of black letters on a white card appear whiter than the rest of the card, but this, of course, is not the fact, the whole background being of the same whiteness. **One may seem to see a whole letter all alike at one time, but, as a matter of fact, the eye is shifting rapidly from one part to another**. The letter may also seem to move although it is stationary.

When the vision is imperfect, the imagination is also imperfect. The mind, in short, adds imperfections to the imperfect retinal image. A great part of the phenomena of imperfect sight is, therefore, imaginary and not in any way to be accounted for by the derangement of the visual apparatus. The color, size, form, position and number of objects regarded are altered, and non-existent objects may be seen. Some persons with imperfect sight literally see ghosts. A person in a dark cellar is often under such a strain that he thinks he sees sheeted figures, and one of my patients in broad daylight used to see little devils dancing on the tops of high buildings.

It is a great relief to patients to learn that these appearances are imaginary, thus helping them to bring the imagination under control. **And, as it is impossible to imagine perfectly without perfect relaxation, any improvement in the interpretation of the retinal images means an improvement in the conditions which have led to a distortion of those images; for relaxation, as all regular readers of this magazine know, is the cure for most eye troubles.** There is no more effective method of improving the sight, therefore, than by the aid of the imagination, and wonderful results have been obtained by this means. At times, imagination almost seems to take the place of sight, as in the case of a patient who gained a high degree of central fixation in spite of the fact that the macula (center of sight) had been destroyed, or in those cases in which patients become able to correctly imagine letters which are seen only as gray spots without knowing what they are.

How patients manage to see best where they are looking without a macula is hard to explain, but the imagination of letters which are not consciously seen is probably made possible by a certain degree of unconscious vision. When one looks at a letter on the Snellen test card which can be seen distinctly and tries to imagine the top straight or open when it is curved, or curved when it is straight open, it will be found impossible to do so and the vision will be lowered by the effort to a greater or lesser degree. In one case the mere suggestion to a patient that he should imagine the top of the big C straight caused the whole card to become blank. When one looks at a letter seen indistinctly without knowing what it is and tries to imagine it to be other than it is, one is usually able to do so, but not without strain, evidenced by the fact that the letter becomes more blurred, or by the impossibility of imagining that it has a slow, easy swing of not more than a quarter of an inch. This fact makes it possible to find out what the letter is without seeing it.

Imagining a letter, parts of letter correct and seeing oppositional movement of the letter = the letter is seen clear.

The patient begins by imagining each of the four sides of the letter (C) taken in turn to be straight, curved, or open, and observing the effect of each guess upon the swing. If the right side is straight, for instance, and she imagines it to be straight, the swing will be unchanged; but if she imagines it to be curved, the swing will be lengthened or lost, or will become less even and easy. If she is unable to tell the difference between two guesses it is because the swing is too long, and she is told to palm and remember a letter of diamond type, with its short swing, until she is able to shorten it. Having imagined each of the four sides of the letter correctly, she becomes able to **imagine the whole letter, first with the eyes closed and covered, and then with the eyes**

open.

When one knows what the four sides of a letter are, its identification, in some cases, is a simple process of reason. A letter which is straight on top and on the left side, and open on the two other sides, cannot be anything but an F. If, on the contrary, it is straight on the bottom and on the left side, and open on the other two, it must be an L. Such letters can be imagined with a lower degree of relaxation than the less simple ones, like a V, a Y, or a K. If the letter is not imagined correctly, the swing will be altered, and in that case the process should be repeated from the beginning.

Having imagined the letter correctly, the patient is told to imagine it first with the eyes closed and covered, and then with the eyes open and looking at the card, until he is able to imagine it as well when looking at the card as when palming. **In this way it finally becomes possible for him to imagine it so vividly when looking at the card that he actually sees it.**

With most patients this method of improving the sight produces results more quickly than any other. Others, for some unknown reason, do not succeed with it. Temporary improvement is often obtained in an incredibly short space of time, and by continued practice this temporary improvement becomes permanent.

The patient who describes her case in a later article looked at the Snellen test card at ten feet one day and did not see any of the letters, even as grey spots. By the method described above she became able in half an hour to read the whole card. A schoolgirl of ten could not see anything at ten feet below the large letter at the top of the card. She was told how to make out the letters by the aid of her imagination, and then left alone for half an hour. At the end of this time she had read the whole of an unfamiliar card. A child of about the same age whose left macula had been destroyed by **atrophy of the choroid** (middle coat of the eye) was able with the affected eye to see only the 200 letter on the test card, and that, only when she looked to one side of the card. She was treated by means of her imagination, and after a few months, during which time she came very irregularly, she obtained normal vision in both eyes. She is still under treatment.

A school girl of sixteen with such a high degree of myopic astigmatism that she could see only the large letter at ten feet became able in four or five visits, by the aid of her imagination, to read 20/20 temporarily, and at her last visit she read 20/15 temporarily. A college student twenty-five years old, with compound hypermetropic astigmatism (four diopters in each eye), could read only 20/100 with his right eye and 14/200 with his left, and had been compelled to stop his studies because of the pain and fatigue resulting from the use of his eyes at the near point. In four visits his vision was improved by the aid of his imagination to 20/30 and he became able to read diamond type at six inches without glasses and without discomfort.

These and many other cases of the same kind have demonstrated that imagination is necessary to normal sight.

STORIES FROM THE CLINIC

15: Imagination Relieves Pain

By EMILY C. LIERMAN

A few weeks ago there came to the Clinic a very tired-looking mother, with her daughter, age twelve, who was suffering intense pain in her eyes and head. Both began to talk to me at once, and the mother told me that the child kept her awake at night with her moaning. She had taken her to another doctor in the hospital, and he, failing to relieve the pain, had sent her to Dr. Bates, thinking that her eyes might need attention. Dr. Bates examined the child, and without telling me what the trouble was, said:

"Here is a good case for you; cure her quick."

The poor child could scarcely open her eyes, and her forehead was a mass of wrinkles. I tested her sight, and at twelve feet she read the 50-line on the test card. While reading the card she said that her pain was not so bad. I told her to palm, and while her eyes were covered I asked her to imagine that she saw the blackboard at school and that she was writing the figure 7 upon it with white chalk. She could do this, she said, and then I asked her to remove her hands from her eyes and look at the black 7 on the test card. She saw it very distinctly, and I noticed that her eyes had opened and that the wrinkles in her forehead had disappeared. The mother noticed this too and said:

"See how wide open her eyes are!"

Evidently the pain had gone, for after a moment the little girl exclaimed in great excitement:

"Oh, that pain is coming back!"

I told her to close her eyes at once and palm again. Noticing how much she had been helped by her imagination, I told her to imagine the black figure blacker than she had seen it with her eyes open. She did this, and when she opened her eyes in a few minutes the pain had again disappeared and her vision had improved to 12/30. After telling her mother that the cause of all the child's trouble had been eyestrain, and that if she would palm and use her imagination she would be well in two weeks, I sent her home. Imagine my surprise when two days later she came to the clinic with her eyes wide open, grinning from ear to ear, and having a gay old time with a school friend whom she had brought with her. She told me that only once during the first evening after she came to the clinic had she suffered any return of the pain. Then she had closed her eyes and covered them with the palms of her hands and imagined first that she saw a figure 7 black on a white background, and then that she saw white roses, daisies with yellow centers and green fields. She went to sleep soon after and did not wake up until morning. She had had no pain at all since that night, and when I tested her sight with both eyes together and each eye separately, I found it normal. It goes without saying that I was very happy to have accomplished in two days what I expected to take two weeks. The patient was instructed to keep on practicing and to report at least once a week at the clinic, but she did not come again.

A boy named Harry, aged eleven years, now being treated at the Clinic came to us about two weeks ago with pain in both eyes. He had been sent to us from the public school for glasses. Reading made him nervous, he said, and he did not wish to read anything on the test card but the large letters. I had him stand fifteen feet from the card, and asked him to read the letters slowly and only to see one at a time. Noticing that he was extremely nervous I lowered my voice as much as possible and talked to him as I would to a child much younger. This seemed to have a soothing effect, for immediately he seemed less nervous and shy, and he was able to read the forty line with his left eye and the fifty with his right. I now showed him how to palm. This seemed to afford him much amusement, but he did it faithfully because he wanted to please me, not because he thought it would help his sight. When he opened his eyes he read the twenty line with the left eye, but the vision of the right had not improved and he complained that the pain in it was still as bad as ever.

I told him to palm again, and while his eyes were covered I asked him if he ever saw a large ship getting ready to sail. He said, yes, he had seen some of our warships on the Hudson River. I asked him how much he could imagine he saw on one of these

vessels. He became intensely interested and was no longer inclined to be restless.

"Why," he said, "I can imagine a rope ladder on the side of the ship and sailors walking on the deck, and I can imagine black smoke coming out of the smoke-stack. Before I had told him to, he uncovered his right eye and read all the letters on the forty line and some of those on the thirty line. He said that the pain had gone and that the letters looked blacker to him and the card whiter than before. He has come to the clinic regularly, and now reads 15/10—better than normal—with both eyes. He still complains about a little pain in the right eye, but when he palms and imagines that he is playing baseball or doing other pleasant things, his pain stops and he always leaves the clinic smiling.

IMAGINATION IN RETINITIS PIGMENTOSA

By Mary Blake

This patient came for examination on February 9, 1921, *and for treatment on March* 11. *Her distant vision with glasses (concave* 6.00 *D.S., both eyes) was* 20/40 *in the right eye and* 20/50 *in the left, and her field had been reduced to ten degrees, so that she could see nothing above, below, or to one side of her line of vision. She was treated almost entirely by means of her imagination and has thus become able, temporarily, to read the bottom line of an unfamiliar card at ten feet. By the same means her field and color perception have at times become normal. When her imagination fails, her vision fails also. Sun-gazing (Sunning) and the focusing of the rays of the sun with a burning glass/sunglass upon the upper part of the sclera (white of the eye) proved very effective in overcoming her extreme sensitiveness to light.*

I began to wear glasses for shortsight when I was fifteen, and from that time I wore them constantly until I came to Dr. Bates five weeks ago, For the last two or three years I never took them off, except for close work, until I got into bed at night, and before I got out of bed in the morning I put them on again,

In spite of these precautions my sight became steadily worse, and for the last ten years I have spent my time and money going from one specialist to another both in this country and in Europe. Three of the most famous specialists in Switzerland told me that I had retinitis pigmentosa, a condition in which pigment is deposited in the retina, and which, I was told, always ended in complete blindness if the patient lived long enough. Nothing could be done to prevent this outcome, they said, but they advised me to wear dark glasses when I went out of doors on bright days, because by exposing my eyes to strong light I was spending my capital. For the last three years (up to five weeks ago) I did this, and for the last year, on very sunny days, I often wore dark glasses in the house also, because my eyes had become so sensitive to the light that I could sometimes find relief only by going into a darkened room. Even with dark glasses and drawn blinds, there was a kind of razzle-dazzle before my eyes which was so maddening that I almost longed for the blindness with which I had been threatened, so that I might be free from such distresses. When I looked out of a window onto a sunny street and then back into the room again, everything became perfectly black for a minute. For the last two years and a half I have not been able to go out alone in the city.

In this state of utter hopelessness, with my sight rapidly getting worse, I heard of Dr. Bates through a patient whom he was treating and, in spite of what I felt to be the incredulity of my friends, although they were considerate enough not to express it, I lost no time in consulting him. The unusualness of his methods, while it excited the suspicion of others, was a recommendation to me. I knew what the old methods accomplished, or rather what they did not accomplish, and I wanted something different. It seemed to me that Dr. Bates was the very man I had been looking for.

My friends have now been converted, but, in spite of the fact that I am able to report substantial improvement in my vision, I still meet with much skepticism in other quarters. A doctor to whom my progress was reported by a friend wrote to her that if my trouble were imaginary Dr. Bates might help me through hypnotism or mind cure, but that if there were anything really the matter with my eyes he could do nothing by his methods. Having a relative in New York who is an eye specialist, this doctor took the trouble to write to him and ask what he knew about Dr. Bates. The reply was that Dr. Bates was the laughing stock of all the oculists in New York. This report, when it was communicated to me, disturbed me not at all. It did not matter to me how much the other eye specialists laughed at Dr. Bates so long as he was helping me, as none of them had been able to do. Other doctors were more open-minded, but were not prepared to believe that such diseases as retinitis pigmentosa could be cured by this or any other method. One who had met some of Dr. Bates' cured patients and was inclined to believe in him, said, when told that I was being treated for this condition:

"Good gracious, he surely doesn't pretend to cure retinitis pigmentosa! That is an organic disease."

I said that he not only pretended to cure it, but had made substantial progress in my case. The doctor said:

"I think he'll help you, but I don't believe you are ever going to see without limitations."

The improvement in my vision since I have been under treatment has been indisputable. After two weeks the intangible suffering caused by light (eyes sensitive to light) left me, and it has never returned. I can go out in the brightest sunlight without glasses of any kind, and, although my eyes feel weak and I squint a little, there is no real distress. I can look out of a window onto a sunny street, and when I turn back again into the room there is no blindness. When I first took off my glasses I had to bend over close to my plate when I was eating in order to see what was on it. Now I sit in an almost normal position with such a slight bend that I don't think anyone would notice it. I also operate a typewriter while sitting in a normal position. For three years, it has been very difficult for me to read or sew, with or without glasses. Now I do both without glasses, and instead of the distress which these activities formerly caused me, I experience a delightful feeling of freedom. And not only can I read ordinary print, but I can read diamond type and photographic reductions. About a year ago I began to lose my color perception, and up to two weeks ago I was unable to distinguish the rug from the floor in the Doctor's office. Now I can see that the floor is red and the rug blue, tan and black. At the present writing I have just become able to observe that a couch cover in my apartment, which had always appeared blue to me, is green. I am still unable to see very much at the distance. But I am beginning to make out the features of the people around me and to read signs in the streets and street-cars, and when I look out of the windows on the Subway I see the people on the platforms. My field is still very limited, but I am conscious that it is slowly enlarging. The other day I pinned a piece of paper three inches from the test card, and was able to see it while looking at the card. After such improvement, in the brief period of five weeks, I do not feel inclined to credit the prediction of my medical friend that I am going to regain my sight only with limitations. I hope I am going to get normal vision.

Along with the improvement in my sight there has come also a remarkable improvement in my physical condition, the natural result of freedom from suffering. I used to be a very restless sleeper, and when I woke in the morning I was greatly fatigued. Now the bed is as smooth in the morning as if I had never stirred all night, and I am much more refreshed than I used to be, although not so much so as I hope to be later. Formerly I had to force myself to write a letter. Now it is a pleasure to do so, and I am clearing off all my correspondence. Previously I could not attend to my accounts. Now I have them all straightened out. If I get nothing more

from the treatment than this physical comfort and increased ability to do things, it will be worthwhile.
In early issues of Better Eyesight, Dr. Bates allowed open eyed sunning.
In later years/issues he advised only closed eyes sunning.
Combine/alternate sunning with palming to increase vision improvement and other benefits derived from these activities.

QUESTIONS AND ANSWERS

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Q - I began to wear glasses for farsight when I was twenty-six. I began with convex 1.00 D. S. and now at forty-two I am wearing convex 2.50 D. S., or was until a few weeks ago when I decided to try the methods presented in this magazine. I can read and sew with ease in the daylight, but cannot read fine print even in a strong electric light for more than a few minutes without getting a dull ache at the back of my eyeballs. What I want to do is this:
1. Do you advise the use of the test card in my case, or is it only for children?
2. Would the swing help me, and if so will you explain it a little more clearly?
3. Is it best to go without the glasses as much as I can, or am I injuring my eyes by so doing?
4. Would it retard the cure to use the glasses just for evening reading?
5. How long will it take for my eyes to become young again, if that is possible? G. H.
A - 1. The test card is for everybody.
2. Yes, the swing would help you. The normal eye is constantly shifting, and thus an apparent movement of objects regarded is produced. By consciously imitating this unconscious shifting of the normal eye and realizing the apparent movement which it produces, imperfect sight is always improved.
3. You should discard your glasses permanently. They are never a benefit and always an injury to the eyes.
4. Yes.
5. It is entirely possible for your eyes to become young again, but it is impossible to guess how long this will take because it is impossible to tell how well or intelligently you will practice central fixation.

Q - Why is it that when I look at an electric light half a mile away it looks as if there were ten or a dozen rays of light going in all directions? R. R. T.
A - Because when you look at an object half a mile away you strain to see it, and under the influence of the strain you imagine rays of light going in all directions so vividly that you seem to see them. It is for the same reason that the stars twinkle. If you could look at the light, or at the stars, without effort, there would be no twinkling.

Fundamentals of Treatment
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
June, 1921

HOW TO DEMONSTRATE THE FUNDAMENTAL PRINCIPLE OF TREATMENT

The object of all the methods used in the treatment of imperfect sight without glasses is to secure rest or relaxation, of the mind first and then of the eyes. Rest always improves the vision. Effort always lowers it Persons who wish to improve their vision should begin by demonstrating these facts.

+ Close the eyes and keep them closed for fifteen minutes. Think of nothing particular, or think of something pleasant. When the eyes are opened, it will usually be found that the vision has improved temporarily. If it has not, it will be because, while the eyes were closed, the mind was not at rest.

+ One symptom of strain is a twitching of the eyelids which can be seen by an observer and felt by the patient with the fingers. This can usually be corrected if the period of rest is long enough.

+ Many persons fail to secure a temporary improvement of vision by closing their eyes because they do not keep them closed long enough. Children will seldom do this unless a grown person stands by and encourages them. Many adults also require supervision.

+ To demonstrate that strain lowers the vision, think of something disagreeable—some physical discomfort, or something seen imperfectly. When the eyes are opened, it will be found that the vision has been lowered. Also, stare at one part of a letter on the test card, or try to see the whole letter all alike at one time. This invariably lowers the vision and may cause the letter to disappear.

FUNDAMENTALS OF TREATMENT

By W. H. Bates, M. D.

ALL errors of refraction and many other eye troubles are cured by rest; but there are many ways of obtaining this rest, and all patients cannot do it in the same way. Sometimes a long succession of patients are helped by the same method, and then will come one who does not respond to it at all.

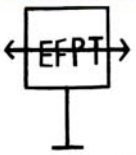
+Closing the Eyes.—The simplest way to rest the eyes is to close them for a longer or shorter period and think about something agreeable. This is always the first thing that I tell patients to do, and there are very few who are not benefited by it temporarily.

+Palming.—A still greater degree of rest can be obtained by closing and covering the eyes so as to exclude all the light. The mere exclusion of the impressions of sight is often sufficient to produce a large measure of relaxation. In other cases the strain is increased. As a rule, successful palming involves a knowledge of various other means of obtaining relaxation. The mere covering and closing of the eyes is useless unless at the same time mental rest is obtained. When a patient palms perfectly, he sees a field so black that it is impossible to remember, imagine, or see, anything blacker, and when able to do this he is cured. It should be borne in mind, however, that the patient's judgment of what is a perfect black is not to be depended upon.

+Central Fixation.—When the vision is normal the eye sees one part of everything it looks at best and every other part worse in proportion as it is removed from the point of maximum (central) vision. When the vision is imperfect it is invariably found that the eye is trying to see a considerable part of its field of vision equally well at one time. This is a great strain upon the eye and mind, as anyone whose sight is approximately normal can demonstrate by trying to see an appreciable area all alike at one time. At the near-point the attempt to see an area even a quarter of an inch in diameter in this way will produce discomfort and pain. Anything which rests the eye tends to restore the normal power of central fixation. It can also be regained by conscious practice, and this is sometimes the quickest and easiest way to improve the sight. When the patient becomes conscious that he sees one part of his field of vision better than the rest, it usually becomes possible for him to reduce the area seen best. If he looks from the bottom of the 200 letter to the top, for instance, and sees the part not directly regarded worse than the part fixed, he may become able to do the same with the next line of letters, and thus he may become able to go down the card until he can look from the top to the bottom of the letters on the bottom line and see the part not directly regarded worse. In that case he will be able to read the letters. On the principle that a burnt child dreads the fire, it is a great help to most patients to consciously increase the degree of their eccentric fixation. For when they have produced discomfort or pain by consciously trying to see a large letter, or a whole line of letters, all alike at one time, they unconsciously try to avoid the lower degree of eccentric fixation which has become habitual to them. Most patients, when they become able to reduce the area of their field of maximum vision, are conscious of a feeling of great relief in the eyes and head and even in the whole body. **Since small objects cannot be seen without central fixation, the reading of fine print, when it can be done, (with relaxation, without effort, no squinting, strain) is one of the best of visual exercises, and the dimmer the light in which it can be read and the closer to the eye it can be held the better.**
(Practice reading fine print in the sunlight for healthy eyes.)

+Shifting and Swinging.—The eye with normal vision never regards a point for more than a fraction of a second, but shifts rapidly from one part of its field to another, thus producing a slight apparent movement, or *swing*, of all objects regarded. The eye with imperfect sight always tries to hold its points of fixation, just as it tries to see with maximum vision a larger area than nature intended it to see. This habit can be corrected by consciously **imitating the unconscious shifting of the normal eye and realizing the swing produced by this movement**. At first a very long shift may be necessary, as from one end of a line of letters to another, in order to produce a swing; but sometimes even this is not sufficient. In such cases patients are asked to hold one hand before the face while moving the head and eyes rapidly from side to side, when they seldom fail to observe an apparent movement of the hand. Some patients are under such a strain, however, that it may be weeks before they are able to do this. After the apparent movement of the hand has been observed, patients **become able to realize the swing resulting from slighter movements of the eye until they are able to look from one side to another of a letter of diamond type and observe that it seems to move in a direction contrary to the movement of the eye.**
A mental picture of a letter can be observed to swing precisely as can a letter on the test card and, as a rule, mental shifting and swinging are easier at first than visual. The realization of the visual swing can, therefore, be cultivated by the aid of the mental swing. It is also an advantage to have the patient try to look continually at some letter, or part of a letter, and note that it quickly becomes blurred or disappears. When he thus demonstrates that staring lowers the vision he becomes

Shift long from one end of a line of letters to the other end to see the swing: The letters/eyechart move in the opposite direction the eyes/head shift/move to.



The Variable Swing



Place the finger in front of the face. Move the head left and right and see the finger/hand move in the opposite direction. Oppositional Movement.



E

Practice smaller eye movements: Look, shift to the left and right sides of the letter E and see it move/swing in the opposite direction.
A smaller, short swing appears.
Practice this on a fine print diamond type letter.
Shift on a letter, or any object in the mind and imagine seeing it swing in the opposite direction. Practice with the eyes open, closed open.

Shift side to side on a small o and see it appear to move contrary/opposite to the movement of the eyes.
Practice with the eyes open and in the imagination with eyes closed; Remember the o perfect, clear.
Shift on it and imagine/see in the mind the o move opposite the movement/shift of the eyes.
Imagine the white opening of the o to be whiter, brighter than the outer area of the page.
When the mind can imagine this, the memory is improved and the o can be remembered indefinitely and clear.
Open the eyes and shift on the o, remember, imagine it moving and clear. Repeat.
Practice on a fine print period.
Improving the memory, imagination, 'mental pictures' relaxes the mind, eyes and brings clear vision.

o

Look at the black dot on the lower right side of the letter E. Shift on it. Blink.
Notice that it appears darker, blacker, clearer than the other areas of the E.
The dot is in the center of the visual field and other areas are in the peripheral field.
The central field is clearest.
Shift part to part, moving the center of the visual field on the E and see one small part at a time darkest black, clearest in the center of the visual field.



E



Flashing-Palm with eyes closed, then open the eyes and shift on a letter on the test card for a fraction of a second. Close the eyes before effort to see, strain and blur occur. Palm. Repeat.

Shift on small letters on a familiar, memorized eye chart daily.

better able to avoid it. **When visual or mental swinging is successful, everything one thinks of appears to have a slight swing**. This I have called the ***universal swing***. Most patients get the universal swing very easily. Others have great difficulty. The latter class is hard to cure.

+Memory.—When the sight is normal the mind is always perfectly at rest, and when the memory is perfect the mind is also at rest. Therefore it is possible to improve the sight by the use of the memory. **Anything the patient finds is agreeable to remember is a rest to the mind**, but for purposes of practice a small black object, such as a period or a letter of diamond type, is usually most convenient. **The most favorable condition for the exercise of the memory is, usually, with the eyes closed and covered, but by practice it becomes possible to remember equally well with the eyes open.**
When patients are able, with their eyes closed and covered, to remember perfectly a letter of diamond type, it appears, just as it would if they were looking at it with the bodily eyes, to have a slight movement, while the openings appear whiter than the rest of the background. If they are not able to remember it, they are told to shift consciously from one side of the letter to another and to consciously imagine the opening whiter than the rest of the background. When they do this, the letter usually appears to move in a direction contrary to that of the imagined movement of the eye, and they are able to remember it indefinitely. If, on the contrary, they try to fix the attention on one part of the letter, or to think of two or more parts at one time, it soon disappears, demonstrating that it is impossible to think of one point continuously, or to think of two or more points perfectly at one time, just as it is impossible to look at a point continuously, or to see two points perfectly at the same time. Persons with no visual memory are always under a great strain and often suffer from pain and fatigue with no apparent cause. As soon as they become able to form mental pictures, either with the eyes closed or open, their pain and fatigue are relieved.

+Imagination.—Imagination is **closely allied to memory,** for we can imagine only as well as we remember, and in the treatment of imperfect sight the two can scarcely be separated. **Vision is largely a matter of imagination and memory**. And since both imagination and memory are impossible without perfect relaxation, the cultivation of these faculties not only improves the interpretation of the pictures on the retina but improves the pictures themselves. When you imagine that you see a letter on the test card, you actually do see it because it is impossible to relax and imagine the letter perfectly and, at the same time, strain and see it imperfectly. The following method of using the imagination has produced quick results in many cases: The patient is asked to look at the largest letter on the test card at the near point, and is usually able to observe that a small area, about a square inch, appears blacker than the rest, and that when the part of the letter seen worst is covered, part of the exposed area seems blacker than the remainder. When the part seen worst is again covered, the area at maximum blackness is still further reduced. When the part seen best has been reduced to about the size of a letter on the bottom line, the patient is asked to imagine that such a letter occupies this area and is blacker than the rest of the letter. Then he is asked to look at a letter on the bottom line and imagine that it is blacker than the largest letter. Many are able to do this and at once become able to see the letters on the bottom line.

+Flashing.—Since it is effort that spoils the sight, many persons with imperfect sight are able, after a period of rest, to **look at an object for a fraction of a second**. If the eyes are closed before the habit of strain reasserts itself, permanent relaxation is sometimes very quickly obtained. This practice I have called *flashing*, and many persons are helped by it who are unable to improve their sight by other means. The eyes are rested for a few minutes, by closing or palming, and then a letter on the test card, or a letter of diamond type, if the trouble is with near vision, is regarded for a fraction of a second. Then the eyes are immediately closed and the process repeated.

+Reading Familiar Letters.—The eye always strains to see unfamiliar objects, and is always relaxed to a greater or lesser degree by looking at familiar objects. Therefore, the reading every day of small familiar letters at the greatest distance at which they can be seen, is a rest to the eye and is sufficient to cure children under twelve who have not worn glasses as well as some older children and adults with minor defects of vision.
In the treatment of imperfect sight these fundamental principles are to a great extent interdependent. They cannot be separated as in the above article. It is impossible, for instance, to produce the illusion of a swing unless one possesses a certain degree of central fixation. That is, one must be able to shift from one point to another and see the point shifted from less distinctly than the one directly regarded. Successful palming is impossible without mental shifting and swinging and the use of the memory and imagination.
All these functions of the visual system work together, are integrated. Practicing, improving one, improves all.
Practice improving each one and all are greatly improved.
Relax, Blink, Breathe abdominally, Shift, Central Fixation, Memory and Imagination, Oppositional Movement (The Swing), Switching and Shifting on objects at close and far distances with both eyes together, one eye at a time, both eyes together again, shifting on familiar objects/eyechart letters, Flashing, Read Fine Print, Sunning, daily exposure to sunlight, Palming, Good Posture, exercise, Diet …

STORIES FROM THE CLINIC

16: Methods That Have Succeeded

By Emily C. Lierman

The patients who come to our clinic do wonderful things, especially the schoolchildren. We can give each one of them, as a rule, only about five minutes of our time, and yet they are able to carry out the instructions given to them at home, and to get results. This is a great tribute to their patience and intelligence.

Most of the children, and of the grown people as well, are helped by palming, and some wonderful cures have been obtained by this means alone. In my first story for this magazine I told about a little boy named Joey whose left eye had been so injured in an automobile accident that he had only light perception left. It was some time before I could get him to palm regularly, but as soon as he became willing to do it many times a day his sight began to improve rapidly, and he is now completely cured.

There are some patients, however, who cannot or will not palm. One of these was a little colored girl, with corkscrew curls, for all the world like Topsy. She had been sent to the clinic because she could not see the writing on the blackboard, and the school nurse told me later that she was very unruly and a great trial to her teacher. She was something of a trial to me too at first, for I could not get her to palm for a moment, and did not know what to do with her. Then I discovered that she had a wonderful memory

when she chose to use it, and I resolved to treat her by the aid of this faculty. I was able to improve her sight considerably, and the very next day her teacher noticed such a change in her behavior that on the next clinic day the school nurse came with her to see what I had done. I then asked her to remember, with closed eyes, a letter on the test card grey instead of black. She could not stand still a minute while she did so, and when she opened her eyes there was no improvement in her vision. Then I asked her to remember the blue beads she had around her neck. She did so for five minutes, standing perfectly still all the time, and when she opened her eyes she read an extra line on the test card. I had her do this again, and again she read an extra line. The nurse was thrilled by this demonstration of the fact that **perfect memory improves the sight and relieves nervousness.**

Recently a poor young man called at our magazine office and asked if Dr. Bates had written a book about the treatment of the eyes. When told that there was such a book, he bought it and also subscribed for the magazine. His sister was being treated at the clinic, he said, and he wished to take off his glasses as she had done. Later he came to the clinic, as he lives in the hospital district. I found that he could not read newspaper print without his glasses, while his distant vision was 12/70, both eyes. This was about six months ago. He now reads diamond type, and last week his sister asked Dr. Bates if he had finer print, as her brother found the diamond type so easy that he wanted something smaller. Dr. Bates gave her a page from a photographic reduction of the Bible, and he reads this also without any trouble. The methods he used were **swinging** and **flashing**, **together with palming**.

The influence of this cure has been extensive and is still going on. The patient loaned the book to a myopic youth in his office, and by means of palming he was able to improve his sight so that now he dispenses with glasses for long periods. An elderly man in the same office thought the palming a very absurd practice but, having borrowed the book, he started shifting and flashing at lunch time, just to pass the time. He now does much of his work without glasses.

A Jewish mother came to the clinic recently with her little girl of eight, and said the child must have glasses. The school nurse had said so. I replied that I was very sorry indeed, but that Dr. Bates did not fit glasses, and she would have to call some other day and see the doctor who did do so. She was about to leave the room when I suggested that I should test the child's sight. I felt sorry for the little girl, because she was very pretty, except for her eyes, which were partly closed most of the time.

"I don't like to wear glasses," she said. "Please help me so that I won't have to wear them."

The mother seemed bewildered at first, and then she said in a burst of confidence:

"You know, nurse, if der glasses was fer notthink, I should worry. But all der time money, money fer glasses, when all der time she breaks dem."

I told the poor mother not to worry, because her child could be cured so that she would not need glasses if she would do what I told her to do.

"Sure, sure," she replied. "Det's all right, lady. You fix her eyes, yes? Ven ve don't buy glasses ve got more money to buy someding for der stomach, yes?"

An Irish woman was standing by, and she just roared with laughter. I had to use some tact to keep peace in the room, and I thought it best to usher the Irish woman outside until I had treated the little girl, who turned out to be a very interesting patient. We have some bright children in our clinic, and I am proud of them; but this dear little girl beat them all. She did such a wonderful thing that Dr. Bates was thrilled. Jennie had never seen the test card before, and after palming was able to read only the thirty line at fifteen feet. Below this the card was a blank to her. I asked her to follow my finger while, with very rapid movement, I pointed to the large letter at the top and so on down to the ten line.

I now asked her to palm, and, pointing to the last letter on the ten line, which was an **F,** and quite small, I asked her if she could **remember some letter her teacher had written on the blackboard that day**. She replied:

"Yes, I can imagine I see the letter O, a white O."

"Keep your eyes closed," I said, "and imagine that the letter I am pointing at has a curved top. Can you still imagine the O?"

"No," she said: "I can't imagine anything now."

"Can you imagine it is open, or straight at the top?" I asked.

She became excited and said: "If I imagine it has a straight top, I can still remember the white O."

"Fine," I said. "Can you imagine it has a straight line at the bottom?"

"No," she said, "if I do that I lose the O. I can imagine it's open much better."

"Good," I said. "It is open. Now imagine it is open or curved to the left."

"I lose the O," she said, "if I imagine the left side open or curved. I think it's an F, nurse."

And when she opened her eyes she saw it plainly. The fact was that, although she had been unable to see this letter consciously, she had unconsciously seen it for a fraction of a second and could not imagine it to be other than it was without a strain that caused her to lose control of her memory. And when she imagined it to be what it was she relaxed so that when she opened her eyes she was able to see it.

In this example the letter F is seen clear when imagining a letter O. As long as the person is **not trying to imagine the F is a O,** the F is seen clear when imagining the letter O clear. (or any other 'easy to remember, imagine' object clear)
Imagining the object the eyes are looking at correct and clear causes the object to be seen clear.
If the eyes cannot see the object and the mind cannot imagine it correct; thinking of a different object and imagining, remembering it clear, shifting on it in the mind causes the mind, eyes to relax, vision to become clear and all objects the in the visual field become clear. This occurs because the mind, eyes are relaxed when imagining, remembering a object that is easy, pleasant to remember, imagine. In this example that object is the letter O.
Let the mind daydream, think pleasant thoughts, remember, imagine a scene in the mind and let the minds eyes move about on objects in the imagination. Let the physical eyes move 'on their own' as the mind moves from thought to thought, object to object in the imagination and notice the vision becomes clear.

A little later a school nurse brought us a child who was giving her teacher a lot of trouble because she could not remember anything, and it was thought glasses might help her. She was very nervous, frowned terribly and at twelve feet the letters on the bottom line of the test card were only black spots to her. As I could not get her to palm, I asked her to look at a letter on the bottom line and with closed eyes imagine it had a straight top. She could not do this and said she could imagine it curved better. Then she found she could imagine two other sides curved and one open, and when she opened her eyes she saw the letter, a C, distinctly, and had stopped frowning. By the same method she became able to read all the other letters on the bottom line, demonstrating that her imperfect memory had been due to eyestrain. **She had unconsciously seen the letters, but the eyestrain had suppressed the memory of them**. **With her eyes closed the strain was relaxed, and she became able to remember, or imagine, them.**

MY METHODS WITH SCHOOL CHILDREN

By a Public School Nurse

Editor's Note.—Better Eyesight considers itself fortunate to be able to publish this remarkable record of the improvement of the vision of school children by means of the methods which it advocates. The attitude of the educational authorities toward the beneficent work of this public-spirited nurse is noteworthy.

On re-reading an article in the August 1920 issue of *Better Eyesight* I find that a nurse, after inquiry in regard to treatment of the eyes without glasses, and observations at Dr. Bates' Clinic, said she would treat the children at school in the same way. I started last fall, in a district school located in one of the suburbs of New York City, to do likewise, but, unfortunately, after having helped several children, I am advised by the school authorities to discontinue. However I shall give some idea of the work already accomplished.

In the examination for records of the children's eyesight, etc., I found several quite below normal—**some with one eye more than normal and the others far below**. In one case for instance, the left eye was 20/13 and the right 9/200. This child, Catherine, after having been shown how to practice, was able to help herself by cutting the letters from a newspaper and pinning them to the wall until she procured a test card. At the present time her sight is 12/50 in the right eye, a four-fold improvement. All this she has done by her own efforts and practice at home. I have helped her only once since the first examination in the latter part of March. Her mother has taken off her glasses, too, and does not suffer any more with burning of the eyes, as she did formerly. She is grateful, and much pleased with her success. Left and right eyes vision uneven, one eye with less clear vision is often the main cause of blur. Practice shifting, central fixation, switching close and far on objects with both eyes, then one eye at a time , then both eyes together again for equally clear, balanced, perfect vision in the left and right eyes. When the less clear eye starts to improve, overall vision will improve quickly.

Another child I brought to the clinic, and Dr. Bates saw him after I had helped to correct a **squint** in the left eye, which **remains straight unless he strains**. The correction occurred at the beginning of the school year. The child's sight has also improved, in spite of the fact that he practices less at home than any of the others and needs constant urging.

The children come to me just before the close of the morning session, sometimes for only fifteen minutes. They palm and do the swing, either the head alone or the entire body. Lately I've found that the swing was more successful than palming alone.

When examining the children in the classroom I found they could read the twenty line at twenty feet after starting at thirty or forty, if the strain was relieved in this way: I would point to a letter or number on the thirty or forty line and then return to the twenty line. Almost immediately they would read 20/20.

One boy I started at 20/20. For some reason he could not read a letter until he got to the top of the card. I then had him palm and read with each eye alternately. In a few moments he had read correctly every line to the very end—20/20.

All the children are greatly interested and pleased with their progress, and the parents fully approve. In every instance I have let the parents decide whether or not the children should be treated so that they would not need glasses. The children themselves say very emphatically that they will not wear glasses.

QUESTIONS AND ANSWERS (None listed this month)

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Stop Concentrating

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

July, 1921

HOW NOT TO CONCENTRATE

To remember the letter o of diamond type continuously and without effort, proceed as follows: o o

+ Imagine a little black spot on the right-hand side of the o blacker than the rest of the letter; then imagine a similar spot on the left-hand side.
Shift the attention from the right-hand period to the left, and observe that every time that you think of (shift to) the left < period the o appears to move to the right, > and every time you think of (shift to) the right > one it appears to move to the left <.
This motion, when the shifting is done properly, is very short, less than the width of the letter. Later you may become able to imagine the o without conscious shifting and swinging, but whenever the attention is directed to the matter these things will be noticed.



+ Now do the same with the o letter on the test card. If the shifting is normal, it will be noted that the letter can be regarded indefinitely, and that it appears to have a slight motion.

To demonstrate that the attempt to concentrate spoils the memory, or imagination, and the vision:

+ Try to think continuously of a period on one part of an imagined letter. The period and the whole letter will soon disappear. Or try to imagine two or more periods, or the whole letter, equally black and distinct at one time. This will be found to be even more difficult.
+ Do the same with a letter on the test card. The results will be the same.

THE VICE OF CONCENTRATION

By W. H. BATES, M. D.

MOST patients who come to me for the cure of imperfect sight think that they have to "concentrate" in order to improve their vision. When told that they should see nothing but black when their eyes are closed and covered, they think that they can arrive at this state by "concentrating" on the black. When they look at a line of letters and see it imperfectly and all alike, they think it is because they cannot "concentrate." If they see better after closing their eyes or palming, they think it is because these things have helped them to "concentrate." It is very hard to get these ideas out of their heads, even though, after "concentrating for all they are worth," as they express it, they invariably find that their sight is worse instead of better.

By concentration they seem to mean the ability to do, see, or remember, one thing at a time, for as long a time as they want to, and to stop doing, seeing and remembering everything else; and they are quite convinced that this can be accomplished by effort. As these ideas are almost entirely erroneous, it is not strange that their sight should fail to improve under their influence.

It is physiologically impossible to see one thing at a time and exclude everything else from sight, because nature has given us a visual field of considerable range. It is true that we can see even a very small object continuously, but only if the attention shifts constantly from one part to another, because the eye is in constant motion, and any attempt to stop this motion lowers the vision and causes the object to blur or disappear. **When the vision is normal the movements of the eye are short, rhythmical and easy, and each successive point fixed is seen better than any other point.** In the eye with imperfect sight the movements are longer, irregular and accompanied by strain. The points fixed are not seen best, so that the object may be seen all alike at one time. In neither case is it possible to stop the motion; but the eye with imperfect sight tries unconsciously to do so and to look at each point for an appreciable length of time. This unconscious attempt to concentrate upon a point is an invariable accompaniment of imperfect sight, and is always produced by an effort to see. When, therefore, patients try to "concentrate" upon a letter, the eye attempts to stop shifting, and the vision is made worse. Even in the case of an eye with previously normal sight, such an effort will quickly cause the letters to blur or disappear.

Although the physiological reasons for it are not as plain, the mind is subject to the same law as the eye. It cannot think of one thing to the exclusion of all other things. Nor can it think continuously of an unchanging object without continuous shifting of the attention. The attempt to do these things is accompanied by a strain which is reflected in the eyes and always produces abnormal conditions there.

It is often hard to get patients to realize these facts, because the shifting of attention may be and usually is unconscious. At points where the vision is good, patients may shift normally and easily from one part of a letter to another without being aware of the fact and without noticing the swing produced by this motion. Therefore they often imagine that they can see it all alike at one time for an indefinite period. In the same way they think that they can remember or imagine a letter all alike at one time continuously. One patient looked at an F for the better part of an hour, seeing it all the time perfectly black and distinct and, as he thought, all alike and stationary.

He was directed to imagine with his eyes closed that a small, black spot on the upper corner of the ten-line F was the blackest part of the letter. Then he was told to remember a similar period on the bottom of the letter and to forget the top period. Next he was directed to shift between these two periods, remembering each one alternately as the blackest part of the letter. He did this easily and noted that every time he thought of the top period, the letter appeared to move downward, and every time he thought of the lower period, the letter appeared to move upward. When he tried to concentrate on one period, however, he immediately lost it and lost the whole letter with it. To imagine two or more periods, or the whole letter, equally black at one time was even more difficult. Having demonstrated with his eyes closed that it was impossible to think continuously of one point, or to think of two or more points equally well at the same time, but very easy to shift continuously from one point to another, he became able to realize that he could not see the letter on the test card perfectly and continuously when he saw it all alike at one time, and could not even see one point perfectly black continuously.

Most patients, when asked to remember or imagine a letter of diamond type, state that they can do it continuously and that they see it all alike at one time. When asked to concentrate on a point, or imagine one or more points equally well at one time however, they find it, as in the case just mentioned, impossible, while they have no difficulty in shifting continuously from one point to another. After having demonstrated these facts they find it impossible to remember a letter all alike at one time, and realize that when they seemed to do so they must have been unconsciously shifting and swinging.

It is strange that physiologists and psychologists have never published these facts. **The normal shifting of the eye is so short and easy that it is scarcely perceptible.** The apparent movement of objects regarded, produced by this motion, is also inconspicuous; yet it is sufficiently marked so that when patients are asked whether the letters they are looking at are moving or stationary they often answer that they are moving. When asked to stop the movement or imagine that the letters are stationary, they reply that they cannot, and that the attempt to do so causes discomfort or pain. One patient even noticed the phenomenon without any hint from me, and came back to me several months after I had cured her to ask for an explanation. The movement, which she noticed only when she looked at a letter continuously, not when she read a few of the letters more or less rapidly, did not trouble her she said; in fact, when she tried to stop it she felt uncomfortable and her vision was lowered; but having never heard of it, she was afraid it might indicate something wrong with her eyes.

Stare at a dot (period) = it will be seen unclear - Shift on the dot point to point = it is seen clear

Psychologists tell us that it is impossible to attend continuously to an unchanging stimulus. This is true, but some of the proofs adduced in support of it are open to criticism. James says that if you try to attend steadfastly to a dot on a piece of paper, or on the wall, "you will presently find that one or the other of two things has happened: either your field of vision has become blurred so that you now see nothing distinct at all, or else you have involuntarily ceased to look at the dot in question, and are looking at something else. But if you ask yourself successive questions about the dot—how big it is, how far, of what shape, what shade of color, etc.; in other words if you turn it over, if you think of it in various ways, and along with various kinds of associations—you can keep your mind on it for a comparatively long time." *1

How to see a small dot clear, easy.

It is probably true that in most cases the person who looks at a dot under the conditions in question would find his vision blurring, or his attention shifting to something else, because he would make an effort to see it. He would stare at it, or "concentrate," upon it. But a person with normal, or nearly normal vision, who looks at such a dot easily and naturally, can regard it indefinitely, because his eyes unconsciously shift from one part of it to another. Other persons, if they shift consciously and realize the apparent motion thus produced, will often find it possible to hold their attention on the dot for a considerable time, but will not see it as distinctly as persons who shift unconsciously. As for asking one's self questions about the dot, I have often tried this experiment with patients,

but never found that it corrected the tendency to stare.

The idea that the attention can be forced is a very common one and is very bad for the eyes. It is greatly encouraged by popular writers, but is contrary to the teachings of more reliable psychologists who know that forced attention can only be momentary, and that it is a great strain upon the mind and the whole body. Ladd records that the subject of an experiment to determine reaction-time under concentrated attention often "though sitting quiet, sweats profusely."*2

Incorrect Palming Example

I can parallel this from my own experience. A patient was left in a room and told to rest her eyes by closing and covering them until I came back; but another patient had unfortunately told her that she must "concentrate on the black." So when a series of colors began to intrude themselves in her field of vision she tried to ignore them. The more they were ignored the more insistent they became, and when I returned the patient was in convulsions. She had to be carried into another room, and only after resting for an hour or two was she able to go home in a taxicab. It was a month, during which time she was under the care of her family physician, before she was able to resume treatment.

Since attempts to force the mind are reflected in the eyes, the popular ideas of concentration must be responsible for a great deal of that strain which is the cause of imperfect sight.

STORIES FROM THE CLINIC

17: Some Results of Concentration

By EMILY C. LIERMAN

Almost all the patients who come to us at the clinic, especially adults, think it necessary to concentrate in order to see better. They think concentration is part of our method of treatment, and until they learn better I cannot make any progress with them.

A young girl about eighteen or nineteen years old came one day recently, holding her glasses in her hand and anxiously waiting to be treated. She told me she had worn glasses for seven years, and that she had consulted several oculists and opticians without getting any relief from the pain in her eyes. With her glasses she read 15/20, and without them 15/50, both eyes. When she closed her eyes I noticed a twitching of her eyelids. She was told to open her eyes and look at a letter on the card, then to close them and remember the blackness of the letter, thinking first of the bottom and then of the top, alternately. When a few minutes later she removed her hands from her eyes she could not see the letter which she had seen before. I wondered why her sight did not improve, but I understood when she said:

"I did what you asked me to do. You told me to remember the letter O, and I held on to it and tried hard not to remember anything else. But now my pain is worse than before."

"You did not understand me," I said. "I did not ask you to hold on to the letter O. I asked you to remember the blackness of it, and see or imagine one part best at a time."

She tried it again, covering her eyes with her hands, and this time I said to her:

"Remember the letter O as you saw it, but first remember the top best. Now what happens to the bottom?"

"It fades from black to gray," she said.

"Now remember the bottom blacker than the top."

"The same thing happens to the top," she said. "It fades to gray color." And then she added: "Please let me keep doing this for a little while, it seems to take my pain away."

After five minutes or so I had to ask her to remove her hands from her eyes, as I could not spend any more time with her, and I wanted to know if I had helped her. As she looked at the card again she saw the O very plainly, and also read two more lines, the forty and the thirty. The twitching of her eyelids had ceased, and she was able to smile. This patient is still coming, and is now able to read most of the ten-line at fifteen feet. She is also able to read some of the letters in a paragraph of diamond type at eight inches from her eyes; but when I hold the type at six inches and ask her to fix her eyes on one corner of the card and stare at it, the whole surface becomes a blank and the pain in her head and eyes comes back.

One day a little mother, imported from Ireland, sure enough, came with her little boy of eleven, who was suffering terrible pain. Dr. Bates and I were not very busy at that moment, which was something quite unusual, and we both listened together to her story, the gist of which was:

"The school nurse sis me biy needs glasses. 'Tis truble he's havin' wid his eyes."

The boy all the while kept his eyes covered with a white cloth, and at first glance I thought he was crying because the part of his face that I was able to see was much flushed. Dr. Bates asked me to see what I could do for him, and his mother began to talk again.

"Oi haven't any time to be foolin' round here, ma'am," she informed me. "Oi got to get back to me washin.' It's glasses he needs, ma'am."

When she finally stopped for want of breath, I said:

"Now wouldn't it be fine and dandy to cure him so that he wouldn't need glasses?"

As I said this, down came the cloth from the boy's eyes. He was interested and returned my smile.

"Just you leave him to me and I will cure him," I said to his mother. "And never mind leaving your work for him again. He can come here by himself."

"Sure ma'am, is it dreamin' ye are, or is it a bit o' blarney yer given' me?" she inquired.

"No," I said, "it isn't dreaming or blarney. Be a good mother and just watch your boy and see what happens."

I tested the boy's sight with the Snellen test card and found that his vision was 12/40 with each eye. Then I gave him a stool and showed him how to palm. Some minutes afterwards I told him to remove his hands from his eyes and look at the card. He stared at it as if some wild animal were after him. I discovered that his mother was threatening him, talking to him in a low tone. Evidently she thought she would please me by forcing him to do what I wished. By this time I knew that the boy was afraid of his mother, and I quietly invited her to take a nice, comfortable seat outside the room. The boy informed me that his name was Joe, and as I smoothed his hair and gave him a few pats the most affectionate look came into his eyes. Then we got down to business again. I told him to palm and reminded him of a baseball.

"Imagine you are throwing the ball," I said. "Now imagine that you are catching it. Now look at the card."

He smiled when he saw the letters come out blacker and more distinct than before. The redness of his face, which at first I had thought was from fever, left him, and his eyes, which were Irish blue, were clear and wide open. He read the thirty-line at twelve feet and part of the twenty-line, which I thought was doing well for the first visit. Now it occurred to me to see what would happen if he concentrated, or stared. I told him to look at the first letter on the forty-line, a Z, and keep his mind fixed on it no matter what happened. As he did this he began to frown, his forehead became wrinkled and his face became red again.

"I don't like to do that, nurse," he said. "All the other letters disappear and my head hurts."

I told him to palm again and remember the letter Z, thinking first of the top, then of the bottom. When he looked at the card again he saw the letters clearly once more, and read all of the twenty-line at fifteen feet. When he arrived at the ten-line, however, the first letter bothered him. He twisted his head in all directions. He stared at the letter, and finally decided to palm again. After a few moments I asked him to open his eyes, and told him that there were three of the same letters on the card, but that they were scattered here and there on the different lines. He again started to read the card, and as he saw the first letter on the hundred-line, which was a D, he said:

"Now I know the first letter on the ten-line is a D."

Shifting his eyes from the hundred-line to the ten-line letter had helped him to see it.

His last visit was a very interesting one. At the beginning of the treatment I explained to him how important it was for him to practice palming at least half a dozen times a day, but he did not feel that he could spare the time, because he earns a little money running errands for his mother. At the next to the last visit I had a talk with him about this and said:

"If your eyes are cured you can earn more money during vacation time, but you cannot if they trouble you."

He promised to practice at home as many times as I wished him to, so I made *him* a promise. My rose garden in the country was in full bloom and I promised to bring him a bouquet the next Clinic day. Not having enough flowers for each patient, I wrapped Joe's bouquet in paper and asked Dr. Bates to carry it. Joe spied me first as we passed the long line of benches which were filled with poor people, all of them suffering from some eye trouble. His hair was combed, which was unusual, and he was spruced up generally. He was smiling, too, and his eyes were shining with great expectations. But when he saw that my hands were empty, the smile vanished, and a look of disappointment came into his eyes. I know what it means to be disappointed, so I told him at once that Dr. Bates was bringing the bouquet for him, and the sun shone for him once more. I was well repaid for those flowers, for that day Joe made wonderful progress.

He had to wait some time before I could treat him, and he never took his eyes from me. I could feel his gratitude, and my impulse was to take him in my arms and hug him tight; but I refrained, thinking he might resent the familiarity. He read the ten-line at fifteen feet, in less than a minute, and he told me that he did not suffer any more pain in his head. He also said that his studies seemed easier to him when he remembered not to stare or think too hard of one thing.

QUESTIONS AND ANSWERS

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Q - After leaving off my glasses and practicing the methods advocated in your magazine for six months, I went to the oculist who gave me glasses eleven years ago to have my eyes re-examined. He said the astigmatism was exactly what it was eleven years ago, but that there had been some improvement in the near-sightedness. I am sending you the prescriptions, old and new. I apparently see better than when I took off my glasses, and there are times when I see letters measuring 3/32nds of an inch in height at a distance of ten feet. This lasts until I wink, (blink) when the letters become blurred and indistinguishable. I would like to ask the following questions:

1. Could there have been an improvement in the astigmatism without the oculist's observing it?
2. What is the percentage of improvement in each eye?
3. In your experience, when astigmatism has been cured, how does it go—all at once, or gradually?
4. Do you think I have made enough progress to warrant my continuing, or should I go back to glasses, which always gave me comfort, and leave perfect eyesight for those more easily cured? G. H. A.

A - 1. Yes. During the examination you may have been under a strain.
2. It is impossible to judge your improvement by comparing your glasses, because the refraction is continually changing.
3. It may go in either way.
4. Yes. Your trouble is so slight that I do not understand why it should take you so long to correct it.

Q - After being out in the bright sunlight everything looks intensely black to me indoors. Is this a natural consequence of the exposure of the eyes to bright light, or does the normal eye not experience it? L. K.

A - Many persons with imperfect sight, and also persons with ordinarily normal sight suffer in the way you describe after going indoors out of the bright sunlight, and the trouble can be relieved by any method which brings about a complete relief of strain.

Q - What is the quickest cure for inability to read without glasses on account of advancing years? J. L. C.

(Presbyopia cure)

A - Close the eyes and remember a small letter of the alphabet perfectly. Open the eyes, and at twelve inches look at the corner of a card showing a specimen of **diamond type fine print**, remembering the letter as well as you can. Close the eyes or palm, and remember the letter better. Alternately, remember it with the eyes open (and looking at the corner of the card) and closed, until the memory with the eyes open and closed is nearly equal. Then look between the lines and do the same thing. In this way some patients become able in half an hour to read the letters on the card. Others require days, weeks, or longer.

Q - Is it possible to become able to read without glasses after the extraction of cataract? A. C.

A - Yes. Accommodation is brought about by a lengthening of the eyeball through the action of a pair of muscles on the outside. If

the patient is able to look at a printed page without effort or strain, the eyeball will lengthen sufficiently to compensate for the loss of the lens.

July, 1921

*1- Talks to Teachers, 1915, p. 104.
*2 - Elements of Physiological Psychology, 1900, p. 543.

School Number
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

August, 1921

CHILDREN MAY IMPROVE THEIR SIGHT BY CONSCIOUSLY DOING THE WRONG THING

Children often make a great effort to see the blackboard and other distant objects in school. It helps them to overcome this habit to have them demonstrate just what the strain to see does.

+Tell them to fix their attention on the smallest letter they can see from their seats, to stare at it, to concentrate on it, to partly close their eyelids—in short, to make as great an effort as possible to see it.

+The letter will blur or disappear altogether and the whole card may become blurred, while discomfort or pain in the eyes or head will be produced.

+Now direct them to rest their eyes by palming. The pain or discomfort will cease, the letter will come out again, and other letters that they could not see before may come out also.

+ Now teach the children to shift part to part on the letters and from letter to letter, and blink. The eyes are relaxed and letters clear.

After a demonstration like this children are less likely to make an effort to see the blackboard, or anything else; but some children have to repeat the experiment many times before the subconscious inclination to strain is corrected.

SIGHT-SAVING IN THE SCHOOL-ROOM

By EDITH F. GAVIN

It seemed so wonderful to me to be able to lay aside my glasses and have eye comfort after wearing them for twenty-two years with discomfort the greater part of the time! I could scarcely wait to get back home to talk to the other teachers about it and try to help a few of the children.

I began with Gertrude, who was so nearsighted that from a front seat she was unable to see very black figures one and one-half inches high printed on a white chart and hanging on the front board. Her vision on January 11, 1921, was 20/70 in both eyes, but by March 10th she had improved to 20/70 with the right eye and 20/30 with the left and could read the chart from the last seat in the row.

Matilda had complained of headaches since last September. Glasses were obtained last December, and after a two months' struggle to get used to them, she refused to wear them, saying that they made her head and eyes feel worse. I then told her how to palm and practice with the chart. She had no more headaches in school, and her mother said she didn't complain at home. Her vision also improved from 20/30 to 20/15.

I next took Walter in hand. His mother would not get glasses for him, although advised to do so by the school nurse and doctor. His vision February 18th was 20/200. Three weeks later his mother decided to get glasses for him, but his vision had improved to 20/20 in the right eye and 20/30 in the left.

Helen's teacher brought her to me, saying she was so nervous and read in such a halting manner that she felt sure that her glasses did not fit her. Her mother said that she might lay aside her glasses and Helen could hardly wait to begin. Shortly after, she was taken ill with scarlet fever and did not return, but her vision improved from 20/40 to 20/15, and her teacher said that her reading had improved noticeably.

Mollie, age six, was sent in to me February 18th. She tested 20/70 in the right eye and 20/50 in the left. Her vision in May was 20/30, right, and 20/20, left.

When Rae came to my room on May 15th, her vision was 20/70. Her father was very much opposed to her wearing glasses and readily gave permission for me to help her. She remained in the district only two weeks, but she had improved to 20/20 in the right eye and 20/30 in the left.

Bennie, mentally defective, required a great deal of patience, but he improved from 20/50 February 9th to 20/15 March 4th.

Leo, a fifth grade pupil, was sent to me February 20th by his teacher. She said he wouldn't wear his glasses and was a poor student. He tested 20/50 in the right eye and 20/30 in the left. By March 15th his vision was 20/30, right eye, and 20/15, left, and his teacher said that he showed a marked improvement in his scholarship.

The children needing help came to me fifteen minutes before the afternoon session began. If I was busy with one, the others would work quietly by themselves, seeming to take great pride in their improvement. The chart hangs on the front wall at all times. I taught the class how to palm and often different ones would come up early to practice. Several children with apparently normal vision told me that they were able to read two or three lines more at the end of the term. To my mind there is no limit to the good that might he accomplished if this method were in general use in the schools.

MY EXPERIENCE IN TREATING MYOPIA

By IRENE KUNDTZ

Having worn glasses constantly for seven years and then, after a week's treatment, returning to school without them, not only caused great excitement amongst my school friends, but began my experience in trying to benefit others. It was then that I really realized what a wonderful thing it was to have perfect sight and never again wear glasses.

My first patient was my chum Margaret, who roomed across the hall from me. She was now fifteen years old and had worn glasses ever since she was a small child. With her glasses off she could faintly see the large letter C. So I immediately taught her the correct way of palming. This not only interested her but my two roommates also, for the blacker they imagined a cat or a period, the better they could read in the dim light. After palming for at least ten minutes she looked up and was greatly surprised to see the large C much blacker and more distinct. Then I gave her a card with diamond type and taught her to swing the little black figure 1. This was something new for all three girls, and soon I found myself treating three patients instead of one. Swinging seemed rather difficult to them until they tried moving their heads from side to side, in this way getting a short, easy swing of a quarter of an inch or less. As our time was very limited at the dormitory I was able to work with Margaret for only a half hour, but in that short time she read three letters at a distance of fourteen feet.

This was a great new game for me, and when her first treatment was over she promised to come again the next evening, and a little earlier if possible.

The news of Margaret being able to read three letters on the Snellen test card spread through the dormitory very rapidly, and the next morning before school I had two other girls ask if they might join the class. I was indeed glad to have them and could hardly wait until evening to resume my fascinating work.

My two new patients were both fourteen years old and had worn glasses since the second grade. As my roommates were out visiting we were able to work for forty-five minutes in peace, and each became more anxious to beat the other, for with their glasses off they could read through the seventy line. While I taught them how to palm, Margaret was practicing at swinging the figure 1 and working at the first letter in the following line, but nothing seemed to give her as much rest and benefit as palming. So after helping her she would palm again while I took care of the other two girls. At the end of forty-five minutes we had made quite a little progress, Margaret having read through the seventy line by palming alone, and the other two girls through two letters in the fifty line.

Having succeeded in helping three of my girl friends, I next began to talk to some of my teachers who had worn glasses from ten to fifteen years. But teachers as a rule are very busy correcting papers, etc.; so not being able to treat them as well, I lent them Dr. Bates' book called *Perfect Sight Without Glasses*, and found to my great delight that it worked just as well, for it not only gave them a start but interested their friends also.

Thus I continued giving treatments, sometimes for only fifteen or twenty minutes an evening, but every little bit helped and each treatment brought me more patients, and gave me more joy and courage to continue.

After treating Margaret for a week, for she was my best patient and really made the most progress, she was able to read through the 50-line, and would have continued to improve more rapidly had she been able to go to school without her glasses.

My experience in treating myopia lasted only two weeks, for at the end of that time examinations began and my evenings were occupied with studies. Helping and treating others was not only very interesting work, but was also benefiting me in continuing my daily practice.

STORIES FROM THE CLINIC

18: The School Children Again

By EMILY C. LIERMAN

We have so many interesting cases among the children sent to us from the schools to be fitted with glasses that one hardly knows where to begin when trying to tell about them, Little Agnes, eight years old, comes to my mind, not because she was more remarkable than a good many others, but because she came recently. Her mother came with her and told me that Agnes suffered from frequent headaches and that for the past year her teachers had been saying that she needed glasses, as she had great difficulty in seeing the blackboard. The mother had hesitated to take her to an oculist, however, as two of her children were already wearing glasses and she did not want to see them on a third.

I could easily see that Agnes was suffering, and when I tested her eyes with the Snellen test card I found that her vision was very poor. At fifteen feet she could not read more than the seventy line. This was so surprising in so young a child that I thought at first she did not know her letters; but when I tested her with pothooks she did no better. I now showed her how to palm, and in a few moments she read the bottom line. The mother was thrilled and said:

"My goodness! When I first entered this room my hope was gone. I could think of nothing but glasses for my child. When she first read the card and I saw how bad her eyes were, I was convinced that there was no escape for her. But now that I see her vision improved so quickly I have hope indeed."

I told the mother that I was thrilled myself, and added that she could help me to cure the child if she would.

"What I do for her here you can do for her at home." I said. "Encourage her to rest her eyes. Nature requires rest for the eyes, but your little girl, instead of closing her eyes when they are tired, strains to keep them open."

The mother promised to do all she could, and as she was leaving she said:

"God sent me here. I will send my two boys to be rid of their glasses also."

The next clinic day Agnes brought with her her brother Peter, who was wearing glasses for astigmatism and headaches. He was very attentive while I treated Agnes, who told me that she had not been having her usual headaches. Peter's vision I found to be 15/40, right eye, and 15/15, left eye. After palming only a few minutes his right eye improved to 15/15 and his left to 15/10. He was very happy when told that he did not need glasses any more, and that I could cure him during vacation. As children are cured very quickly when one helps the other at home, I expect that Agnes and Peter will soon be reading 20/10, which is twice what the normal

eye is expected to do.

Another recent patient was Mary, a colored girl, twelve years old. She complained of such violent headaches that she could no longer attend school and stayed in bed most of the time. The school nurse had advised glasses, and she had come to get them. Mary kept her head lowered much of the time, but when I was about to treat her she tried to open one eye and look at me. The effort was so great that her face became a mass of wrinkles. As the light seemed to distress her, I decided to give her the light treatment, that is, to focus the rays of the sun on the upper part of her eyeballs with a glass. I asked her to sit on a stool where the sun could shine on her eyes. To reassure her I asked a patient who had already had the treatment to let me repeat it on her, and when Mary saw her enjoy the light bath she readily submitted to it herself. Afterward her eyes opened wide and I was able to test her sight. Her vision was 20/50, both eyes, I showed her how to palm, and when, after ten minutes, she opened her eyes, her pain was gone and her vision perfect. I was quite proud to have accomplished so much in one treatment.

Two days later Mary came again, and with her came the school nurse and a friend, both eager to hear more of the miracle that had been worked on Mary. Could it be possible, the nurse asked, that the child had been cured as quickly as she said? I was surprised myself at the change in the patient's appearance. Her eyes were still wide open, and the constant grin on her face made her almost unrecognizable as the sad creature I had seen two days before. I told the nurse what had been done for the child and how she could help the other children in her school who had eye trouble. She came a few times more to watch our methods and told me that she was teaching all the children sent to her for examination of their eyes to palm. This always relieved them, to some extent, at once. The hard cases, however, she sent to us without delay.

A very remarkable case still under treatment is that of a girl with nystagmus, a condition in which the eyes vibrate from side to side. The child is now so much improved that ordinarily her eyes are normal, but when anything disturbs her the vibration returns. This always happens, she tells me, when the teacher asks her a question, and at the same time she loses her memory. But the teacher allows her to cover her eyes to rest them, and in a few minutes the vibration ceases and her memory improves. Before she came to the clinic she often became hysterical and was obliged to leave the classroom. Now she is never troubled in this way.

One of the most puzzling cases I ever had was sent by the school nurse for glasses. A patient who came from the same school told me that she was stupid, and she certainly appeared to be so. I asked her if she knew her letters, and in trying to reply she stuttered painfully. I tried to reassure her by speaking as gently as I could, but without avail. I could not get her to answer intelligently. I tried having her palm, but it did not help. I held the test card close to her eyes and asked her to point out certain letters as I named them, but only in a few cases did she do this correctly. Completely baffled I appealed to Dr. Bates. He asked the child to come to him and touch a button on his coat, and she did so. He asked her to touch another button, but she answered:

"I don't see them."

"Look down at your shoes," he said. "Do you see them?"

"No," she answered.

"Go over and put your finger on the doorknob," he said, and she immediately did so.

"It is a case of hysterical blindness," the Doctor said.

The child came for some time very regularly, and now reads 15/10 with both eyes. She has stopped stuttering and has lost her reputation for stupidity. She has become a sort of good Samaritan in her neighborhood, for every once in a while she brings with her some little companion to be cured of imperfect sight. She never has any doubts as to our capacity to do this, and so far we have never disappointed her. I hope she never brings anyone who is beyond our power to help, for I would be sorry to see that sublime faith which we have inspired in her shattered.

Shift, see oppositional movement on a small period for perfect shifting, central fixation and clear vision.

Two of our patients graduated in June, and after the final examinations they told me that they had been greatly helped in these tests by the memory of a swinging black period. One of them was told by the principal that if she failed to pass, it would not be because of her stupidity but because she refused to wear glasses. She gave him Dr. Bates' book, and after that, though he watched her closely, he did not say anything more about her eyes.

"I made up my mind to pass without the aid of glasses," she said, "and put one over on the principal, and you bet I never lost sight of my precious swinging period. The book has become a family treasure," she continued. "When one of us has a pain in head or eyes, out it comes. It is a natural thing to see mother palming after her work is done. She enjoys her evenings with us now because palming rests her and she does not get so sleepy."

The other graduate said: "I did not have to think of a black period when the subject was easy, but when I had to answer questions in the more difficult branches I certainly did find the period a lifesaver. I know I would have failed without it."

Memory of a swinging black period. Shift on the period and see it move, 'swing' in the opposite direction the eyes shift to. This relaxes the mind, body, eyes and improves the memory.

BETTER EYESIGHT IN NORTH BERGEN

BY M. F. HUSTED

Superintendent Public Schools of North Bergen, N. J.

"Better Eyesight" takes great pleasure in presenting to its readers this remarkable report of the results attained in the schools of North Bergen by the use of the Snellen test card. It is an extract from the fourteenth annual report of Superintendent Husted.

Early in October, 1919, under the direction of our school nurse Miss Marion McNamara, a Snellen test of the eyes of all of our pupils was made. A novel health experiment was begun, a campaign for "Better Eyesight." In June a second test was made in order to verify the value of progress in this phase of health work. The June test of 1920 shows marvelous, practical, successful results. Only the skepticism of principals, teachers and pupils and lack of faithfulness in carrying out its conditions, prevented the wonderful results achieved from paralleling those of an Arabian Knight's story.

A Snellen test card was placed permanently in the room. The children were directed to read the smallest letters they could see from their seats at least once every day, with both eyes together and with each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. Those whose vision was defective were encouraged to read it more frequently, and in fact needed no encouragement to do so after they found that the practice helped them to see the

blackboard, and stopped the headaches, or other discomfort, previously resulting from the use of their eyes.

In 1911 and 1912 the same system was introduced into some of the schools of New York City[1] with an attendance of about ten thousand children. Many of the teachers neglected to use the cards, being unable to believe that such a simple method and one so entirely at variance with previous teaching on the subject, could accomplish the desired results. Others kept the cards in a closet except when they were needed for the daily eye drill, lest the children should memorize them. Thus they not only put an unnecessary burden upon themselves, but did what they could to defeat the purpose of the system, which is to give the children daily exercise in distant vision with a familiar object as the point of fixation. A considerable number, however, use the system intelligently and persistently, and in less than a year were able to present results showing that of three thousand children with imperfect sight over one thousand had obtained normal vision by its means.

The following summary shows the remarkable results of the North Bergen experiment in the use of the Bates System. The first grades are omitted because of the difficulty in making accurate tests.

Schools	No. Tested	Grades II to VIII No. Below 20/20 Normal Standard	No. Absent 2nd Test	No. Below Improved	Per Cent Improved
Grant	72	36		30	83.3
Robert Fulton	359	112	11	76	75.2
Franklin	341	103	17	53	61.6
Lincoln	388	169	21	103	69.4
Hamilton	211	78	12	48	72.7
Jefferson	526	216	33	109	59.5
Washington	353	184	11	107	63.4
Horace Mann	335	96	5	66	72.5
McKinley	144	75	17	55	94.8
Totals	2729	1049	127	647	70.1

This is a remarkable demonstration of the priceless values of this method of treatment. That 647 or 70.1% of the 922 pupils below normal (20/20) should have been improved in eyesight is a truly marvelous showing. The record of improvement is suggestive of what a very faithful and systematic application of these health principles may accomplish.

Not only does this work place no additional burden upon the teachers, but, by improving the eyesight, health, disposition and mentality of their pupils, it surely lightens their labors.

QUESTIONS AND ANSWERS

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Q—(1) Does working by artificial light affect the eyes? I work all day by electric light—am a bookkeeper, and suffer a great deal from my eyes. I have been fitted with glasses, but cannot wear them. I feel that my eyes, instead of getting better from wearing them, get weaker.
(2) When I go out in the street after working I cannot stand the glare of the sun, and must keep my eyes half-closed; otherwise I suffer a great deal of pain. Is it so because of my eyes being accustomed to the artificial light? It is not so on Sundays.
(3) Is it advisable to wear an eye-shade while working?—S. S.

A—(1) Working by artificial light should not injure the eyes. If it does, it is because you are straining them. The idea that the light is injurious may cause you to do this. If you think of it as quieting and beneficial, it may have the opposite effect. You are right in thinking that the glasses injure your eyes.
(2) The sun hurts your eyes when you go out on the street after working because you have been straining to see, not because you have been working by artificial light. Because you strain less on Sundays the sun does not hurt you.
(3) It is not advisable to wear an eye-shade while working.

Q—Can the blindness of squint be cured?—F. C. E.
A—Yes. It can be cured by the same methods that are employed to relieve strain in other cases of imperfect sight.

Q—Do you get as much benefit from gazing at the sun through a window as you would outdoors? I have read that it did no good to take a sunbath through glass.—E. C. H.
A—Yes. The strength of the sunlight is not appreciably modified by the glass.
Modern Scientists state that all glass, plastic, clear, tinted, colored blocks out part of the suns healthy full spectrum light causing unhealthy, unbalanced, partial spectrum light to enter the eyes, brain, body resulting in lowered health, impaired function of body, brain, eyes and unclear vision. Full Spectrum transmitting glass may allow passage of more (but still imperfect) full spectrum light.

1 - Bates; Myopia Prevention by Teachers, N. Y. Med. Jour., Aug. 30, 1913

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

September, 1921

HOW TO IMPROVE THE SIGHT BY MEANS OF THE IMAGINATION: No. 2

Imagine parts of a letter correct/clear to see a letter clear.

In a recent issue directions were given for improving the vision by the aid of the imagination.

+ According to this method the patient ascertains what a letter is by imagining each of the four sides to be straight, curved, or open, and noting the effect of each guess upon the imagined swing of the letter.

+ Another method which has succeeded even better with many patients is to judge the correctness of the guess by observing its effect on the appearance of the letter:

+ Look at a letter which can be seen only as a gray spot, and imagine the top is straight. If the guess is right, the spot will probably become blacker; if it is wrong, the spot may become fainter or disappear.
+If no difference is apparent, rest the eyes by looking away, closing, or palming, and try again.

In many cases, when one side has been imagined correctly, the whole letter will come out.
+ If it does not, proceed to imagine the other sides as directed above.
+ If, when all four sides have been imagined correctly a letter does not come out, palm and repeat.

One can even bring out a letter that one cannot see at all in this way.
+Look at a line of letters which cannot be seen, and imagine the top of the first letter to be straight. If the guess is correct, the line may become apparent, and by continued practice the letter may come out clearly enough to be distinguished.

THE FRECKLE-FACED BOY

By W. H. Bates, M.D.

IN one of the public schools of New York, some years ago, was a boy about ten years old with a very unusual amount of freckles. He had one of those smiles which some care-free boys carry around with them all the time, in all places and under all conditions. His teacher was a very nervous person wearing glasses. Every time she spoke I was annoyed, not so much by what she said as by the disagreeable way in which she said it. As soon as I entered the room she began to find fault with me for introducing my method of curing and preventing imperfect sight in children into the school. Pointing sternly at the freckle-faced boy she said:

"That boy is very nearsighted. He holds his book too close to his eyes. He cannot read the writing on the blackboard. He is all the time looking at the Snellen test card instead of studying his lessons. He talks about it to the other children in the class and he encourages them to practice reading it. He tells them that he feels good when he reads it, makes his eyes feel better, and helps him to learn his lessons. He is impertinent because he persists brazenly in advising me, his teacher, to practice reading those fool letters which do not even spell a word and have no meaning whatever. I wish you would insist that he get glasses for his own eyes and make him stop taking glasses off the eyes of other children. Really, Doctor, it is too absurd for anything. That boy has actually persuaded the other children that they cure their headaches and improve their sight by reading that card. If it were not for the principal, I would have thrown it away long ago."

She said some other things, too, which were even more uncomplimentary. The children became restless. When she stopped for a breath I took the freckle-faced boy into a dark room and examined his eyes with the ophthalmoscope I found them perfect, with no trace of myopia or astigmatism. I asked him:

"How is it that the teacher says you cannot read the writing on the blackboard?"

He replied, still with his wonderful smile: "Because she is such a bum writer that nobody can read it; she acts often as if she couldn't read it herself."

"How is it," I continued, "that you hold the book so close to your face?"

He answered apologetically, "Because I get tired of the scenery."

"What do you mean by that?" I asked.

"Oh," he answered, "the teacher's face; I don't like it. She is always so cross; her face gives me a pain."

Then I took him back to the classroom and sent him to his seat. I asked the teacher if she could read the bottom line on the Snellen test card. She could not do so. Then I showed her an unfamiliar test card, which she saw even worse. She explained that her glasses needed to be changed. I asked the freckle-faced boy if he could read it.

"Yes," he said, and promptly did so.

The teacher exploded. It was impossible, she said, that he should have read the letters; he must have found out in some other way what they were. She pointed to the clock,

"What time is it?" she asked.

The boy answered her correctly. Then she held up a book with very large print, which the boy also read at five feet. She was finally convinced by these and other tests that the boy's sight was better than her own. When she was through I pointed to some very small letters which nobody could see at the distance at which the boy was sitting. He smiled, and said he could not see them.

"But," I said, "you are not trying, you are making no effort to see them."

At that the teacher unexpectedly struck the top of her desk with her ruler and we all jumped, with the exception of the freckle-faced boy, who had learned how to protect himself from such influences. With a rasping voice she cried:

"Why don't you do what the doctor tells you to do?"

In a short time my nerves returned to something like the normal, and I turned to the boy and asked:

"Why don't you try?"

He replied, still smiling: "No use tryin'."

With this as my text I talked for a few moments, and told the class that the boy was right and that your sight is never perfect

when you try to see. You only make yourself uncomfortable by the strain, and it never benefits you. I then proceeded to have the pupils demonstrate some facts I directed them to keep their attention fixed on the smallest letter they could see from their seats, to stare at it, to try to see it better, to concentrate, to partly close their eyelids—in short, to do everything they could to improve their sight. I noted that the teacher, who had previously walked to the back of the room, was listening to what I was saying. The children did as I suggested, and soon found that the effort made them very uncomfortable and lowered their vision. I now asked one pupil to tell me the smallest letter he could see. He answered:

"A letter O on the next to the bottom line."

"When you saw it did you see it easily?"

He answered: "Yes, without any trouble."

Then I said to him: "When you tried to see it, when you made trouble for your eyes by an effort, by a strain, what happened?"

He answered, "The letter disappeared and the whole card became blurred. I got a headache and I don't like it."

"Close your eyes," I said, "and rest them. Cover your eyes with the palms of your hands and shut out all the light. Now tell me who discovered America."

"Columbus," he replied, "in 1492."

"Can you spell Columbus?" I asked.

"Yes," he answered, "C-o-l-u-m-b-u-s."

All this time the teacher was standing with her eyes closed and covered with her hands.

"You spelled it correctly," I said. "How is your headache?"

"Gone," he replied, "and I feel good."

I noted that the teacher still had her eyes covered, and when the boy said his headache was relieved she nodded her head. I now directed the boy to take his hands down, open his eyes and tell me how much he could see.

"Gee" he exclaimed, "I see better. The letter O is all right, and I can see some of the letters on the bottom line."

With that he put both his hands in the pockets of his trousers, smiled at me, and turned around and grinned at the class. A little girl wearing glasses now timidly raised her hand, and when I told her to speak, said:

"Please, sir, I have an awful headache."

Her eyes looked very much strained. I told her to take off her glasses and put them on the desk, to look at the card and read what she could see. At this point, the teacher at the back of the room removed her hands from her face, took off her glasses and placed them on the desk in front of her. I asked the little girl what she could see:

"I can only see the largest letter at the top of the card."

She was told to close her eyes and cover them with the palms of her hands. The teacher did the same, and all the other children wearing glasses took them off, looked at the card, closed their eyes and covered them with the palms of their hands. Then I said to the little girl who had the awful headache.

"What is your first name?"

"Margaret," she answered.

"Can you spell it?" I asked, and she spelled it.

"What is your last name?"

She told me, and at my request she spelled it also. Then she smiled.

"How is your headache?"

"I haven't any," she answered.

"Take down your hands, open your eyes and kindly read the letters for me on the card."

She promptly read four lines of letters, and looked very happy when she did it. Meanwhile the teacher and the other pupils who had been wearing glasses had been doing the same, and when they looked at the card the second time they smiled, evidently pleased with what they saw. I was surprised to observe that even the teacher smiled and when, as I was about to leave the room, she came forward and threw her glasses into the waste-basket, I was quite shocked. Turning to me she said:

"Doctor, need I say anything?"

"You have said it all, thank you," I replied.

As I went out of the door I heard the class call out in a chorus:

"Thank you, thank you."

After this the Board of Education condemned my method as "unscientific and erroneous," and forbade the use of the Snellen test card in the schools, except for the usual purpose of testing the children's sight. Thus my pleasant visits to the classrooms came to an end. Some years later, however, I called on the teacher of the freckle-faced boy to ask about him. She met me smiling and without glasses, and I noted that the Snellen test card was still on the wall. In response to my inquiry as to why it should be there after the Board of Education had forbidden its use, she replied:

"The Board of Education has not the power to make me take that card down."

Then I asked about the freckle-faced boy.

"Graduated." she replied.

As he was below the age at which children usually graduate from the public schools, I expressed some surprise.

"Rapid advancement class," she said. "Got through my class in a hurry and took a lot of my other children with him to the rapid advancement class. Must be half through high school now. Bright boy."

I have written a book on *The Cure of Imperfect Sight by Treatment Without Glasses* which contains several hundred pages. The freckle-faced boy told in three words substantially what is contained in that book: "No use tryin'."

OPTIMUMS AND PESSIMUMS

A Possible Explanation

By M. E. GORE, M.D.

A LADY that I was treating could not see the letter R on the test card, the last letter of the fifty line. It seemed strange that she was able to see the other letters on the same line, but not the R. It occurred to me that perhaps the patient unconsciously saw this letter when she first looked at it, but on account of some unpleasant association which it produced in her mind, she made an effort to forget it, thus causing a lowering of vision. I determined to employ an association test to find out if possible what had caused her mental distress on looking at the letter. I asked her to think of the letter R and tell me the first thought that came into her mind. She answered:

"Red."

Now associated with red was her mother, as red had been her favorite color. Her mother had recently died, and thinking of her caused grief. I told the patient that I believed this was the cause of her lowered vision for that particular letter. To our astonishment she has since been able to see this letter without difficulty.

Another case which clearly illustrated the optimums and pessimums was a patient who was unable to see the figure 2 in a line of figures the same size and distance. On questioning her I found this number made her think of her two children which she had lost. On the other hand, she could see the letter F and V wherever they occurred. She said F made her think of her father whom she dearly loved, and V was the initial letter of his middle name.

These cases and several others of like nature have led me to the conclusion that the association of pleasant or unpleasant ideas with any of the letters is the cause of optimums and pessimums.

In most cases, by employing the association test and showing the patient the connection between the letter and the unpleasant thought, they have become able to see letters which had been pessimums.

No. 51 Main Street, Orange, N. J.

STORIES FROM THE CLINIC

19: A Trio of Difficult Cases

By EMILY C. LIERMAN

Cornea Injury, Scar

MYOPIC and farsighted patients are numerous, and I always feel confident that I can in no time improve their sight; but I suffered a case of cold feet when Dr. Bates placed in my care a young woman of twenty-seven, who came to our Clinic some time ago with a **scar on her right eye almost in the center of sight.** All the doctor said to me was, "Help this patient, please," and it was my first experience with a case of that kind. I asked the girl how long the scar had been there and also what caused it. Being a southerner darky, she spoke with a southern accent, and this is the way she answered me:

"When ah was twelve years old, mar granma was settin' ba de fireplace a-smokin' a pet pipe, an' as ah was removin' a boilin' kettle ob water ole Granny upsets de pipe ob hot ashes an done burned mah eye. Lordy, ma'am! Ah thought mah eye was burned from de socket. De doctor says ah would neber see again out ob dat eye."

I tested her sight, and with her left eye she read 14/40 while with her right eye she could barely see my fingers one foot away. I had not the slightest idea that I could improve the right eye at all. However, I told her to stand in a comfortable position and palm for a little while. In about ten minutes or so I told her to remove her hands, and I was pleased to see that her left eye had improved to 14/15, and that with her right eye she was able to distinguish the 200-line letter at fourteen feet. Dr. Bates was dumb struck with amazement. He said that, although he had seen **opacities of the cornea** resulting from constitutional disease clear up, he had never before, in his thirty-six years of experience, seen any improvement in an opacity resulting from an injury, even after years of treatment. That encouraged me so much that I told the patient to palm again, and before she left the clinic that day her right eye had improved to 14/50. She became hysterical when she found that she could see objects again with this eye. For a while she came quite regularly to the clinic and at her last visit her right eye improved to 20/50, while with the left she became able to read 20/10. Dr. Bates said it was a miracle. After that I never saw her again. I was sorry that she stayed away, because I was proud of what I had accomplished and wished to cure her completely.

A case of squint, which I think will interest our readers, was first seen on August 4, 1921. The patient had been wearing glasses for twelve years to correct the trouble, but without benefit. The first year her mother, who came with her, tried to console her by saying that perhaps in another year or so the squint would be cured; but instead it only got worse. Her playmates made unkind remarks about it, and when she found her sight was getting worse for reading she became utterly discouraged.

I tested her sight, and she read 12/40 with her left or better eye. When I asked her to read the card with her squinting eye she turned her head half way round to the left in trying to see. I at once showed her how to palm, and her mother and I were quite astonished when in a few minutes she opened her eyes and, with her head perfectly straight, read 12/40 with her right eye without a mistake. On August 6, two days later, she read 12/15 with each eye separately, with her right eye perfectly straight. She had followed my instructions to palm at least six times a day for as long a period as was comfortable for her. On August 9th she came to the Clinic smiling and expressed her gratitude for what had been done for her.

"I can now read a book for hours at a time," she said, "without headaches or discomfort. Just yesterday I visited another clinic where I had received treatment and asked the doctor who had treated me to let me show him what I could do. I showed him how I could palm, and then I read the test card for him with each eye separately. The doctor was thrilled, and said it seemed like a miracle, because he had told me that I could never again get along without glasses and to be sure and have them changed every year or so."

That day my patient read 12/10, both eyes, and I am sure that I can cure her if she will continue to come.

Another case of squint, a little colored boy five years old, the most unruly youngster who ever came for treatment, was cured in less than six months. When he tried to look straight ahead his right eye turned in so far that one could hardly see the cornea. His grandmother who came with him expressed very little hope, and assured me that I would have a hard time trying to manage him or

to help him. I asked him his name several times before he answered:

"I ain't got no name."

Later he said it was Francisco. I could see that he was straining and that he was extremely nervous. So I decided to be very patient with him, but for some time the only answers I could get from him were:

"I don't wanna" and "I won't."

All sorts of apologies came from his grandmother, but I assured her that I was not discouraged with him. I made up my mind to help the little chap and in some way relieve him of that awful tension and nervous strain. I said to him:

"If I had a bad eye and a good eye, I would not make my good eye do all the work. I would make the bad eye work hard so that I could see better."

This interested the child for some reason, and he asked:

"Have I got a bad eye?"

"Yes," I said, "and the reason it is bad is because it is lazy and you won't let it be good. All you can say when I try to tell you how to make it behave is, 'I don't wanna.' Nice boys with good eyes don't say that." Whereupon he shouted in a loud voice which startled the rest of the patients:

"Make my bad eye do some work; I want good eyes like you have."

I immediately showed him a test card with pothooks (E's) pointing in different directions. I covered his left eye with the palm of my hand, and asked him to show me how the E's were pointing as I held the card two feet away. At that distance he was able to see the 100-line letters. He could see straight ahead with the right eye only just long enough to see those letters; then his eye turned in again. At first I could not induce him to palm, so I told him to close his eyes as though he were sleeping. He was very obedient about doing this, and his grandmother stood by in astonishment while his eyes were closed. I praised him for closing them and resting them for me, and I said if he would do this lots and lots of times every day his right eye would become straight like the left and would not be bad any more. I then told him to cover his left eye with his hand and look at the card which I had fastened on the wall five feet away. This amused him very much and he acted as though he were in for a good time. I told him to look at the 200-line letter and then quickly close his eyes; then to look at the 100-line letters and close his eyes quickly again. He was able to see these letters as well at five feet as he did at two, and this encouraged me. When he opened his eyes a third time he showed me with his hand how the next line of letter E's pointed.

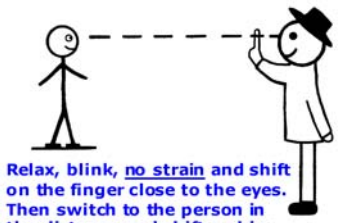
He came regularly for a few months, and was always very obedient. Each time he came he was able to keep his eye straight, not only while practicing with the card, but also while talking to me. His grandmother bought a Snellen test card, and assisted with the treatment very faithfully at home. Now, just six months since he first came, he is able to see the 10-line of letters at ten feet away with each eye, 10/10, and has learned the alphabet by heart. Dr. Bates became very much interested in the rapid progress of the case and congratulated me frequently on the good results I had obtained. He said it was very unusual for the blindness of squint to be cured in such a short time, and that most authorities would have said it was impossible.

QUESTIONS AND ANSWERS

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Q—(1) After closing my eyes tight and then opening them, I can read *Better Eyesight* at a distance of about two feet. The type stands out very black and clear. After about two or three minutes my old myopia comes back. What I want to know is whether this practice is good for the eyes and whether it will help me to see at a distance.

(2) Can you tell me what is a good thing to do to see people across the street clearly or in a meeting room at fairly close range? It is awkward not to be able to recognize people until one is close upon them.—A. H. C.



A—(1) Yes, but I would expect you to get better results if you closed your eyes easily and naturally, instead of closing them tight.

(2) The only way to overcome this difficulty completely is to get cured, but the practice you have described sometimes helps to bring out distant objects temporarily. Straining to see at the nearpoint may also improve your distant vision temporarily. **One myopic patient, when she wished to recognize people across the street, used to strain to see her finger held close before her eyes and then look at the person she wished to see.**

Shift on the finger, no strain for clear close and distant vision.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

October, 1921

HOW TO OBTAIN MENTAL PICTURES

Quick Distant Vision Improvement Activity

+ Look at a letter on the Snellen test card.

+ Remember its blackness.

+ Shift the attention from one part of this spot of black to another. It should appear to move in a direction contrary to the imagined movement.

+ If it does not, try to imagine it stationary. If you succeed in doing this it will blur, or disappear. Having demonstrated that it is impossible to imagine the spot stationary, it may become possible to imagine it moving.

+Having become able to form a mental picture of a black spot with the eyes closed, try to do the same with the eyes open. Alternate until the mental vision with the eyes closed and open is the same.

+ Having become able to imagine a black spot try to imagine the letter *o* in diamond type with the center as white as snow. Do this alternately with eyes closed and open.

+ If you cannot hold the picture of a letter or period, commit to memory a number of letters on the test card and recite them to yourself while imagining that the card is moving.

+ If some other color or object is easier to imagine than a black spot it will serve the purpose equally well.

+ A few exceptional people may get better results with the eyes open than when they are closed.

MENTAL PICTURES AN AID TO VISION

By W. H. Bates, M.D.



Shift part to part on the apple, seeing one small part clearest at a time. (Central fixation combined with shifting). See the swing - The apple moves in the opposite direction the eyes shift to. Remember, imagine the apple is clear with perfect color. Practice with the eyes open and in the imagination with the eyes closed.

WHEN an object is seen perfectly it is possible to form a perfect mental picture of it; when it is seen imperfectly this cannot be done. Persons with ordinarily good vision are able to form a perfect mental picture of some letter of the alphabet especially a letter of diamond type, when looking at the Snellen test card, or at fine print; but persons with ordinarily imperfect vision can do this only under certain favorable conditions, as with their eyes closed, or when looking at a blank surface where there is nothing particular to see. They may also be able to do it when looking at objects at a distance at which their vision is fairly good, as in the case of near objects in myopia. Persons with ordinarily good vision, on the other hand, have moments when they see imperfectly, and at such times their mental pictures are imperfect.

These facts are of the greatest practical importance, because many persons easily learn how to form mental pictures, and when they become able to do so under all conditions their sight becomes perfect.

Mental vision is subject to precisely the same laws as visual perception. The mental picture must be seen or imagined by central fixation; that is, one part of it at a time must be seen best, and the attention must shift continually from one point to another. This shifting of attention produces a swing which is even more pronounced than the visual swing. (The swing, opposite movement of the object the eyes are shifting on in the mind, imagination with the eyes closed is more pronounced than when shifting on a real object with the eyes open.) Furthermore, the mind adds details that do not exist in the object remembered or imagined. If this object is a black letter on a white background, for instance, the white openings and margins will appear more intense than the reality.

It is not possible to retain a mental picture of a letter *o* of diamond type when one tries to think of one point continuously. The point may be remembered for a brief interval—a few seconds or part of a minute; then it is lost and with it the whole letter. One cannot, in short, "stare" at a point with the imagination any more than one can stare with the eye, and if one tries to do so the point disappears. If one tries to think continuously of two points of the letter, imagining them both to be equally black at the same time, the picture is lost more quickly. To think of four points or more, or to think of the whole letter perfectly black at the same time, is still more difficult.

Mental pictures cannot be retained for any length of time unless they appear to move. This movement may be so slight and easy that it is not observed until the attention is called to it, and even then it may not be realized. Some patients have told me that they could remember small letters of diamond type easily and continuously, and that they were not moving. Usually the patient can demonstrate the facts by trying to think of one part of the letter as stationary. In this case it immediately disappears. But the effort to keep the attention fixed on a point is so great that some patients cannot or will not make it. It is easier to let the attention shift naturally. In such cases I direct them to look at the letter *o* so close to their eyes, or so far away, that they are unable to see it clearly, and call their attention to the fact that now it seems to be stationary. Then I have them look at the letter at the distance at which they see it perfectly and ask them to imagine it stationary, as the letter at the preceding distance seemed to be. Usually they are able to do this, and to note that the letter blurs or disappears. After they become able to imagine that a letter which they see is stationary, they become able also to imagine that their mental picture of it is stationary, and to note that it cannot be held more than a moment under these conditions.

To imagine that other things seem to be moving helps some people to form and retain mental pictures. One patient, whose mental pictures were very poor, became able, when walking around the room and imagining things moving in the opposite direction, to imagine that a letter "o" was moving in the same direction as the furniture.

A mental picture need not be a complicated one. The perfect memory or imagination of even a small spot of color is sufficient to

cure all errors of refraction—nearsight, farsight, and astigmatism—as well as many other abnormal conditions. But to form a perfect mental picture of a spot of color—say a black period—is not always easy. One may think one is imagining a black period perfectly, but when one compares one's mental picture with the reality, one usually finds that the former is several degrees paler than the latter. It is usually easier to form mental pictures with the eyes closed than with the eyes open, and by imagining a period, or other object, with the eyes closed and open alternately one can improve one's ability to imagine it under the latter condition. In a few exceptional cases, however, mental pictures are better and are more easily held with the eyes open than when they are closed.

When the sight is imperfect it is always easier to hold a mental picture when looking at nothing in particular than when looking at letters or other objects at distances at which they cannot be seen distinctly. To improve the ability to hold them under the latter conditions it is necessary, alternately, to imagine the object with the eyes closed, or looking away from the Snellen test card or printed page, and then to look back at the Snellen test card or reading matter.

Persons unable to imagine a period or letter may succeed with other objects. For example, one patient who could not imagine a white card with black letters on it which she had just seen in her hand was able, with her eyes closed, to imagine the color of her house, one part best, and the different objects—curtains, furniture, etc.—in the different rooms. She was able to see the lawn, the flower-bed, the numerous flowers, one part best, and to imagine the color of the eyes of her friends. After that she became able to imagine the white card with the black letters.

Persons who suffer from pain, fatigue, or other discomfort to their eyes, have great difficulty in forming mental pictures. Such persons, although they cannot remember a letter or other objects, are often able to remember the movement of a card held in the hand. If they cannot do this at first, they may become able to do it by alternately looking at the card and then closing their eyes and trying to recall the movement. When they become able to do this the pain stops and the sight becomes temporarily normal.

Most people are helped by learning how to fail. When they demonstrate that their sight is lowered by an imperfect mental picture, they become able to avoid such pictures. A patient with squint was cured when she learned to imagine double images. At first, with her eyes open, she could not imagine them more than two inches apart, Later, with her eyes open, she got them four feet apart, while, with her eyes closed, she could imagine one Snellen test card on one side of a bay five miles wide and another on the other. These images could be imagined either crossed or homonymous at will; that is, each eye sometimes seemed to see the image on its own side, and at other times the image seemed to be on the opposite side. When the images were homonymous the eyes turned in, and when they were crossed the eyes turned out, By means of this practice the patient gained such a degree of mental control that her eyes became almost continually straight, the slight occasional deviation not being noticeable.

AN ARTIST'S EXPERIENCE WITH CENTRAL FIXATION

By FLORENCE CANE

This patient consulted the editor on July 20, 1921, because her vision was getting worse, and she suffered from a constant feeling of strain and fatigue in her eyes. She had worn glasses since she was seven years old for hypermetropia, commonly called farsight, and was now wearing convex 4.00 D. S., a rather strong lens. Yet without her glasses she was able to read fine print imperfectly, and by the aid of her memory she became able at the first visit to read it at six inches. Her discomfort was relieved at the first visit, and her distant vision, which had been imperfect, though better than her near vision, also improved.

I have made a few observations while improving my eyesight by the methods recommended by Dr. Bates, and many thoughts and questions regarding them have suggested themselves to me.

The first thing I remember observing on leaving the doctor's office after my first treatment was a new sense of movement and life. Never before had I seen such dear, bright color in the crowd. I walked toward the library on Fifth Avenue, and never had the sun shone so brightly, or the world looked so exciting. My heart beat faster. I felt a great elation, as if a new vision, a new power, had been given me.

The second thing I remembered was that I sat down the same evening with *The Cure of Imperfect Sight by Treatment Without Glasses*, determined to see what I could do without my glasses. I found that by shifting and palming I could read a sentence or two, later more, and after a while I could read a paragraph without stopping. I found shifting from a point above a word to one below it particularly helpful.

I went to bed at ten o'clock, but was so excited, after reading there until twelve that I could not sleep much. The magnitude of the truth thrilled me. The relation of sight, memory and imagination to body, mind and soul—the use of one faculty to strengthen another—seemed to be such a wonderful conception.

Soon I observed that looking upward seemed to improve my sight. I took to practicing on high objects out of doors. I shifted on points like two apples in a tree, or on the clouds. This helped me very much, and overcame my shrinking from light. I found that I had never walked with my eyes really open before. When I told Dr. Bates about it, he said it was the light that helped me, not the height of the objects I looked at.

I have had several experiences in the application of the principles of central fixation which seem interesting enough to communicate to the readers of BETTER EYESIGHT. The first occurred when I had mislaid something. I had looked everywhere for it in vain. I sat down and palmed and, quietly but suddenly, I saw in my mind where I had laid it. I got up and looked, and it was there.

I burned myself at a beach fire on a piece of wood that I picked up. It had been in the fire, but it was dark and I did not notice it. I burned my thumb quite badly-enough to raise a big blister. It was very painful, and I had no remedy at hand. I remember that I had read in Dr. Bates' book about central fixation in relation to pain, and I tried remembering the small *o*. After a few minutes the pain ceased until I could not tell which thumb I had burned. The same thing happened after a bee had stung me; and one night when I had a severe cold and could not sleep because of difficulty in breathing, I was greatly helped by seeing the period and making it swing. I fell asleep and continued seeing the period in my sleep.

In painting I have had the most interesting experiences of all. If I am working from the memory or imagination and it won't come the way I want, I try palming. The first time this happened. I was painting a lake with some birches at one side. I just couldn't remember how birches grew, and the trees wouldn't look right. So I closed my eyes and waited, and soon a vision came to me of myself walking in a young birch wood that I used to know; I saw how the branches grew, and felt the white glimmer of reflected light from the bark, and the tender young green of the fragile leaves, and I painted the birches with ease and joy. This use of palming may be of great value to artists, because the artist works from the image, and sometimes this image is lost. By straining and effort

he cannot regain it, but by palming he may.

I have also had interesting experiences in treating others, my first pupil being my little girl. She had a great fear of the water, so that she could not let herself go, and float face down. She has a cat of which she is very fond; so I suggested that she recall her cat washing itself when she tried to float. She did this and was able to float for twelve seconds.

Another case of interest was that of a woman who was in a nervous condition, overwrought and discouraged over her problems. I began teaching her how to improve her eyesight and at the first lesson she made such great progress that she was overcome with happiness. The magnitude of the thing she had done gave her a sense of control over herself, a new sense of power. She said, "If I can do this, why I can do anything." And it is true; she has pulled herself out of the overwrought state.

Among all the people with whom I have talked, or to whom I have tried to explain these ideas, I have met only one with a perfectly rigid mind. He was, as one would expect, a pure scientist of very high standing. He wouldn't even admit that his hand appeared to move when he swung his bead from side to side with his hand eight inches before his eyes. He said it merely made him dizzy. He knew the hand was in a fixed position, so it couldn't appear to him to move. This statement showed that he only used half his functions. He used his reason but refused to allow his senses to record how things appeared.

There is one thing Dr. Bates has said that I want to question. "We can see only what we imagine, and we cannot imagine something which we have not seen or experienced." As an example, he gives our inability to imagine a foreign alphabet. Well, if that statement is true, how do we get at a new truth? I think it is from the imagination. One can conceive of new forms in art, and I should judge that a scientist must conceive a possible truth in his imagination, and then set about testing it by experiment and observation. The marriage of the two—facts and imagination—creates new truth and widens man's consciousness. This Dr. Bates has done. But he has only called imagination good. I think it is infinite, and by penetrating deeper into its mystery we are penetrating into the source of man's growth.

STORIES FROM THE CLINIC

20: St. Vitus' Dance and Myopia

By EMILY C. LIERMAN

HYMAN, age ten, came to the clinic not as a patient, but as his mother's escort. She was having her eyes treated, but her trouble was not half as bad as that of her son. His poor eyes stared painfully behind his thick glasses, and in order to see through them at all he made the most awful grimaces I ever saw. His head moved constantly in all directions, and later on I discovered that he had St. Vitus' Dance. He was an unusually bright boy, and was never satisfied unless he saw and knew everything that was going on in the Clinic. Whenever he was in the room he would stay as close to me as possible, listening eagerly to every word I said and watching every movement I made. One day I said to him:

"Look here, young man, I don't mind having you watch me, but I don't think the patients like you to stare at them so much. If you want to know how I cure people, why don't you get cured yourself so that you won't have to wear glasses?"

"My teacher says I must wear glasses because I cannot see the blackboard without them," he replied.

I explained to his mother that I was sure I could cure not only his eye trouble, but also the nervous twitching of his head. She did not seem to understand me, and I'm sure she doubted my ability to do anything at all for him. The boy himself seemed to be equally skeptical, but was, nevertheless, much interested. He was evidently curious to know what I would do for him, and quite willing to let me entertain him.

I tested his sight with his glasses on and found that he was able to read only 10/50, all the rest of the card being a blur. I then took the glasses off and noticed that he stared less without them. In addition his personal appearance was greatly improved, for the glasses had made him look hideous. I now told him to cover his eyes with the palms of his hands so as to exclude all the light, and to remember something perfectly. He seemed to think this was a game of hide and seek, and kept continually looking through his fingers. My patience was considerably tried, but I did not let him see this. Instead I told him that I was especially fond of little boys, and wished to help him. He squared his shoulders and made an effort to keep his head still, but failed. Finally I succeeded in making him understand that if he wanted to stop the twitching of his head, he must keep his hands over his eyes until I told him to take them down. He now became as serious as I was myself, and though I watched him while I was treating other cases, I did not once see him uncover his eyes, or peep through his fingers. No doubt the fifteen minutes that he spent in this way seemed like hours to him. When I was able to return to him, I said very gently:

"Now take your hands from your eyes and look at me."

He did so, and to my delight his head was perfectly still, I now told him a story—being careful to preserve the same gentle tone of voice—about a boy who lived in the country town where I live and who stole some delicious big apples from a farmer. He ate too many of the apples, and soon began to feel that there was something wrong with his stomach. Then the farmer caught him and punished him, so he suffered both inside and out, and came to the conclusion that stealing apples was not very much fun. I took as long as I could to tell this simple tale, for my object was to keep my patient from thinking of himself, or his eyes. He seemed to find it hugely amusing. His eyes beamed with fun while he listened to me, and his head never moved once.

"Now," I said, "do some more palming for me, and then we will read the card."

When he uncovered his eyes the second time, his vision had improved to 10/30. By this time his mother's indifference had vanished. She did not know how to show her gratitude for what I had done for her boy, but promised to see that he spent a sufficient amount of time palming every day. The next Clinic day she told me that the twitching of the head had become less frequent. She was instructed to watch the boy and have him palm at once whenever she noticed the twitching. This always relieved the trouble.

Hyman was anxious to be cured before vacation began, and was quite willing to do as he was told. He came to the clinic for two months, and at the last few visits there was no twitching, while his vision had improved to 12/10.

LET YOUR EYES ALONE

By JAMES HOPPER

I PERFORM now and then an experiment which, I think, will interest the readers of BETTER EYESIGHT. It affords a striking proof of two of Dr. Bates' contentions: Number 1, that no defect of the eye is fixed, that the refraction of the eye is variable. Number 2, that the perfect refraction which means perfect sight is obtained through relaxation. Here is what I do, using first one eye, then the other:

I close the left eye, and then, taking the card with the *Seven Truths of Normal Sight* printed in diamond type, I place said card right up against the tip of my nose. (Parenthetically speaking, my nose is not flat, nor is it of great length. An average nose I'd call it.)

(Do not close the left eye. Use a eye patch and keep the eye not in use open under the patch. Closing one eye causes face/eye muscle tension, strain.)

I place the card right up against the tip of my nose, and, with my left eye closed, look at it with my right eye. My right eye is my bad one. It had only one half of normal sight when I first saw Dr. Bates.

Looking at the card, thus placed against my nose, I see at first nothing—or simply blurred lines.

Then consciously I relax my eye, I "let it go." I can do that only gradually. I let go and let go. The best way I have found to do this is to **keep my mind off the idea of reading the card, and to think of something else—a football game, a play—anything**.

I can feel my eye gradually relax. There is no mistaking the process. It is one of relaxation, of letting go. And there is degree after degree of letting go. Just when I think I have reached the limit of relaxation, I feel the eye let go another notch.

And then, suddenly—so suddenly it almost scares me—and clearly—so clearly it is almost weird, I see the diamond type and I read the Doctor's *Seven Truths!*

Each letter is not only black and sharp and distinct, but it is almost gigantic—two or three times the size it was when seen at six inches. (Microscopic Vision)

There is no doubt to me that my eye has passed from a state of not seeing the type to one of seeing the type. Hence that the refraction of my eye is variable.

And there is no doubt to me that the passing from the state of not seeing the type to the state of seeing the type is obtained through *relaxation* of the eye.

And the counter proof also exists. If, while I am seeing the type perfectly and big, I set my mind deliberately to reading it—it abruptly disappears.

Working consciously, I have done something with my eye which has made it an instrument that cannot see at that distance. Working consciously, I have tightened some muscles or other, so that the eye has now the wrong shape for seeing at that distance.

Moral: Let your eyes alone, and they do the right thing. Interfere with them, butt in with your conscious will and— presto—they do the wrong thing.



Clear Close Vision;
Place a diamond type fine print card in front of the tip of the nose, at eye level and read it with the eye that has less clear vision). Other eye is covered with a eye patch and open under the patch. Relax the eye, mind, body more and more while letting the mind drift, thinking happy thoughts, something pleasant.
Avoid thinking about reading the card.
Then, practice with the other eye, then with both eyes, then repeat.

Trying, using effort to see=blur.
Relax, no effort, forget about the eyes=clear vision

QUESTIONS AND ANSWERS (Some months do not have Ques/Ans.)

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

November, 1921

THE SENSE OF TOUCH AN AID TO VISION

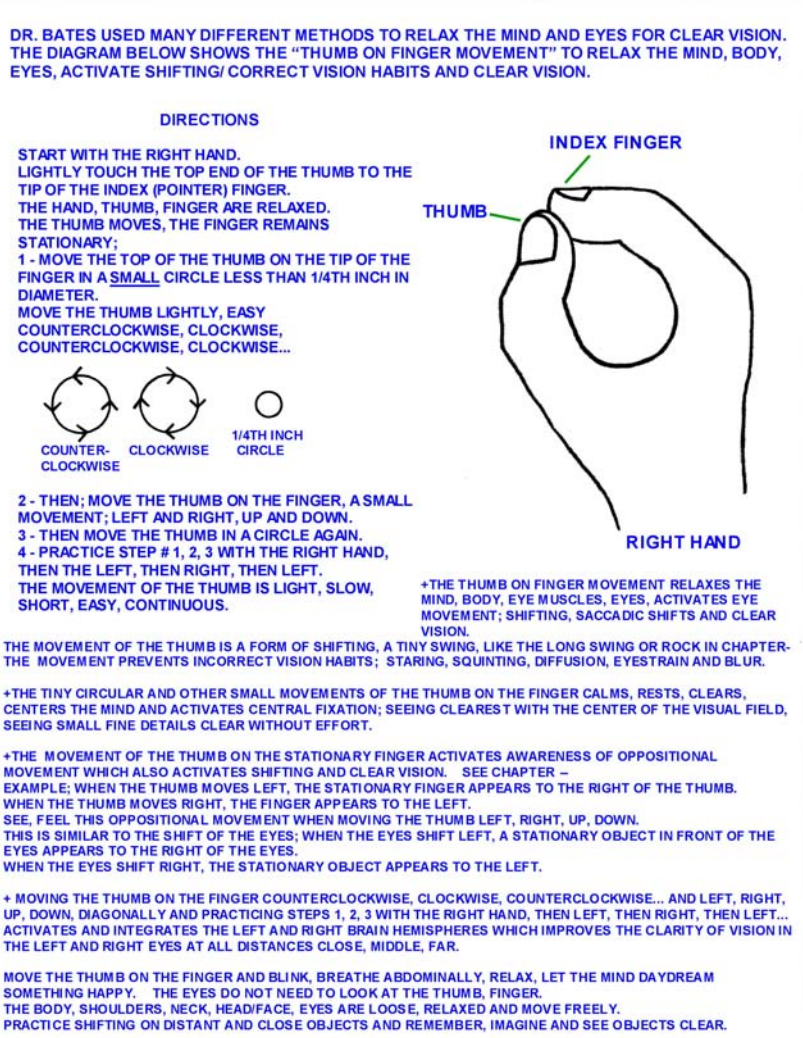
Just as Montessori has found that impressions gained through the sense of touch are very useful in teaching children to read and write, persons with defective sight have found them useful in educating their memory and imagination.

One patient whose visual memory was very imperfect found that if she traced an imaginary black letter on the ball of her thumb with her forefinger, she could follow the imaginary lines with her mind as they were being formed and retain a picture of the letter better than when she gained the impression of it through the sense of sight.

Another patient discovered that when he lost the swing he could get it again by **sliding his forefinger back and forth over the ball of his thumb.** When he moved his fingers it seemed as if his whole body were moving.

(This can also be done with thumb moving on the finger. See diagram. Counting even numbers when the thumb moves in one direction (Example–up) on the finger and odd numbers as the thumb moves in another direction (Example–down) also relaxes the mind.)

Picture - Finger thumb movement



Both these expedients have the advantage of being inconspicuous, and can, therefore, be used anywhere. The vision was improved in both cases.

THE FIRST VISIT

By W. H. Bates, M.D.

AT THE beginning of treatment, as well as later, it has been found to be a great benefit to have the patient demonstrate facts. It is better to avoid stating results expected, and instead let the patient discover the results for himself.

Rest Improves the Vision.—The first fact to be demonstrated is that rest improves the vision. The patient is told to close his eyes and rest them, forget about them, let his mind drift, remember pleasant things. After half an hour, more or less, he is told to open his eyes and read the distant test card as well as he can. If he finds that his vision has improved the next question is:

"What did you do that helped your sight?"

Obvious as the answer to this question seems to those familiar with the treatment of defective vision by relaxation some patients find extraordinary difficulty in replying to it, and one has to ask them a number of leading questions to get the proper answer, "Rest."

The amount of relief obtained from this procedure differs greatly in different cases. Some get none at all, and others very little. Others again may be cured at the first visit by this means alone. Why some people can close their eyes and rest them with so much benefit, while others fail, is not always evident; but one can often tell at the outset what the result will be. One case cured by this means rested comfortably for half an hour without any change whatever in his position. A case not benefited was very restless, moved around in his chair, got up, opened his eyes every few minutes, and was decidedly uncomfortable. For him there was no rest with his eyes closed, and his vision was not improved. Later a cure was obtained by other methods, but with much trouble.

Palming.—After having rested the eyes by closing, the patient is told to cover his eyes with the palms of his hand in such a way as to exclude all the light. Usually, not always, he is able to obtain more rest in this way than by mere closing. Those who succeed in relaxing completely see a perfect black, but this is rare, and the patient may consider himself fortunate if he is able to begin by seeing an approximate black.

Staring.—Having demonstrated that rest improves the vision the next step is to have the patient demonstrate that effort lowers it. The patient is directed to look continuously at a letter which he can see distinctly on the distant test card, and after a part of a minute the question is asked:

"Do you see better or worse?"

The answer is usually:

"I see worse, it makes my eyes pain."

He is then directed to stare at other objects instead of letters, to make an effort to see them, concentrate on them, and to note that lowering of the vision, with fatigue, discomfort, or pain, is produced. After he has demonstrated these facts he is told that persons with imperfect sight always attempt to hold their points of fixation too long, even when the lowering of vision is caused by an injury, or by a foreign body in the eye. In short, they stare, thus not only spoiling their eyesight but making themselves conspicuous and uncomfortable.

"You have your choice," I tell them. "Stare and have poor sight and other troubles. Avoid the stare and have normal vision."

Occasionally a patient thinks that staring does improve his vision. In this case I tell him to keep on staring and improve it still more. It does not take long for him to convince himself that the improvement that results from staring is only temporary, and is followed by a lowering of the vision.

Patients who have lowered their vision and produced pain and discomfort by staring are glad to relieve the strain by closing the eyes or palming. After they have alternately stared and rested for a while it would be hard for any one to convince them that anything is to be gained by effort when one wants to see, and they instinctively close their eyes in such a case instead of straining them.

Shifting and Swinging.—Having demonstrated that staring lowers the vision, a patient is easily able to demonstrate that if he wants to see an object distinctly he must shift constantly from one part of it to another; but often he does not easily realize the apparent motion produced by this shafting. In demonstrating the facts to a new patient I usually begin by having him walk around the room and note that the furniture seems to he moving in the opposite direction. Then I have him take one step forward and one back and note that the furniture seems to move backward and forward. Next I have him hold his hand six inches in front of his face, and move his head far to the right and far to the left, alternately, without looking at the hand. Almost invariably he is able to note a very pronounced movement of the hand. After this I have him hold a small card in his hand and note that it appears to move with the former. Having noticed the movement of the card in his hand, it is usually easy for him to look from one side of the test card on the wall to the other, and note that it appears to move in a direction contrary to the movement of the eye. After this the shortening of the swing until he becomes able to look from one side to the other of a letter of diamond type and imagine that it is moving is a mere question of practice.

Memory and Imagination.-The use of the memory or imagination is an important part of the cure of imperfect sight, since a perfect memory or imagination means perfect relaxation; but I do not begin by explaining this to a patient. Instead I say:

"Can you remember a small letter o?"

Some patients can do this at once; others cannot. Those who can usually think that they are remembering the letter all alike and stationary. In order to demonstrate that this is impossible they are asked to imagine a black period on one side of the o, to keep the attention fixed upon it, and to imagine that it is perfectly black and stationary. Generally the patient finds that he cannot do this. The period usually moves in spite of all his efforts to imagine that it is not doing so. If it does not, it becomes gray and finally disappears. Having demonstrated that you cannot remember the period continuously unless it is moving, it usually becomes possible for the patient to realize that his attention is shifting constantly from one part of the o to another, and to note an apparent movement in a direction opposite to the imagined movement of the eye.

One difficulty in getting patients to make this demonstration is that the effort of remembering an unchanging object, even for a few seconds, is so great that some people cannot or will not make it. It is easier to let the attention shift naturally.

" Some patients are unable to form any kind of a mental picture, and it may require much ingenuity and long practice to enable them to do it. Some become able to form mental pictures when they are able to imagine that the things they see are moving. Others are helped in remembering a black letter by imagining that it has a very white background, whiter than the card on which they saw it.

Mental pictures are formed first with the eyes closed, then with the eyes open, and as the ability to form them with the eyes open increases the vision increases.

In every way possible the fact is impressed upon the patient that he can be cured only by *rest*; that he must learn to let his eyes alone; that whatever he does to improve his sight must be wrong. For home practice three general plans are recommended:

1. Practice with the Snellen test card at ten, fifteen, or twenty feet, remembering the blackness of the letters, imagining their form and their swing, and imagining the white openings and margins to be whiter than the rest of the card.

2. Reading fine print at the distance at which it is seen best, then gradually bringing it up to six inches or less and putting it off to a distance of two feet or further.

3. Seeing things moving all day long from the time the eyes are opened in the morning until they are closed at night, and going to sleep finally with the imagination of the swing.

STORIES FROM THE CLINIC

21: More Cases of Squint

By EMILY C. LIERMAN

ONE day in the early part of September there came to our clinic a very neatly dressed woman of forty-five, with her daughter, aged eleven. One of the doctors from another section of the dispensary had told her of the wonderful cures wrought by Dr. Bates' methods, and convinced her that they would be effective in the case of her daughter, who was suffering from convergent squint of the left eye. I at once became more than usually interested in this case, not only because I did not want to disappoint the doctor who had sent it, or cause him to lose faith in our methods, but because Selma, the patient, was a dear little girl and made a strong appeal to my sympathies. I did not notice until her eyes became straight that Nature had intended her to be very pretty; but I saw her sweet smile, and her absolute faith in my ability to cure her, combined with her willingness to do as she was told, was very touching.

I tested her sight with the Snellen test card, and at ten feet she was able to read, with the right eye, only the forty line. With the left eye (the squinting one) she read only the 200 line. I showed her how to palm, and then I had a talk with the mother, who was wearing glasses, and had been wearing them, as she told me, for twenty-five years. I explained to her how hard it would be to cure her daughter if she continued to wear them.

"How can I possibly harm my little girl by wearing glasses?" she asked.

You are under a constant strain while you wear them," I answered, "and that affects your daughter's nerves."

"But I cannot sew, read, or do other things, without my glasses," she said: "so what shall I do?"

I told her to watch very closely while I was treating Selma and do just exactly what she did. She took off her glasses at once, and did not seem to doubt that she would be cured. For this I was very grateful, as mothers are not always willing to take off their glasses at their first visit, thinking, I suppose, that although I may be able to cure children, I cannot cure adults. I placed the mother where she could watch her daughter's eyes during the treatment and, as she saw them after five or ten minutes become temporarily straight, she expressed her gratitude in no uncertain terms. On leaving she invited me to her home, and every time she carne after that the invitation was repeated. She bought a test card, too, for home practice, and Selma was very faithful about using it.

From that time up to the present writing mother and daughter have come regularly three days a week. Selma now reads the twenty line with her left eye at twelve feet, and with her right eye, at the same distance, she can read the ten line. Except when she becomes excited or over-anxious, her left eye is straight most of the time. The improvement in the mother's sight seems almost equally remarkable. She reads and sews without her glasses, the lines in her face caused by strain have disappeared, and she looks so much younger that she might easily be taken for her daughter's sister. We have all become fast friends and, although I shall be glad when Selma is completely cured, I will be sorry not to see her smiling face any more at the clinic.

At the beginning of the treatment Selma's mother could not be encouraged to discuss other treatment she had had; but when, one day recently, the child read the whole of the test card with both eyes straight, she began to talk.

"You don't know how grateful I am to you," she said. "It is not so long ago that I was told at another eye clinic that Selma would have to be operated on for squint. They told me that it would get worse if they didn't operate. I told them to give me time to think it over. I was a whole year thinking it over; but I could not make up my mind to the operation, as I had doubts about its curing her."

Doris, aged four, has convergent squint of the right eye, and came to us also during September. It was noticed when she was two years old that the right eye was turning in and, although glasses were immediately secured for her, they did no good. When I first saw her the vision of the squinting eye was only one-quarter normal (10/40), while that of the other eye was one-half normal (10/20). Now the sight of both eyes is slightly above normal (12/10).

Doris does not know the alphabet; so in treating her I have to use a card covered with letter E's arranged in different ways, and she tells me which way they are facing, left, right, up or down. I found it rather hard at first to get her to palm for any length of time; but one day the mother told me of a dear baby brother at home, and I told Doris to think of her brother when she closed and covered her eyes. This worked like a charm. When she thinks it time to open her eyes, usually about a minute, she calls out, "Open them?" If I answer, "No," she keeps them closed until I say, "Ready." During the first few treatments the right eye would not keep straight for more than half a minute, but now it stays straight all the time she is reading the chart, down to the ten line. After the treatment it turns in again, but not so badly as before, and if she is reminded to make it look straight she can do so very readily.

The child's mother has been a great help in the treatment, both at home and at the clinic, and I think she has got a great deal of good out of it for herself. She is a most unselfish parent, absolutely devoted to her children; but this devotion causes her to get excited and nervous, so that when she arrives at the clinic her eyes are staring almost out of her head. In a few moments she becomes relaxed, and her eyes begin to look natural.

Doris got on so nicely that her cousin Arthur, who also has a convergent squint, came for treatment. When I tested his sight I found that the vision of the squinting eye, the left one, was only 10/50, while that of the right eye was 10/20. He was a very bright boy, very obedient and lovable, and when he looked at the chart it was sad to see the left eye turn in until it was almost hidden. He made rapid progress, however, and his mother, who always comes with him, is very happy over the good results obtained in little over a month. At his first visit he was told, after reading a line of letters on the chart, to remember the last letter while he closed and covered his eyes. When he looked at the card again he was able to read another line. His vision now is almost normal, 12/15, and when he is reading the card his eyes are almost straight. His mother tells me that he gets on much better at school than he used to. He is eager to get well, and is very happy when clinic day comes so that he may have another treatment.

I am wondering which of the trio will be cured first, and when they are I will give most of the credit to the mothers, for it is their help and the treatment given at home that has counted most.

QUESTION AND ANSWERS

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Q - (1) How long should one palm at a time, and how far should one be from the test card?
(2) I do not understand shifting and swinging well enough to practice this method. Will you please explain it to me just as you would to a new patient?
(3) I am not getting the results you say one should from the treatment. For instance, I tried palming last evening, and at the beginning I could see clearly only the first three lines on the test card. After two hours work I could see and read clearly all but the last line of letters at the bottom, but when I looked at the card this morning it was just the same as when I started palming. Now, how can I get the vision to stay? Must one continue to palm every day, and if so will the improvement in time become permanent? R. H.
A - (1) The length of time you should palm depends entirely upon the results you obtain from the practice. Some patients can palm for hours with benefit; others cannot keep it up for more than a few minutes. Your distance from the test card depends somewhat on the state of your vision and somewhat on your own convenience. At whatever distance you may be—7, 10, 15, or 20 feet—practice with a line of letters which you cannot see distinctly.
(2) See *The First Visit*, this issue.
(3) We think you are doing wonderfully well and congratulate you. If you continue the palming, the improvement will in time become permanent. If you will practice shifting and swinging when not practicing with the card it will help you (See *The Swinging Cure*, BETTER EYESIGHT, October, 1919).

Q - (1) I have discarded my glasses for street use, and am slowly getting used to seeing without them. However, when I go to the theatre or a movie I cannot discern the faces, expression, etc., of the actors without the aid of my glasses. When I look without them the whole proceeding is like one hazy mass before my eyes. What can I do about this?
(2) Kindly explain your terms "cupping and palming." Subscriber.
A - (1) All you can do is to go on improving your sight.
(2) By cupping is meant cupping the hand over the eye in such a way so as to exclude the light while avoiding pressure on the eyeball. Palming cannot be explained briefly. See BETTER EYESIGHT, January, 1920.

Q - (1) What is the best method to use when the patient has a dilated pupil?
(2) What special refractive condition causes white letters and dots to appear over the test card along with blurring of the letters and also without it? (3) Is the temporary use of the reading glass or lorgnette as detrimental to the eyes as regular glasses? C. C. J.

A - (1) Any method that produces relaxation will help. Palming is particularly effective.
(2) They may occur with any error of refraction.
(3) Yes.

Q - (1) In swinging the period should one follow it in its travel from side to side, seeing it clearly all the time.
(2) BETTER EYESIGHT advises sleeping on the back. Will you kindly give me explicit directions as to how to do this. T. J. O. J.
A - (1) Whether you see a period all the time you are swinging it depends upon the length of the swing. If the swing is very short, a mere pulsation, you will; if it is long, or too rapid, it will be blurred or lost altogether at times.
(2) In lying on your back the arms should be parallel with the body and the lower limbs completely extended. The height of the pillow is immaterial. The head may or may not be turned to one side. It is a good thing to go to sleep swinging or palming.

Q - (1) When I palm does it affect my eyes if I do mental work. I could palm more if it didn't matter what you were thinking about, because I could do part of my studying that way. In short, does mental work necessarily mean mental strain?
(2) Isn't there any way to cure my eyes that doesn't take so much time as palming? M. W.
A - (1) Mental work does not necessarily mean mental strain. If you can see black with your eyes closed and covered while thinking of your lessons, you are perfectly safe in doing so.
(2) The best thing for a busy person is to form a habit of constant shifting and to imagine that everything seen is moving. It is the habit of staring that spoils your sight. If you can correct this by constant shifting and the realization of the movement produced by the shift, you can get well without so much palming and you will also be able to do your school work better.

Q - I cannot yet read or write easily without my glasses. Can I harm my eyes by trying to do so? P. A. C.
A - You cannot harm your eyes by reading and writing without glasses if you stop often to rest them by closing or palming. Even if the use of the eyes without glasses produces pain and fatigue the injury is less than from the wearing of the glasses.

Q - How can I relieve fatigue and nervousness while listening to the sermon in church?
A - Try swinging your thumbs over or round each other, or back and forth, and then reversing. One patient gets relief from swinging her big toe inside her shoe.

Q - Can a tendency to sties be relieved by relaxation?
A. Yes.

Q - Is it injurious to expose a baby's eyes to the strong sunlight while sleeping? F. E.
A - The strong sunlight is very beneficiary to the eyes of babies, asleep or awake. It is injurious to shade their eyes from the sun.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

December, 1921

THINK RIGHT

"As a man thinketh in his heart so is he," is a saying which is invariably true when the sight is concerned. When a person remembers or imagines an object of sight perfectly the sight is perfect; when he remembers it imperfectly the sight is imperfect. The idea that to do anything well requires effort, ruins the sight of many children and adults; for every thought of effort in the mind produces an error of refraction in the eye. The idea that large objects are easier to see than small ones results in the failure to see small objects. The fear that light will hurt the eyes actually produces sensitiveness to light. To demonstrate the truth of these statements is a great benefit.

Remember a letter or other object perfectly, and note that the sight is improved and pain and fatigue relieved; remember the object imperfectly, and note that the vision is lowered, while pain and fatigue may be produced or increased.

Rest the eyes by closing or palming, and note that the vision is improved, and pain and discomfort relieved; stare at a letter, concentrate upon it, make an effort to see it, and note that it disappears, and that a feeling of discomfort or pain is produced.

Note that a small part of a large object is seen better than the rest of it.

Accustom the eyes to strong light; learn to look at the sun; note that the vision is not lowered but improved, and that the light causes less and less discomfort.

Remember your successes (things seen perfectly); forget your failures (things seen imperfectly); patients who do this are cured quickly.

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THE CORRECTION OF IMPERFECT SIGHT WITHOUT GLASSES

By Dr. Etna Marion Jones

THE correction of imperfect sight by Central Fixation, as taught by Dr. Bates, first came under my observation one year ago this September while assisting for a month in the practice of my friends, Drs. H. S. and Jennie K. Beckler, of Staunton, Virginia. I was astonished at the results they were obtaining in eye cases and at once began to study the system under their supervision.

About the same time I received a letter from a sister of mine, a teacher in the Detroit Public Schools, who had worn glasses for twenty years for myopia and astigmatism. She stated in her letter that she had discarded her glasses and was taking the Central Fixation treatment from an osteopathic physician in Detroit who had been a student of Dr. Bates. The treatment was continued during the winter, my sister keeping right on with her school work and doing extra reading at night without suffering with headaches as she had previously done. On seeing her this summer I was agreeably surprised at the change in her appearance. The strained look about the eyes and face had given place to one of relaxation, the eyes were straight, and the nervous system had lost its tension and gained a poise formerly unknown. The retinoscope showed no errors of refraction in either eye.

Encouraged by this and other cases, I decided to prepare myself to specialize in this work. After studying the anatomy, pathology and physiology of the eye all last winter, and treating several patients as best I could with my limited knowledge of the system, I decided that what I now needed most was a course of personal instruction from Dr. Bates. I went to New York for this purpose a few months ago and spent a wonderful fortnight there. The course included work in Dr. Bates' clinic held three times a week in the Harlem Hospital. The hospital being in one of the colored sections of the city, many of the patients are negroes, and they are very appreciative, too; but both white and colored come in droves to be cured of all kinds of eye afflictions. Here I had a good opportunity to study eyes by means of the retinoscope and ophthalmoscope, and I observed the changes in the refraction and pathology as the treatment progressed. I can tell of only a few of the remarkable cases which I saw, for it would take days to tell about them all.

I was especially interested in a case of squint in a girl of fourteen, who had been attending the clinic about three months before I saw her. She had worn glasses since she was four years of age to correct the trouble, but had been growing gradually worse. When her sight was first tested she read 12/40 with her left or better eye. When asked to read the card with her squinting eye, she turned her head half way around to the left in trying to see it. Mrs. Lierman gave her one simple relaxing exercise to do and left her for a few minutes. At the next test she read 12/40 with the squinting eye without turning her head. Of course, that was temporary relief, as on straining again the squint would recur; but it showed what could be done by continuous treatment, and when I left New York the right eye was as straight as the left and did not change when the patient was excited or annoyed, or on reading or studying. She told me she could read or study for hours at a time without headaches or discomfort, while before coming to the clinic she could look at a book for only a few minutes at a time.

A negress, seventy-two years old, was responding wonderfully to treatment for cataract in the advanced stage. She had been in the clinic for two months. At first she could not distinguish the large C at the top of the test card. Before I left she could read 10/40 with both eyes.

A girl of twelve was suffering from retinitis pigmentosa, a condition generally pronounced incurable, in which spots of black pigment are deposited in the retina, parts of the retina destroyed and the nerve of sight diseased. On examination by the test card, the patient could read only the seventy line at five feet. Nystagmus was one of her worst symptoms, the eyes vibrating continually from side to side. She was extremely nervous, and very sensitive in regard to her condition, the slightest annoyance making her worse. At the first treatment, the nystagmus temporarily stopped, and she read the fifty line instead of the seventy at five feet. The last day I saw her at the clinic she could read the twenty line through at ten feet, and the nystagmus had entirely disappeared.

After seeing these things it would seem impossible for anyone to doubt that Dr. Bates' discoveries are bound, before long, to revolutionize the practice of ophthalmology. They offer hope to millions for whom formerly there was no hope, and I am glad to have a share in the wonderful work of making them available to the world of eye sufferers.

470 First Avenue, North, St. Petersburg, Fla.

MENTAL CONTROL IN RELATION TO VISION

By W. H. BATES, M.D.

THE eye with perfect sight is always at rest. When it begins to strain the sight becomes imperfect. The eye with imperfect sight is always straining, and when it ceases to do so the sight becomes normal. These conditions of rest and unrest are reflections of the mind. In other words, they indicate the presence or absence of mental control.

When the mind is not under control the memory or imagination is impaired. Therefore one cannot at the moment of seeing something imperfectly form a perfect mental picture. A person with perfect sight can remember a color, a yellow flower, a red piece of cloth, a letter of small print, a black period, a white cloud in the sky, just as well with the eyes open and looking at the Snellen test card, or reading a printed page, as with his eyes closed. A person with imperfect sight either cannot do this at all, or can do it only under certain favorable conditions, as with his eyes closed, or when looking at objects at certain distances. A near-sighted person may retain his mental control and consequent ability to form mental pictures when reading fine print at six inches, but may lose both at five inches, or when looking at certain letters on the distant Snellen test card. Some patients have a good imagination and normal sight in the daytime, but lose both by artificial light. Others have normal vision and a good imagination only when the light is dim. One patient had imperfect sight (20/70) corrected by concave 6.00 D. S. in ordinary daylight, but when the light was dim her vision became normal (20/20) without glasses, and her mental pictures were just as good when her eyes were open as when they were closed. She became able, by means of sun-gazing, to remember, with her eyes open, a black period in the bright outdoor sunshine, when her vision, tested with the Snellen test card, became normal in ordinary daylight.

Many cases of imperfect sight have been cured simply by having the patient demonstrate these facts. One patient had vision of 20/200 without glasses. She was near-sighted and could read fine print at a near point without trouble. She was asked to look at a small letter o. The question was asked:

"Can you see the letter easily and continuously?"

"Yes," she answered.

She could also, with eyes closed, remember it without difficulty and imagine the white center much whiter than the white card on which it was printed. With some encouragement she became able to realize that she did not imagine the letter all alike; that she saw one part best, and that she did not imagine the same part best very long at a time; that her attention was constantly shifting; and that the small letter was moving slowly, easily, rhythmically, continuously, a very short distance from side to side, the movement being so inconspicuous that she would not have noted it if her attention had not been called to the fact. When she tried to keep her attention on one small part of the letter continuously for a few seconds, or part of a minute, she noted that this could not be done without effort, her mind tired, her eyes pained, although they were closed, and she lost the memory of the letter.

With her eyes open she then demonstrated that her sight was the same as her memory with her eyes closed. When she tried to keep her attention fixed on one part of the letter the movement from side to side stopped, she experienced a sense of effort, her head began to ache, the letter blurred, all parts of it looked alike, and soon it disappeared. She was reminded that when she saw the letter distinctly, or when she imagined it perfectly, she did it easily, without effort, without strain, without any trouble or hard work whatever; but that when she saw, or imagined it imperfectly, she made a great effort.

The letters on the distant Snellen test card appeared gray and blurred to her, and all parts of each letter looked alike. Even the large letter that she could distinguish was blurred, with a gray outline, and was not as black as the small letters of the fine print which she read so easily. Her attention was called to the great difference between the size of the letters on the Snellen test card and those of the fine print, and I suggested that if she saw the larger letters on the test card gray, while the smaller letters of the fine print looked black to her, it must be because she was imagining them to be gray. I also said that if she could imagine the white openings of the small letters to be whiter than they really were, she ought to be able to do the same thing with the larger white spaces of the larger letters. Thus she was led to realize that a large part of what she saw on both the large and the small card was imaginary, and that she ought to be able to use her imagination to improve her sight when looking at the large card, as she did when looking at the small one, instead of to spoil it, as she was then doing. Having demonstrated these facts she soon became able to retain her mental control when looking at distant objects, and was permanently cured.

One of the worst cases of pain and fatigue which I ever saw occurred in a young man who lived several thousand miles from New York, and came here as a last resort in the hope of being relieved of the misery he had endured as long as he could remember. The history of his treatment by numerous physicians, mostly ophthalmologists, would make an interesting story, but it is too long to be recounted here. On testing his sight I was surprised to find it good. He read the twenty line of the Snellen test card at twenty feet, and also read the finest print at various distances. At this time he had no pain. When the pain came on, however, his vision became imperfect, and as the pain was almost continuous, he said he suffered from imperfect sight most of the time. I asked him why he did not maintain his good sight continuously when he obtained so much relief from it. He replied that he was unable to do so.

He had lost his mental control to such an extent that even with his eyes closed he was unable to visualize his own signature, and when he attempted to do so and failed, the pain in his eyes and head became much worse. I had him look at a large letter on the Snellen test card and observe its white center, which he was able to see whiter than the rest of the card. I told him that the white center of the letter was not whiter than the rest of the card and that he only imagined it so. Then I asked him if he could imagine the white center as white as snow with the sun shining on it—a dazzling white. He answered:

"Yes, I can imagine it as white as the snow on the top of the mountains near my home."

I told him that he had formed a mental picture of the snow-capped mountain, by the aid of his memory or imagination, and that having done this with his eyes open, he ought to be able to visualize the mountain with his eyes closed. Much to my gratification he was able to do this for part of a minute, and to imagine not only the white snow on top of the mountain but also other parts of it as well. Then he demonstrated that he could imagine one part best of the snow-cap, but that when he tried to imagine it all at once the mental picture disappeared and his pain increased. To see one part at a time of the snow-cap was easy and his pain was relieved. To see all parts at the same time was impossible, and trying to do the impossible was a strain which produced pain. In other words to lose his mental picture of the mountain required an effort, a very great effort which tore the nerves of his eyes and head all to pieces.

With this demonstration as a beginning, he became able to form mental pictures of other objects. The most difficult thing of all was for him to imagine printed or written letters, but this was finally accomplished, and his mental control, and consequently his mental pictures, became normal. With his eyes closed he is now able to remember or imagine large or small letters as well as he can see them with his eyes open. His pain is entirely relieved and—what pleased him most—his vision has improved to 20/10, double the accepted standard of normality.

STORIES FROM THE CLINIC

22: Christmas at the Clinic

By Emily C. Lierman



THROUGHOUT the civilized world Christmas is recognized as the children's day. To hosts of boys and girls it seems the most wonderful day in the year; but there are other little folks—all too many of them—who do not know its meaning, whom Santa Claus seems to have quite forgotten.

This fact was brought home to me very forcibly during my first Christmas at the clinic, seven years ago. A boy of seven came with his sister, a little girl of five, for treatment. Both the children were thinly clad and far from clean, and seemed to feel perfectly at home near a warm radiator. There was nothing wrong with the girl's eyes, but the boy had a severe inflammation of the eyelids, along with a squint of the right eye. I was not surprised to find later that this inflammation was caused by uncleanliness. As I was about to treat him I asked him what he expected Santa Claus to give him. The time was two weeks before Christmas. He looked up and said:

"Oh, he aint never came to our house! I only sees him in the store windows."

"But you have a Christmas tree on Christmas eve, don't you?" I asked.

"Nope," said he, "we never had none."

I began to think I wanted to use my influence with Santa Claus on behalf of this neglected waif, but my present business was to treat him. No, I did not begin with palming this time. I washed his eyes and face with water, and judging by the color of the towel when the operation was over I should say that he had not been washed for six months or so. I now tested his sight, and with both eyes he read the ten line at fifteen feet. Then I covered his good eye, and with the squinting eye, the right, he read the seventy line (15/70). I now showed him how to palm, and while his eyes were covered I told him the story of the Babe of Bethlehem. This worked like a charm, and in less than ten minutes his right eye improved to 15/30. The little fellow promised to cover his eyes to rest them many times each day; and I promised that Santa Claus would surely have a present for him at Christmas.

The progress he made was astonishing. I learned later that his father was in jail for theft, and that he had to mother his little sister and baby brother while his sickly mother went out to work; yet he found time to practice, and before Christmas he had normal vision in both eyes, though the right eye turned in at times the least little bit. As for the inflammation, it had completely disappeared under the influence of the sun treatment.

The day before Christmas I bought a Christmas tree and filled a big basket with good things to eat and a little gift for each child in the family of my little patient, and in the evening I took them to his home. The poverty I found there wrung my heart, but I had the gratification of knowing that the children at least would have a happy Christmas.

The sight of the Christmas tree filled them with rapture too great for speech, and the gratitude of the mother was pathetic.

Shortly afterward the boy's visits to the clinic ceased, and going to his home I found the scanty belongings of the family upon the sidewalk, all covered with freshly fallen snow. Next day I went again, and was told by the neighbors that the mother was in a hospital and that the children had been placed by a charitable society in an institution.

I never saw nor heard of my patient again, but he inspired me with the idea of trying to make my family at the clinic happy at Christmas time, and incidentally I found that Santa Claus was an invaluable assistant, taking the place of baseball at other seasons. Mothers often tell me that Jimmie or Johnnie will not behave long enough for me to treat him. Well, I listen, of course, and then I begin to talk baseball or Santa Claus, according to the season of the year, and I have known the most restless of small boys to sit on a stool, or stand in a corner, for ten minutes without moving while I told of the night before Christmas, or related some incident of the baseball field. It is astonishing the interest a small boy takes in baseball. Nine times out of ten when I ask a boy to imagine something perfectly he will say:

"I can imagine a baseball very well."

I think if Babe Ruth knew how these infants admire him, he would provide seats for about a thousand of them at some of his games just for the sake of having a group of pre-eminently enthusiastic rooters on the bleachers. I think, too, that he wouldn't mind playing Santa Claus and providing baseballs for some of my patients. I am sure nothing would make them happier, even though baseballs are of very little use in a city that does not provide enough playgrounds for its children, and where the police will not let you play baseball in the streets.

However, this is a digression. Santa Claus, as I said, is a fair rival of baseball, and appeals to girls and boys alike. I begin in September to talk about the visit he makes to the clinic every year, and the result is magical.

Joseph, nine years old, was quite unmanageable at first, and could not be enticed to palm, nor even to stand still long enough for me to test him. I finally got tired of coaxing him, and told him to wait until others had been treated. His mother, a very nervous woman, wanted to thrash him, but the little fellow didn't seem to mind that a bit. He had been sent by the school nurse for glasses, and was so sensitive to light that he could only partly open his eyes. When I was able to get back to him I said:

"If you will read this card for me and do as I tell you, I will have you come here the day before Christmas when Santa Claus will give you something nice."

It worked splendidly. He read the card with both eyes together and each eye separately, getting most of the letters on the forty line at twelve feet. He palmed when I showed him how, and before he left his sight had improved to 12/20. After he had palmed for ten minutes or so his mother remarked on how wide open his eyes were. Joseph came quite regularly after that, and was so grateful for the gift Santa Claus brought him at Christmas that, even though he was cured in a few weeks, he continued to come just to say "Hello" to the Doctor and myself.

One day, shortly before Christmas, a little girl came for treatment. Her age I cannot exactly remember, but should imagine it was nine or ten years. Her wistful eyes looked up into mine, and I guessed that she was very poor and lonely. She told me that her

READ
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By W. H. BATES, M.D.
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mother and father were both dead and that a kind neighbor who already had nine children was mothering her too. I knew just what I would like to have had Santa Claus give her, and tried to figure out just how much I could stretch my Christmas fund so that I could buy clothes and shoes for this little girl. It could not be done; but I doubt if these useful things would have made her as happy as the dolly and the necklace which I ultimately gave her, and which cost only a trifle. Like the children in the first story she was so overcome with joy that she could scarcely talk.

There was nothing seriously wrong with her eyes, but she was under a nervous strain which caused her sight to blur at times. I soon corrected this, and she was very happy when told that she didn't need glasses.

I must add that the adult patients are not forgotten at Christmas time. Each one gets a box of candy and an orange, and they all leave the clinic with a smile that won't come off; all of which, I am sure, is good for their eyes. My family seems to grow each year, but somehow I always find the money for the annual distribution of Christmas joy. A good many of the patients buy Snellen test cards to practice with at home, and all this money goes into the Christmas fund; then checks come from various sources—sometimes at the last moment. To all who have so generously helped me in this way I want to say:

"I thank you from the bottom of my heart, and wish you all a merry Christmas and a happy New Year."

QUESTION AND ANSWERS

Our readers are invited to send in questions regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

January, 1922

STOP STARING

It can be demonstrated by tests with the retinoscope that all persons with imperfect sight stare, strain, or try to see. To demonstrate this fact:

+ Look intently at one part of a large or small letter at the distance or near-point. In a few seconds, usually, fatigue and discomfort will be produced, and the letter will blur or disappear. If the effort is continued long enough, pain may be produced.

To break the habit of staring:

(1) Shift consciously from one part to another of all objects regarded, and imagine that these objects move in a direction contrary to the movement of the eye. Do this with letters on the test card, with letters of fine print, if they can be seen, and with other objects.

(2) Close the eyes frequently for a moment or longer. When the strain is considerable, keep the eyes closed for several minutes and open them for a fraction of a second—flashing. When the stare is sufficient to keep the vision down to 2/200 or less, palm for a longer or shorter time; then look at the card for a moment. Later mere closing of the eyes may afford sufficient rest.

(3) Imagine that the white openings and margins of letters are whiter than the rest of the background. Do this with eyes closed and open alternately. It is an interesting fact that this practice prevents staring and improves the vision rapidly.

BE COMFORTABLE

By W. H. BATES, M. D.

IT can be stated without fear of successful contradiction that persons with perfect sight are always comfortable, not only as to their eyes, but as to the rest of the body. As soon as they cease to be so, it can be demonstrated, by examination with the retinoscope, that their sight has ceased to be perfect. They become nearsighted, farsighted, or astigmatic. The art of learning to use the eyes properly, is, in short, the art of learning to be comfortable. Even the memory of comfort improves the sight, while the memory of discomfort lowers it. Persons with imperfect sight often say and think that they are perfectly comfortable; but invariably such persons experience a feeling of relief when they close their eyes, demonstrating that they were not perfectly comfortable before, but had merely formed a habit of ignoring that discomfort. Persons with perfect sight, on the other hand, can immediately produce discomfort by producing imperfect sight, or even by remembering or imagining it, and persons with imperfect sight can produce a degree of discomfort that cannot be ignored by making their sight worse.

Imperfect sight cannot, in other words, be produced without effort, and this effort tears the nerves of the whole body to pieces. The same is true of an imperfect memory and imagination. To demonstrate these facts is often the best way of improving the sight.

While persons with imperfect sight may feel no discomfort when looking at letters on the test card which they do not ordinarily distinguish, they cannot blur their vision for a letter they do distinguish without great effort and discomfort. In fact, the effort and discomfort are so great that many patients cannot be induced to make the experiment. When they can be prevailed upon to do so, however, they realize that they must be unconsciously straining whenever they look at anything with imperfect sight. It is often hard to convince patients of the existence of this unconscious strain, and nothing helps more in their treatment than to have them demonstrate the facts.

What is true of the vision is true of the memory and imagination. When a letter is remembered perfectly, with the outlines clear, and the opening as white as snow or starch; when the attention shifts easily from one part of the letter to another and it appears to move in a direction opposite to that in which the attention shifts; it is remembered easily. There is no sense of effort, or strain, and the individual is perfectly comfortable. When, on the other hand, a letter is remembered imperfectly, with the outline obscured by a gray cloud which is all the time changing, the mind tires so quickly that the memory of the letter is lost from time to time and has to be brought back by an effort. Discomfort is soon produced, and if the effort is continued long enough, severe pain may result. At the same time the retinoscope will show that an error of refraction has been produced, or if this condition previously existed, that its degree has increased.

It should be added, however, that if the strain is to remember a near object, myopia may be decreased, because a strain to see a near object always decreases myopia and the memory of near objects has the same effect. Similarly a strain to remember distant objects may decrease hypermetropia.

Staring is uncomfortable, and lowers the vision. Shifting and the realization of the apparent movement resulting from it are comfortable, and improve the vision. Let anyone try to stop the apparent movement of telegraph poles and other objects past a moving train, and discomfort, pain and carsickness result. In the same way any effort to stop the slighter movement of stationary objects produced by the normal shifting of the eyes, results in discomfort and pain, even though the individual may not previously have been conscious of the movement.

Some people are able to close their eyes and be comfortable. Such persons are easy to cure. In one case a man with presbyopia was completely relieved by keeping his eyes closed for half an hour; and the cure was permanent. Later his wife was cured by the same means. Other people cannot rest with their eyes shut, and are very difficult to cure. It is the same way with palming. Some persons, when they close and cover their eyes so as to exclude all the light, at once relax and are comfortable, and such persons are easily cured. Others strain more than ever, and are very difficult to cure.

Perfect sight, perfect memory and perfect imagination cannot, in short, coexist with the consciousness of any abnormal symptom, and all such symptoms are relieved when the sight becomes perfect, or when one is able to remember or imagine something seen perfectly.*1

MY EXPERIENCE WITH CENTRAL FIXATION

By Dr. Doris J. Bowlby

THE correction of imperfect sight without the use of glasses, as taught by Dr. Bates, first came under my observation on January 1 of this year when Dr, Etha Marion Jones, of St. Petersburg, Fla., called my attention to the method. It appealed to me as being both simple and rational, and I began at once to study and later to practice it. Since that time I have taken glasses off about fifty patients, varying in age from ten to eighty years. Among them have been cases of squint, glaucoma, iritis, retinitis, double progressive myopia and muscae volitantes (floating specks). Many had worn glasses for years. Yet I had great success with all of them. The following are specimens of other equally interesting cases that might be cited:

Frank, aged ten, came to my office on September 1, 1921, for examination. He had been wearing glasses since he was four years old for what was supposed to be congenital myopia, and was then wearing the following:

Right eye, concave. 15.75 D. S., combined with concave 4.00 D. C., axis 15;
left eye, concave 15.75 D. S., combined with concave 4.00 D. C., axis 165.

With his left eye he could see only the 200 letter at one foot (1/200), and with his right he had only light perception. His parents hesitated about putting him in my care, as it seemed incredible that he could ever be cured, but were finally persuaded to snatch at what must have appeared to them a forlorn hope. The boy himself was unwilling to discard his glasses at first; but after the second treatment, when the vision of the left eye improved to 3/30 and that of the right to 3/40, he hesitatingly consented to go home without their aid. After his third treatment he felt safe in going anywhere without them. As he lives twenty-five miles from my office, I could see him only twice a week, but after every treatment the improvement was so marked that now, after two months, his right vision is as good as his left, both being 11/30 for the Snellen test card, while he reads diamond type at six inches and the larger type of his school books at eight incites. I feel sure that he will soon be reading 20/20. He looks and acts like a different boy, and is, naturally, a very happy one. The case has attracted much attention in the village where he lives.

On September 9, a young girl of eighteen came to me because of the intense pain which she was suffering in her eyes and head. She had not been able to go to school, or use her eyes in any way, for over a year, and during this time had been to three specialists. Her lenses had been changed a number of times, she had dark glasses to wear whenever she went into the light, and for eight months she had spent most of her time in dark rooms. Her sight had been perfect, so far as she knew, until she had had measles four years previously. During this illness she had read and studied, and afterward her eyes were red and weak. Two years ago she noticed that she could not see writing on the blackboard, and in a few days an eruption appeared on the eyelids and side of the face. Later she had an infected sinus, and also infected tonsils, tonsillectomy and an operation upon the nose having been performed eighteen months previously. No doubt the foci of infection which had existed at least a year had something to do with her trouble. When she came to me she was suffering from conjunctival congestion, with exudation of purulent material, and there was some hardening of the eyeballs. Her left vision was 7/30 and her right vision 7/50, and she was wearing:

Right eye, convex 1.00 D. S., combined with convex 1.00 D. C., axis 100;
left eye, convex 1.00 D. S., combined with convex 1.25 D. C., axis 80.

The patient came for treatment every day and has been very faithful in her palming and other exercises. After the third treatment all pain left her and she left her glasses with me. By October 1 she was able to return to school. She now reads the lowest line of the test card at twenty feet (20/10), and reads diamond type at ten inches. The retinoscope shows no error of refraction in either eye, and the strained look about her eyes and in her face has given way to one of relaxation.

135 Jefferson Street, Brookville, Pa.

STORIES FROM THE CLINIC

23: Congenital Blindness Relieved

By EMILY C. LIERMAN

It is a pleasure to be able to publish the following report of the relief of congenital blindness involving not only cataract but disease of the retina. According to the accepted teachings of ophthalmology there would have been no relief for this child, and he would have been condemned to a life of blindness, a burden to himself, his family and the state.

ONE day about a year ago there came to our clinic a little boy of three bearing the picturesque name of Jocky. A man and woman on the last lap of life's journey accompanied him, and I learned later they were his grandparents, his father and mother having died of influenza when he was a baby. As they held the child's hands and waited very patiently for Dr. Bates to speak to them, they both looked very sad indeed.

After the Doctor had examined the boy's eyes, he called to me and asked me to watch very carefully to see if the little fellow would follow his hand as he passed it from side to side very close to the eyes. Poor Jocky paid no attention whatever to the proceedings, for he did not see the hand at all. He could not see anything. He was blind, and had been so from birth. Breathlessly the grandmother exclaimed:

"Isn't there no hope at all, Doctor, please? Oh, say there is!"

Poor woman! There seemed very little room for hope. The child's pupils were filled with a white mass plainly visible to the naked eye, and Dr. Bates said that there must have occurred before birth an inflammation of the iris and the interior coats of the eyeball. This had not only caused the formation of the cataracts, but had destroyed the sensitiveness of the retina, so that the removal of the cataracts would have done no good. The Doctor did not promise anything, but carefully explained to the dear old people how necessary it was for Jocky to rest his eyes, and I then showed the grandmother how he could do this.

It was not easy for Jocky to rest. Every nerve in his body seemed to be straining. But with infinite patience his grandmother taught him to palm and encouraged him to make a game of it.

"Where is Jocky now?" she would ask.

Then he would cover his closed eyes with his little chubby hands, shut out all the light, and say: "Jocky gone away."

Jocky enjoyed playing this game, and the two would keep it up for hours. Even by himself, when he became tired of his other games he would cover his closed eyes with the palms of his hands and go somewhere else in his imagination. When he took his hands down he could always see better, and this naturally encouraged him to continue the game. He also enjoyed joining hands with his grandmother, or grandfather, and swinging, and the practice helped his sight very much. He did not know his letters at first, but the grandmother soon taught him, with the help of the test card.

After a few months of this treatment he had made the most astonishing progress. The area occupied by the cataracts grew smaller and smaller, until one pupil was half clear and the other partially so. Jocky began to go out by himself and to play with other children. At the clinic, after he had palmed awhile, his grandmother would ask him to go and find the good nurse who had been so kind to him when he first came, and he would go straight to her. Then she would ask him to find Dr. Bates, and he would put his arms about the Doctor's knees and hug him affectionately. He would also go to a little girl patient, suffering from crossed eyes, and the two had great fun swinging together.

Then one day the grandparents were told that Jocky could not come to the clinic anymore, because he did not live in the district of the Harlem Hospital. We did not see or hear from him after that, and I can only hope that the grandmother kept on with the treatment and continued to get result, from it.

No patient who ever came to the clinic was more missed than Jocky when his visits ceased. As he lived quite a long way off, he did not come three days a week, like the other kiddies, but when he did come he was like a ray of sunshine. His cunning ways endeared him to everybody, while his wonderful progress inspired confidence in the treatment and encouraged young and old to practice more industriously. He understood what we were trying to do for him, and tried to help us all he could. Whenever he saw Dr. Bates coming towards him he would put his hands over his closed eyes, and say over and over again:

"Jocky gone away, Doctor. See! Jocky gone away."

AFTER THIRTY YEARS

By William Murphy

This very interesting article furnishes a striking illustration of the fundamental principle of the cure of imperfect sight by treatment without glasses. All the methods used for this purpose are simply different ways of obtaining rest, and although most persons cannot obtain sufficient rest to effect a cure merely by closing their eyes, there is a minority of patients who require nothing more. The writer is mistaken in thinking that his imperfect sight was caused by excessive reading in youth. He could not have done all this reading unless he had done it without strain. And even reading under a strain would not have made him myopic. It is more likely that his trouble started with straining to see the blackboard or other distant objects in school, for it is straining to see distant objects that causes myopia.

I WAS born in Ireland forty years ago, and my eyes began to fail when I was about nine or ten years old. I never knew why, but since reading *Better Eyesight* and *The Cure of Imperfect Sight by Treatment Without Glasses* I think I have found the reason.

I was very far from being a sissy when I was a boy. If you had asked any of the gang, they would have told you that I was a "regular feller"; and if they had told you anything else they would have heard about it, because I was the leader of the gang. Nevertheless I was an inveterate reader. I would eagerly devour every scrap of reading matter that came into my hands, and many a night I have curled up in bed all night long, reading about the hair-breadth escapes and other thrilling adventures of Buffalo Bill and Nick Carter and all the other wonderful heroes so dear to the heart of a red-blooded boy. On such nights I might get one, or, maybe, two hours sleep. I would then get up and go to school. I now believe that all that reading was a very great strain on my eyes, and, not having learned how to rest them, they remained under this strain for more than thirty years.

My vision grew steadily worse, but I never could bring myself to wear glasses. Several times I have been tempted to do so, but always when it came to the point I balked. One day when I was about fourteen years old, in my search for something to read, I happened upon a publication entitled *Physical Culture Magazine*. Of course I read it. It was only a pamphlet of ten or twelve pages,

but it made a very strong impression upon me. Ever since then I have been a firm believer in natural methods of curing disease, and I fully, expected that some day I would find a natural method that would cure my eyes. Wearing glasses was not curing them, and I simply could not get myself to put them on. Perhaps I missed something by this stubborn attitude. Perhaps there was something on the other side of the street that I did not see, but now I am sure that I gained more than I lost. If I had added the strain of glasses to my other strains, there is no knowing how much worse my eyes would have become.

Now, after waiting nearly thirty years, my long cherished hopes have been realized. I have found a way to cure my eyes by natural methods. On November 28 of last year I began the practice of Central Fixation, and the results have been wonderful. On that date I could read, with my left eye, only the fifty line at six feet. With my right eye, at three feet, I could barely see the great big letter at the top of the card. Eight days later my left eye had improved to 6/10 and my right eye to 6/50, and with the right eye alone, the eye that was almost blind, I read newspaper type at twelve inches.

All this I accomplished simply by closing my eyes and resting them for fifteen minutes at a time, and then looking at the card. I didn't imagine dots or swings or anything else. I just rested my eyes and looked at the card, keeping it up for about two hours.

Now I am trying something else. I noticed that whenever I attended a movie show my eyes felt fine afterward. So I decided to go to a movie every day, and this is how I work it: The first day I sat up in the very first seat, close to the screen; now I am moving back a seat each day (I always go to the same playhouse). I am very careful not to strain and always close my eyes and rest them when they feel the least bit tired. In fact, this resting of my eyes is becoming quite a habit with me. The results so far have been splendid.

My greatest trouble is double vision. I have it in both eyes; but it is going away gradually, and doesn't bother me except when I look at the test card.

QUESTIONS AND ANSWERS

All readers of this magazine are invited to send in questions regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Q - (1) Should a house be brightly lighted by a direct electric light or a reflected white light?
(2) In many homes colored shades are used on the lights. Does that impair the sight? C. I. I.
A - (1) The more brightly the house is lighted the better for the sight.
(2) Yes.

Q -. (1) Is it advisable to use specimens of diamond type other than the *Seven Truths of Normal Sight?* Would it be well to get a *New Testament* in diamond type?
(2) I have thus far found the flashing method the most helpful. However, after closing the eyes, I have difficulty in opening them. The lids seem to stick together, as it were. What is the cause of such stickiness and the remedy?
(3) I was trying to read the *Seven Truths* lately by the flashing method, and for about twenty minutes obtained very little results. Then, of a sudden, upon closing my eyes, I saw the blackest object I have ever seen with closed eyes. I was startled, it seemed so real, and on opening my eyes I was surprised to find that I could read practically all of the *Seven Truths* clearly, at thirteen inches, without closing my eyes. I think the black object was probably the black rubber key of the electric socket in the fixture which I had unconsciously looked at from time to time during the exercise. I have not been able to do just this since. What is the probable reason for my failure?
(4) I find I see any reading matter more clearly in a bright light—sunlight or electric light—than in a dim or less bright light. Why is this?
(5) Today in trying to read the *Seven Truths* I found that I could do it at six or seven inches with few alternate closings of the eyes and flashes; but I found in accomplishing this I was partially closing my eyelids, so that I must have looked much like the Patagonians in Fig. I in Dr. Bates' book, said to be probably myopic when the picture was taken. I found that I could not keep my eyes thus partly closed without some strain, but I could not see the print clearly when they were wide open. Often the print would look quite blurred when I first looked at it, but it cleared perceptibly and became quite black as I continued to look. I also found myself reading today twenty pages of fairly small print at about eight or nine inches in much the same way. W. C. C.

A - (I) Yes, if you wish to. The *Testament* would be a good thing to have.
(2) Difficulty in closing or opening the eyes is a common symptom of strain, and may be relieved by any method that relieves strain.
(3) Such intervals of relaxation are a very common phenomenon. They will come more frequently and last longer if you continue to practice.
(4) In a bright light the contrast between black letters and their white background is more marked than in a dim light. Persons differ greatly, however, in the amount of light they require for maximum vision. Some people see better in a dim light, because they think that condition a favorable one.
(5) It is a bad one. Squinting is a destructive habit that causes, increases eye muscle tension, eyestrain, blur.

January, 1922

*1 - Bates: The Relief of Pain by the Aid of the Memory, N. Y. Med. Jour., May 24, 1919.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

February, 1922

Test Your Imagination!

WITH the eyes closed remember some letter, as, for example, a small letter o. Imagine the white center to be white as snow with the sun shining on it. Now open the eyes, look at the Snellen Test Card and imagine the white snow as well as you can for a few moments only; without noting so much the clearness of the letters on the card as your ability to imagine the snow white center, alternating as before with the Snellen Card.

Another method: With the eyes closed, remember and imagine as well as you can the first letter, which should be known, on each line of the Snellen Test Card, beginning with the larger letters. Then open your eyes and imagine the same letter for a few moments only, alternating until the known letter is imagined sufficiently well that the second letter is seen without any effort on your part.

Third method: With the eyes closed remember or imagine a small black period for part of a minute or longer. Then with the eyes open, looking at no object in particular and without trying to see, imagine in your mind the black period. Should you believe that your vision is improved, dodge it, look somewhere else. This you can practice at all times, in all places, at your work as well as when sitting quietly in your room practicing with the Snellen Test Card. When the period is imagined perfectly with the eyes open, one cannot dodge perfect sight, which comes without any effort whatsoever.

SIXTEEN SCHOOL GIRLS

By EMILY C. LIERMAN

THROUGHOUT the summer of 1921 our morning and afternoon offices were filled with school children, boys and girls, waiting for treatment of their eyes. They came from the Northern, Southern and Western parts of the United States. Watching them waiting patiently for their turn to see the Doctor who would take their glasses from their eyes and cure them, one could read the happy thoughts expressed in their faces. Mothers and guardians were with them to reassure them if they became impatient or the least doubtful while waiting.

To the clinic of the same good and great Doctor in one of New York City's large hospitals, throughout the whole year, there comes a steady stream of school children, just as eager to be cured without glasses. Not always does the boy or girl have a guardian or mother to give reassurance as the different ones are waiting to be treated. Sometimes they come alone and at other times they come in pairs or with three or four other children. At the office the Doctor sees the patient for one-half hour or so, but each child at the clinic can have only five minutes or just a little longer, for the time is short on clinic days.

I am anxious to tell about fifteen school girls, all from one class of Public School No. 90. Their ages range from nine to fourteen years. On January 5th they first appeared. That day Dr. Bates and I had to plead for admission.

ENTER, THE FIRST FIFTEEN

There were about thirty adults, besides these school girls, also waiting for treatment and all of them made a rush for us when we arrived. I found that the teacher of the girls, who is very near-sighted, was at the present time being treated by Dr. Bates at his office. The progress she was making inspired her to send those of her class who were wearing glasses to the clinic. All hands went up at once when I asked who came first.

I could see from the start that I would have my hands full. All of them had a strained expression and, because of their actions and their manner, my heart went out not just to them but to that poor near-sighted teacher!

Three out of the fifteen girls have squint and two of the three are sisters. These sisters, Helen, age 10, and Agnes, age 12, both have squint of the left eye. Helen had 14/20 with both eyes, glasses on. Glasses off, she read 14/40. After palming and resting her eyes her right eye improved to 14/20, and the squinting left eye improved to 14/30 without glasses. On January 17th she read 14/15 with each eye separately. Agnes, whose squint is worse than Helen's, had 14/70 in the left eye on January 5th, and on January 17th improved to 14/20. The right eye improved from 14/40 to 14/15 from January 5th to January 17th.

Frieda, who also has squint of the left eye, improved from 14/40 to 14/15 in the same length of time. Her right eye has normal sight.

All the rest of the fifteen, I discovered, were near-sighted.

MARY AND MURIEL

The youngest and best behaved is nine years old. Her name is Mary. She suffered terrible pain in her eyes and head the first day she came, but after she had closed her eyes and rested them for a short time the pain went away and her sight improved from 14/40 to 14/20. The strange thing about Mary is that she did not practice at home resting her eyes as she was told to do, but nevertheless her pain never came back even though her sight did not improve any more than it had on the first day.

Muriel and another Mary had progressive myopia. Muriel become so frightened the first day she came that she ran out of the clinic as fast as she could. She feared that the Doctor would apply drops or make her suffer in some way. Next day at school Mary told her what she had missed by running away and now, after three visits to the clinic, Muriel is running a race with Mary and I believe she has a fair chance of being cured first.

Muriel's sight improved from 14/70 to 14/20. Palming, resting her eyes, did this for her. She practices faithfully at home. Mary's vision was 14/15 with glasses. Without them, 14/50. Now she has sight as good, without her glasses as she did with them before. January 17th her vision was 14/15. She also practices faithfully, and her father has also become interested and helps Mary at home

with her chart. The remainder of the fifteen all had about the same degree of myopia and all are eager to be cured. It is encouraging to see them improve after they have rested their eyes for just a few minutes.

This is the twenty-forth of the series of Stories From the Clinic. Can any mission of helpfulness be greater than that of Mrs. Lierman's to these children of New York's crowded schools? We think not— nor do the other children of the world await any greater blessing than that which she has been fortunate enough to give to these.

IS IT A CRIME TO HELP THESE CHILDREN?

As I finished with these cases Doctor called my attention to a girl from the same school who has opacity of the cornea of the left eye. She had had this trouble since she was one year old. Her age now is twelve. She had no perception of light at all in that eye when she came. On her second visit to the clinic she could see light in that eye for the first time. Now she is beginning to see the letters on the test card.

Is it a crime to help the sight of these poor children? Should they be forced to keep wearing their glasses to benefit the man who sells eyeglasses? I am willing and want to devote the rest of my life to this wonderful work, but we need help. Mothers of the children are helping, they are our assistants only in the home. Teachers who are wearing glasses and who are being cured without them are also helping, but the prejudice of some of the authorities, based on ignorance of the truth, is a stumbling block. If they would only investigate the facts we would all be better satisfied.

The second visit of these children to the clinic is one to be remembered. On January 7th Doctor and I arrived a little late. We were greeted by a very much excited nurse. I knew something terrible had happened because this particular nurse has the best disposition of any nurse I have ever known. She is the most faithful, self-sacrificing person I know and I wonder, as does Dr. Bates, why some wonderful Doctor in need of a nurse and assistant has not taken her for his private practice. She is very intelligent and speaks several languages. How my heart did ache to hear her say that never in all her life had she come in contact with such bad girls. One of them invaded a doctor's room and placed herself in the operating chair. A team of horses could not move her. Others yelled so loud that the doctors could not hear themselves talk. Well, I cannot explain in writing just how I felt. I treated each one, with tears in my eyes and a lump in my throat. I had planned to share between them some test cards to practice with at home, but I sent them home without them that day.

AS ARE THE EYES, SO IS THE GIRL

But now since I have distributed them, my girls have faithfully practiced and improved not only their eyes but in other ways. I have promised them a day in the country this spring if they continue to behave, and also a house party with lots of goodies to eat. Winter storms have changed to summer breezes and they are working with a determination for better sight without glasses.

On January 14th they informed me that the school doctor said they must put on their glasses again, regardless of the fact that the sight of all of them has improved. The mothers feel quite differently about it, however, and they say that their children will not put on their glasses again no matter what the school nurse or doctor says. Since then my girls are all my willing assistants and are more determined than ever to be cured.

I will be pleased to report from time to time the progress we are making.

READING WITHOUT GLASSES

By W. H. Bates, M. D.

Dr. Bates Cures His Eyesight – Discovers Principles, Methods of Natural Eyesight Improvement

A PATIENT asked me how I discovered so many truths about eyesight. It may emphasize the facts and their value, if I relate the events connected with the discovery of these truths.

P. T. Barnum, many years ago, wrote an essay on "How to Make Money." In the opening sentence he stated that he felt that he was able to write an essay on how to make money because he had made money. Perhaps, similarly, as I have established medical truths I am encouraged to write how it was done.

About ten years ago I was talking to a friend of mine who showed me a letter which he desired me to read. At that time I was wearing glasses, but only for reading and on account of my age, not then knowing any means of doing without them for that purpose. My glasses were mislaid and it took me some time to find them while my friend impatiently waited. Being a friend, of course, he had the license to say things to me in a way he would not to his worst enemy.

Among other disagreeable things he said, and the tone was very emphatic, sarcastic, disagreeable, insulting: "You claim to cure people without glasses; why don't you cure yourself?" I shall never forget those words. They stimulated me to do something. I tried by all manner of means, by concentration, strain, effort, hard work, to enable myself to, become able to read the newspaper at the near-point.

After a few weeks, a few months, it dawned on me that all my efforts were useless. Previously, it had been my custom when I could not do a certain thing myself to look around and find somebody to help me, and so in the present instance I went looking for help. My old friends, the eye doctors, laughed at me and told me that I was crazy to think of the possibility of such a thing. They repeated to me the old established theories that accommodation is produced by change in the curvature of the crystalline lens. In youth, the lens readily changes its form or its ability to focus. With advancing age the lens, like the bones, the cartilages, becomes hard, loses its elasticity or its ability to change its shape and the eye no longer can change its focus from distant to near objects.

Hypnosis, Electricity, Neurology—and Back to Dr. Bates!

I consulted specialists of hypnotism, electricity experts, neurologists of all kinds and many others. One I called on, a physician who was an authority in pyscho-analysis, was kind enough to listen to my problem. With as few words as possible I explained to him the simple method by which we diagnose near-sightedness with the retinoscope. As I looked off at the distance, he examined my eyes, and said that they were normal, but when I made an effort to see at the distance he said that my eyes were focused for the reading distance, near-sighted. Then when I looked at fine print at the reading distance and tried to read it he said that my eyes were focused for a distance of twenty feet or further, and the harder I tried to read the further away did I push my focus. **He was convinced of the facts, namely: a strain to see at the distance produced near-sightedness, while a strain to see near produced a far-sighted eye.**

+When strain occurred when looking at a specific distance, the eye would focus/set itself for the opposite distance causing the distance the eyes are looking at to be unclear. The shape of the eye would be incorrect.

+When strain is avoided and relaxation is present the eye focuses/sets itself for the correct distance, the distance the eye is looking at and vision is clear. The shape of the eye is correct.

Then I told him what I desired: "Will you kindly suggest to me a line of investigation by which I can become able to focus my eyes for reading just as well when I am looking at the near-point where I desire to see, as I am able to do when I strain to see distant objects?" He answered, "Come back in a month." At the end of three months I returned for his opinion. He said to me: "After consulting with a number of neurologists, ophthalmologists and others it is my opinion that there is only one man that can solve your problem." I eagerly asked, "Who is he?" He answered, "Dr. Bates."

And so I had to go on with my work without his help.

That great truths are always simple truths, and that simplicity and humor frequently are akin, have been remarked before. But how often has one the experience of finding an appreciative and discriminating sense of humor—such as Dr. Bates'—in a scientist's reports of his experiments and discoveries?

Stumbling on the Truth

The man who finally helped me to succeed or the only man who would do anything to encourage me was an Episcopal minister living in Brooklyn. After my evening office hours I had to travel for about two hours to reach his residence. With the aid of the retinoscope, while I was making all kinds of efforts to focus my eyes at the near-point, he would tell me how I was succeeding. After some weeks or mouths I had made no progress.

But one night I was looking at a picture on the wall which had black spots in different parts of it. They were conspicuously black. While observing them my mind imagined they were dark caves and that there were people moving around in them. My friend told me my eyes were now focused at the near-point. When I tried to read he said my eyes were focused for the distance. Lying on the table in front of me was a magazine with an illustrated advertisement with black spots which were intensely black. I imagined they were openings of caves with people moving around in them. My friend told me that my eyes were focused for the near-point; and, when I glanced at some reading matter, I was able to read it. Then I looked at a newspaper and while doing so remembered a perfect black of my imaginary caves and was gratified to find that I was able to read perfectly.

(The word perfectly was originally printed as 'imperfectly', which is now considered a misprint. Or, Dr. Bates may have meant that previously he could not read/see the newspaper and now he can read/see it, although imperfectly, this is an improvement.)

We discussed the matter to find what brought about the benefit. Was it a strain or what was it? I tried again to remember the black caves while looking at the newspaper and my memory failed. I could not read the newspaper at all. He asked: "Do you remember the black caves?" I answered, "No, I don't seem to be able to remember the black caves." "Well," he said, "close your eyes and remember the black caves," and when I opened my eyes I was, able to read—for a few moments. When I tried to remember, the black caves again I failed.

The harder I tried the less I succeeded and we were puzzled. We discussed the matter and talked of a number of things, and all of a sudden without an effort on my part I remembered the black caves and, sure enough, it helped me to read. We talked some more. **Why did I fail in remember the black caves when I tried so hard?** Why did I remember the black caves when I did not try or while I was thinking of other things? Here was a problem. We were both very much interested and **finally it dawned on me that I could only remember these black caves when I did not strain or make an effort.**

I had discovered a truth: ***a perfect memory is obtained without effort and in no other way. Also, when the memory or imagination are perfect sight is perfect.***

Relaxation. No effort to see clear, remember, imagine easily without effort = clear vision

THERE SHOULD BE A *BETTER EYESIGHT LEAGUE!*

By Roberts Everett

I RECENTLY had the illuminating experience of an hour's intimate talk with Dr. Bates in his laboratory. It was my fortunate privilege to learn at first hand of the wonderful discoveries of Dr. Bates, his incalculable service to the poor of vision and the triumphant persistence of his methods in the face of indifference and opposition.

There was a double interest in my attention to Dr. Bates as he talked to me. There was the personal interest of my memory of a time when I had worn glasses—had *had to* wear glasses, I had been told—and of a time when, tired of much experimenting, of this lens replacing that one and this treatment following another, I had simply and determinedly discarded glasses and their ills. And successfully had done so.

But there was another interest as I listened. I realized that I was in the presence of a man and of a work that meant a definite blessing to the world. Dr. Bates, like scientists of earlier and less enlightened eras, was the discoverer and the missionary of healing methods that mankind needs. His truths of physical vision should be, by right, the property of every class and every people—as

much a part of civilization's common property as the knowledge that the world is round or that mosquitoes spread disease.

And as I listened to the simple, yet for so long unaccepted, fundamentals of his discoveries and methods, it was this second, broader interest that became the overwhelming one. I felt that it became the duty of those who know of his discoveries or have been benefited by them *to spread the knowledge of them everywhere.*

The Idea of a League

So as I listened there came the idea—I believe it is a practicable idea—of a disinterested organization to carry this good word of improved vision to all who should be told of it: to the American public. An organization disinterested in all except its purpose to promulgate a healing truth, an alleviatory knowledge for the lack of which the suffering of the world today is enormously augmented and its darkness, of the spirit and of the light of days so terribly increased.

As I learned more and more of the methods and the cures of Dr. Bates and of the needlessness of glasses this idea became stronger and more clarified. It has been my opportunity to see certain organizations, disinterested in the larger sense but directly and enthusiastically interested in some one philanthropic or industrial truth, carry on works of education that have benefited the country or important groups or territories of it. And surely no "cause" could be more worthy of advancement, no information more worthy of promulgation, than that which will bring perfect vision and renewed faith to thousands, children and mature men and women alike.

Since that illuminating hour in Dr. Bates' laboratory I have thought much of the necessity of spreading the knowledge of the possibility of the prevention and cure of imperfect sight without the use of glasses. To those who have been benefited by the discoverer of this possibility it is a *duty* to so spread this knowledge, one way in which they owe it to themselves to make their lives count in the betterment of others.

So I propose to all the readers of this magazine that this work definitely be started. The sightless, the maimed of vision, those denied of Nature's freely-offered share of light and color, ask it of them with an unescapable appeal!

How the League Can Be Formed

I propose the organization of an active Better Eyesight League, devoted to the promulgation of the knowledge that the prevention and the cure of imperfect eyesight without glasses is a scientific possibility and that the man and the demonstrated methods for its achievement are at the disposal of mankind.

I propose that this Better Eyesight League be organized by readers of this magazine, by those who have been benefited by the methods of Dr. Bates, and that it be formed immediately, by those who first respond to this suggestion and are the nearest in time and distance to New York.

I propose that its membership be open to all those, beyond the readers of this magazine and those who have been helped by Dr. Bates, whose pleasure and zeal it is to help their fellow men and lessen suffering.

I propose that this Better Eyesight League be formed not with the aid of Dr. Bates, if that should not be offered; but without that aid if necessary, to give the knowledge of his many cures, as well as of great discoveries, to the world. He has already within his means and to a consequently limited public told these same results and laid his knowledge of the possibilities of better eyesight open to the eyes of others. I propose that the Better Eyesight League convey this knowledge to tens and hundreds and thousands as compared to every one that Dr. Bates has reached.

Each Reader Can Become an Organizer

To this end I suggest that every reader of this magazine the day his eye discovers this proposal write in his name and his approval of a Better Eyesight League to the office of the magazine. The envelope in the corner can be marked with the initials "B. E. L." to make sure it is read immediately. It is not necessary that Dr. Bates should ever see the letters or the names, unless that is desired. When all the letters are received there will be some means found, and word of it communicated to each name received, effectively and expeditiously to organize the League.

There should be a few weeks from now an actually functioning Better Eyesight League! Who will be first to start its organization?

QUESTIONS *and* ANSWERS

Q - Do the rays from the Snellen Card at 20 feet enter the normal eye approximately parallel?
A - Yes.

Q - I am not absolutely clear in my mind about the use of the word relaxation.
"The eye possesses perfect vision only when it is absolutely at rest." Page 107, "Perfect Sight Without Glasses."
"Near, vision although accompanied by muscular action." Page 101.
A - Read further.

Q - What is the function of the ciliary muscles?
A - I do not know.

Q - How do you account for this muscle and the changes in the curvature in the lens which never occur? (I have lost the page reference where you cited cases of a flattening or increase in convexity of the lens.)
A - I do not account for the presence of the ciliary muscle and never stated the lens changed its curvature.
The ciliary muscle = two muscles in the ciliary body.

The ciliary muscle suspends the lens in place and moves Aqueous Humor into the posterior chamber of the eye.
The old theory of accommodation states that the ciliary muscle changes the shape of the lens to produce accommodation, clear close vision.
Other doctors state it may slightly move the lens forward and backward as in a camera or may change the shape, position of the lens for other purposes; function with light, work with the iris muscle…

Doctors are needed all over the world to cure people without glasses.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

March, 1922

SEE THINGS MOVING

WHEN riding in a railroad train, traveling rapidly, a passenger looking out a window can imagine more or less vividly that stationary objects, trees, houses, telegraph poles, are moving past in the opposite direction. If one walks along the street, objects to either side appear to be moving. When the eyes move from side to side a long distance with or without the movement of the head or body it is possible to imagine objects not directly regarded to be moving. To see things moving avoid looking directly at them while moving the eyes.

The Long Swing*:* No matter how great the mental or other strain may be, one can, by moving the eyes a long distance from side to side with the movement of the head and body in the same direction, imagine things moving opposite over a wide area. The eyes or mind are benefited.

The Short Swing: To imagine things are moving a quarter of an inch or less, gradually shorten the long swing and decrease the speed to a rate of a second or less for each swing. Another method is to remember a small letter perfectly with the eyes closed and noting the short swing. Alternate with the eyes open and closed.

The Universal Swing*:* Demonstrate that when one imagines or sees one letter on a card at a distance or at a near point that the card moves with the letter and that every other letter or object seen or imagined in turn also swings. This is the universal swing. Practice it all the time because the ability to see or to do other things is benefited.

Practice the imagination of the swing constantly. If one imagines things are stationary, the vision is always imperfect, and effort is required and one does not feel comfortable. To stare and strain takes time. To let things move is easier. One should plan to practice the swing observed by the eye with normal vision: as short at least as the width of the letter at twenty feet or six inches, as slow as a second to each movement and all done easily, rhythmically, continuously.

READY FOR THE BETTER EYESIGHT LEAGUE!

By ROBERTS EVERETT

The cause of better eyesight is soon to come into its own through a new medium. Every reader of this article has an opportunity to become a Founder of the Better Eyesight League.

THE Better Eyesight League is to become a reality. So assured is its formation and functioning, that this article is an official call for an organization meeting—in New York City, at four o'clock in the afternoon of Wednesday, March 8th, The organization meeting will be held in Room 504, 300 Madison Avenue, at the corner of 41st Street.

Last month's BETTER EYESIGHT carried a proposal for the forming of this League, its working called for by "the sightless, the maimed of vision, those denied of Nature's freely-offered share of light and color, with an unescapable appeal!"

As a result of that one article, sufficient enthusiastic support has been vouchsafed to make possible this call for an immediate organization meeting—to form a Better Eyesight League "to relieve the sufferings and discomforts of those afflicted with imperfect eyesight, to disseminate knowledge of the scientific cure and prevention of imperfect eyesight without the use of glasses, and to promote further research and investigation into the causes for imperfect eyesight and its improvement without the use of artificial lenses."

Some Letters of Approval

The February BETTER EYESIGHT barely had time to reach its numerous subscribers before the letters of approval of the proposal for a League began to be received. They came from New York and Missouri, from Virginia and Massachusetts, and from many other places, too. Without exception, their writers hailed the opportunity to enlist in a coordinated humanitarian movement to help alleviate a large share of the physical sufferings and discomforts of the world and to promote a general knowledge of the scientific discoveries and cures of Dr. Bates.

Says one letter from Cleveland, Ohio: "I heartily approve of any idea to band together the people who are interested in better eyesight. To assist in getting the truths that Dr. Bates has discovered to the attention of the thousands suffering from poor eyesight it is time that we who have been benefited take a stand that will make the public recognize the possibilities of these truths."

Reads another letter—this one from Kansas City: "I wish to be a member and shall do all that I can to help such a wonderful cause."

Here is an extract from another letter, this one from New York City: "I think it would be a splendid idea to start a Better Eyesight League and will be glad if you will add my name to your list of those interested."

"My best wishes for your success. You may propose me as a member of the Better Eyesight League," writes a practicing physician from another city.

Here is still another letter, and this one, perhaps, best of all expresses the spirit animating these numerous messages of support, as if it were the world of one in the light who wishes to reach out and help those still in darkness:

"I am highly interested in your great proposition concerning a Better Eyesight League. I feet indebted to Dr. Bates who improved not only my eyesight but also my nervous condition; so I naturally wish *to do my little bit to bring the life and health message to all others who are in need of it*."

Pioneers in a Great Cause

A number of the writers of these letters will be present at the organization meeting in New York. At that meeting the constitution and by-laws of the League will be determined upon and adopted. Officers will be elected, disinterested men and women fired with the same zeal to promote the cause of better eyesight that is expressed in the letters quoted here. Arrangements will be made to insure publicity for the efforts of the League, so that its message of enlightenment may reach the greatest number from the start.

If you who now read this official call for an organization meeting are too far away from New York to be present, at least send in your request for enrollment before March 8th, so that the honor of a Founder may be yours in spite of inability actually to be there; Eight days remain to thus enroll yourself in this great work.

To all the other readers of the magazine—those who live within easy distance of New York—may I, as the original proposer of the Better Eyesight League now say this final word? "Be present at the meeting on March 8th, even though your being there may mean a sacrifice of personal convenience, for the Better Eyesight League, once formed, can surely add itself to the roster of the world's organizations that are benefiting without gain this generation of mankind!"

THE TRUTH ABOUT FATIGUE

By W. H. Bates, M.D.

This is a true explanation of fatigue. The mystery of fatigue has been one almost equal in the mind of man for ages with the mystery of death. Dr. Bates explains not merely why there is fatigue, but the lack of necessity for it!

ABOUT fifteen years ago I was ambitious to learn how to run long distances. At that time I was, it seemed to me, the poorest runner ever invented. I could not run a mile or even a quarter of a mile. To run a block brought on palpitation of the heart and the loss of breath and fatigue was sickening. One of my dear friends told me it was impossible, that I was too old to attempt it, that it would be disastrous and that if I continued in my foolishness I would drop dead suddenly, without warning. Instead of his discouraging me, I felt an increased incentive to get busy. If I succeeded I could enjoy a conversation with my friend; but, if I failed, dropped dead, the conversation would be necessarily omitted.

At that time I belonged to a gymnasium which had a running track. The physical director promised to find out my faults. He had me run a lap and watched me closely. When I finally arrived at the starting point, all tired out, gasping for breath, he said: "Doctor, you will pardon me, I hope, when I tell you that you did not breathe naturally, but held your breath the whole distance." This knowledge was a great help; but, the strain I was under when running interfered with my breathing and was a more important factor in the cause of "fatigue" than the lack of air.

A few years ago some observations on the pulse, the heart, the breathing before and after a race of about twenty-six miles were published. It was an interesting fact that those who finished close behind the winner had no symptoms of fatigue, loss of breath or weakened action of the heart, while the winner was in better condition at the close of the race than at the beginning. Why? Answer: At the beginning his mind was excited; and, strange to say, because he was confident of winning this great race as he knew that he could run better than any of the men who were entered. And when he had won his mind calmed down and the action of his heart improved in consequence.

Much has been written on the cause of fatigue. A prominent physiologist who had for many years studied the numerous theories, made the statement not long ago: "We do not know now any more about fatigue than we did many years ago."

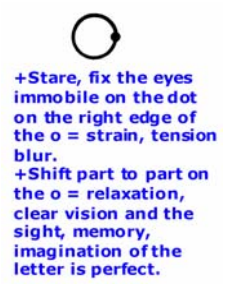
Running Oneself Into the Ground

I determined to obtain more facts. In one race I ran about eight miles and I made all the effort possible, planning to keep running until I dropped. The experience was valuable. Before I fell I lost all sense of effort, my sight failed, the ground appeared to be rising in front of me, I lost all perception of light, everything was midnight black. I had literally, actually, run myself into the ground. In a few minutes I was conscious. In spite of my protests they carried me away in an automobile.

In another experiment I entered a race of twelve miles. Just as soon as my sight failed I stopped running and walked until my vision was again normal, when I would again run some more. By alternating the walking and running I was able to finish with a sprint. A policeman invited me to sit down. Before I knew it they had me in an ambulance, galloping to the hospital, with me protesting all the way. I have run in many races since, finished in good condition and have escaped the kind attentions of the police and the ambulance service.

I now know the cause of fatigue; I know the remedy. I have cured myself. I have cured others while they in turn have relieved their friends. I can produce excessive fatigue in persons lying quietly in bed without any muscular exertion whatever. The facts are so simple they can be demonstrated by children or by adults who do not wear glasses; but, the most learned eye doctors or the great scientists of the world wearing glasses cannot understand.

A Demonstration With a Period



If possible, with the eyes closed, remember a small letter o with a white center as white as the whitest snow. Then imagine a small black period on the right edge of the o. Keep the attention on it, or try to see the period continuously for several seconds or for part of a minute. Note that in a few seconds it becomes more and more difficult to hold the period or a small part of the o stationary, the mind becomes tired, the attention wanders, the period disappears and reappears, at times the o is forgotten, and one demonstrates that it is impossible to keep the attention fixed on a point continuously or to remember or imagine the letter o with one part stationary. Or that it is impossible to *concentrate* on a point, and that trying to do so or trying to do the impossible is a strain which modifies or destroys the memory or imagination, causes discomfort and fatigue. The fatigue produced can be relieved by shifting from one part of the letter to another, when the memory or imagination of the letter again become normal and continuous.

Or, another demonstration: look directly at a small letter which can be seen. Keep on trying to keep the attention fixed on the letter continuously. In a short time, a few seconds, the eyes begin to tire and if the effort is made strong enough, the vision becomes imperfect, and with other disagreeable symptoms much fatigue will be experienced.

Or, still another demonstration: regard a page of fine print at a distance where it is read easily and note the restful feeling, Then hold the page further off or at a near point where the letters are very much blurred. Make as strong an effort as possible to read the letters seen imperfectly. If the effort is strong enough one feels much fatigue. In this way one demonstrates that fatigue can be produced by eye strain.

So many people complain that they do not have time to practice and that they have fatigue. They are less inclined to practice central fixation, the universal swing, the memory of perfect sight and other things which relieve or prevent fatigue. It should be emphasized that one has just as much time to do right as he has to do wrong and it certainly is the wrong thing to go around most of the time suffering from fatigue.

Prevention, Not Relief, for Fatigue

Theories are always wrong. As a working hypothesis the value of simply *relieving* fatigue is questionable.

I have a vision of the school children of this country able to do their work without discomfort or fatigue. The profession of teaching in the public schools requires much hard work and the teachers are quite properly objects of sympathy. This is all wrong because it can all be corrected. It is possible for people to do the hardest kind of work from early in the morning till late at night without any evidence of fatigue whatever. It is a puzzle for some people to explain how or why so many people are very much fatigued when they first wake up in the morning. Many society people hunt for rest and recreation. They sit in a chair and try to do nothing and wonder why they get so terribly fatigued.

I have repeatedly published that the only time the eye is at rest is when one has or imagines perfect sight. The normal eye when it is at rest is all the time moving. Fatigue is relieved by a universal swing and the relief is instantaneous, demonstrating quite decidedly that **fatigue is a mental symptom**. I could go on and write much more but after all the matter may be summed up very briefly:

(1) Fatigue is always associated with the imagination of imperfect sight.

(2) Rest or relaxation is always associated with perfect sight or the imagination of perfect sight.



WHAT PALMING DID FOR A BLIND MAN

(Pop, The Blind Barber)

By EMILY C. LIERMAN

I HOPE and trust that our readers will forgive me for not waiting until my dear old patient could see a little better, or until I was able to accomplish a little more for him, but in this particular case I feel very much like a child, eager to tell of the most thrilling thing that ever happened in my life.

A few months ago, some time in November, this dear old man came to our clinic, led by another man much younger. They had been told by the clerk that he could not receive treatment there because he did not live in the district. However, the nurse in charge, who is dearly loved by all the patients, did not send him away, but asked him to wait until Dr. Bates had finished with his patients and see what could be done. After our patients had been attended to, Dr. Bates had a talk with the old gentleman.

The doctor examined him and found that he had all sorts of trouble with the nerves and muscles of his eyes. Dr. Bates then called me and asked me to look at the patient's eyes and also asked me what we could do for him. There he was, absolutely with no sight whatever, but with a smile that went straight to my heart.

A Faith That Will Not Be Denied

Before I go any further I would like all who read to know that if it had been at all possible, Dr. Bates would not have hesitated for one moment, but would have offered to treat the man himself. But it could not possibly be done because Dr. Bates labors daily, Sundays included, at the rate of sixteen hours a day. These poor people, when they hear of Dr. Bates., come from all over the United States, and we do the best, the doctor included, of course, we can for them.

As the old man held his head up toward our faces waiting to hear us say that he would be able to see again, I made up my mind to make time myself to treat him at our laboratory. Every moment of my time is taken up with our work but there was my lunch hour before clinic on each Saturday that I could devote to his case. I had not the slightest idea that I could ever give him even perception of light or that I would have the intelligence to ever help him see like other people. One could see no iris whatever or pupil in either eye. Each eye had a thick, solid-looking white mass where the iris and pupil should be. But that day we arranged that he should come to see me each Saturday, and that I was to treat him for one hour. I made no promises to him, but said only that I

would do all I could for him if he would do his part and carry out the treatment at home.

His age is seventy-four years, I learned, and he is an inmate of the home for the blind in Brooklyn. He said that he was first stricken with blindness in the left eye in the year 1889, and the trouble was neuralgia. In 1898 he was stricken with blindness in the right eye after suffering with chills and fever. During the year of 1898 he could see slightly with the left eye, and until 1920, when his sight gave out completely. He had been treated by noted eye specialists without success.

The first week in December he came to our laboratory, and without thinking, he said, "I am very happy to see you," and I answered very promptly, "And I am happy to see you, also." I found that he was under a terrible tension. The muscles of his arms, especially at the elbows, were so tense that I made up my mind that he would go through some sort of calisthenics with me before we started with the treatment.

Calisthenics at Seventy-four

I called him "Pop" right from the start, and he seemed to like it. Well, you should have seen the poor old fellow throw his hands over his head and try to touch the floor without bending his knees. Of course, he only got half way. Nevertheless, it was a good start. We were very serious in our exercises and to make it appear doubly so to him I went through the exercises with him, guiding him as best I could. I taught him how to palm and to swing his body from side to side as I stood before him, holding his hands, reminding him always to loosen up at the elbows. I told him that anyone could see that he was blind because he stared so much and never seemed to close his eyes, which made his condition worse. So the next thing I taught him was to open and close his eyes often, which we call blinking.

The hour was over and the next time I saw him he was a very happy man. "I have so much to tell you," he said. "The other day, as I went to the washroom I did not feel for the wash basin, but I saw it and I walked over to it. But in my happiness and excitement my vision left me. Why was that, please?" I answered, "You began to strain in your excitement and caused your blindness to return." I encouraged him by saying, "Don't worry, you will be able to see more next time when you are not straining!"

Then, to my surprise, I learned that this dear old fellow has been shaving men's faces by the sense of touch. Before he became blind he was an expert barber. He loves to repeat again and again how he shaved ex-President Taft and other notable men.

Next time he came he was even more interesting. He could not wait to tell me how young he feels now and how he loves to exercise. He gave me a demonstration of how he could touch the floor with his finger-tips without bending his knees, and he did it quite successfully. I was just in the act of praising him for the ability to do such a wonderful trick for a man seventy-four years young, when all of a sudden there was an accident … a button went flying to the opposite side of the room!

It broke off from the back of his trousers as he touched the floor with his finger-tips, and poor old "Pop" was more embarrassed than I was.

But the Treatment Goes On

However, we soon remedied the trouble and started in with our treatment. As he had no perception of light in the beginning I was quite thrilled when he pointed to both windows of our room and showed me just where the curtains were fastened. I placed him in another part of the room and I was thrilled again when he pointed with his fingers to a sunbeam shining on the rug. With this progress to encourage me, I now am striving with him to give him his greatest desire—his real eyesight. I cannot understand as yet just how he does see, but I do notice that the white mass in front of the iris is not quite as thick as formerly. The last time I saw him he told me that while he was shaving a man he suddenly saw the man's face and that he also saw another man walking past him who had entered the room quietly. He also told me that the matron of the home had entered his room and as she passed out, he asked the maid if the matron had on a blueish-gray gown, and the maid, knowing that he was blind, was surprised, as she answered, "Yes, it is a blueish-gray color, your sight must be coming back."

What my poor old "Pop" says now that he is most anxious about is that he may have the pleasure of seeing my face some day. There is a great deal of refinement about my dear old "Pop" and I am always anxious for the hour on Saturday to come to be with him and help him. But, of course, I merely tell him that he must not hope too seriously to see my face for it might make him blind again!

Perhaps some day I will report some further progress made in restoring of this dear old man's eyesight.

NEWS NOTES OF BETTER EYESIGHT

Leslie's Weekly of January 21st, carried an article by Herewood Carrington, Ph.D., describing the methods and possibilities of the prevention and cure of imperfect eyesight without glasses. The article was written from information supplied practically entirely by Dr. Bates, and scores of thousands of persons read it.

One evening last month, members of the Discussion Club of Grantword, New Jersey, gathered at the home of Mrs. Emma Hodkinson, listened with great interest for two hours to an exposition of Dr. Bates' methods and an account of some of his cures and experiments by Dr. Bates himself. A number of Mrs. Hodkinson's guests were former patients of Dr. Bates. At the conclusion of his talk, Mrs. H. Kellett Chambers proposed the formation in the future of a local branch of the proposed Better Eyesight League.

Miss Martha Smith, who is a registered nurse in Philadelphia, is a devoted servant to the cause of better eyesight. She recently wrote to the proposed Better Eyesight League: "My interest in better eyesight has led me on to the extent of having four lending copies of Dr. Bates' book, 'Cure of Imperfect Sight Without Glasses,' busy all the time, and just before the February BETTER EYESIGHT came I had arranged to send two copies to China. One of our nurses takes one to the North of China, and the other goes to the South portion of China. Am I eligible for membership?"

Doctors are needed all over the world to cure people without glasses.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

April, 1922

IMPROVE YOUR SIGHT

ALL day long use your eyes right. You have just as much time to use your eyes right as you have to use them wrong. It is easier and more comfortable to have perfect sight than to have imperfect sight.

+Practice the long swing. Notice that when your eyes move the great distance rapidly, objects in front of you move in the opposite direction so rapidly that you do not see them clearly. Do not try to see them because that stops the apparent movement.

+Rest your eyes continually by blinking, which means to open and close them so rapidly that one appears to see things continuously. Whenever convenient close your eyes for a few minutes and rest them. Cover them with one or both hands to shut out the light and obtain a greater rest.

+When the mind is awake it is thinking of many things. One can remember things perfectly or imagine things perfectly, which is a rest to the eyes, mind and the body generally. The memory of imperfect sight should be avoided because it is a strain and lowers the vision.

+Read the Snellen Test Card at 20 feet with each eye, separately, twice daily or oftener. Imagine white spaces in letters whiter than the rest of the card. Do this alternately with the eyes closed and opened. Plan to imagine the white spaces in letters just as white, in looking at the Snellen test card, as can be accomplished with the eyes closed.

+Remember one letter of the alphabet, or a part of one letter, or a period, continuously and perfectly.

Shift part to part on the letter, or period, then shift to a new letter, then another… Avoid staying on one part, one letter too long. Shift continually, easy, relaxed, flowing to a new part or new letter. Do this with the eyes open, then in the imagination with the eyes closed, then with eyes open again. The normal eye shifts quickly, easy. The student does not need to practice quick shifting. Practice at a comfortable pace and the brain/eyes will activate quicker (saccadic) shifts automatically, a subconscious function, just as the heart beats on its own.
This movement, shifting prevents staring, strain, blur.
The eye does this normally, without effort, without the person thinking about it.
We practice shifting to get the eyes back to normal movement, then, let the eyes alone and the brain, eyes activate this movement completely natural, automatically.

Better Eyesight

A Monthly Magazine Devoted to the Prevention and Cure of Imperfect Sight without Glasses

Published by the CENTRAL FIXATION COMPANY, 300 Madison Ave., New York, as the official organ of the Better Eyesight League, a national organization to relieve the sufferings and discomfort of those afflicted with imperfect eyesight, to disseminate the knowledge of the scientific cure and prevention of imperfect sight without the use of glasses, and to promote further research and investigation into the causes for imperfect eyesight and its improvement without the use of artificial lenses.

W. H. BATES, M. D., Editor

VOL. VI. APRIL, 1922 No. 4

THE LEAGUE IS FORMED

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Some thirty former and present patients of Dr. Bates gathered in his laboratory office that day and enthusiastically adopted a constitution and by-laws bringing into existence a permanent body for the promotion of better eyesight everywhere.

Not merely was the League definitely formed, but the spirit of devotion and eagerness which called it into being and which is destined to give constant motive power was crystalized into unmistakable expression. The League is not merely a paper organization—it is a living, active and determined thing.

The thirty persons actually present at the formation of the League represented three times their own number. Letters and telegrams were received before the meeting from about one hundred men and women in all parts of the country, asking for enrollment as charter members of the League. Most of these letters and telegrams conveyed the same spirit, in addition to the mere formal request for enrollment, that characterized the organization meeting as almost an evangelical gathering—for it was made clear there, that there can truly be an evangelism of better eyesight.

The constitution adopted provides for a Board of Directors of nine, from which the President, Vice President, Secretary and Treasurer are chosen, and for an Executive Committee of five, comprising these four officers and one additional member of the Board of Directors appointed by the President.

The League's First Officers

The charter members present elected Miss Rose O'Neil, the celebrated illustrator, as the first President of the League. Roberts Everett was elected Secretary, and Mrs. E. C. Lierman, Treasurer.

The Directors chosen included, besides the officers, Mr. James Hopper and Mrs. Mable Potter Daggett, both very well known magazine writers, Miss Portia Creed, Dr. C. P. Bennett and Ross Varney.

It was unanimously voted that BETTER EYESIGHT be made the official organ of the League and this designation was accepted by the magazine. In return for this monthly representation of the League it was voted that $2.00 of each member's dues received by the League be transmitted to the publishers of the magazine, to cover an annual subscription for that member. The dues of the League were fixed at $3.00 a year for each member.

The constitution provides for monthly meetings. The next of these will he held in Room 504, 300 Madison Avenue, New York City, at 41st Street, at 4 o'clock in the afternoon, April 12th.

The founders of the Better Eyesight League are almost without exception readers of BETTER EYESIGHT. To those readers of the magazine who have not enrolled themselves as charter members, the League extends its first and most particular invitation to membership. As the new "masthead" of the magazine proclaims, it is now the monthly representative of an organization devoted to the advancement of that knowledge which has so benefited the great majority of the readers of BETTER EYESIGHT—the knowledge of the possibility and the methods of the prevention and cure of defective vision without glasses.

The League has already announced in a letter to its membership that "as a true missionary of better eyesight the League will soon begin a campaign of education among the school children, physicians and general public, in which you, as an active member, can greatly help." Every reader of BETTER EYESIGHT should be aligned in this great missionary work which the League is undertaking.

Won't you, if you are not already enrolled, send in your name today as a member of the Better Eyesight League?

HOW WE SEE

By W. H. Bates, M. D.

In this, and its companion article, "The Illusions of Perfect Sight," Dr. Bates recounts the mysterious part that ***imagination*** *plays in vision. For this, as well as for the physiological facts recited, no one interested in the bases of a perfect sight should fail to read these pages.*

THE theories which have been advanced by numerous writers to explain how the eye sees have all been proved to be imperfect or wrong. **Mathematically** and according to all the laws of **Optics**, since every object seen is focused on the retina, upside down, we ought to see things upside down. Why not? If the head is tipped to one side or at various angles objects seen are still in their proper place as before. You can stand on your head and see things right side up. According to all the laws, I believe when we see things right side up we are trifling with the, exact science of optics.

It tired me exceedingly to read some of the numerous explanations offered of how we see, and they seemed all wrong. When someone found in the retina a fluid which surrounded some of the cells it was described as **Visual Purple**. The assumption was made that a chemical change took place in the visual purple which altered its chemical composition and produced an effect on the cells of the retina. In this way the nerve of sight was stimulated or irritated and the message carried to the brain. There has been a considerable amount of argument about this visual purple and it is difficult to find two of the authorities who agree on the action of the visual purple.

The eyeball has been compared to a photographic camera. When one takes a picture of an object at a near point the bellows is lengthened or a stronger lens is used, but, when the camera is focused to take pictures of distant objects the bellows is shortened or a weaker lens is used. Helmholtz, a great student of the eye, a scientist of world-wide fame, during his studies of the eye jokingly said that the human eye is made very imperfectly and that he believed he could make a better one by artificial means.

Physical Structure of the Eye

The eye is about one inch in diameter. It has a coat in front called the cornea, which is a part of the outside coat called the sclera. Behind the front part of the eye is a cavity containing a fluid resembling water in its density. The colored part of the eye, called the iris, is a thin vertical curtain lying at the bottom of this front cavity. In the center of the iris is an opening called the pupil which appears an intense black. The size of the pupil varies, in different conditions. Back of the iris is a firm gelatinous body called the lens. Back of the lens is a larger cavity filled with a dense fluid, and then comes the retina which is connected to the brain by the nerve fibers of the optic nerve.

In order to see it is important or necessary that the eye should be focused properly for objects at different distances. This change in the focus has been ascribed at times either to the action of the cornea or lens. **Arlt advanced the theory that the change in the focus of the eye was brought about by a change in its length, as occurs with the ordinary photographic camera.** Arlt, later, apologized for his theory, because V. Graefe and public opinion were too strong for him.

I have proved that Arlt was mainly right while V. Graefe was all wrong in this matter. The eye with perfect sight sees many illusions. The eye with imperfect sight sees more and different illusions. I have published a list of the illusions of perfect and imperfect sight. One cannot explain these illusions by mathematics, by chemistry or by the anatomy or structure of the eye. A blind man will tell you, if you let him, a long list of the marvels of color, forms, and objects which he often sees. I cannot escape these details, I must listen. Other doctors do not have to, but I must listen in order to keep up the hope of the patient. Hope is quite essential when you start out to cure a patient with imperfect sight. The very illusions that blind people have are a benefit in the treatment. To discourage their imagination is a crime, I now firmly believe. Why? Because the imagination when properly controlled cures blindness.

The Potency of the Imagination

Too often people look on imagination too lightly, too carelessly. They do not realize the importance of the imagination when it can be used beneficially or harmfully. One reads stories of people who have been killed by the force of their imagination, by practical jokers who made them believe that they were bleeding to death with some warm water flowing down their neck, dripping into a pail. People lying in bed not expecting to recover, have at times accomplished what seemed to be impossible, and with the help of their imagination recovered completely. These facts should be investigated, studied, realized, because we can explain all the phenomena of how we see by the imagination. All the illusions of perfect sight, all the illusions of imperfect sight are imagined and not seen.

The imagination may do good or it may do harm. The imagination of perfect sight is capable of curing all errors of refraction and all diseases of the eyes. **A person with a cataract who is able to imagine perfect sight with his eyes closed or with his eyes open will recover and the cataract will disappear.** How, where or why I do not know. All that has been written in all the books on physiological optics on how we see is full of error because so much of it is a guess or a theory. By realizing that what we see is only what we imagine is a great help in our treatment of the various diseases of the eyes, and the more thoroughly we realize the importance of the imagination the better become our results.

The Illusions of Perfect Sight

How do we see things perfectly?

"When the eye with normal vision regards a letter on the Snellen Test Card at twenty feet it sees the point regarded best and all other points not so well. It can see the first letter of a line blacker than the second or other letters on the same line, because of central fixation, the ability to see best where the eye is looking.

Yet this is an illusion, because all the letters of the Snellen Test Card are printed equally black, equally clear. The photographic camera will take a picture of the whole card with all the letters equally black.

With normal vision it can be demonstrated that the eye sees the white part of letters or the background in the neighborhood of the letters whiter than the margin of the card or whiter than it really is. This is an illusion.

We do not see illusions; we only imagine them. If we can realize that the imagination is the principal factor of how we see and prove it to the patients the results from treatment of imperfect sight become very satisfactory.

OPERATIONS AT THE CLINIC

By Emily C. Lierman

SO many of our office patients have asked me if Dr. Bates approves of operations on the eye or if he ever does operate for cataract or other conditions. Others wish to know if there is a little Christian Science or something else mixed with our method of treatment. As I do not understand or know anything about these other things, I would like our readers to know at least that Dr. Bates always does operate on the eye when it is absolute necessary. I have been assisting Dr. Bates for almost eight years and during that time I have helped him when he operated either at his office or at the clinic. These operations have been done without pain or discomfort to the patient.

My memory goes back to four years ago when there came to the clinic a dear old Italian woman, eighty-three years of age, accompanied by her daughter who was just about to become a mother. The daughter had already made arrangements with the hospital upstairs and the newcomer was expected most any day. The daughter was very anxious that her mother should not suffer while she herself was away from home, so she appealed to Dr. Bates and to me that her mother might be operated on, and asked Dr. Bates to please do the operation himself.

Of course such things can be taken out of our hands entirely if we send the patient into the hospital. But if it is at all possible to send the patient home immediately after the operation. Dr. Bates in his gentle way always asks me if I would mind staying just a

few minutes longer so that he can do the operation himself and so take away the fear and dread that some of these poor patients have of a strange doctor.

Smiles as for a Party

This dear old woman, who had the kindliest face and sweetest expression of any old woman I have known, smiled as though we were arranging a party for her. She did not seem to mind in the least as we placed her on the operating table. Most patients sigh and show traces of fear, which is natural for I dread operations myself, and I know how it feels, but she looked at me with kindly eves and smiled and you can be sure I returned that smile in full measure. She in turn looked at her daughter who stood on the opposite side of her and as she smiled at me again she said something in Italian which of course I did not understand. Her daughter very promptly translated to me what her mother said. As I can remember, these were the words: "She say, 'You nica da lady, you bigga da heart. She lovva you, she no afraid.'" I pressed the mother's hand gently and would also like to state that I kissed her.

Now I would like to say that the operation was necessary for the lower eyelid of her left eye was inflamed and swollen from an abscess of the left tearduct. For a long time she had been coming faithfully to the clinic, but her condition gradually became worse so that there was nothing else to do but to relieve her by an operation.

She had the same smile and the same loving words for Dr. Bates when he began to operate. Not once did I hear her moan. When she wished to be reassured, all she did was to press my hand. Such courage is indeed wonderful. The operation was accomplished without pain under cocaine anesthesia. Two days later she again came to the clinic with her grandchild, a girl about ten years of age.

She stood among the patients waiting for attention and when I came to her to ask her how she felt, she told her grandchild to tell me that she had slept peacefully the night after the operation, better than she had for a long time. The grandchild informed me that upstairs was a new baby brother and that mother was doing fine and that grandma wanted me to know that she had placed a candle in church which was blessed for Dr. Bates and me in appreciation of what we had done for her. Grandma soon got well and that was the last we saw of her.

Another day a young woman who was troubled with chalazion tumors was also operated on at the clinic. I believe if this poor woman owned the whole of Panama we might have had it, but we would have had to go after it. So many different things were never promised to us by one single patient. I cannot say that she behaved as well during the operation as did the dear old Italian woman, but any way we had a lively time of it while the operation was going on. She suffered no pain but she talked a blue streak. She informed us that her husband was employed on a ship that made regular trips back and forth to Panama and that we were going to receive the most wonderful fruits that we had ever tasted in our lives. Then she asked me if Doctor wore Panama hats during the summer, but Dr. Bates got ahead of me and promptly answered himself, "Sure," said he, "never in my life could I afford a Panama hat." "Well," said she, "kindly tell me your head size and I will see that you will wear one." Then she asked me if I would like to have one also. "Of course." We were finally told that within two weeks or so we would be presented with our Panama hats.

The time of this operation was two years ago and we are still waiting for our Panama hats. But I really feel that this poor woman had all the best of intentions and I hope that her husband is still making his regular trips to Panama.

Recently a young man entered the clinic with a small baby in his arms. Anxiety and worry showed in his face and he looked as if he had not slept for a week. As the baby was crying continuously Dr. Bates immediately stopped his work with other patients to attend to the little one. This young father told the Doctor with tears in his eyes that for five days and nights the baby never stopped crying and that its mother had taken the child to another clinic where the doctor told her that the child had a cold in his eye and that drops applied in the eye would soon cure the baby. As Dr. Bates placed the baby on his lap the father asked, "Please Doctor, don't tell me that the baby has a terrible disease of his eye and that he might lose it; please tell me you can help him." I held the baby's head firmly in my hands and as the doctor carefully examined the eye he found a foreign body, perhaps a piece of steel, firmly embedded in the cornea. In less than five minutes it was out and the baby stopped crying. The baby was placed in his father's arms again and the father was told the baby was alright.

As he passed out the door he turned and said, "Thank you, Doctor, from the bottom of my heart." Dr. Bates turned to me and said, "Did you hear that? That 'Thank you' came from the man's heart and it is worth a great deal to me because he meant it."

TO A PATIENT

By L. M. Stanton, M. D.

These words of instruction and encouragement have a message not only for a single patient of Dr. Stanton's, but for everyone who seeks the better vision that true knowledge gives.

THE eyes are almost a part of the brain, and vision is more closely connected with the mind than is any one of the other special senses. Anything that effects the mind, therefore, is almost certainly reflected in the eyes and if the mind is disturbed vision is impaired.

Importance of mental control cannot be overestimated. Perhaps this state of the mind at rest is better expressed by the word composure or equanimity than by control, as the latter somewhat suggests effort. If we could but catch those fleeting moments of clear vision, so exasperating because so elusive, and trace them to their origin I think in every case it would be found that a state of mental composure would account for them.

An unperturbed mind undoubtedly makes for clarity of physical as well as of mental vision. This is no "far-off divine event" but an effect which happens immediately and which one can demonstrate many times a day.

When you look at an object you will see it better if you don't try to see it than you will if you try to see it. The maxim, "If at first you don't succeed try, try, try again" is never true in the sense that "try" means effort, and the futility of effort is never more convincingly shown than in our attempt to see by straining to see. If we would "venture," instead of "try," we would succeed not only eventually but often "at first."

You need not trouble about your blood pressure, but take your nerve pressure as often as you can. You can guage your mental tension by your muscular tension, and if your muscles are taut—your arms rigid, your hands clenched—you are mentally straining. And there are no muscles that respond more quickly to our thought than do the ocular muscles. A patient was requested to close her

eyes. She literally banged them shut, and if she had been asked to perform the most difficult task her face could not have expressed greater strain. By our multifarious environment we are being continually bombarded, and though we must ever be ready for action, unless this action springs from sell-possession it is pretty sure to miss fire.

Can you perfectly recall the individual letters of the diamond type card? This is very good practice for the memory and imagination. I could not remember a small letter *t* but resolved to experiment without looking at the card. Many *t's* were at first discarded for I knew they were imperfect and not like the *t* of the card. I knew that a *t* was a long letter but whether it extended above or below the short letters of the line I could not tell. I was not sure where it was crossed in relation to the other letters in the word in which I imagined it. So poor were my mental pictures that I confounded the *t* with an *f*. This, however, was a step forward, as an inverted *f* closely resembles a letter *t*. I continued to experiment, knowing that if I imagined the truth I would see the letter as perfectly as when looking at it on the card. Then, suddenly, there it was, shapely and black. I still remember it clearly for "the little one does learn is unforgettable, impressed upon the mind in a different way than mere learning."

When you palm do you see a perfect black? I look out into the blackness of the darkest night and then imagine it still blacker.

Experience is only suggestive. As you are different from anyone else so are your eyes like no others. Do your own experimenting, and prize your own successes above all things.

Monthly Meeting
BETTER EYESIGHT LEAGUE
4:00 P. M., APRIL 12th
Room 405
300 MADISON AVENUE NEW YORK CITY

Doctors are needed all over the world to cure people without glasses

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

May, 1922

RELAXATION FROM FINE PRINT



Fine print card placed in front of the eyes, lower part rests on nose, upper part on eyebrows. Look at the card without trying to see. Relax. Move the card side to side, slowly, a short distance. The print becomes clear when the eyes, mind relax. Microscopic vision.

+ A BUSINESS card, 3" x 2" with fine print on one side is held in front of the eyes as near as possible, the upper part in contact with the eyebrows, the lower part resting lightly on the nose.

+ The patient looks directly at the fine print without trying to see. Being so close to the eyes most people realize that it is impossible to read the fine print and do not try, in this way they obtain a measure of relaxation which is sufficient to benefit the sight very much.

+ The patient moves the card from side to side a short distance slowly and sees the card moving provided the movement is not too short or too slow. The shorter the movement and the slower it is, the better.

+ Some patients, although the card is held very close, note that the white spaces between the lines become whiter and the black letters become blacker and clearer. In some cases one or more words of the fine print will be seen in flashes or even continuously as long as no effort is made to see or to read the fine print.

+ This movement of the card should be kept up to obtain the best results, for many hours every day. The hand which holds the card may soon become fatigued; one may then use the hands alternately. Some patients vary this by holding the card with both hands at the same time.
(This does not need to be done for many hours a day. Just a few minutes is beneficial.)

The amount of light is not important.

SOME COLORED PATIENTS AT THE CLINIC

By Emily C. Lierman

(Colored = Modern = Black, African American)

One of slavery's obscure brutalities sent a pitiable patient more than half a century later to the great metropolitan clinic where the new science of the eye is relieving scores each week. Read this little document of human pain, and human helpfulness, and realize the wealth of fine accomplishment that the ministrations of those devoted to the cause of better eyesight have before them.

FREQUENTLY colored people have difficulty in remembering their ages, especially when they are middle aged or older. But just now we have a colored woman who does not know where she was born. The nurse was making a record of her age, name and address and then asked her where she was born.

"Ah dun know where ah was horn. How should ah know? It am so long ago—anyway it was a very hot place, dats what ah knows."

Her eyes do not trouble her for reading for she does not know how to read. But she complains that her eyes burn like fire and that she cannot see at a distance. Palming helps her. and the sun treatment relieves the burning of her eyes instantly.

An old fashioned mammy negro, age 72. who has been coming to us for about one year is being treated for cataract in both her eyes. When she first came she was fully convinced that we could help her so that she would not need an operation. She was employed by a former patient who was cured by Dr. Bates. At first she could just make out the seventy-line at ten feet with each eye. The first treatment improved her vision to 10/40. She was told to do a great deal of palming and swinging every day and now she reads 12/20.

Incidentally I can prove that eye strain caused her cataracts, for one day she was sufficiently relaxed to read some of the letters on the bottom line of the card, 12/10, temporarily.

Sadness Brings Its Strain

And another day she came and I knew she was in trouble of some kind. I love to talk to her because she is so clean and neatly dressed, although very poor. Her manner is so apologetic and she is extremely grateful for the benefit she receives. This day, however, I noticed her eyes were swollen from weeping. She was eager to please me and started to read the card without success. She turned toward me and said. "Mam, I cannot read. The card is all blurred, I cannot see one letter clearly." Then she began to cry softly and told me her trouble.

"Many nights I have not slept," she said, "because my son was sent to prison. He is not bad but he did get into mischief."

She loves her boy very much but she did not tell me the nature of his trouble. But, oh, how she strained and suffered for him! I wish I could have told her boy all about it. I think he would have been sorry. I comforted her while she palmed and reminded her that everything might be so much worse. I observed that she was under a terrible tension all the while she palmed, but after awhile as she became more calm, I saw her relax. As she again removed her hands from her eyes to read the card, she exclaimed with relief:

"My, how the letters clear up! What did you do to me? I feel so much better now."

I told her that she did it all herself. The poor woman had strained so much that it made her cataracts worse.

My mind was greatly relieved because her vision had cleared up. She comes with a smile now almost every clinic day and she is eager to read 10/10 with each eye permanently and I am striving to help her do it.

Another old mammy who remembers the Civil War very well but does not know when she was born, also suffered from cataract in both eyes. Her condition was so bad in the beginning that she could not see anything on the test card at three feet. When she was instructed to palm she looked around the room observing several patients who were also palming and then remarked:

"Good lor, mam, dis here room looks like a prayer meetin' and beleeb me ahs ready to join in too."

She had the saddest looking pair of eyes I ever saw in a negro and even as she smiled she looked sad. I found out after we got acquainted with each other, the real reason for her look of sadness. The story she told me was almost unbelievable but I will tell the readers just what she told me.

First I would like to say that her vision improved at the first visit so that she read 12/200 and in flashes read 12/100. This amused as well as pleased her, and she would have it that palming alone did not improve her vision but that I must have done something mysterious to her while she had her eyes closed which caused this wonderful miracle. No amount of explaining to her that day would make her understand that the **eyestrain which caused the cataract was lessened by palming.** Every clinic day she was there and her vision at the present time is 12/30. She has been coming to us about one year. Now for her story.

A Tragedy of the Past

"You know mam, a long time ago ah had a master an he was good and kind. Den came a new master an he was bad to de help. Dey was twenty of us in help and we did work on de plantation. After awhile ah was sick an was becomin' weary 'cause a li'l stranger was on de way. De sun was hot in de fields, mam, an' mah back was ackin' powerful bad. De old master would sure hab sent me to bed but de new one he jes tells me to get a move on. One day when all felt so bad an hungry dat ah falls down on mah knees. Ah jes couldn't get up. De master beat me wid a lash right before de oder niggers to teach dem a lesson an said ah was only lazy. When mah little boy was born he did hab de stripes oh de lash on his hack de same as was on mah own back. One night ah ran away with mah baby and dis was jes before de niggers were freed by Lincoln."

She looks very old and I should judge, as does Dr. Bates, that she is about eighty years of age. It is remarkable what a good memory she has. I have asked her several questions on different days to confuse her or to test her but she has always been correct in her answers.

The strain of squint, especially in children, has a great deal to do with their disobedience. I feel quite sure of that because I know of several clinic patients who, after they were cured, became manageable and less nervous. The change was so great in their conduct both in school and in their homes, that mothers and teachers would come and tell me about it.

Some time ago in one of our back numbers of Better Eyesight I wrote about a little colored boy named Frisco who suffered from squint in one eye. His poor mother could not live with him, he was so bad. His brothers and sisters continually punished him for the terrible tricks he played on them all. He was finally taken care of by his grandmother who did the very best she knew for his welfare.

She heard of Dr. Bates and our clinic so she came with him, for treatment. Before I had a chance to speak to him, his grandmother told me that she was afraid he was hopeless and that I might not be able to do anything with him for he was never still a minute.

She was anxious to have his eye straightened even though he was a naughty boy. I spoke to him and the only answer he gave me was "I don't want to! I won't!" I ignored his remarks and just said, "All right, you don't need to."

Strain and Behavior

His grandmother frowned and said she was so sorry he was a bad boy. I paid no attention to him for some time and fortunately there was a little girl in the room being treated for squint so I let him watch the little girl and me. For his benefit I said to the little girl. "You don't want a bad eye, do you? You want two good eyes, don't you? Your good eye is doing all the work; just make your

bad eye do some of the work and you will soon have two good eyes instead of one."

When I was ready to treat Frisco he asked with his head and shoulders straight. "Have I got a bad eye? Won't you show me how to make the bad eye do some work?"

"Why of course I will show you," I told him. As I explained in the article I wrote about him, he became a very willing patient then and with his dear grandmother's help at home, Frisco was absolutely cured in six months.

Several months after he was cured I noticed one clinic day a colored woman standing in line smiling pleasantly and when I asked what her trouble was she answered, "Nothing at all, nurse, I just came to tell you that Frisco has returned home to his mother. He is the best behaved of all his family and he receives the highest marks from his school teacher for his studies. He shows no more symptoms of nervousness and plays no more tricks."

This squint case was so bad that one could see only the white of the left eye. Palming, swinging and alternately opening and closing his eyes many times every day, cured this boy.

THE OPTICAL SWING

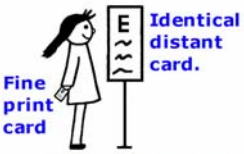
By W. H. Bates, M. D.

For thousands of years mankind, both lay and professional, has overlooked a seemingly minute but vitally important phenomenon of the human system—the eye's normal inability to see a stationary object. Of the result in the science of the eye of the final observation of this vital matter, Dr. Bates tells in part in this article.

IN this magazine, and in other publications, I have quite frequently written about the swing. The matter is so important that I feel that it should be described and recommended more frequently. The benefits which come from the optical swing are far-reaching and of greater importance, I find at the present time, than I realized even six months or a year ago.

When a person of normal sight regards one letter of the Snellen test card with normal vision, the letter appears to move about a quarter of an inch or less from side to side, continuously and slowly, a little more rapidly than a movement each second. This is what I call the optical swing.

For many thousands of years people of normal sight have regarded small and large objects which were stationary and imagined that they saw them stationary. It can be demonstrated that when the normal eye imagines a letter, or a part of a letter, stationary, that the letter becomes very soon imperfect. Furthermore, the letter has a jerky movement, irregular, and variable, demonstrating that it is impossible by any kind of an effort to keep or imagine a letter stationary for any length of time.



For Clear Distant Vision

+Shift on a fine print letter on a close card and imagine, see that it has a slow, short, easy swing, movement. Practice for a minute or less, 5-20 seconds. Avoid staring. Blink and keep the eyes moving on the letter.
+Then, look at the same letter on a identical distant card for less than a fraction of a second.
As vision improves the eyes can look at a letter for a second or longer without experiencing blur.
+ Repeat looking at the letters on the close and distant cards. Practice on one letter at a time.
+Practice with the distant card farther away as vision improves.
+Practice with both eyes together, one eye at a time, then both eyes again.
+Reverse the process to improve close vision, looking at the close letter for the shortest time.

Literal Concentration Impossible

Eyes closed: Remember, imagine a letter O with a pure white center and a little black period on the edge. Keep the attention on the period without shifting/moving the eyes. Note that strain will occur and the mental image of the period will be lost.
The period and eyes will eventually move, which is normal. Shifting, eye movement when the eyes are closed or open keeps the mind, eyes relaxed, and the mental and visual image of a object clear.

With the eyes closed most persons can remember or imagine a letter O with a white center, as white as they like—as white as snow. They can imagine a little black period on one edge of the O and keep their attention fixed on the black period for a few seconds, or part of a minute. Sooner or later, however, they note that the period moves and defies all efforts to keep it stationary; and that every once in a while the period is lost altogether. The imagination of the period fails from the strain. Most patients also note that they lose the O and have to bring it back again. To concentrate on one point of the letter O is impossible for any length of time.

The dictionary defines "Concentration" as an effort to see one thing only, or to do one thing only. I have never met any person who was able to concentrate on a point for any length of time. Concentration is impossible. Trying to do the impossible is a strain; which is the main cause of imperfect sight. For we find that all persons with imperfect sight try to concentrate—try to imagine things stationary. It is much easier and better to let the eyes shift from one point to another than to remember or imagine imperfect sight. To stare, strain or try to concentrate is an effort which is followed by not only imperfect sight, but symptoms of discomfort, pain and fatigue.

When one can imagine the letter O of fine print moving from side to side, it is possible to imagine that the card on which the O is printed is also moving from side to side, with the same speed and in the same direction; the hand which holds the card moves; the card and everything on it, including the letter O. When the card moves and the letter O moves, one can imagine the hand moves, the wrist, the arm, the whole body, in short, moving with the O. If we imagine the O printed on the arm of the chair, when the O moves the chair moves. When the chair moves the floor moves; when the floor moves one can imagine the whole room and the objects in the room in turn to be swinging. All objects seen, remembered or imagined move with the letter O.

The Universal Swing

This I call the universal swing, for one letter, or one object, cannot move without the imagination of all other objects moving at the same time. When the universal swing is imagined and one object is consciously imagined to be stationary, the universal swing stops, because it is impossible to imagine one object moving and other objects stationary when they are all connected.

A great many people have told me that they could imagine the letters on the Snellen test card to be moving and the card stationary. To do this requires a strain and, when we analyze the facts, to imagine letters moving and the card stationary, it is necessary to separate the letters from the card. There are an infinite number of ways of doing it wrong, or of imagining the swing under a strain. To imagine a letter suspended and swinging, one part more than another, requires an effort or strain. Some patients have a great facility for doing things wrong, and sometimes my ingenuity is taxed to the utmost to get them back to the right way. Some cases have required many days, weeks, of conversation, before they became able to practice the optical swing in the normal or proper way. It is well to repeatedly call the attention of such people to the fact that the optical swing is an evidence of relaxation, a phenomenon which is always present in normal sight, and that in all eases of imperfect sight the normal optical swing is modified or lost.

All parts of a object, all objects: the entire visual field moves in the opposite direction the eyes, head move to.

The Swing and Memory

Over and over again I have taught people to demonstrate that, when they had a perfect memory of some letter or other object, they could not retain the perfect memory if they tried to imagine things stationary. Patients who were near-sighted, myopic, who were able to read fine print at a near point with good vision, were able to demonstrate that trying to imagine letters stationary made their vision at a near point very poor. By suggesting to them the possibility of imagining the swing at a distance or, when regarding the Snellen test card as well as they could imagine the optical swing of letters at the near point, much benefit usually followed.

About a year ago a patient was brought to me, a young girl aged ten years, with considerable compound myopic—or short-sighted—astigmatism. She was unable to see the large letter on the Snellen test card more than three or four feet away with either eye. This child read fine print with normal vision. She demonstrated that she could not imagine small letters stationary and see them perfectly. When she imagined a letter was moving from side to side, not any wider than the width of the letter, her vision was continuously good, or improved. With her eyes closed the memory of the letter with its swing was not quite as good as when she regarded the letter. When she looked at the Snellen test card at fifteen feet, her memory of the letter with its optical swing was gone.

I had her practice for a while looking at the small letters with fine print at a near point, imagining one at a time with a slow, short, easy swing, and then looking at the Snellen test card for a moment only—less than a fraction of a second. This practice was followed at once by improvement and she was directed to continue the practice at her home; first to regard the same letter of fine print at the near point and imagine it moving, and to do this for a minute or longer and then look at the Snellen test card for not longer than one second.

After three days the child came in and read the whole card with normal sight with each eye. I was very much surprised and I said to the mother. How did this happen?"

Practice Brings Cure

"Oh," she said, "the child is practicing it all the time; she is practicing it at her meals, is practicing it all day long, even when she is in bed; the first thing in the morning, as soon as she opens her eyes, she gets busy."

The optical swing was a cure; not only were her eyes cured, but the mother told me that a great many functional derangements were also relieved. The mother became interested in the cure of her child and asked for treatment of her own eyes for hypermetropia, astigmatism and presbyopia. She was as enthusiastic as the child and was cured in two visits. She became my friend.

NOTES OF THE LEAGUE

THE first regular monthly meeting of the Better Eyesight League was held the afternoon of April 12th at 300 Madison Avenue, New York City. Mr. Ross Varney presided in the unavoidable absence of the presiding officer.

The Secretary's report showed that the names of 500 prospective members had been sent into the League by charter members since the organization meeting held March 8th. Dues received, according to the Treasurer's report amounted to $147.

The meeting was thrown open to suggestions regarding lines of immediate activity for the League. Many phases of activity were discussed, among them work to preserve the sight of factory and shop workers, educational work for school children, educational work among college students and among teachers, and the preparation of educational and expository publicity matter.

The members present agreed to use such educational literature in their own correspondence; and measures for acquainting prospective members of the League with its purposes and with the whole subject of the new ophthalmology were discussed in detail.

The enthusiasm and interest in the work of the League that has become manifest was strikingly shown in the volunteering of a number of those present to address noon hour meetings at factories, explaining to factory workers the menace to the eyes of too close industrial application unless the new scientific measures of prevention are understood and practiced.

A number of other suggestions, all apropos and practical, were made and discussed. It was eventually moved and seconded that Mrs. Mable Potter Daggett, a Director of the League, be authorized to draw up an outline of a publicity leaflet to be printed by the League and furnished to all its members for use in correspondence.

All the suggestions offered and discussed were referred by the meeting to the Board of Directors, and it was further voted that the Directors should work out and present to the second monthly meeting of the League a complete plan of operation to cover activities throughout the remainder of 1922.

THE second monthly meeting of the League will be held in Room 504, 300 Madison Avenue, New York City, at 4 P. M., May 10th. Every member, it is desired, will be there and will bring a prospective member also.

The directors will present there their plan of operation for the balance of 1922. The Secretary will report the progress made in obtaining new members.

Every effort will be made to have this second meeting mark a new record of enthusiasm and practical application to the great cause of better eyesight.

QUESTIONS AND ANSWERS

Q - "When the sight is perfect the memory is also perfect because the mind is perfectly relaxed." "Better Eyesight," November 1919, page 2. I know of a Professor of Chemistry who has remarkably fine eyes and who cannot remember the roads to drive his car home from Boston to Malden.
A - He does not see the roads perfectly.

Q - Do idiots and patients having aphasia never have perfect eyesight?
A. Some do.

Q - Am I right in thinking that you consider the reverse of this true?
A - Yes, with exceptions

Second Monthly Meeting

BETTER EYESIGHT LEAGUE

4:00 P. M., MAY 10th
Room 405

300 MADISON AVENUE NEW YORK CITY

Doctors are needed all over the world to cure people without glasses.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

June, 1922

DISCARD GLASSES

EASY to say, something else to do. But it is a fact that no one can be cured without glasses and wear glasses at the same time.

This is a fact that one should keep in mind. It may help to give one backbone sufficient to do the right thing. I know how difficult it is from personal experience. I suppose I have as much originality, if not more, than the average person. It required a year before I was convinced that my eyes could not be cured unless I stopped wearing glasses. I could not wear them even for emergencies without suffering a relapse.

Patients who are really anxious to be cured can discard glasses and obtain benefit almost from the start. Wearing of glasses becomes a fixed habit. The idea of going without them is a shock. The honest determination to do all that is possible to be done for a cure, makes it easy or easier to discard glasses at once. Patients tell me that after they have discarded their glasses for a few days they do not feel as uncomfortable as they expected.

Do not use opera glasses. Do not use a magnifying glass for any purpose.

It is very natural that one should hesitate to discard glasses after he has worn them for many years and obtained what seems considerable benefit. It may help to read what I have published about glasses. Most of the discomforts of the eyes are largely functional or nervous and not due to any real or organic trouble with the eyes. All the symptoms of discomfort are accompanied by a strain which produces a wrong focus of the eyes called myopia, hypermetropia, astigmatism or presbyopia. Glasses may correct the wrong focus produced by the strain, but they do not always, because the eyes are not always strained to fit glasses accurately. While wearing glasses in order to see, one has to strain or, by an effort, squeeze the eye ball out of shape and it is impossible therefore, to obtain relaxation and see with glasses.

If one can understand what I have just stated one can realize the necessity of discarding glasses in order to obtain a cure. I feel that the facts should be emphasized and the patient made to understand the necessity of discarding glasses. This makes it easier for the patient to do without glasses.

Do not argue with yourself about the matter. When you go to a doctor you expect to take his medicine even though you may not know what it is or how it is going to act. When patients come to me for relief I say, "Discard your glasses and you can be cured."

If they are wise they do as I say without any talk.

THE LEAGUE FOR BETTER EYESIGHT

What the League has already done—what you can help it do besides.

THE time of meeting of the next meeting of Better Eyesight League is being changed to evening, to permit a greater attendance. The third monthly meeting will he held in Room 504, 300 Madison Avenue, New York City, at 8 P. M., Tuesday, June 13th.

It takes any organization a short while to become effective in action. The League has proved itself no exception, but it can truly be said that its period of gesturing is over and its day of actual accomplishment already begun. And this with the League only three months old.

Up to the present the most effective work of the League has been done between its monthly meetings, through the mails. In a small, but an ambitious way the League has already begun its work of education of the public.

Its membership has increased slightly, due to this activity.

A number of persons previously without the knowledge of the new science of the eye have become definitely interested in it as a result of the League.

Some 500 persons, both adults and children, in need of better vision, have been acquainted with the existence of the League and with the availability of the new methods for obtaining and retaining better vision.

Convincingly worded, attractively printed and attention-commanding correspondence cards have been supplied to members of the League for use in their personal correspondence, telling in less than five hundred words the great fact of the development of the new ophthalmology. This correspondence card, "About Your Eyes," is from the pen of Mrs. Mable Potter Daggett, a noted magazine contributor.

The preparation of educational literature to go to school teachers throughout the country and to mill and factory superintendents in industries where vocational eye strain is common is under way.

A list of possible speakers for the League is being made up.

At the last meeting, in accordance with the constitution, Mr. Ross Varney was chosen to be President of the League for the balance of its first year, Miss Rose O'Neil, previously elected, having found it impossible to devote the necessary time. Mr. Varney is both enthusiastic and competent, and is giving to the League a high type of unselfish executive force.

Similarly, the previously elected Vice President having found it impossible to serve properly, the League at the last meeting elected Miss Portia Creed Vice President for the remainder of this first year. Miss Creed's ability and zeal are outstanding.

The meetings of the League may be compared to an exclamation point at the end of a paragraph of action. They are the periodical accent of emphasis to the continuously carried-on work of the League. The stronger each exclamation point of interest and enthusiasm, the more emphatic becomes the steady routine work of the succeeding month.

It is in many ways a notable intellectual group that is comprised in the League membership, it is a very forceful group, to be a part of which is a distinction. Already this group is growing. It is going to widen more and more.

Every reader of the magazine should come and find out for himself the spirit of the League and the work it has under way, by attending the next monthly meeting June 13th.

SOME ANIMALS' EYES

The experimental detail into which Dr. Bates has gone in his development of the new science of ophthalmology is realized by few persons, although readers of his book, "The Cure of Imperfect Sight by Treatment Without Glasses," have some appreciation of this. This article tells some of the incidents and discoveries of his long series of experiments, some significant to science, some humorous us well.

Turtles

THE turtle has an unusual power of changing the focus of the eye. A physician who taught in a medical college told me that every year he would remove the eye of a turtle and demonstrate that stimulating the ciliary muscle with electricity produced accommodation by altering the front surface of the lens. He had been doing this for many years.

He was a good-natured person and I asked him if he would demonstrate the facts to me, which he kindly consented to do. After removing the eye of a turtle he fastened it on a piece of cork with the help of several pins. He then told me to note that when he stimulated the eye with electricity I could see the lens change its form, with the aid of a magnifying glass. I followed his instructions carefully and told him that I did not see the lens move but I did see a considerable agitation of the iris. With the aid of the retinoscope I found that with a strong stimulation of the eye by electricity there was no change in the focus. The doctor was able to demonstrate the same thing with my retinoscope.

During all these years the commotion produced in the iris was wrongly supposed to be associated with a change in the shape of the front part of the lens. In the other eye, having demonstrated by simultaneous retinoscopy that the lens of the turtle did not produce a change in the focus of the turtle's eye I proceeded to demonstrate that the oblique muscle was a necessary factor in accommodation. I exposed the superior oblique muscle, which is of considerable size in the eye of the turtle. When this muscle was stimulated with electricity the doctor and I both demonstrated with the aid of the retinoscope that the eye was accommodated to a high degree.

I then cut the superior oblique muscle, when I was able to demonstrate with the retinoscope that electric stimulation of the eyeball produced no change in the focusing power of the eye. The doctor agreed with me.

Then I sewed the divided ends of the oblique muscle together again. Now the electric stimulation produced the same change in the focus as in the beginning. The eye was accommodated for the near point.

The doctor confirmed my observation. He said before he left that he was convinced that when it came to turtles Helmholtz was wrong and that all these years he had been teaching an error and would in the future omit the experiment on the eyes of turtles.

Bears

One night about ten o'clock I was testing the eyes of animals in Central Park. The watchman had kindly loaned me a lantern for my use. This lantern I placed on a stone coping which surrounded a den of bears. When possible I flashed the light from the retinoscope into their eyes and found that they were normal. When I was about to leave I started to pick up the lantern and suddenly out of the dark a bear sprang forward against the rail, poked his paw between the bars and tried to grab the light. I was so startled I jumped back in great fright. The bear seemed interested and amused, he opened his mouth and if ever a bear laughed silently he did. I am sure there was nothing wrong with his sight.

Monkeys

After examining a number of monkeys I found by simultaneous retinoscopy, some who were myopic. Usually when I examined the eyes of tigers, leopards or lions I was careful to do so at a respectful distance, but the monkeys seemed so very playful and good-natured that it did not seem necessary for me to take any precautions. While I was trying, with the help of the keeper, to get a view of the eyes of an old lady sitting up on a roost, a monkey in the adjoining cage grabbed me by the hair and produced a lot of joy among his fellows at my expense. It was so unexpected and the pull so strong that I do not believe I shall ever forget the experience, although I was more frightened than hurt. The keeper laughed louder than a lion's roar.

Wolves

A great many wolves were examined by simultaneous retinoscopy and in all cases their eyes were found to be unusually good. One night a policeman stopped me and asked in a very disagreeable tone of voice what I was doing among the animals. I explained to him that I was very much interested in finding a method of preventing myopia in school children and that facts obtained from studying the eyes of animals were a great help. Well, he softened right away, and was kind enough to hold the lantern for me while I made further observations.

Leopards

It seems a safe procedure to stand in front of a cage ten or twenty feet away and flash the light of a lantern into the eyes of some wild animal, but in one case a tragedy seemed imminent. The keeper was helping me all he knew how by coaxing the animals into a position that was favorable for me to examine their eyes. He went into a cage where he thought no animal was present, in order to reach another cage that contained some leopards. Suddenly there came out from a shadow into the light another leopard, and the speed with which that keeper got out of that cage was wonderful. And he was none too soon, because the door slammed shut against the very teeth of the animal. I was able to examine the eyes of this leopard while he was annoyed and found his eyes were normal.

Other Animals, and Fish

None of the members of the cat tribe which I have examined with the retinoscope was near sighted. One of the lions had a cataract. A hippopotamus also had a cataract. Old Jewel, an elephant I examined, was near sighted. The distance of the eyes of the elephant from the ground may be six feet or more, and I am quite sure that this elephant did not become near-sighted from straining to see near objects. I found some buffaloes near-sighted and some other animals, also. No birds were found near-sighted. At the New York Aquarium I examined many thousands of eyes of fish and found none near sighted. The ability of fish to focus their eyes for a very near point is wonderful. The muscles found in the eyeballs of fish are very large. Electrical stimulation produces a high degree of accommodation or focusing at the near point, except in the eyes of the shark family. These fish have no superior oblique muscle; but, when I placed a suture of strong silk thread in the place occupied by the oblique muscles in other fish, electrical stimulation produced accommodation in the eyes of all the shark family.

It is interesting to report that the cat family does not focus its eyes to see near-by. Electrical stimulation always, in my experiments, has produced near focus in the cat family, but only after a silk thread was inserted in the place usually occupied by the superior oblique muscle.

THE PARTY

By Emily C. Lierman

If there is any pleasure keener than that of giving pleasure and comfort to a child the great teachers and philosophers of history as well as the ordinary man and woman has never found it out. It is the great privilege of Mrs. Lierman not only to be constantly advancing the knowledge of the new science of the eye, but at the same time to be giving weekly service and comfort to many of God's children.

IN the February number of Better Eyesight I wrote about sixteen school children who were sent to us for treatment of their eyes. Children with imperfect sight are usually sent from the schools to us to be fitted for glasses. But all of these girls wore glasses, with the exception of two. The teacher of these children wore glasses, and they were surprised when she appeared one day without them. They all wondered how she could possibly see for she had a very high degree of near-sightedness.

In my article I wrote about the children's misbehavior and the trouble we had with them at the clinic. As they acted like wild Indians I became more determined to cure them and began to plan very quickly in my mind just what I would like to do for them if they would only behave in the clinic room and allow me to benefit their eyes. So a house party was promised to all whose sight improved to 20/20.

Little did I think that day in February that so many of them would obtain perfect sight so soon. But Saturday, April 22nd, the party

was held at our afternoon downtown offices in New York City,

When school children discover that they can be cured without glasses we have very little trouble treating them because they are always anxious to be cured, with a few exceptions, of course. The exceptions are generally colored children who would feel much more dressed up with eyeglasses on. Their elders, especially fathers, are seen standing about on the street corners in the vicinity of the Harlem Hospital, where Dr. Bates' busy clinic is. They are very much dressed up in flashy clothes, with near diamond studs and shiny patent leather shoes. They delight in wearing eyeglasses with attractive rims of gold or tortoise shell.

I remember about six years ago as Dr. Bates and I passed by some of these people on the street near the hospital, he remarked, "I wish I had some of the dignity of these colored people; I wonder where they get all the money to dress so well."

Sometimes they come to us to have their eyeglasses readjusted and the doctor finds that their glasses are practically window pane glass. So it is no wonder that their children crave eyeglasses to be attractive also. It does not take a very long time, however, to discourage a colored boy about wearing glasses. I just start talking about baseball and other games where eyeglasses would be troublesome and that is all that is necessary. In a very short time he has normal sight if he practices the method faithfully.

The Frolic of the Thirteen

We spent an hour at the clinic before the party and when we arrived a surprise was awaiting us. Thirteen kiddies were all arrayed in their Sunday best and two of them presented us with bouquets of roses and carnations. They came from grateful mothers and I am certain that it meant a great sacrifice to them. The coming event must have had a good effect upon their sight for twelve of them read 20/20 with each eye separately on strange cards.

Three of the sixteen were not there. One of them stayed away because she had put her glasses on again. Her teacher informed me that she did not do so well in her studies nor with her reading on the blackboard after she had put her glasses on again. I was sorry about this because when the girl took off her glasses she was immediately benefited by the treatment and soon obtained normal sight. She became more accurate in all her studies. It was a comfort to her to see better at the distance without her glasses than she ever saw with them. I was told that previously while wearing her glasses she read figures incorrectly and usually made serious mistakes. The school nurse had visited her mother and threatened to make trouble for her if the glasses were not put on the child again. This particular girl was one of the most nervous and unruly of any girl patient I ever had. She worried her school teacher because she found it hard to be truthful. During her treatment Dr. Bates and I noticed that as her vision improved, she became less nervous and her teacher said there was a marked improvement in her conduct in school. She is coming back again for treatment as her father refuses to keep glasses on her.

After clinic was over, two taxicabs drove the kiddies with the doctor and myself through the East Drive of Central Park. The flowers were budding here and there and it was like a moving picture show to watch the kiddies. One of them asked me if skunk cabbage grew in the park and who feeds the squirrels in the winter time. One of my little charges has never been to the country. The party was a decided success.

Right in the midst of our fun, though, two persons called for an interview with Dr. Bates. There he was, a boy all over again, playing parlor games and laughing heartily with the kiddies as though he had not a care in the world. I allowed the visitors who came such a long distance to see him, to have only five minutes of his time, otherwise it would have been a great disappointment to him to be denied the company of the kiddies. A game of forfeits was played and when Dr. Bates was called upon to forfeit something he gave his retinoscope. It was held over the head of the kneeling child, who was the arbiter of the fate of the owner.

"What should the owner do to redeem it?" was asked, and the answer was: "The owner must go to the next room and read the Snellen Test Card from top to bottom without a mistake." The doctor promptly did this, while two of the children went with him to see that it was read correctly.

I could go on telling more of the funny things that happened on that wonderful occasion, but there would not be space enough, but I would like to add that the children said as they filed out of the room: "Thank you for the party, but thank you most of all, Dr. Bates, for joining us in the fun."

I would like to say also that I have discovered that Dr. Bates is very fond of ice-cream. I can prove it because he did not refuse the third helping.

QUESTIONS AND ANSWERS

Q - When the memory is perfect the sight is also perfect? An eminent musician in Boston has a phenomenal memory for music but is so near-sighted that without glasses he could not see to find his way.
A - He sees music perfectly.

Q - You have said that imagining sensations of feeling, tasting, smelling, etc., are as effective as seeing in perfecting the eyesight. I know of a Professor of Psychology who is an expert in the field of smell. She has a remarkable ability to imagine odors, as I have heard her testify many times. She is so near-sighted that she has to have an attendant when she walks. I don't remember any definite statement as to her visual memory except that I remember her remarking that when she heard a name she always by some power of association saw distinctly some color. Her memory in other respects also seems far above the average. How would you account for her near-sightedness?
A - Strain to see.

Q - "The cause of this loss of function in the center of sight is mental strain and as all abnormal conditions of the eyes, organic as well as functional, are accompanied by mental strain, all such conditions must necessarily be accompanied by loss of central fixation."—"Better Eyesight," page 8, July, 1919. Why is this necessarily true if as you say on pages 8 and 9 of the same magazine different strain produces eccentric fixation from that strain which produces, for example, myopia.
A - Imperfect sight is always accompanied by loss of central fixation.

Q - In visualizing a black period what background should one see?
A - Not important.

Q - How would you explain by your theory this experience? A friend of mine who has far-sighted astigmatism for which she is wearing glasses, when working under pressure and with considerable nervous strain has no trouble with her eyes, but upon

completely relaxing during a vacation period is troubled with smarting and aching of the eyes.
A - Strain, not relaxed.

Q - "It is true that every motion of the eye produces an error of refraction but when the movement is short this is very slight and usually the shifts are so rapid that the error does not last long enough to be detected by the retinoscope, its existence being demonstrable only by reducing the rapidity of the movement to less than four or five a second. *The period during which the eye is at rest is much longer than that during which an error of refraction is produced.*"—"Better Eyesight," December, 1919, page 1. I do not understand the italicized statement. You have said that the normal eye is continually shifting. If every motion of the eye or the object of vision ("Perfect Sight Without Glasses"), page 107), produces an error of refraction how advise reading in a moving vehicle, or attending a moving picture show?
A - Moving pictures do not move when seen. Reading in a moving vehicle is common as the page may be stationary with the eye.

Vision remains clear because: when watching the movie, the characters, scenery are constantly moving, changing and this keeps the eyes moving, shifting often.
It is only when the eyes move very slow, infrequently or stop moving (staring) that the temporary blur produced by eye movement is seen.
When the eyes move easily, frequently, blur is not seen, vision remains clear.
This same fact occurs when reading a book in a moving car, train; the book moves about and if the eyes stay relaxed and move with the book, without trying to lock the eyes onto it: shifting, eye movement occurs and the neck, body move, stay relaxed. This keeps the vision clear.

Third Monthly Meeting
BETTER EYESIGHT LEAGUE
8:00 P. M., JUNE 13th
Room 405
300 MADISON AVENUE NEW YORK CITY

Doctors are needed all over the world to cure people without glasses.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

July, 1922

"PAGE TWO"

ON page two of this magazine are printed each month specific directions for improving the sight in various ways. Too many subscribers read the magazine once and then mislay it. We feel that at least page two should be kept for reference.

When the eyes are neglected the vision may fail. It is so easy to forget how to palm successfully. The long swing always helps but it has to be done right. One may under adverse conditions suffer a tension so great that the ability to remember or imagine perfectly is modified or lost and relaxation is not obtained. The long swing is always available and always brings sufficient relief to practice the short swing, central fixation, the perfect memory and imagination with perfect relief.

Be sure and review page two frequently; not only for your special benefit but also for the benefit of individuals you desire to help!

Persons with imperfect sight often have difficulty in obtaining relaxation by the various methods described in the book and in this magazine. It should be emphasized that persons with good vision are better able to help others than people who have imperfect sight or wear glasses. If you are trying to cure yourself avoid people who wear glasses or do not see well. Those individuals are always under a strain and the strain is manifested in their face, in their voices, in their walk, the way they sit, in short in everything that they do.

Strain is contagious. Teachers in Public Schools who wear glasses are a menace to their pupils' sight. Parents who wear glasses or who have imperfect sight lower the vision of their children. It is always well when treating children or adults to keep them away from people with imperfect sight.

THE STORY OF VIOLET

BY W. H. BATES, M, D.

Just what, in simple words, is Central Fixation? If you will read this story of a ten-year-old girl who discovered it for herself you will know, not in terms of theory or in scientific phrases, but in practical simplicity.

SOME years ago a young girl, aged 10, was brought to me for the cure of imperfect sight and squint. She was wearing quite strong glasses for relief.

The right or squinting eye, even with her strong glasses, had very poor vision. The best she could see with this eye with or without glasses was counting fingers at about three feet. Looking straight ahead of her with this squinting eye, with the other eye covered, everything was visible and, she said, perfectly dark, and what she did see at any time with this eye was off to one side. She was unable to read with this eye with or without her glasses.

With her left eye her vision was improved by glasses so that she had about one-quarter of normal vision and could read large print with more or less difficulty for short periods of time. She usually had a headache every day and at times great pain in one or

both eyes.

Reading or studying her lessons was a punishment. Unlike other children she had no pleasure in reading story books. The trouble with her eyes interfered with her play. She spent most of her time sitting alone with no desire to talk and kept her eyes closed a good deal of the time. Without her glasses she could not read at all ordinary print.

The case to me was very interesting because of the results obtained in a short time, three weeks. When the mother asked me how long it would take, I believed and told her that if the girl got any improvement in three months she would be very fortunate. In fact she was practically cured in a week but I was so fearful of a relapse I had her come a few weeks longer to be sure she retained what she had gained.

Glasses Off

The first thing I had her do was to discard her glasses altogether. With both eyes open her vision was 10/200. When she was able to see the large letter on the card clearly or well enough to tell what the letter was, I asked her if she saw it all alike. She said "No." She told me that she noticed that when she looked at the top of the letter she saw it best and the bottom worse. When she looked at the bottom of the letter she saw the bottom of the letter best and the top worse.

"But," I said, "The top is just as black as the bottom and one side is just as black as the other side. The letter is perfectly black in all parts."

"Yes," she said, "but I do not see it that way."

I told her to try it that way. She said at once the letter blurred so that she could not tell it. When I brought the letter up close, at three feet away she saw it more distinctly than at ten feet.

"Now," I said to her, "when you try to see the letter all alike what happens?"

She answered, "It blurs and if I try hard enough I cannot even tell what the letter is."

I said to her, "You know the letter is perfectly black and when you see one part best you are seeing something that is not so, aren't you?"

"Yes," she answered.

"Now when you see something that is not so you do not really see it—you only imagine it, don't you?"

She answered, "I do not see one part best, I only imagine it."

Then I pointed to the second line, first letter, "Can you imagine the top of this letter is blacker than the bottom? Make believe it is," I told her.

"Oh," she said, "I can make believe it is, I can imagine the top best."

"Can you imagine the bottom best if you want to?"

"Yes I can imagine the bottom best and the top worse."

"What letter is it?" she answered: "A letter R."

"Is the letter R as black as the big C?"

"No," she answered, "it is quite gray and all blurred on the edges."

"You know it isn't gray don't you?"

"Yes, I know it isn't gray but that is the way I see it."

"Isn't that an illusion? When you see gray you are seeing something that isn't true, aren't you?"

"Yes, when I see it gray I am seeing something that isn't true."

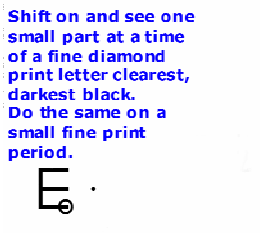
"Now suppose you make believe that the letter R is just as black as the big C, which it really is. Can you do that?"

"I can make believe it is, I can imagine it is, but I have to imagine one part at a time."

"All right," I said, "I can forgive you for that. Keep on imagining one part is blacker than the rest," and then she screamed with delight.

"Oh goody, the whole card is getting better and I can see a thousand times more then I could before."

Better Vision Quickly



In her eagerness to prove that her sight was better, almost breathlessly, she read several lines.

I said to her, "Why do you stop?"

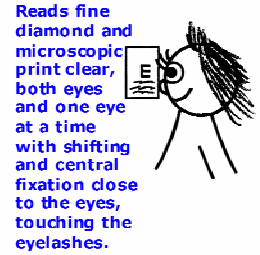
She answered, "They all turn gray."

"Oh," I said, "Nonsense, they didn't all turn gray. You only made believe they did. Suppose you make believe they are black all the time, not some times gray, and other times black, because they are not. You know those letters are continuously black."

"Yes I know it but I do not always imagine or make believe they are."

"Can you make believe they are?"

"Oh, yes I can and can read more of them," and this she did and apologized, saying that she could not read them or imagine them perfectly black unless she made believe she saw a part of the letter best.



I was very much impressed with the fact that this child had discovered for herself what I call Central Fixation or the ability to see a part of a letter better than the rest of it. She found, without any suggestion on my part, that she could not read any of the letters with maximum vision unless she did see one part best. When she came to the smaller letters she hesitated and failed to see them.

"What is the trouble?" I asked.

"Oh," she said, "They are so small it seems as though I ought at least to see a small letter all alike and tell what it is."

Then I called her attention to the fact that she could not tell any of those small letters when she tried to imagine the letters all alike. I brought the card closer and encouraged her to imagine one part best of the smaller letters. At a nearer point than ten feet she was able to imagine even the letters on the bottom line, one part best, and distinguish them. She was able to demonstrate that when she saw the small letters all alike that her sight was not so good. When she looked at the card at ten feet she became able, by alternating with looking at the card nearer, to see the small

Real Practice

She practiced with the card at home and did what very few of my patients are able to do, she improved her sight practicing by herself. In a few days her vision with both eyes together became normal. Then I had her cover the good eye, the left, and practice in the same way with the squinting eye, which had such very poor sight. With her eyes closed she could imagine one part best of a large letter at ten feet continuously. By flashing the large letter with the squinting eye, alternately, her ability to see one part best improved, at first in flashes and later more continuously.

When she was at home her mother said the child was spending all her time with the card. She shortened the time of her meals in order to be busy with the Snellen Test Card for a longer time. She even brought the card to the table and practiced with it while she was eating. It was difficult to induce her to go to sleep because she wanted to practice more. She was up in the morning soon after daylight and practiced with her card while she was dressing.

She very soon had her reward, for in less than a week's time she had normal vision with each eye and the squint disappeared never to return.

It was very interesting how she improved her ability to read fine print at the near point. When I asked her, "Do you see those small letters of the diamond type one part best?" she answered "Yes."

"Do you see the period of the diamond type one part best?"

"Yes, but when I get started I can read it so fast that I do not have time to notice that I am seeing the letters one part best."

Higher Mental Efficiency

This child accomplished what I have never seen anybody else do. **She could read the diamond type with each eye by central fixation so close to her eyes that the page touched her eye lashes**. She could read signs further off than any person I ever knew.

With the wonderful improvement in her sight came an increased mental efficiency. Her memory was unusual. She could read perfectly a page of history and because she saw it perfectly she was able to remember it perfectly. As a consequence her scholarship became very good indeed. Formerly she was at the foot of her class, afterwards she was at the head. She astonished her teacher with the quickness of her perceptions, her ability to understand. Formerly when her sight was poor she was a very unhappy, depressed person, later she was full of life and action and seemed to enjoy life to the utmost.

One day she met one of my patients on the street. "How are you getting along?" she asked. The patient answered gloomily, "Not as well as I would like. How are you?"

"Oh, I am all right. I am cured and I am very glad and happy over it. How much do you practice and how often do you go to see Doctor?"

"Oh, I practice once in a while, half and hour or so a day when I think of it and I call on the Doctor about once a week."

Then Violet exclaimed, "Oh how foolish, that isn't the way I did it. I wanted to get well and I wanted to get well quick and I did just exactly what the Doctor told me to do and the more I practiced the more I improved. I found it was a good thing to do what he said, so I did it. When he told me to remember a period all day long I did it. He told me to do a whole lot of other things and some of them seemed hard, difficult, but when I found I could do them they seemed easier to do and I am glad of it."

When the patient told me of the meeting with Violet he asked me why she improved so much more than he had improved.

I asked him, "Did you follow my instructions as enthusiastically as Violet did? Was there any reason, any real reason why you could not do it?"

"No," he answered, "There was no reason why I should not have practiced as faithfully as Violet but my eyes are so bad that it is difficult for the to do the right thing although you repeatedly had me demonstrate that to do the wrong thing was a strain, an effort and required hard work and made me uncomfortable. When I did the right thing it was easier and I felt more comfortable."

This patient after his meeting and talk with Violet came to the office more frequently, practiced more continuously and made surprising progress. In a few weeks he went back to his former state of mind, and did not do so well. I have always thought if he could have had Violet with him most of the time or could have seen her daily he would have done much better. Most of my patients always do better when they have someone with perfect sight to encourage them by their example or advice.

Better Eyesight

NO one interested in children should fail to read The Story of Violet in this issue. The facts of child vision in America today are startling. In the New York City public schools the percentage of children with imperfect vision, and wearing glasses, is very high. It is customary in many schools for the teachers to send any child with imperfect sight promptly to a doctor to be fitted with glasses. Most such cases are of recent development and can readily be cured by the new ophthalmology.

The Better Eyesight League, concerned with this state of affairs not only in New York but throughout the country, will devote its next meeting to its discussion.

The League is essentially an educational medium. It is an agency for the possible dissemination to thousands of parents and teachers of the wonderful information that can bring normal sight to tens of thousands of little sufferers.

Come to the meeting of the League, Tuesday, July 11, Room 504, 300 Madison Avenue, at 8 P. M.
And bring with you as many parents and teachers as you can. They will thank you for the opportunity of learning, for the children in their care, what many teachers and parents before them have gratefully learned of the possibilities of normal sight.

THE MEANING OF A LEAGUER

By Ross Varney

President, Better Eyesight League

IT is not a mere empty gesture to become a member of the Better Eyesight League. Those who attended its last meeting, in June, need no reminder of this; it was in the very air that night that the mission of the League is something finer than mere words, and its fulfillment to be realized by the endeavors and enthusiasm of each individual member.

The Secretary's report of work actually begun in relation to persons known to have imperfect sight, to physicians, teachers and industrial plant managers and welfare workers gave a new idea of the scope of our activities to many of those present. So, too, was Dr. Bates' incisive, well-considered message concerning general medical practitioners and the new ophthalmology, and the many-angled discussion that followed, instructive to every person there as to actual conditions and methods to pursue in bettering them.

But if this last successful meeting and the other successful ones preceding it have made one fact predominant, it is that the *cause of better eyesight rests in our individual hands*. We the members of the League, have assumed the work of propagating this tremendous, this health-and-vision-revolutionizing information. Every discussion of ways and means that has arisen has ended finally in dependence on the individual—on the League as the united medium of expression *but on the single member as the strength and motive spirit of the League*.

The League is concerning itself today with the problem—a most serious problem—of child vision. No worthier cause could occupy the thought and time of any person. It is a problem that can lie solved by education only—by education directed by the League and made effective largely through the individual efforts of the members of the League.

To bring about the beginning of an effective educational campaign in this one field alone will make the League a place in the history of national and social betterment. *And it comes down at first again to individual efforts in the League.* A pioneer group of teachers already is bringing blessings to many pupils by the use of the new science. More teachers to begin to do this in the public schools are needed now. With every new teacher thus put at work the education of a further two becomes more easy. A single teacher, interested by a Leaguer now, will *mean a dozen this time next year*.

Let every member realize that the League depends upon that member—now, in this matter of school education—and in every other work that may be undertaken.

HOW CHILDREN HAVE HELPED THEIR PARENTS

By Emily C. Lierman

"A little child shall lead them," is sometimes true in matters of health as well as things spiritual. More than one suffering mother has found relief through the guidance of a child, acquainted at the clinic with the new methods of obtaining normal vision.

ONE day a little girl ten years of age came for treatment of her eyes. She was alone and explained that her mother was unable to come. Her name was Mary.

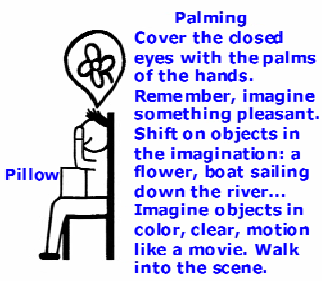
She complained that she had headaches, and the pain in her eyes was so bad that at times she was put to bed for a few days. Her mother told her she was to ask for glasses. The doctor in school ordered her to get them.

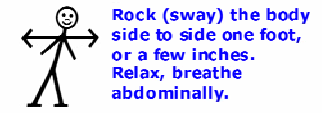
At first I found it hard to make her smile. Her head and eyes pained her so much that she found it hard to look pleasant. Then, too, she did not want glasses. They frightened her, she said.

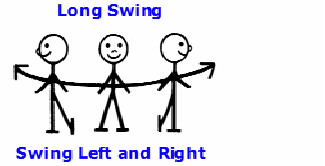
I placed her in a comfortable position and showed her how to palm. (See palming picture, directions on right and last pages this book.) After I had treated several patients, I asked Mary to remove her hands from her eyes and, to look up at me. She did so and smiled. That was encouraging. Adults, especially some women I know, imagine that there is something wrong when one smiles. Mary smiled because the palming cured her pain.

Her sight was tested and I found her vision was normal. While she was standing I taught her how to swing her body from side to side, first on one foot, then on the other. I did the swinging motion with her to be sure she was doing it right. At first she complained of dizziness which showed that she was making an effort or trying too hard. When I told her to take it easy and swing more gracefully, the dizziness left her and she became more relaxed and enjoyed it.

"I could keep this up all day," she said. "I like it because all may pain is gone." She was instructed to keep up the palming and swinging at home and to come again the next clinic day.







The Mother Next

When Mary came again her mother was with her. The mother was anxious to know what there was about palming and swinging that could cure eye strain. Was it a faith cure or did we perform a miracle? She said that Mary had suffered for a long time with pain in her eyes which prevented her from attending school regularly. But for the last few days Mary, after school, had played with the children in the street instead of going to bed. She had studied her home work without being told to, after palming her eyes for ten minutes or longer.

The mother was also anxious for me to know what palming had done for her. "At first my husband and I thought Mary was joking," she said. "We did not think that such a simple thing as covering the eyes with the palms of the hands could relieve pain.

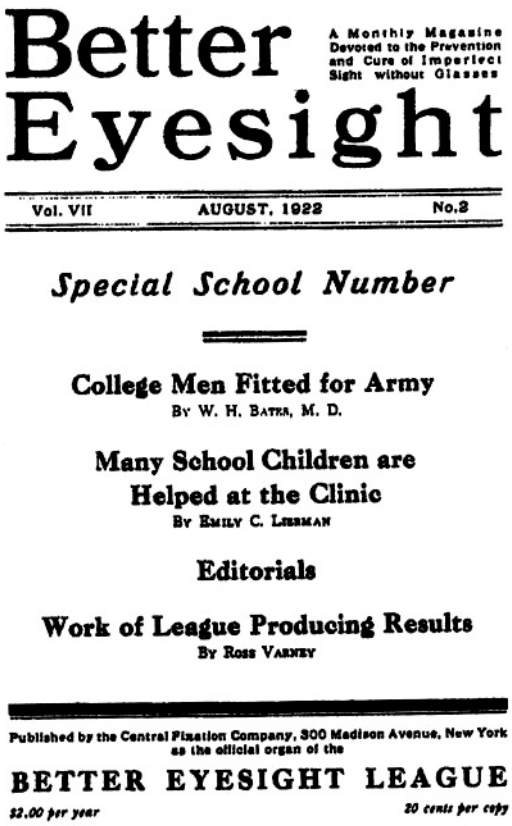
Ever since my children were born I have suffered with backache and my eyes have been troubling me. Mary suggested that I should try the palming also. **My eyes were rested and my backache left me**. Now, won't you please tell me about the swing, too?"

I went through the motions with her until she was able to do it. The last time I saw her she told me she was not half so cross with her babies since she learned how to swing her body and see things moving. Palming helped her to read evenings to her husband. Mary does not complain of pain any more, she said. She is more willing to help her mother about the house and never retires until bed time. Relief from strain, relaxation through palming and swinging the body from side to side, cured this tired mother and Mary.

Anna's Mother

Anna, a very bright girl of twelve years, born of Jewish parents, unconsciously helped her mother at a very critical time, when most expectant mothers worry and suffer, most of them silently and uncomplainingly. Anna was very near sighted and had to have treatment for a long time before her sight improved at all. Her vision a few months ago was 10/70 in both eyes. Now she reads 15/15. Anna obtained a test card to practice with at home. This interested her mother so that she herself practiced palming.

One day the mother came to the clinic with a tiny bundle to her arms. With a smiling face she asked me to please look at her baby boy. So proud she was as she held out her arms for me to see. "I want to tell you," she said, "that palming helped me so much just before my baby was born. I thought of you and Dr. Bates at the time, and it helped me to relax. I am so glad my daughter came to you." This made me very happy because the mother tried the palming of her own accord. Her daughter received benefit, why shouldn't she? A great deal of credit is due her because her own good judgment was all that was necessary. Dr. Bates has records of patients who were benefited greatly in this way. **Some women have told him that palming and imagination of the swing, gave them great relief and freedom from pain during childbirth.**



Better Eyesight

A Monthly Magazine Devoted to the Prevention and Cure of Imperfect Sight without Glasses

Vol. VII AUGUST, 1922 No.2

Special School Number

College Men Fitted for Army
By W. H. Bates, M. D.

Many School Children are Helped at the Clinic
By Emily C. Lierman

Editorials

Work of League Producing Results
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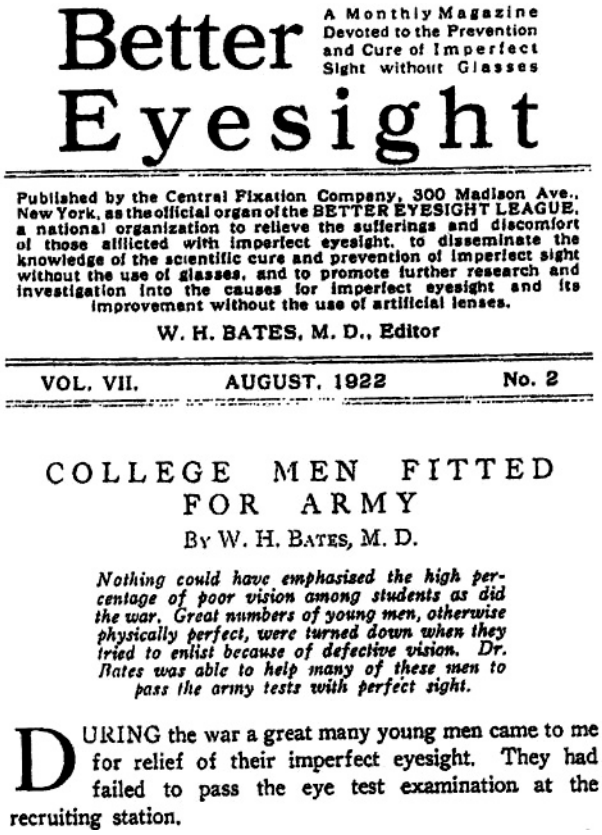
Published by the Central Fixation Company, 300 Madison Avenue, New York as the official organ of the
BETTER EYESIGHT LEAGUE
$2.00 per year 20 cents per copy



Better Eyesight

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W. H. BATES, M. D., Editor

VOL. VII. AUGUST, 1922 No. 2

COLLEGE MEN FITTED FOR ARMY

By W. H. Bates, M. D.

Nothing could have emphasised the high percentage of poor vision among students as did the war. Great numbers of young men, otherwise physically perfect, were turned down when they tried to enlist because of defective vision. Dr. Bates was able to help many of these men to pass the army tests with perfect sight.

DURING the war a great many young men came to me for relief of their imperfect eyesight. They had failed to pass the eye test examination at the recruiting station.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

August, 1922

Special School Number

SCHOOL CHILDREN'S EYES

THE cure and prevention of imperfect sight in school children is very simple.

A Snellen Test Card should be placed in the class room where all children can see it from their seats. They should read the card at least once daily with each eye separately, covering the other eye with the palms of the hands, in such a way as to avoid pressing on the eyeball. (Or a eye patch can be used on the eye not in use. Eye is open under the patch) The time required is less than a minute for both eyes. The card measures the amount of their vision. They will find from time to time that their eyesight varies. Some children are very much disturbed when they cannot see so well on account of the light being dim on a dark or rainy day and although they usually learn the letters by heart they do not always remember or see them. It is well to encourage the children to commit the letters to memory because it is a great help for them to see them. When a child can read the Snellen Test Card with each eye with perfect sight, even although they do know what the letters are, it has been found by numerous observations that their eyes are also normal and not nearsighted, farsighted nor do they have astigmatism. Many children find that when they have difficulty in reading the writing on the blackboard that they obtain material help after glancing at the Snellen Test Card and reading it with perfect sight. Familiar, memorized objects relax the mind, eyes, improve the memory and clarity of vision.

When the eye is at rest, perfect rest, it always has perfect sight. A great many teachers and others condemn the method unwisely because they say that the children learn, and because they know what the letters are, they recite them without actually seeing them. With my instrument I have observed many thousands of school children reading the Snellen Test Card apparently with perfect sight, the test card that they had committed to memory, and in all cases never did I find anything wrong with their eyes.

About ten years ago I challenged a Doctor, a member of the Board of Education, to prove that the children deceive themselves or others by saying that they see letters when they don't. To me it is very interesting that the most wicked child in school no matter how he may lie about other things with great facility and gets by with it, was never caught lying about his eyesight. I believe that every family should have a Snellen Test Card in the home and the children encouraged to practice reading it for a few minutes or longer a number of times every day. Some children are fond of contests and quite often a child who can demonstrate that his vision was the best of any pupil in the class had a feeling of pride and satisfaction which every one in sporting events can understand.

COLLEGE MEN FITTED FOR ARMY

By W. H. Bates, M. D.

(Military Story)

Nothing could have emphasized the high percentage of poor vision among students as did the war. Great numbers of young men, otherwise physically perfect, were turned down when they tried to enlist because of defective vision. Dr. Bates was able to help many of these men to pass the army tests with perfect sight.

DURING the war a great many young men came to me for relief of their imperfect eyesight. They had failed to pass the eye test examination at the recruiting station.

At one time, if a man failed to enlist on account of his eyesight, he was drafted and had to serve in some branch of the service which did not require good vision.

Paul had just graduated from the high school, when the war broke out, and found that he could not enlist because his sight was too poor. He had about 1/3 of the normal vision. He said to me, "I consider it a disgrace to fail to pass the examination for my eyes, I want to enlist in some crack regiment, I don't want to be drafted."

He was very ambitious to join the Marine Corps. He laid his heart open to me, and he was very much discouraged, very sore, and willing to do anything and everything within his power to have his eyes cured without glasses. He certainly had a strong incentive to get well. He would come to the office early in the morning, half past seven or eight, practice all the forenoon, take an hour off for his lunch, return and continue doing things to help his eyesight until nine or ten o'clock at night. He certainly was very earnest about it, and he attained a very unusual improvement in his sight in a short time, and was very happy over it, and he said to me, "now I've almost got perfect sight and can go back home and try to enlist," and he said, "do you suppose they will take me; do you think that I am able now to pass the examination?" I said to him, "you are not entirely cured, and I doubt that you will improve when practicing by yourself." Still he was eager to enlist, went back home, applied for enlistment, and failed, because his vision was still too imperfect.

At once he came back and said "I am going to stick it out this time, until you tell me that I am cured." And, he certainly did. In a few weeks time he became able to read 20/20 with each eye on a strange card as well as on a familiar one. I said to him "now you palm just as much as you possibly can the day before the test, and at other times during the day before you are examined, and that will make it possible for you to retain all that you have gained, and pass the test of good vision successfully."

Paul Gets Into the Marines

He went to his home, and afterward wrote me that he did just what I told him to and read 20/20 with each eye without any difficulty. I did not hear from him again for a year or more. He wrote me a long letter about his affairs. The following are some extracts:

"I went down to Paris Island, the Marine Training Camp, and underwent a very rigid physical examination, passing the eye test without any difficulty, 20/20. After eight weeks of severe training in the hottest part of the year, I went on the rifle range, where I made a score of 251 out of a possible 300 points. I was the second highest qualified man in my company, and was awarded a sharpshooter's medal."

His first stop in France was at Brest: he says "I had not been in Brest very long, when the call came for fifty men from each company who had high rifle range records to go at once to Chantilly for quick preparation, to enter the lines as machine gunners. It looked like action in two or three weeks, and we all worked hard, and one fine day the Armistice was signed, and it was all off. All interest in the work and drill ceased from that day."

A young man from Texas came to me about his eyes, which were so poor, that I could not understand how he ever passed the examination. "How old are you?" I asked him. Officially I am twenty-three years old, chronologically I am nineteen. You know, Doctor, you can't enter the ranks and become an officer unless you are twenty-one years old. Can't you do something for my eyesight?"

I was able to improve his sight in a very short time, so that he obtained 20/20 in each eye, which became permanent. What was interesting in his case was, that he went all through the war with imperfect sight, and after the war was over, he came to me to be cured. This young man said nothing about his adventures, never mentioned the war, but his father told me of one incident where a Texas regiment charged the German trenches and that his son began to cry like a child because a friend of his got to the trenches first and while he was in tears and shooting away, he saw a German poke a gun at his arm and take the sleeve off clean, without doing him any injury, and this German soldier was killed by the man who got to the trenches first.

The Twins Qualify for Service

At one time there came to the office two young men of twenty-one, twins, who were quite near-sighted, and who complained that they could not pass the medical examination in order to enlist. Their father, a wealthy manufacturer, came with them and enlivened the occasion by loud applause whenever one of the boys by palming, swinging, memory or imagination improved his sight decidedly. We had a rollicking time whenever the father was present, and I am quite sure, that his outbursts were more helpful than injurious. The twins had a great respect for him, as they should.

One of the boys read the whole card down to next to the bottom line and then stopped. "Keep going," shouted the father, those small letters won't do you any harm; there isn't as much to see as of the big letters," and much to my surprise the boy did read the bottom line, which meant temporary normal vision.

I really missed the old man when he ceased to visit with the boys. They came to me for several weeks after their father had returned home. They both were able to pass the examination and enter the service, for which they were grateful.

I had a college boy, whose name is Henry, come to me some years before the war started. By persistent treatment his imperfect sight was cured, and when the war broke out, he wrote me a very nice letter, saying that he had passed the examination and was now in active service.

I did not hear from him for some years, when one day my attention was called to an article in a magazine, in which my method was attacked and criticized for curing imperfect sight without glasses. Henry published a letter in the same magazine in which he defended my method and said it was all true that I cured people with imperfect sight by treatment without glasses.

Henry's Cure Was Permanent

One day he called on me, and I asked him, "how are you getting along?" "All right." "Can you read the bottom line on the familiar card?" "Oh, yes," he answered. Then I showed him a card that he had never seen before. All the letters were strange to him. "Can you read that?" I asked him. "I can," and he proceeded to read the whole card, standing as far away from it as he could get, with a vision of 18/10. I asked him if he ever had any relapses, and he answered, "no." "What do you do?" "Shift" he replied. **It was his constant shifting of his eyes to avoid staring and the strain that prevented him from having imperfect eyesight.**

The normal eye is all the time shifting, but it is done so easily, so readily, that most people do not notice that they do it.

A young man came to me from Princeton University and said that he had been told that I cured people without glasses. He thought that glasses were a great discomfort to him; that he had just as much pain, headache and imperfect sight wearing his glasses, as he had without them and he was very anxious to be cured.

I did not think he had very much money, but he paid my fee for the first examination, and told me he would call again when he had the money. He did call again about six months later, and I said to him, "how are you?" "All right" "You must have done what I told you to do, and you must have done it thoroughly and well." "Yes, I did," he said. "You do not need any more treatment; as far as I know you are cured."

Pilot

The Major was a college man, and they said he was the greatest devil that ever piloted a flying machine. His friends said that he did not know what fear was, but when he came to me, he says: "Doctor, I am worried. There are times when I am driving my machine, when my vision temporarily fails, and I can't see the compass. When I am flying high among the clouds, it is difficult for me to know whether I am flying right side up or upside down. I have heard that most deaths which occur to men who pilot flying machines are due to a temporary loss of sight. Is there anything that you can do to help me?"

What I told him to do must have been of some benefit, because he never had any more attacks of blindness, and as long as he was in the Aviation Corps, he never had any serious accidents.

I told him to take a small letter, about one-quarter of an inch in diameter, and paste it on the front part of his machine, in a position where he could see it all the time. Knowing what the letter was, it was very easy for him, with his wonderful vision to see that letter perfectly, and when he did, he saw everything else perfectly, because one cannot remember, imagine or see one thing perfectly, without remembering, imagining or seeing everything else perfectly.

MANY SCHOOL CHILDREN ARE HELPED AT THE CLINIC

By Emily C. Lierman

"A stitch in time saves nine," says an old proverb. Similarly there is no time when defective eyesight can be cured as easily and effectively as in childhood. Hundreds of pupils from the New York public schools have had their sight restored at Dr. Bates' clinic. Children with normal vision are always brighter mentally.

EVERY year toward the end of June our Clinic is a very busy place. Our room is usually filled with happy kiddies because it is promotion time. Some of them however are not fortunate enough to be promoted and I did not notice until a few years ago that the unfortunate kiddies always suffered more with their eyes than the ones who were promoted to a higher class. During the winter months, school children come flocking in from the district schools, all sent to us to be fitted for glasses. Since last December I have had but two cases that were not cured. This happened because in both cases the school nurse visited both mothers and threatened all sorts of things if the children did not put on their glasses again. These girls give unnecessary trouble to their teachers in school and it is all due to eyestrain. What a blessing it would be if our district nurses were given the privilege of learning how to benefit patients by our method of treatment. As they go about from home to home doing their wonderful work they could benefit mothers as well as the school children.

A middle aged woman of the clinic who was cured of eyestrain and who is mothering two little orphans, brought one of them named Ruth to us for an examination of her eyes. Ruth is a beautiful child and smiles all the time even though she is a cripple. She has large wistful eyes but acquired a bad habit of staring which caused a constant headache. Ruth soon learned to rest her eyes by just closing them often. She was taught how to blink often which is just what the normal eye does all the time. Ruth first entered school January, 1922, and at the end of six months was promoted to 2A and 2B, advance class. Fifteen out of forty-eight children were promoted. One of the fifteen was a boy named Jerry. I remarked to Ruth that Jerry must have been very proud to be the only boy bright enough to pass. "Why no," said Ruth, "Jerry was as mad as hops because the other boys were so stupid." Jerry undoubtedly did not cherish the fact that he was the only boy among fourteen girls.

Bertha Was Soon Made Happy

Bertha, age 13, was also interesting. She came to us for the first time on June 24, 1922. I asked her how she had heard of our treatment and this is what she said:

"There are so many of my school mates and friends who were cured by you and Dr. Bates and so I want to be cured too. I have worn glasses for ten years and now my sight is getting worse." Bertha did not need any encouragement such as most patients do. She said she knew we could cure her and would never wear her glasses again. Her trouble was divergent squint, that is, her right eye turned out. The sight in that eye was so bad that she could only see the largest letter of the test card, which is the 200 line letter at 20 feet. With her left eye she could only read the next line which is the 100 line letters. From the first visit Bertha's sight improved so much that on July 11, which was not a full month, she now has 20/20 in both eyes. Her squint is cured but when I hold my finger close to her eyes her right eye tires and turns out the least bit. She will continue to practice the treatment so that she might be cured before school opens in the fall.

Jennie, age 10 years, will always be remembered by Dr. Bates and me. She is the most intelligent kiddie of her age I ever saw. She has the most to say of any kiddie I know and the joke of it is that she says something when she talks. Most talkers do not impress you, they rather tire you; but not Jennie. Her left eye had caused her a great deal of suffering and pain for a long time, so she was ready to do anything to be cured. Her vision at the beginning was 10/200 in the left eye and 10/10 in the right. Now she has temporary normal vision in both eyes. While I was ill and could not attend Clinic for a few months, Jennie came in very handy. She was so small she had to stand on a stool to reach the letters on the test card with her finger tips. Dr. Bates would ask her to point to the different letters he wanted other patients to see which was a great help to patient and Doctor.

Jennie Turns Doctor

One day a boy sixteen years of age appeared for an examination. He was disagreeable and sneered because he wanted to be anywhere but the Clinic. As the room was crowded with patients Jennie took it upon herself to help along. She singled out this fellow and with a voice of authority said; "Now don't be afraid little boy the letters won't hurt you."
"Tell me how much you can see." At this remark the boy laughed as loud as he could and took it all as a joke. She finally convinced him that she was serious and before he left the Clinic he had normal sight. This boy had myopia and the vision in both eyes was 15/70 and when he left the room his vision had improved to 15/10 that day. He came a few times after that but he had no more trouble in retaining normal sight. Another day Jennie demonstrated her intelligence by treating a doctor who had come from the West to learn about the treatment. Of course she did not know she was talking to a Doctor for if she had, I fear Jennie would have lost her wonderful nerve. The doctor stood where he could observe best the patient being treated. Jennie approached him gently saying: "Now how do your eyes trouble you." One can imagine the doctor smiling at the little girl desiring to do so much for a big man. Without returning the smile she walked to her stool, chin up in the air as though she were a princess and as she pointed to a letter, asked the doctor if he could see it. The patients roared with laughter but that did not trouble Jennie in the least. The doctor

patient said "no" he could not see the letter she was pointing at, which was the 70 line. The doctor stood 15 feet away, so he had imperfect sight. She told him to palm which he did, in jest at first, but when he saw that the little girl was really trying to help him, he did as she told him. The result was, that the doctor's vision improved to 15/15 just because Jennie taught him how to rest his eyes by palming and alternately closing and opening his eyes. I want to add that Jennie is a very poor girl but is well cared for by a loving mother.

Better Eyesight

THE next meeting of the Better Eyesight League will he held Tuesday, August 8. Room 504, 300 Madison Ave., at 8 P. M. Be sure to come. There will he some interesting discussions.

One great influence for good which the League can perform is to spread news of the cure of imperfect sight without glasses among school principals and teachers.

Nothing is more pitiful than to see a little child peering out from behind heavy lensed glasses. A child with bad eyesight is slow to learn and is often nervous and unruly in school. He is hampered in his play and throughout life.

Members of the league should never lose an opportunity when talking to teachers to tell about Dr, states' wonderful work in the public schools.

Are you sending your friends the little folder "About Your Eyes" when you write them? This interesting little folder may be the means of helping many others to secure better sight! If you do not have a supply of these correspondence inserts write to the Better Eyesight League, 300 Madison Avenue, New York, and as many as you can use will he sent to you.

WORK OF LEAGUE PRODUCING RESULTS

BY ROSS VARNEY, *President*

IN RESPONSE to the series of questions sent out to members of the league and others many good suggestions and many offers of active support have been received.

One doctor writes from a little town in Texas, "Send me your literature and write out a lecture emphasizing the strong points in Dr. Bates' methods. I will be glad to deliver the message to the people here."

Other equally enthusiastic offers have been received. The work of the league is going on steadily. Each month letters and printed matter are being sent out which are producing results by interesting more people in the work.

Due to the fact that many members of the league were away for vacations the attendance at the July meeting was small but those who were present heard a most inspiring talk by Dr. Bates in which he outlined the fine results accomplished under great difficulties in the public schools in different parts of the country.

QUESTIONS AND ANSWERS

Q - If one's arms become tired while palming, will a black silk handkerchief covering the eyes produce the same amount of relaxation one gets from palming?
A - No. Palming is the best method for relaxation and improvement in vision. When tired of palming, the hands can be removed and the eyes kept closed until one feels relaxed.

Q - Will it still be necessary to continue practicing the methods of swinging and shifting after my eyes are cured?
A. No. When you are cured of eyestrain you will not be conscious of your eyes. However, if you strain then, you will know what to do to relieve the strain,

Q - Can squint be cured by treatment without glasses after an operation proved unsuccessful? Does age make any difference?
A - Yes, even when it is over corrected, done too much damage. No, age does not make any difference.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

September, 1922

COMPARISONS

IN practicing with the Snellen Test Card, when the vision is imperfect, the blackness of the letters is modified and the white spaces inside the letters are also modified. By comparing the blackness of the large letters with the blackness of the smaller ones it can be demonstrated that the larger letters are imperfectly seen. They really have more of a blur than do the smaller letters which cannot be distinguished.

When one notes the whiteness in the center of a large letter, seen indistinctly, it is usually possible to compare the whiteness seen with the remembered whiteness of something else. By alternately comparing the whiteness in the center of a letter with the memory of a better white, as the snow on the top of a mountain, the whiteness of the letter usually improves. In the same way, comparing the shade of black of a letter with the memory of a darker shade of black of some other object may be also a benefit to the black.

Most persons with myopia are able to read fine print at a near point quite perfectly. They see the blackness and whiteness of the letters much better than they are able to see the blackness of the larger letters on the Snellen Test Card at 15 or 20 feet. Alternately reading the fine print and regarding the Snellen Test Card, comparing the black and white of the small letters with the black and white of the large letters, is often times very beneficial. Some cases of myopia have been cured very promptly by this method.

All persons with imperfect sight for reading are benefited by comparing the whiteness of the spaces between the lines with the memory of objects which are whiter. Many persons can remember white snow with the eyes closed whiter than the spaces between the lines. By alternately closing the eyes for a minute or longer, remembering white snow, white starch, white paint, white cloud in the sky with the sun shining on it, and flashing the white spaces without trying to read, many persons have materially improved their sight and been cured.

AN EDUCATOR OFFERS PROOF

Received too late for publication in the special August School number of Better Eyesight is the following report by Professor Husted, Superintendent of Schools of North Bergen, N. J., of the astounding results in the improvement of children's vision achieved through the use of Dr. Bates' methods. The report, made independently by Professor Husted to the school commissioners of his locality, is definite, irrefutable proof, from an unquestionably neutral observer, of the efficacy of those methods.

IN the schools of North Bergen, New Jersey, are some six thousand children. They are, besides being children of a typical near-metropolitan community and a part of the coming generation of our citizens, men and women, a representative living laboratory of childhood. And in that laboratory has been performed a practical test by Professor Husted, Superintendent of Schools, the results of which are stated by him in the subjoined extract from a regular report to his school commissioners.

They are of vital significance.

Professor Husted's report says:

High Spot Normal Eye Health Crusade a Successful Three Years' Experiment

Early in October, 1919, under the direction of our school nurse Miss Marion McNamara, a Snellen Test of the eyes of all of our pupils was made. A novel health experiment was begun, a campaign for "Better Eyesight." In June a second test was made in order to verify the value of progress in this phase of health work. The June test of 1920 shows marvelous, practical, successful results. Only the skepticism of principals, teachers and pupils and lack of faithfulness in carrying out its conditions, prevented the wonderful results achieved from paralleling those of an Arabian Knight's story.

Eye Strain

Swift says: "Eyestrain is so frequently the cause of headaches that the more intelligent physicians now make this the starting point in their diagnosis. It may produce loss of ambition, disinclination to study and apparent dullness. It may even develop predisposition to epilepsy and insanity. The apparently organic diseases which may be caused by uncorrected ocular defects seem to cover the entire field of pathology.

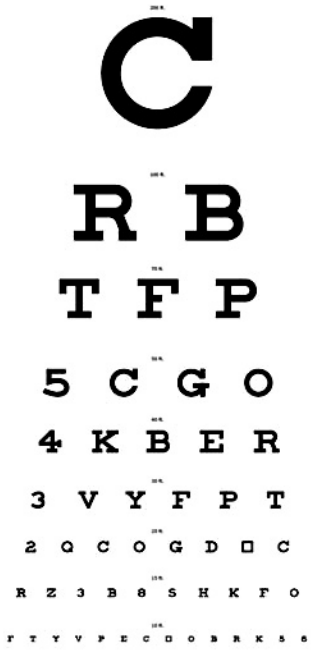
Eyestrain sometimes reacts upon the moral nature and may even result in a permanently perverted disposition. Children who can focus their eyes for near objects only by constant and severe effort, cannot be expected to enjoy studying."

Myopia and Other Errors of Refraction

Bates says: "You cannot see anything with perfect sight unless you have seen it before. When the eye looks at an unfamiliar object it always strains more or less to see that object, and an error of refraction is always produced. When children look at unfamiliar writing, or figures, on the black-board, distant maps, diagrams, or pictures, the retinoscope always shows that they are myopic, though their vision may be under other circumstances absolutely normal. The same thing happens when adults look at unfamiliar distant objects. When the eye regards a familiar object, however, the effect is quite otherwise. Not only can it be regarded without strain, but THE STRAIN OF LOOKING LATER AT UNFAMILIAR OBJECTS IS LESSENED.

This fact furnishes us with the means of overcoming the mental strain to which children are subjected by the modern educational system. It is impossible to see anything perfectly when the mind is under a strain, and if the children become able to relax when looking at familiar objects, they become able, sometimes in an incredibly brief space of time, to maintain their relaxation when looking at unfamiliar objects."

Bates: The Prevention of Myopia in School Children, N. Y. Medical Journal, July 29, 1911.



Shift on small letters on a familiar (letters memorized) eye chart daily.
Practice with both eyes and one eye at a time using the eyepatch.
This relaxes the mind, eyes and keeps the vision clear.

A Snellen test card was placed permanently in the room. The children were directed to read the smallest letters they could see from their seats at least once every day, with both eyes together and with each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. Those whose vision was defective were encouraged to read it more frequently, and in fact needed no encouragement to do so after they found that the practice helped them to see the blackboard, and stopped the headaches, or other discomfort, previously resulting from the use of their eyes.

In 1911 and 1912 the same system was introduced into some of the schools of New York City, with an attendance of about 10,000 pupils. Many of the teachers neglected to use the cards, being unable to believe that such a simple method and one so entirely at variance with previous teaching on the subject, could accomplish the desired results. Others kept the cards in a closet except when they were needed for the daily eye drill, lest the children should memorize them. Thus they not only put an unnecessary burden upon themselves, but did what they could to defeat the purpose of the system, which is to give the children daily, exercise in distant vision with a familiar object as the point of

fixation. A considerable number, however, use the system intelligently and persistently, and in less than a year were able to present results showing that of three thousand children with imperfect sight over one thousand had obtained normal vision by its means."—Bates, Myopia Prevention by Teachers, N. Y. Med. Jour., Aug. 30, 1913.

The following summary shows the remarkable results of the North Bergen experiment in the use of the Bates System. The first grades are omitted because of the difficulty in making accurate tests.

Grades II. to VIII.

Schools	No. Tested			No. Absent 2nd Test		
	1920	1921	1922	1920	1921	1922
Grant	72	100	133	0	4	19
Robert Fulton	359	498	672	11	4	122
Franklin	341	339	418	17	3	54
Lincoln	388	585	873	21	21	135
Hamilton	211	225	204	12	1	8
Jefferson	526	542	609	33	16	41
Washington	353	543	538	11	15	67
Horace Mann	335	319	446	5	19	45
McKinley	144	157	312	17	5	36
Totals	2729	3308	4205	127	88	527

Schools	No. Below 20/20 Normal Standard			No. Below Improved			% Improved		
	1920	1921	1922	1920	1921	1922	1920	1921	1922
Grant	36	31	31	30	16	19	83.3	51.6	61.3
Robert Fulton	112	127	152	76	84	56	75.2	66.1	36.8
Franklin	103	102	100	53	53	53	61.6	51.8	53.0
Lincoln	169	131	162	103	90	71	69.4	68.6	43.8
Hamilton	78	60	42	48	40	22	72.7	66.6	52.4
Jefferson	216	181	147	109	117	86	59.5	64.6	58.5
Washington	184	134	136	107	84	80	63.4	62.6	58.8
Horace Mann	96	70	100	66	42	61	72.5	60.0	61.0
McKinley	75	38	91	55	21	52	94.8	55.2	57.1
Totals	1049	874	961	647	547	500	70.1	62.5	52.0

This is a remarkable demonstration of the priceless values of this method of treatment. That 647 or 70.1% of the 922 pupils below normal (20/20) should have been improved in eyesight in 1920, that 547 or 62.5% should have been improved in 1921, and that 500 or 52% should have been improved in 1922, is surely a marvelous showing. The record of improvement is suggestive of what a very faithful and systematic application of these health principles may accomplish. In 1920 there were 1,049 or 38% pupils out of 2,729 tested that were below 20/20 or normal standard, while in 1921 but 874 pupils or 26% out of 3,308 were found below normal, and in 1922 only 961 pupils or 23% were below standard. This cumulative improvement is credited to our health work of 1920 and 1921. This reduction from 38% to 26%, and then 23% must be due to those pupils who are benefited and remain in the North Bergen system. We have enrolled 389 new pupils from other systems this year. As the percentage of pupils below standard becomes less, (38%, 26%, 23%) the percentages of improvement has become less (70.1, 62.5, 52). This suggests that many cases remaining in our schools are less amendable to treatment and should, therefore, receive persistent and systematic attention.

Not only does this work place no additional burden upon the teachers, but, by improving the eyesight, health, disposition and mentality of their pupils, it surely lightens their labors.

Regular Monthly Meeting

At eight o'clock, at 300 Madison Avenue, New York City, the September meeting will be held, the evening of September 12.

Lack of space prevents, of course, the verbatim reporting of the various meetings but every one who can should surely be one of the gathering at each meeting of the League.

THREE THINGS WHICH WILL PRODUCE BETTER EYESIGHT

By Dr. W. H. Bates

In this article Dr. Bates offers some remarkably helpful suggestions for those who are trying to improve their sight without the use of glasses. Every reader should study the ideas offered here very carefully.

THERE are three things which are important or necessary for the patient to practice while under treatment. The most important of all is to see things moving, or rather to be conscious that stationary objects are moving, in the opposite direction to the movement of the eyes. (Oppositional Movement, 'The Swing') Unless this is done continuously one is apt to imagine stationary objects are stationary which is very injurious to the eyes. When riding in a railroad train one can imagine the telegraph poles, trees, hills, the houses and the scenery moving in the opposite direction. When one drives an automobile it is important to watch the road straight ahead, and while the car is going forward the road appears to come toward the driver and he is very apt to pay little or no attention to the movement. He does not try to imagine the road is stationary, as he knows by experience that it is impossible, and the effort makes him uncomfortable. However, the passenger in the car is interested in the scenery off to one side, and in order to see things more clearly they make an effort to imagine things are stationary. For this reason alone some people suffer from headaches, nausea

or other disagreeable symptoms when riding in a motor car. They complain that moving objects make them uncomfortable. It can always be demonstrated that it is not seeing things move which is uncomfortable but rather it is trying to stop the movement which causes the discomfort. Objects that are apparently moving rapidly are not seen clearly or perfectly. They are seen better when the car is not moving. One of the first things I have my patients demonstrate is that it is impossible to keep the attention fixed on a point and imagine it stationary for any length of time, and that the effort to do so is disagreeable and lowers the memory and imagination and sight.

Many people can remember a small letter **o** and imagine the white center as white as snow, or a white cloud in the sky, or very white starch. They can also imagine a little black period on the right edge of the o and imagine it perfectly black for a few seconds or longer, but the longer one tries to remember or imagine the more difficult it becomes. The eyes and the mind become tired and the period is forgotten and the letter q is seen for a short time, when trying to imagine the period and the o stationary. It is impossible to concentrate on one point continuously. The dictionary says that concentration is an effort to keep the attention fixed on a point only and not to see anything else. To concentrate on a period on the right edge of the o continuously is impossible, and trying to do so is a great strain. All persons with imperfect sight consciously or unconsciously are trying constantly to do the impossible, to concentrate.



Shift part to part, left and right, top and bottom, any direction on the o and see it swing - oppositional movement.

Shift easy, continually from one small part of the o to another: left and right, top and bottom, diagonally… Trace around the o on the black ink counterclockwise, clockwise. Blink. The eyes remain relaxed and the o clear.

Stationary Objects Should Seem to Move

To see things moving all the time or rather to imagine the illusion that all stationary objects are moving opposite to the movement of the eyes is a great help in curing imperfect sight. It is well for the patient to have someone to remind them at frequent intervals of the movement of stationary objects. Many persons, when they are talking to you, feel it the proper thing to keep their eyes fixed continuously on your face, that is to say, to stare at you. Instead of moving their eyes from one eye to the other or from one side of the nose, to the other they stare at one eye continuously which lowers the vision and may cause headaches or some other discomfort. It is well to get into the habit of imagining the faces of the people are moving from side to side. To do this the patient requires constant supervision. In many cases when one becomes able to imagine things all day long, moving with a slow, short, easy movement from side to side, the vision becomes normal. If any other treatment, like palming or flashing or use of the memory or imagination helps the sight, the patient's ability to see things moving all day long is also benefited.

Objects moving = eyes are moving, shifting. Experience the illusion of oppositional movement, the swing: Shift on the letter o: left and right, top and bottom… and see the o move, 'swing' in the opposite direction the eyes shift to. The o is a stationary object. The shift of the eyes causes the o to appear to move. This swinging movement is very restful, relaxing to the mind, eyes and brings clear vision.

Snellen Card and Fine Print

A card with letters printed on it can be used in such a way as to obtain perfect relaxation with consequent perfect sight. The Snellen Test Card has letters of different sizes arranged in such a way that one can measure the amount of vision of the patient, more or less perfectly. The Snellen Test Card, when placed in a school room and read every day, with each eye separately, by the pupils, always improves the sight, provided the children do not wear glasses. Most children under twelve years of age are cured in a very short time, a few weeks, or even less, but if they wear glasses they cannot be cured unless they stop wearing them. In families where the parents have poor eyesight and wear glasses it often happens that the children sooner or later appear to need glasses also. However, if they read the Snellen Test Card every day, at 20 feet, with each eye, imperfect sight is always prevented.

Children who are older than twelve and all children who have worn glasses require a much longer time to obtain benefit from the use of the Snellen Test Card. Some of these cases may require three months, six months, or even longer. When one studies the facts it seems remarkable the amount of damage that can be done to the eyes of children from wearing glasses. Only persons who are graduates of medicine should be permitted to prescribe glasses. In some cases it is well to require a knowledge of the eye and its numerous diseases. Patients come to me wearing glasses which do not improve the sight, rather lower it, who have disease of the optic nerve, or disease of the retina of very serious nature. I have seen patients, condemned to cataract, wearing glasses which did not improve their eyesight. Patients with glaucoma, a very treacherous disease, I have observed wearing glasses that they obtained from some optician or from some ignorant so-called eye-specialist.

Glasses Keep up the Eye Strain

It is a mistake to believe that even though the glasses do no good they cannot do harm. Glasses keep up the strain. A person wearing glasses for myopia has to strain all the time in order to make the eyeball elongated sufficiently to fit the glasses. It can be very readily demonstrated, as I have frequently published, that under favorable conditions all persons with myopia are temporarily normal. When they try to see they strain in such a way that the eyeball becomes nearsighted. Some days they strain more than other days, and many people tell me that they notice that, with their glasses on, their vision was extremely variable. The same is true with other errors of refraction. Reading the Snellen Test Card twice a day or oftener, after glasses are discarded, is a great help in improving the sight. If one can memorize the letters of the Snellen Test Card and imagine that they can see the smallest letters on the card at 15 ft. or 20 ft., it can be demonstrated that their eyes are normal. I believe this is a discovery worth emphasizing. Always, when a patient imagines he sees or reads the letters on the Snellen Test Card with perfect sight the retinoscope

demonstrates that the eye is normal and he is able to read the card with normal vision. I have no exceptions. One patient who had 40 diopters in myopia, when looking at a blank wall and not trying to see the retinoscope flashing the reflection of a light on to the center of sight, demonstrated that the eye was normal for longer or shorter periods; that when the patient regards the Snellen Test Card, 40 diopters of Myopia can be demonstrated.

While reading the Snellen Test Card gives great benefit to many people it should be realized or known that there are some cases who can be cured better without reading the Snellen Test Card. For some persons the Snellen Test Card is a PESSIMUM and the vision is lowered whenever some people regard it. I have seen a great many persons with normal sight when they regarded any ordinary objects, people's faces, houses, trees, flowers, who became highly myopic with considerable astigmatism whenever they look at the Snellen Test Card. One such person I cured was a champion rifle shot. When he looked at a bull's eye his vision was unusually good but when he looked at the Snellen Test Card he had compound hypermetropic astigmatism with a vision of one-quarter of the normal. Glasses in such a case would have been a crime.

Glasses are often prescribed for normal eyes, with normal clear vision that experience temporary less clear vision during a eye exam in the Doctor’s office due to nervousness or pressure to hurry, uncomfortable, inaccurate test conditions, equipment.
The eyeglasses maintain and increase the temporary unclear vision.
If eyeglasses were avoided, the temporary blur would have naturally reversed back to normal clarity after the eye exam.
Many people develop vision impairment after receiving an unnecessary eyeglass prescription.

Palming

One of the three things which patients are recommended to practice for the cure of their imperfect sight is to palm at least six times daily for five minutes or longer each time. Some persons with very poor eyesight who were anxious to recover as soon as possible have palmed nine hours daily with wonderful benefit. Palming for such long periods of time requires supervision because palming, like many other things, while it is, when done properly, a great benefit, can be used wrong. Instead of the vision improving many people have lowered their vision by palming. Instead of resting their eyes they would strain and would imagine all kinds of colors. Resting the eyes by closing and covering them with the palms of the hands improves the sight of most people. Some persons have obtained a cure by palming only. When the vision is not improved by palming do not practice it until one can learn how to palm properly. Palming has cured so many people that I always recommend it very highly to all my patients.

THE SUN TREATMENT CURED THIS COLORED GIRL

By EMILY C. LIERMAN

NOT long ago a colored girl, aged 17, came to have her eyes fitted for glasses. As she stood among others waiting for treatment, I watched her as she tried in vain to keep her eyes open. She made all sorts of grimaces and her mouth was distorted as she kept trying to see things about her. One of our office patients who came to see how the work was accomplished at the Clinic was standing beside me and as she observed this colored girl, remarked: "Isn't she disagreeable looking? Do you suppose she will let you cure her without glasses?" My visitor was surprised when I answered. "She is in pain and cannot possibly look natural." I was eager to treat this girl because I felt that it was possible to relieve her suffering. She did not return my smile and I forgave her. I could not induce her to even glance at the test card because she said the light caused so much pain in her head and eyes. Palming seemed to relieve her so that she could open her eyes more with less pain, so she was instructed to rest her eyes, by palming often during the day. Two days later she appeared again and said that palming did not always help her. I decided to try the sun treatment and see if that would help. I placed her on a stool at a window where the sun shone in and told her to look down as far as possible to be sure she would not look up at the sun during the treatment. I raised her upper lid and with our sun glass I flashed the strong rays of the sun on the sclera. This only required a part of a minute and the effect was instantaneous. First thing she did was to look up at the sun and then at me. What a change came over her face. For the first time she smiled and showed her pearly white teeth. All she said was, "Pain is all gone Mam." She returned again on a sunshiny day for more sun treatment but she no longer complained of pain. The first treatment had cured her. On this same day we had another patient whom I know will interest our readers.

Eye Trouble Often Due Merely to Foreign Substances

A woman who could not speak a word of English tried very hard to tell of her suffering. Her son, aged 14, was with her and he repeated to me in English what she told him in Greek. Twice she had the muscles of her left eye cut in order to relieve her pain. She was discouraged the boy said, because two operations had done her no good. I examined her eye very carefully and when I turned her upper eyelid inside out, I discovered two small eyelashes growing in. This had caused all her suffering because every time she closed her eye the end of these eyelashes rubbed the cornea of her eye. Under the supervision of Dr. Bates I promptly removed the two lashes with a pair of tweezers and immediately her trouble was over. I cannot describe my pleasure and happiness when our patients show their gratitude after their sufferings are relieved. My heart overflows with thankfulness because I am able to help.

Dr. Bates told me that day about a patient who came to him who had been treated medically by other doctors for syphilis. When he did not respond to the treatment the medicine was changed and then they gave him treatment for rheumatism. The pain still continued so he called on Dr. Bates. Dr. Bates examined his eyes and found a foreign body, a cinder lodged in his cornea. This was removed and, for the first time in weeks, the poor man was relieved entirely of pain. I could go on describing such cases but I must leave room for something perhaps more important to our readers.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

October, 1922

PRACTICING

A GREAT many people have asked, "How much time should one devote to practicing the methods of central fixation in order to be cured of imperfect sight without glasses?"

The answer is—ALL THE TIME.

+One should secure relaxation or rest until one is perfectly comfortable and continue feeling comfortable as long as one is awake.

+The feeling of relaxation or comfort can be obtained with the memory of perfect sight. Even if one cannot remember perfect sight one can imagine it. All black objects should be imagined perfectly black. All white objects observed should be imagined perfectly white. All letters observed should be imagined perfectly and everything that is seen should be imagined perfectly.

+To imagine anything imperfectly requires a strain, an effort, which is difficult. Choose the easy way. Imagine things perfectly.

+If you try to imagine an object as stationary you will strain and your sight become impaired. All day long the eyes are moving from one point to another. Imagine that objects are moving opposite to the movement of the eyes. If one does not notice this one is very apt to strain and imagine things stationary.

+One can practice properly for ten minutes and be comfortable. That does not mean that all the rest of the day one can strain and tear one's eyes all to pieces without paying the penalty for breaking the law. If you are under treatment for imperfect sight be sure to keep in mind all day long from the time you wake up in the morning until you go to bed at night the feeling of comfort, of rest, of relaxation, incessantly. It is a great deal better to do that than to feel under a strain and be uncomfortable all day long.

THE MINISTER

By W. H. Bates, M. D.

65 Year of Age Man – Clearer than 20/20 Close and Distant Vision

The case of this minister is interesting because he found out by himself that rest is a cure or prevention for eye troubles. He reached the same truth, partly by accident, that has been demonstrated scientifically by my experiments, research and successful practice.

HIS daughter came to me for treatment of imperfect sight from myopia. After she was cured she told me that she had two brothers who also wore glasses, but that her father, a minister, 65 years old, had perfect sight in each eye, for distance and for reading and had never worn glasses. I was very much interested in the father. At my request he came to the office for an interview.

His vision in average sunlight was 20/10 with each eye. An ophthalmoscopic examination revealed a normal eye with no evidence of any disease whatsoever. He read diamond type at six inches or less and as far off as he could reach, about twenty-four inches or further. I told him that his eyes were unusually good not only for the near point but also for the distance. I asked him to tell me how he had escaped glasses for reading.

"Well Doctor, when I was about 45 years old," he informed me, "I had some trouble with my eyes after a period of hard work. As my eyes are very necessary to me in my work, I felt that I could not afford to neglect them and once consulted a well known eye-specialist. When I told him my age he was very much concerned and said that I should have had reading glasses sooner in order to prevent all strain and injury to my eyes. He gave me a prescription for glasses and insisted that I use them whenever I did any reading.

Professional vs. Common Sense

"He talked to me at great length and explained how the focus of the eye is changed from a far point to a near one by an alteration in the shape of the focusing lens of the eye, and that with advancing years the lens became harder as the bones becomes harder, with increased difficulty of the lens muscle to alter its shape. On account of this fact one must wear glasses to prevent strain and injury to the eye, he said.

"I obtained the glasses but did not have occasion to use them right away and found that after a few days of rest my eyes became as comfortable as they were before I consulted the specialist. I did some reading without the glasses and without discomfort. By resting my eyes frequently I became able to read for longer and longer periods of time. And so I let matters drift and I have never felt the necessity of glasses all these years. I must admit that I am very careful not to strain them and only read when they feel comfortable.

"Closing my eyes rests them and this I do quite often and I have become so expert that I can rest them by closing them for only a few seconds at a time. Momentary closure of the eyelids for a fraction of a second is beneficial to me."

I was delighted to hear him talk and told him that he had discovered and demonstrated that my methods for treating imperfect sight are correct. When I asked him to look at one letter on the bottom line, 20/10, and asked him if he could see it continuously, he

said he could. Then I asked him if he could imagine it moving from side to side, a very short, slow, easy movement. It was on the tip of his tongue to say something and then he said with an air of surprise:

"Why, I verily believe I do imagine it is moving, but the movement is so slow and so short and so easy that I would not have imagined it if you had not called my attention to it."

Then I said to him:

"Can you stop the movement?"

He looked away.

I said to him: "Why did you look away?"

He answered: "Because when I tried to stop the movement it gave me a pain and I lost the letter and the whole card became blurred."

He was ready to believe me when I told him that he could demonstrate that it is impossible to imagine a letter stationary and that it could be readily demonstrated that one could only remember, imagine, or see a letter which is moving.

Effect of Painful Memories

He also demonstrated that when he saw a letter, he saw always one part best and that his eyes were continually shifting from one part of a letter to another. If he tried to see the whole letter perfectly at the same time, he felt a strain and his vision became imperfect. He was one of the very few patients who was able to demonstrate that he could not see perfectly when looking straight at a letter, and that his sight was best when he looked a very short distance to each side of a letter. Staring always lowered his vision and produced pain.

He could remember a letter *O* with a white center perfectly white with a slow, short, easy swing and remember it continuously. He could remember a number of letters, which were perfect, but if he remembered or imagined a pain, his memory became quite imperfect. The memory of fatigue, the memory of a cough, a cold, rheumatism or any other disease or the symptom of any other disease, always impaired his memory and he could not remember a letter perfectly.

I told him that a perfect memory of white, black, red, green or any other color, prevented pain and he believed me. I suggested to him that being a minister he would have abundant opportunities of helping people who were sick in mind or body, that all he had to do was to teach them what he already knew about the sight and he would do them a great deal of good spiritually as well as mentally.

We had a very delightful hour together and I was sorry to see him go. Before he went, I asked him, "How is it that you did not do something for your daughter and your two sons instead of recommending them to me?"

He answered, "Doctor, I am not a physician; while my treatment was a benefit to me, I do not feel that the same treatment would be a benefit to other people. Of course I could not see any harm in it but at the same time I was timid about assuming the responsibility of practicing medicine on my family."

STORIES FROM THE CLINIC

By Emily C. Lierman

Two more colorful bits of human interest, from the pen of Mrs. Lierman. Dr. Bates' regular clinics in the Harlem hospital are attended by many incidents replete with blended humor and pathos, and Mrs. Lierman is a skilful narrator of them, indeed.

A YOUNG man came to the clinic recently suffering terrible pain in his eyes and head. He complained that he could not stand the light. He told Dr. Bates that he had been to other clinics where they told him he had iritis. Getting no relief from eye drops which were given him by others, he came to us to see if we could help him.

Dr. Bates examined his eyes and said that the other doctors were right. He did have iritis. I did not know what the discussion was between this young man and Dr. Bates so while Doctor was busy with other patients, I started to treat this case of iritis without realizing that the eye was diseased. I noticed however that the eyes were inflamed.

As I do not always ask the patient what the trouble is, on account of the short time we have to treat each patient, I go right ahead and test their sight and then work as earnestly as I know how with my patient until I have relieved the pain and improved the sight. I placed the young man fifteen feet from the test card and asked him to read as much as he was able. He complained that the electric light near the test card caused a severe pain in his eyes.

So I placed him in the sun and with my sun glass, I flashed the strong rays of the sun on the white part of his eyes after I had raised his upper eyelid and had him look down. Then I again placed him fifteen feet from the test card and this time he began to read the letters without complaining about the light until he finished reading the 40 line, when he again said the pain had returned.

I taught him how to palm and left him for a half an hour. When I returned to him I was much surprised to find that the redness of his inflamed eyes had disappeared. His vision also improved to 15/10 with each eye separate. All this time Dr. Bates was busy with other patients and was paying no attention to the young man or me. I was very happy when doctor told me what I had accomplished.

He said: "Did you know this man had iritis?"

I said: "No."

Then the Doctor proceeded to tell me what was the usual experience with the treatment of iritis, that these cases required usually three or more days before the pain in the eyes and head was relieved.

In most cases it might require two weeks of treatment before the sight could become anything near normal. Always eyedrops were prescribed to be used frequently during the day, sometimes at night and in all cases general treatment was prescribed and this treatment was usually continued in most cases for several years. To relieve a case of iritis in the short time of one hour was very wonderful and this without local treatment and without internal medicines.

"I have never in my life seen a case of iritis so bad obtain perfect sight so quickly and acquire such wonderful relief in the condition of the eye," the Doctor said.

A Colored Mammy

A good natured old mammy came to us one day, walking very slowly with the aid of a cane. She was all dressed up with a faded red rose in her hat, which was gray with age. Her white apron was starched so stiff that it rustled every time she moved. When I asked her what her name was she answered, "Mah name is Annabelle Washington Lee."

I am still wondering if George Washington and General Lee attended her christening. Poor Mammy had squint in her left eye and I could see that she was in pain. I asked what her age was and she answered: "Now Ah don know, mam just zackly, but mebby Ah is fifty and mebby Ah is sebenty. But Ah do know Ah's cross eyed and mah head hab sech pain Ah can't sleep nohow."

Dr. Bates examined her eyes and told me that she had a hemorrhage of the brain and suggested that resting her eyes would be the best treatment for her. Mammy had a strong desire to talk and before I could tell her that we had so little time to talk she said: "You know, mam, Ah sees you twice. Yes'm Ah sees de letters twice. Funny, but you hab two heads."

Then mammy laughed. She sat quietly with both hands covering her eyes for quite a while and I began to praise her to other patients who were not so willing to palm more than a minute or two, when all of a sudden mammy's hands dropped to her lap and we found her fast asleep. The joke was on me all right. Mammy practiced palming faithfully at home, however, and the third time she came to the clinic Dr. Rates examined her eyes again and said that the hemorrhage must have been cured by palming or keeping her eyes closed a great deal for the retina was all clear and there seemed to be no more trouble.

Mammy's eyes are now both straight and she does not complain about seeing double anymore. The last time I saw her she said: "Mam, de world is bery different since mah eyes is better and Ah wants to smile all de time."

Mammy will do anything for me but read the card. I really believe her when she says, "Ah is plum lazy an Ah jes don' care 'bout readin'. Ah gets along bery well widout it."

The best she was able to do for me with the test card was 12/20 with each eye while, in the beginning, her squinting eye was 12/70 and the other eye was 12/40.

Better Eyesight

THE Better Eyesight League should become a more active agency in the introduction of Dr. Bates' methods among school children.

The greatest benefits from the new ophthalmology can be conferred upon the world through its children. This is true because children's eyes are more immediately responsive to proper corrective efforts, and because through the children of today a greater part of the next generation can be reached than can ever be reached of the present generation, no matter how widely the new science may be known among it.

If you who read this, as a member of the League were to call upon the principal of the nearest school tomorrow or next week, and talk with them about Dr. Bates' methods and what they have accomplished and can accomplish, it is highly probable that that principal would install the Snellen test cards and introduce the new methods in the class rooms under his direction. That would mean a true science of the eye brought home to additional hundreds of children.

Won't you make such a call on the nearest school principal before the next meeting of the League?

Is it not a fact of more than merely medical significance that patients sometimes experience the first comfort of relaxed and perfect vision, under Dr. Bates' treatment, through the magic of their picturing in the imagination—and with an unconscious smile upon their lips—the blue eyes of a baby, a thousand miles away, or the smile of an absent wife?

The October Meeting of the Better Eyesight League will be held at 300 Madison Avenue, New York City, at the corner of 41st Street, at 8 P. M. October 10th.

"THE CURE OF IMPERFECT EYESIGHT" REVIEWED

The Journal of the Allied Medical Associations has recently published a page review by W. Wallace Fritz, M. D., of "The Cure of Imperfect Eyesight Without Glasses," Dr. Bates' treatise on the new science of ophthalmology. This review from an important scientific and professional publication is reprinted here.

THAT all imperfect sight is caused by strain, that the removal of the strain causes a return to normal vision and that all human beings should have perfect sight without the use of glasses are points maintained by Dr. W. H. Bates in his book, "The Cure of Imperfect Sight by Treatment Without Glasses."

Dr. Bates' statements to this effect are backed by a series of conclusive experiments which have extended over a period of more than twenty years. Four years of this time were spent in re-performing the experiments of Helmholtz, the great German ophthalmologist whose work has been accepted as the basis of all eye knowledge for years.

In this experimental work Dr. Bates proves with seeming conclusiveness that the lens of the eye is not a factor in accommodation. He shows that myopia and hypermetropia—nearsightedness and farsightedness—can be produced just as readily in eyes from which the lens has been removed as they can in eyes having a lens. On the other hand, he demonstrates through another series of experiments that accommodation depends wholly upon the exterior muscles of the eyeball.

Revolutionizes Ophthalmology

So widely do the facts presented by Dr. Bates vary from the theories which have been so long accepted as authentic as to make this work perhaps the must revolutionary statement on ophthalmology published in the last fifty years.

In presenting the experiments upon which all his conclusions are based Dr. Bates has treated his subject with a scientific thoroughness which will command the interest and respect of every physician and which perhaps only the trained eye specialist will completely comprehend. There are illuminating and detailed chapters, for instance, on "Simultaneous Retinoscopy," "The Truth About Accommodation as Demonstrated by Experiments On the Eye Muscles of Fish, Cats, Dogs, Rabbits and Other Animals," "The Variability of the Refraction of the Eye," "The Illusions of Imperfect and Normal Sight," "Presbyopia: Its Causes and Cure," "Squint

and Amblyopia: Their Causes and Their Cure." etc., etc.

But in the description of the results obtained and of the methods of correcting imperfect sight, and in the report of actual cures effected Dr. Bates has employed a style which will both interest and instruct the lay reader as well as the physician and eye expert. It would be impossible to quote at length all of the interesting incidents and facts, and the logical deductions from many of them, with which, together with some sixty illustrations, the three hundred pages of the book are replete.

Strain is Responsible

Muscular strain is the root of all imperfect sight, says Dr. Bates, and this muscular strain is in itself caused largely by mental strain. Only through complete relaxation and a complete resting of the mind can perfect vision be obtained. The efficiency of the optic nerves, as well as of all the sensory nerves, is impaired when made the subject of effort.

Central Fixation, the ability to see one part of everything looked at best, is the mode of the normal eye. The loss of this ability produces eccentric fixation, a condition of every abnormal eye which causes much discomfort and often pain.

Memory and imagination are two important factors in the production of perfect eyesight. An interesting corrollary of the deductions of Dr. Bates is that it is logical to account for the keenness of practical memory of the primitive man by his exceptional keenness of vision.

Upon first reading some of Dr. Bates' statements as to what can be accomplished, it may seem to the superficially minded that surely too much is being claimed. Truly the accepted canons of ophthalmology are flouted. The story of cure after cure said to be impossible is told. But it is in this very respect that Dr. Bates' accomplishments are accounted for, since the fundamentals of his treatments and discoveries are different fundamentals than those of Helmholtz and the host of ophthalmologists of the present school.

Cures of cataract, by treatment, are recorded, for instance. Revolutionary results in the treatment of squint and amblyopia and of presbyopia are cited. Myopia cures are listed. Chapter after chapter of the book make up a fascinating, engagingly yet scientifically told account of cure after cure of what, according to prevailing standards, was hopelessly defective and inherently incurable eyesight.

Milestone in Bibliography

An important section of the book is devoted to the prevention of myopia in schools and to home treatment for children and adults. Explicit directions for the home cure or home relief of defective vision are given.

The book is a surprisingly comprehensive, lucid, coherent and fascinating resume of a new ophthalmology which does not recognize the need of artificial lenses, founded on the experiments of Ault rather than of Helmholtz, and carried further by modern methods and equipment and by personal devotion of years—plus an equally fascinating and overwhelmingly conclusive record of the accomplishments, in actual cures of defective vision, of this new science of the eye. It is undoubtedly a milestone, and a milestone marking an abrupt and complete turn, in the scientific bibliography of the eyes. The book is published by the Central Fixation Company, 300 Madison Avenue, New York City, and sells for $5.00.

QUESTIONS AND ANSWERS

Q - Is reading too great a strain for the eyes?
A- No. Reading is good for the eyes.

Q - Is it an injury to read in dim light?
A - No. It is a benefit to the eyes.

Q - Is it a strain to the eyes to read while riding on a train?
A - No. If there is no discomfort. It is a good thing to look out of the window and see the scenery moving opposite, then continue to read.

Q - How can one look at the sun without injury?
A - While looking toward the sun it is best to blink the eyes and to look to the right and to the left of the sun. This will help you to look directly at the sun without discomfort or pain. One cannot look directly at the sun without normal vision.

Q - What causes and cures abnormal watering of the eye?
A - Strain produces watering of the eye. Relaxation obtained by palming and swinging will cure this trouble.

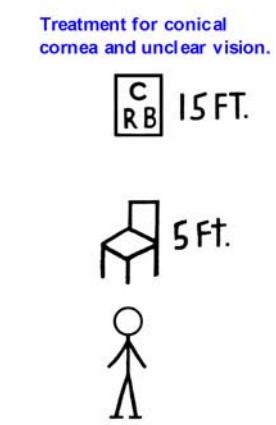
Q - How can one, without glasses, accustom himself to reading by electric light?
A - The sun treatment, as it is explained in an article written by Emily C. Lierman in "Stories from the Clinic," September, 1922 number, is beneficial to anyone troubled by strong light of any kind. Whether it is a natural sun light or electric light, it does not matter. The sun treatment can only be applied by an expert.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

November, 1922

THE VARIABLE SWING
(Oppositional Movement)
(Conical Cornea Cured)



RECENTLY I have been impressed very much by the value of the variable swing. **By the variable swing is meant the ability to imagine a near object with a longer swing than one more distant.** Example: To move the eyes, head, body left and right and imagine and see **oppositional movement**: close objects appear to move 'swing by' in the opposite direction to the movement of the eyes, head, body while distant objects, beyond the close object appear to move with the eyes, head, body in the same direction. The close and distant objects also appear to move against eachother in opposite directions. The close object shows the most movement. The distant object shows the least movement as long as the eyes do not lock onto any objects, at any distance while swinging side to side. This can be seen when doing the Sway or Long Swing, in front of two eyecharts or any stationary objects at close and far distances. A variety of examples for experiencing the variable swing are provided in Better Eyesight Magazines.

For example, a patient came to me with conical cornea, which is usually considered incurable. I placed a chair five feet away from her eyes, clearly on a line with the Snellen test card located 15 feet distant. When she looked at the Snellen test card and imagined the letters moving an inch or less (shifting on the letters) she could imagine the chair that she was not looking at moving quite a distance. As is well known the shorter the swing the better the sight. Some persons with unusually good vision have a swing so short that they do not readily recognize it. This patient was able to imagine the chair moving an inch or less and the card on the wall moving a shorter distance. She became able to imagine the chair moving a quarter of an inch and the movement of the Snellen test card at 15 feet was so short that she could not notice it. In the beginning her vision with glasses was poor and without glasses was double, and even the larger letters on the Snellen test card were very much blurred. Now, when she imagined the chair moving a quarter of an inch and the Snellen test card moving so short a distance that she could not recognize it, the **conical cornea disappeared from both eyes and her vision became normal**. To me it was one of the most remarkable things I have seen in years. I know of no other treatment that has ever brought about so great a benefit in so bad a case.

The variable swing is something that most people can learn how to practice at their first visit. Some people can do it better than others. The improvement depends directly upon their skill in practicing the variable swing.

MARIAN

By W. H, Bates, M.D.

THIS case is reported because the child on account of her enthusiasm obtained normal vision in a short time—about a week.

The patient was ten years and six months old. She was wearing glasses constantly, concave 2.25 D. S. combined with convex 4.00 D. C. 90 deg. in each eye. Even with her glasses her sight was imperfect for distance. At the near point she read diamond type at six inches the closest distance from her eyes while she could only see it two inches further off, at eight inches without her glasses. This inability to read over a greater distance was a hindrance to comfortable reading and her eyes tired. She was taught to rest her eyes by closing them and covering them with the palms of her hands (palming). With her eyes closed and covered she was told to think of other things than her eyesight, to remember things that were pleasant for her to remember, and she learned to do this so well that she told me that everything was dark, perfectly black all the time.

I asked her to remember a letter O of diamond type with a white center as white as snow. "Can you imagine it moving from side to side?" I asked her. She said, "Yes, as short a movement as the width of the letter." "Can you remember that moving letter all the time?" "Yes," she answered. Then I had her remember a little black period on the edge of the O and asked her to keep her attention on that period all the time. She volunteered the information that she had lost the period and could not remember the O; that when she tried to imagine a part of the O or the whole of it stationary her memory failed. She was able to demonstrate that it was impossible for her to concentrate on the little black period that she imagined on the right edge of the O during any length of time. She said it was easier for her to alternately imagine the little black period on the left side of the O, then the right side of the O, and when she did that she could imagine the O was moving, and could remember or imagine it all the time that she kept up this continuous swing. I had her read the Snellen test card as well as she could, which was about half of normal vision. At the time I was impressed with the fact that she had unusually good vision for one who had been wearing such strong glasses for myopia and astigmatism.

She complained that the smaller letters looked gray. I asked her if she could imagine the large letters moving; she said, "The letters that I can see are moving about a quarter of an inch from side to side, but the letters that I do not see appear to be stationary. She also volunteered the information that when she looked at the letters that she could see her eyes were comfortable, but when she looked at the stationary letters that she could not see, she felt a strain—an effort—which made her uncomfortable. I called her attention to the fact that the small letters were just as black as the large letters and, as she was not color blind, she should see them both equally black. If she saw the small letters gray her imagination of the color was imperfect. Then I had her close her eyes and remember or imagine a small letter of diamond type perfectly. I asked her if she could do it easily and she replied, "Yes." "Now, can you remember the same letter imperfectly, all blurred, gray," I asked her. She said, "Yes, but I have to make an effort and I notice that I do not remember it all the time; it gets away from me; it is easier for me to remember it perfectly." "Well," I said, "that being true, why do you go to so much trouble; why do you make such an effort; why do you make

yourself so uncomfortable; why do you make it so hard to see those smaller letters imperfectly?" That seemed to her rather startling that she had to strain and make an effort to have imperfect sight and that when she remembered or saw the letters perfectly she did it easily, without any effort, without any strain. Her sight was very much improved by resting her eyes and by imagining the letters moving and by alternately closing her eyes and remembering the letters blacker than she saw them.

It was very interesting to see how much her vision improved at the first visit. She demonstrated central fixation without much trouble. When she regarded the upper right-hand corner of the large letter on the Snellen test card she could imagine that she saw it best. If she shifted to the bottom she could see the bottom best and the top worst and could demonstrate by practicing central fixation her vision was imperfect. She said it seemed to her as though the sun came out from behind a cloud and made everything clearer when she practiced central fixation. I called her attention to the white center of a large letter O and had her look at it about a foot from her eyes. She said that the white center looked whiter to her than the rest of the card. Then I covered over the black part of the letter with a white card with an opening that showed the center. When the black part of the letter was covered over, the center looked, she said, the same shade of white as the margin of the card. When the whole letter was exposed the center looked much whiter than the rest of the card. I said to her, "You do not see the white center of that letter O whiter than the margin. It is an illusion that you imagine," and after a little talk she soon became convinced that it was true that she did not see the white center whiter than the margin; she only thought, imagined, it so. It was a great help to her in imagining or seeing smaller letters. As she said she could not see the white center of the letter O on the lower lines of the small letters, but she could imagine she did, and when she succeeded her vision was perfect not only for the letter regarded but she was able to distinguish other letters.

For several days she practiced the methods which helped her on the first day, and her vision rapidly improved. In fact, she obtained a flash of normal sight on the second day of her treatment. Later these flashes became more frequent, more continuous, until she was able to read with normal sight more continuously. I tested her with a strange card from time to time and was pleased with the results. Her memory and imagination were very unusual. When I pointed to a small letter that she could not distinguish and asked her to imagine one side straight, she said that she could imagine it straight but she could not see it. She could also imagine it curved without being conscious of seeing the letter. Then I said to her, "Which can you do best?" Invariably if it were a round letter she would imagine the left side curved better than she could imagine it straight or open. She could imagine the top, the bottom and the right side curved and knowing what the four different sides were she became able to state what the letter was. In those cases in which all four sides are the same but the letters different, like the letter B, for example and the letter D, both the left side straight, top straight, bottom straight and the right side curved, she could imagine the letter correctly. If it were B she could imagine it better than D. If the letter were D she could imagine it better than B, or any other letter.

I recall numerous occasions when she would read a line of letters quite rapidly and miscall one or more letters of the line, and I said to her, "You miscalled two of those letters; which were they?" and she would tell me. "How do you know," I asked her. She answered, "Because I know I miscalled those letters because I did not see them as black or as clear as the letters I read correctly. The miscalled letters were not so black and furthermore they did not have a short, slow and as easy a swing as the letters that I saw correctly."

One day she came to the office and told me that she woke up in the morning with a severe cold in her nose and after she had palmed, as she usually did before she got out of bed, the cold left her, and when she got up and dressed it was all gone.

I have seen similar cases in which palming for half an hour had relieved acute cold of the eyes, nose, throat or lungs.

On another occasion she said that she was restless and could not sleep and she said to me, "I could not sleep so I thought I might as well spend the time in palming and the next thing I knew it was morning. Palming enabled me to go to sleep very quickly."

When it came to memory I asked her what was the best thing that she could remember and the most perfectly, and she said, "A white dress with polka dots," and sure enough when she looked at the Snellen test card and remembered that white dress with polka dots her vision became very much improved.

After she had been treated for three days I said to her mother, who was wearing glasses, "Are you willing to do all that you can to help the eyes of your child?" She answered, "Certainly." "Well," I said, "I am going to ask you to do something that may be very difficult for you to do." "Oh," she said, "I don't care what it is, I will do anything." She was wearing glasses at the time, one pair to see at a distance (which she wore constantly) and another pair which she used for reading. "Do you know that the strain that you are under is contagious; that when you wear glasses it requires a strain on your part to squeeze your eyes all out of shape to see with the glasses." She said she had never heard of such a thing before. "Anything you want me to do I will do it," she said. I said, "Take off your glasses and never put them on again." She did this without any argument. I said, "Now practice the same thing that your daughter is practicing and you will get better. She started in right at once and I told the daughter to palm and she palmed, and when I told the daughter to imagine the swing she did the same thing. Her child improved her sight by the different methods she practiced and the mother tried to keep up with the daughter. It was very interesting to watch them. The girl would say, "I saw it first," and the mother would say, "Well, next time I will see it first"

During the week they were here each one was trying to out-do the other. The mother was cured in about the same time as the daughter. Her vision without glasses became normal and she became able to read without glasses and to read with a great deal more comfort than she ever had when she wore glasses. I am quite sure that the cure of the mother's eyes was of great benefit to the sight of her daughter.

The interesting feature of the treatment of this young girl was that her progress was continuous and she had no relapse. It was remarkable that **she obtained normal sight and was able to maintain it after so short a treatment as one week**. It was still more interesting to find the mother cured in as short time as was the daughter. They had to leave town and were quite willing to practice with the Snellen test card as long as I said it was necessary. I heard from them occasionally and then they stopped writing. One day, about a year later, I was pleased to have a visit from the mother who stopped in my office to tell me that both she and her daughter had continued to have normal sight without glasses and that they had done nothing whatever the last six months to improve their sight by way of practicing. The Snellen test card was lost and they had not taken the trouble to find it. Both of them did not know that they had eyes. Both of them read many hours a day; both of them read by artificial light; both of them used their eyes for reading while riding on railroad trains and as far as they could tell and their friends could judge, both of them had eyes as good as any one could wish. I believe the good results obtained were entirely due to the enthusiasm of them both. I wish all my patients could be cured as quickly.

STORIES FROM THE CLINIC

THREE CASES

By Emily C. Lierman

IMPERFECT sight is contagious. Perfect sight is also contagious. When I am treating a patient who is suffering from eye strain I must swing or palm occasionally just the same as the patient does, otherwise I begin to strain unconsciously, which makes it difficult for me to benefit the patient. Not always does the patient affect me in this way because all patients are not alike. When patients are agreeable and do what I tell them to do I can improve their sight much quicker. This thrills the patient as well as it does me. The patient becomes more and more relaxed and so do I. In the clinic where so many poor souls come for relief, not knowing what can be done for them, we find many trying cases very hard to handle. Not long ago a friend asked me what I meant by imperfect sight being contagious. I invited her to the clinic to observe the cases as they were being treated.

+Among other patients was an old-fashioned woman about 60 years of age who had progressive myopia. She was so near-sighted that even with her glasses on she bumped into everything in the room as she walked. Her vision with glasses on was 5/200. With them off she could not see me or the test card at 5 feet, I removed her glasses and she complained of being dizzy so I taught her how to palm. I asked her to remember her name while she had her eyes covered and she said she couldn't. I asked her if she could remember her hat or her dress and she said, "Yes, but only for a second." After that she said there were colored lights and objects which appeared to be floating spots before her eyes. I told her to remove her hands from her eyes and to look at the large letter on the top of the test card which I held six inches from her eyes. She saw it but it was blurred. I told her to open and close her eyes alternately and look at the large letter again. This time she saw the letter clearly. Then I pointed to the 100 line letter below and she could not see anything. Instead of looking directly where I was pointing she looked to one side, about eight inches or so. The poor thing was willing enough to do as she was told but she had been doing the wrong thing for so long that it was hard for me to make her do the right thing. My friend who was sitting quite near whispered in my ear, "Now, I know what you mean by imperfect sight being contagious; I feel nervous and strained watching this case. How do you stand it, anyway?" My friend has perfect sight but just to prove that I was right I looked at her with the retinoscope and found that she was near-sighted. I proved this to her by testing her sight with the test card. This frightened her but after she had palmed her eyes for a few minutes she was relieved of her eye strain and her vision became normal. She proved this herself by reading 15/10 with the test card. The near-sighted woman has been to see us regularly and on her sixth visit to the clinic she reads the test card 15/200 with each eye and she can also read some words of very fine print (diamond type), six inches from her eyes by moving the card slowly from side to side and alternately closing and opening her eyes.

+A young German woman came to me not long ago, eager to ask questions. She was imported from Germany only one year ago so her English was anything but perfect. She has had tear duct trouble for some time and she wanted very much to know if Dr. Bates could cure her without an operation. Now this was the conversation between us:

"Mrs. Lierman: What you call dat enyhow? My eyes is running all der time. Der vorter runs on der face insteat of inside. Pebles always say to me, 'What you cry for all der time?' Maybe sometime ven I cry I vouldn't haf no vorter left. Tree times in Germany I wus by der doctor and he say uperation. I say no. Vat you call dat enyvay? I go by anoder doctor and he did vun operation vot is no good. He hurt me someding awful but der vorter is running yet."

I told her that she had trouble with her tear duct and that Dr. Bates could easily cure her by palming and swinging. When the strain was relieved the tear duct trouble would cease. She was told to call for other treatment if the palming and swinging did not help her. Evidently palming and swinging has helped her for we have not seen her since.

+A few days ago a big negro, six feet tall, came into the room very quietly and sat in a corner with his head down. One could see that he was trying to hide the right side of his face. When I came close to him I found that he had a very good reason for doing so. There was a big cut over the eyebrow which had been stitched up by one of the house surgeons the night before. Perhaps some of our readers do not like to have me write about these things but we do have to meet all kinds of people and all kinds of cases and we must not be afraid. I knew that this huge bulk of dark humanity had been in a fight, so I was very cautious as I approached him. There was a great deal of kindness shining out of his good eye as he looked at me. I said, "Poor fellow, how did this happen, anyway?" In a kindly but very unsteady voice he answered, "Well, mam, Ah was in a fight. You see Ah had too much hooch." He really did not need to tell me he had been drinking; I could smell it. So could everybody else in the room. I would never have had the nerve to approach him anywhere else but the clinic, for he would have scared me most to death if I chanced to meet him in the street. Dr. Bates looked at his bad eye, or I should say where the eye ought to be, and after the man had palmed his eyes for a little while the eyelid opened. He was a very happy individual when he learned that his sight was not destroyed. As the man left the room I tried to say something encouraging to him and his answer was this: "Now, mam, done you worry 'bout me; you oughter see de other feller; he's in de hospital; yes, mam."

THE BETTER EYESIGHT LEAGUE

THE Better Eyesight League was organized for the purpose of benefiting the vision of its members. Each one was supposed to practice improving their vision every day without glasses. After their vision became normal it was expected of them that they would help one or more persons every day.

It is a well-known fact to educators that the teacher usually learns more than the pupil. The members of the Better Eyesight League are expected to do all they can for the prevention of imperfect sight.

A large field is the schools. Imperfect sight in school children is very great. The number is not becoming less, rather it is growing. The only thing that organized medicine can recommend is glasses and glasses for school children are very objectionable, just as they are objectionable to older people.

Every teacher who has practiced our method for the prevention of imperfect sight in school children has evidence that the method always improves the sight of school children, but more than that, it improves their mental efficiency. Children should practice my method for the benefit of their eyesight. Not only do they see better, but their memory, their imagination, their judgment are improved. It has benefited many children who were in the habit of staying out of school. It has done much for children who were mischievous or hard to control. Many stories can be told of how individuals have been relieved of headaches and pain and dislike for

school by practicing with the Snellen test card or by following out the directions given in the August number of each year of BETTER EYESIGHT. Every family with children, every family without children, should have a Snellen test card and practice reading it for the benefit and cure of imperfect sight. All persons over 40 years of age have trouble with their eyes and usually require glasses for reading. (This is a old theory. It is now proven that persons over 40 do not necessarily have trouble with their eyes. If close or distant vision becomes unclear, it can easily be cured by Bates method.) The use of the Snellen test card is a cure for adults as well as children. Of course the more chronic cases and the older the patient, other things being equal, the more time is required; but I have never seen a case yet but that the use of the Snellen test card has been of benefit. One should expect to practice reading the Snellen test card for weeks, months and years, whether sight is good or bad. If the sight is good the use of the Snellen test card would improve it even more and benefit the general nervous system to a very large extent, and it acts as a preventative of imperfect sight in middle life or older. It does not take much time and the benefits that are obtained from it are so great that I cannot urge too strongly all persons in all walks of life, young and old, to read the Snellen test card once a day.

I sincerely hope that the members of the League will keep this in mind and be guided accordingly.

The November meeting of the Better Eyesight League will be held at 300 Madison Avenue, New York City, corner 41st Street, at 8 p. m., November 14th. 1922.

QUESTIONS AND ANSWERS

Q - If I improve the vision of the poor eye will there not be a confusion of images?
A - Not necessarily.

Q - Is it possible to cure a three year old child of squint without an operation?
A - Yes. I have had many such cases that were cured by my method of treatment.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

December, 1922

THE EASY SHIFT

SOME time ago a man came to me for treatment of his eyes. Without glasses his vision was about one-half of the normal. This patient could not palm without suffering an agony of pain and depression. He had pain in different parts of his body as well as in his eyes and the pain was usually very severe. The long swing, the short swing tired him exceedingly and made his sight worse. I asked him to tell me what there was that he could remember which caused him no discomfort.

He said, "Everything that I see disturbs me if I make an effort." "I try very hard not to make an effort, but the harder I try the worse do I feel."

When he could not practice palming, swinging or memory successfully I suggested to him that he look from one side of the room to the other, paying no attention to what he saw, but to remember as well as he could a room in his home. For two hours he practiced this and was able to move his eyes from one side of the room to the other without paying any attention to the things that were moving or to the things he saw. This was a rest to him, and when his vision was tested, much to my surprise, he read the Snellen Test Card with normal vision at twenty feet. I handed him some diamond type, which he read without difficulty and without his glasses.

Since that time I have had other patients who were unable to remember or imagine things without straining and they usually obtained marked benefit by practicing the EASY SHIFT.

No one can obtain perfect sight without constantly shifting, easily, without effort. THE EASY SHIFT is easy because it is done without trying to remember, to imagine or to see. As soon as one makes an effort the shift becomes difficult and no benefit is obtained.

SOME CRITICISMS FROM A PATIENT

By W. H. Bates, M.D.

MANY of my patients who were benefited by my treatment have been kind enough to speak well of my methods.

Recently I treated an elderly lady who was suffering from cataract with a considerable amount of nearsightedness. The cataract was sufficiently opaque to impair her distant vision very much, but strange to say, it did not apparently interfere at all with her ability to read fine print at a near point. She was treated twice with only temporary benefit, bought my book and returned home with instructions to write to me once a week for advice. In her first letter she said:

"Relaxation is not easy if one is part of a strenuous program of living." "Here are some of the items of yesterday's hours." "Before breakfast, I learned of the death by suicide of an acquaintance, and of the possible loss of an item of income which has been mine for years." The mail brought me two letters, one a bill for some work done for me, just one-third larger than I supposed it would be, and a request from a society in which I am interested that I would write a delicate and difficult letter." "Briefly, I decided to shed all responsibility about these things."

"What can be meant by page 127 in your book in which you say, 'It is impossible to remember even such a simple thing as a period, perfectly black and stationary for more than a fraction of a second?' And on page 138, 'A patient . . . could remember a period twenty seconds.' And on page 140, 'Most persons become able to remember black for an indefinite length of time?' "

Answer—By referring to page 127 of my book my correspondent has quoted a very small part of what was said about the period. I believe that with the help of someone who has perfect sight the matter can be made clearer to her. Again, I suggest that the patient read more of what was said, especially the connection between vision and the memory of a period.

"On page 140, 'Most persons become able to remember black for an indefinite length of time.' "

Answer—How this is accomplished is described at some length in the book.

Question—"May Central Fixation be illustrated by the following fact?" "When one reads a book, she does not read it word for word, but takes sentences, paragraphs, even pages at a glance." "If there appears a word in another print, or an unfamiliar word, or a mispelled word, that word leaps out, and the rest of the text is ignored for a minute." "Is not this simple and common?" "Central Fixation seems to mean to me that when I regard any detail intently, the remainder of the object is disregarded?"

Answer—The previous paragraph is full of errors. It is impossible to read a whole word, a whole sentence, a paragraph or a page at a glance. It can be demonstrated that with perfect sight one sees one part of a letter best at a time. It is all done with incredible rapidity when one reads a page of three hundred words in a few seconds. It is not simple and it never occurs for the reader to pick unfamiliar or mispelled words without seeing each part of every letter at a time best. The definition of Central Fixation is in the book and the patient has stated it wrong.

"I am trying to supplement your method by all the cure-alls I know; deep breathing, sun baths, new thought, Coue's rosary, Fellow's hypophosphites."

Answer—Imperfect sight is not cured by sun baths, deep breathing, new thought, Cone's rosary or by Fellow's hypophosphites. However, each of these methods may benefit the general health or relieve other troubles, they are of no benefit to the sight, with the exception of sun baths.

"I find that I can do the imaginary stunts better than the real ones; for instance, on page 168, exercise 4, I can swing the letters better with my eyes closed or when looking at a blank wall than I can when looking at the test card. I am reminded that when I was a little girl and played with my little dishes, I could get on better with nothing in my little pitcher than I could with water to be called milk. I could imagine milk in the pitcher when I accepted the task of imagining, but when I knew it was water I would not call it milk. I know the letters do not move and I feel foolish when I allow the illusion. The most that I have gained so far is the knowledge that the eye is passive and that nothing is gained by trying to see."

Comment—This last paragraph is very encouraging. Most people can do the imaginary stunts better with the eyes closed than with the eyes open. Looking at a blank wall does not disturb the memory so much as when looking at the Snellen Test Card. To be able to remember a black period, a piece of white starch or white snow when looking at the Snellen Test Card with the eyes closed is a cure. It is all right to imagine the letters are moving because this is a physiological fact when the sight is normal because it prevents staring or trying to concentrate. The dictionary defines concentration as an effort to keep the mind focused on a point. It is unfortunate that concentration is taught or recommended so universally because it is impossible to concentrate with the mind or with the eye and the effort to do so is always associated with imperfect sight caused by nearsightedness, astigmatism, cataract, glaucoma, disease of the optic nerve, retina or choroid.

"The remarkable instances of healing in Dr. Bates' book is encouraging to anybody." "But what about those who found no help?"

Answer—It is a fact that when one practices closing the eyes or palming and it is done right the vision is always temporarily improved. Too many people close their eyes without resting them or practice palming with a strain which lowers the vision instead of helping it. One can practice the long swing and produce dizziness, pain and imperfect sight by straining to see things that are moving.

Elevator ride

One patient came to me complaining that never in her life had she been able to ride in an elevator without becoming very ill. Her vision for distance was normal and she was able to read fine print without trouble. I at once took a ride with her in the house elevator and told her to look at a bell which was stationary in the elevator and to pay no attention to the floors which appeared to be moving opposite to the movement of the elevator. We rode up and down and had a good time because when she did not strain to see the moving floors she was just as comfortable and happy as she was when she did not ride in the elevator.

The people who found no help were always people who fought me for all they were worth. I remember a physician who came to me for nine months, every day, and devoted from one to two hours trying to prove that I was wrong. Finally after numerous remonstrances I suggested to him that it did not do him any good for me to lick him every time he called, if he desired to be cured. I advised him to try and prove that I was right. In a very short time he was cured.

The people who find no help are the people who do the wrong thing against my advice.



CHRISTMAS AT THE CLINIC

By Emily C. Lierman

THE spirit of Christmas already prevails at our Clinic. For eight years I have watched the happy faces of boys and girls and the smile of pleasure on the faces of tired mothers with sick babies in their arms as every one of them received their share of candies and oranges and toys of every description.

My friends gave so generously last year which made it possible for our room to look very much like fairy land. One medicine cabinet was just covered with very pretty but inexpensive dolls and tables were filled with toys and music horns such as every little boy enjoys. Cornucopias filled with good chocolates and bon-bons were hung on the curtains and screens about the room. I am proud to say that Dr. Bates himself helped to decorate the room and even though he was very busy he found time to hand each of his patients a gift and to wish them a Merry Christmas.

Before the patients arrived, the doctors and nurses from other parts of the Clinic came to our room and there were shouts of joy and surprise from all. One of our big, good-natured doctors asked me if he might carry one of the dollies to another section of the Clinic, where other doctors were at work. He forgot that he was grown up. He was a boy again. I shall never forget how he admired that doll. He held it as though it were a baby and said, "You are fortunate to have such generous friends." "I have poor boys and girls who visit me but they are not so lucky."

Bridget, the Dispensary scrub woman, who had heard some weeks before that our patients were to have a treat again, decided, all of a sudden, that her eyes needed treatment. Just to please her we prescribed some harmless eye-drops to apply, for there was really nothing the matter with her eyes. She is big, fat and good natured and walks around as though she owned the place. Bridget, however, wanted to be our patient at least until Christmas time, so we allowed her to fool us.

A colored woman brought her little girl that day to be treated for an infection of her eyes and was waiting to be attended to. Instead of being pleased at all the pretty toys she saw she looked very sad and downhearted. After Doctor had treated the little girl he sent her to me for a dollie. The mother hurried to me and begged me not to give her one, because she had two younger children

at home who would not have any Christmas on account of their poverty. The little girl was taken care of by me while the mother was sent home post haste, to bring the little brother and sister. When the mother returned with her brood she had tears in her eyes when a doll was given to each of her girls and a mouth-organ to the little boy. Mother's arms were filled with oranges and candy and then there were no more tears. This little family was always well provided for while the husband and father was living, but he was killed while at work and the mother being in ill health found it very hard to keep her family together. I had to convince this mother that she was not accepting charity, but to feel that real friends were just sharing their gifts with us at the Clinic. I am proud of my big family there. I love them all and they love Doctor and me.

We have a very queer case, a girl aged twelve years, at the Clinic just now. For the last two years she has been coming to us off and on. She usually turns up near Christmas time. At a glance one would say she was stupid but I know she is not. Just a case of neglect. She has no parents, and if you ask her about them she will tell you she never had any. Neighbors fed her or I should say underfed her and she never knew from one day to the next just where she would sleep. Sometimes her clothes are clean and sometimes torn and ragged. Her name is Elsie and is a colored child, black as the ace of spades. As she was thrown about here and there it was impossible to keep her at school regularly.

Her vision is near normal at very rare intervals, but if I say very quickly to her, "read the card," she stares and it is pitiable to see how distorted her mouth becomes and she says she cannot see. I do not intentionally frighten her, I forget because of the many cases we have to handle in a very short time. If I speak softly and gently and point to a large letter which she remembers easily with eyes closed, she can read every letter, 12/15, perfectly after palming a few minutes. I asked Elsie if she wished a doll at Christmas time and she replied, "No, I'm too big for a doll." So Elsie will receive either a book or a necklace of some kind. I want to say more about the different cases but as the space is limited, I will stop and again and again wish all my friends a Merry Christmas and a very Happy New Year.

A PERSONAL EXPERIENCE

By James D. Dillon, Swansea, Arizona

AT the age of six years I had a bad case of granulated eyelids, which was finally overcome by treatment, but left my eyes weak and very sensitive. From that time until I began treating my eyes according to the methods of Dr. Bates—I am now thirty-six years of age—I suffered much discomfort from strain and the glare of daylight. School was more or less a burden to me because of the pain caused by reading.

I have had many prescriptions for glasses at various times but have never received real relief from them. Often I would rebel and fail to wear my glasses, always finding rest and comparative relief when doing so.

Two years ago I was fitted with the most perfect lenses I have ever had, but even these failed to relieve strain and I continued to suffer from the glare of the light. I did not suffer often from headaches but from continual smarting and irritation of the eyes, and from nervous symptoms and bad temper.

In February, 1922, I began to treat myself by Dr. Bates' methods. At that time I was doing hard work with figures. In spite of misgivings at leaving off my glasses, and though I was hard pressed to persevere some days when the struggle, seemed worse, I did persevere and have succeeded.

List of treatments

+The first thing in the morning and the last thing at night, and often during the day, I would read the Snellen Test card at various distances with each eye alternately, and then with both eyes together, until I could finally read the letters clear, black and distinct.

+I would practice looking at a pencil point held close to the nose until it became as easy to look cross-eyed as to look straight ahead.

+I would practice accommodation exercises by looking at near objects, then at distant objects, alternately.

+Palming always was a great help.

+ Regarding very small black objects and then remembering them perfectly also helped greatly.

+In every way I sought to break myself of the habit of straining to see and instead to see without effort. In proportion as seeing became effortless and all fear of light vanished the vision became more perfect.

+ I also found that gazing at the setting sun had a very tonic effect upon my eyes.

In 1920, the glare of the intense sunlight gave me much misery far into the night. Now I not only receive no harm from the light but enjoy it. In fact, I never notice the glare now; it does not disturb me. I have used many more of the exercises and ideas of Dr. Bates, as described in his book, and have much more yet to learn. I find that I greatly enjoy this method of improving my vision still more. Although I can read the ten lines of letters on the card at thirty feet easily I wish to do better. Diamond type I read easily at four inches from my eyes. I have now practically perfect vision and have overcome all the irritation and the nervousness caused by eye strain. During this summer, though extremely hot and trying in this desert country, I have felt better and fuller of life and vim than ever before. I know that this is due to the relief from eye strain, which had been a great drain on my vitality.

Needless to say, I am exceedingly grateful for this relief and wish to thank the author of the book a thousand times for his great work, which has made it possible for those who suffer from eye strain to obtain real and permanent relief even though they cannot reach him personally for treatment.

I shall be very happy to receive any letters from persons who desire further information, and will be pleased to help them all I can and to cheer them along with all my heart.

THE BETTER EYESIGHT LEAGUE

AT the last meeting of the League held at 300 Madison Avenue on Tuesday, November 14th, there were fifteen persons present.

This was a small attendance for a membership of more than one hundred.

We were pleased to hear from Dr. Brown of Orange, N. J., that a branch had been organized by the friends of Miss Shepard and that their next meeting will be held at 50 Main Street, Tuesday, December 5th, at 8 P. M. Dr. Bates is expected to deliver an address while others from neighboring cities will be there to discuss matters. We believe all persons interested in Better Eyesight are invited. The question was asked about the amount of money which each branch should send to the central organization. This matter could not be handled until delegates from the various organizations at some specified meeting met and considered it. The League has not been in existence long enough to make rules and regulations for each branch. It is very desirable that branches of the League be organized all over the United States and elsewhere to help all persons suffering from imperfect sight and more especially to prevent school children from acquiring imperfect sight and glasses. The publishers of the magazine, BETTER EYESIGHT, call attention to the August number in every year which describes the method of prevention and cure.

One member told how she helped an old blind woman by teaching her how to rest her eyes by "PALMING." The patient reported that with its aid she had become able to take a walk unattended and visit a friend. When she became confused the patient would stop and palm for a few minutes when her sight would at once improve for a time. The palming helped her to make the crossings successfully, to find her way and to avoid pedestrians.

There was some discussion about **eye strain during sleep**. Many people suffer very much from headache, imperfect sight on first rising in the morning and the symptoms may continue for several hours.

A gentleman present related his experience. He obtained much benefit by rising at 4 a. m. with the aid of an alarm clock, when he would practice the "LONG SWING" until relieved. He would then retire, sleep the rest of the night and on rising find the eye strain much less or absent altogether.

A new member started to ask questions such as: "How long does it take?" "What is the cause of imperfect sight?" "Can cataract be cured without an operation?" It is not necessary to publish the discussion of these and other questions because the answers have been repeatedly published; but, those who did the talking and those who listened, learned more than they knew before.

The next meeting of the Better Eyesight League will be held at 300 Madison Avenue, New York City, corner 41st Street, at 8 p. m., December 12, 1922.

QUESTIONS AND ANSWERS

Q - Has Dr. Bates' method anything to do with concentration?
A—No, to concentrate is to make an effort. Dr. Bates' method is rest and relaxation which cannot be obtained by concentration.

Q - Is auto-suggestion a benefit to the eye?
A—Dr. Bates has tried it and found that it is not beneficial as it does not relieve the strain.

Q - Can hemorrhage of the retina be cured by Dr. Bates' method of treatment?
A—Dr. Bates has cured many such cases.

Q - Can one be cured of near-sightedness without being examined personally by Dr. Bates?
A—Yes, we have received letters from people who have cured themselves by reading Dr. Bates' book PERFECT SIGHT WITHOUT GLASSES.

Q - Can a patient while under treatment with Dr. Bates carry on his daily work just the same?
A—Yes, most patients continue their work just the same without the use of their glasses even though they find it difficult at the start.

Q - Can the vision be improved without glasses after the lens has been removed for cataract?
A. Yes.

Q - Does Dr. Bates approve of dark glasses to protect the eye from the glare of the sun at the sea shore?
A - No. Dark glasses are injurious to the eyes. The strong light of the sun is beneficial to the eyes, although it may be temporarily painful and blinding.

Q - When the pupils become dilated is that an indication of eyestrain.
A - No. A great many people who have dilated pupils have no trouble at all with their eyes.

Q - What causes styes (sties)?
A - Infection, which is always associated with eyestrain.
A young girl experienced painful sties. She was poor and could not go to a doctor. She noticed that when a eyelash hair root, skin in that area itched, it would form a sty. She began the habit of pulling out eyelashes that itched and never again had sties. Possible infection starts in the eyelash root, skin pore?

Q - What causes night blindness?
A - It is caused by a form of eyestrain which is different from the eyestrain which causes imperfect sight with other symptoms.

Q - Can imperfect sight in school children be cured or prevented without supervision?
A - No. It is necessary for someone, who does not have to be a physician, to inspect the work once a year or oftener.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

January, 1923

BREATHING

MANY patients with imperfect sight are benefited by breathing. One of the best methods is to separate the teeth while keeping the lips closed, breathe deeply as though one were yawning. When done properly one can feel the air cold as it passes through the nose and down the throat. This method of breathing secures a great amount of relaxation of the nose, throat, the body generally including the eyes and ears.

A man aged sixty-five, had imperfect sight for distance and was unable to read fine print without the aid of strong glasses. After practicing deep breathing in the manner described he became able at once to, read diamond type quite perfectly, as close as six inches from the eyes. The benefit was temporary but by repetition the improvement became more permanent.

At one time I experimented with a number of patients, first having them hold their breath and test their vision, which was usually lower when they did not breathe. They became able to demonstrate that holding their breath was a strain and caused imperfect sight, double vision, dizziness and fatigue, while the deep breathing at once gave them relief.

There is a wrong way of breathing in which when the air is drawn into the lungs the nostrils contract. This is quite conspicuous among many cases of tuberculosis.

Some teachers of physical culture in their classes while encouraging deep breathing close their nostrils when drawing in a long breath. This is wrong because it produces a strain and imperfect sight. By consciously doing the wrong thing, breathing with a strain one becomes better able to practice the right way and obtain relaxation and better sight.

The habit of practicing frequently deep breathing one obtains a more permanent relaxation of the eyes with more constant good vision.

Abdominal, diaphragmatic breathing, yawning is taught by modern Natural Eyesight Improvement teachers.

ASTIGMATISM

(&Cornea scars)

By W. H. Bates, M.D.

IN astigmatism the curvature of the eyeball in one principal meridian is greater than in the one at right angles to it. The eyeball is lop-sided. In such an eye, rays of light, are not focused. It differs from the near-sighted eye in which parallel rays of light are focused in front of the retina. In the far-sighted eye, Hypermetropia, parallel rays of light are focused behind the retina.

Occurrence: Astigmatism is very common and may be near-sighted astigmatism, far-sighted astigmatism or it may be combined with either near-sightedness or far-sightedness. Again the astigmatic eye may be far-sightedness in one principal meridian and near-sighted in the other. This is called mixed astigmatism. Regular astigmatism can be corrected by the use of proper glasses. Irregular astigmatism due to a malformation of the front part of the eyeball, the cornea, the lens or to the eyeball itself cannot be corrected by glasses.

In the normal eye astigmatism can always be produced by some kind of a strain. One kind of strain will produce one form of astigmatism while another form will produce a different form. We have an instrument which measures the curvature of the front part of the eye called the Ophthalmometer. With this instrument we can detect and usually measure astigmatism produced by some change in the shape of the cornea. We can observe with it the production of corneal astigmatism of varying degrees when the subject strains either unconsciously or consciously. The amount of astigmatism that can be produced by different individuals is variable. I have seen people who could consciously produce astigmatism of 3D. By practice one can acquire the ability to consciously produce astigmatism of the cornea at different axes. This fact may explain why glasses which correct astigmatism at one time do not correct it at another time.

Many cases of normal eyes have been observed which later acquired astigmatism. In many instances patients later returned wearing glasses for the correction of astigmatism and complained that the glasses no longer suited them and when the eyes were tested no astigmatism could be found. It can be demonstrated that astigmatism may be acquired and that it may spontaneously disappear. What has been said of astigmatism caused by the malformation of the cornea is also true of the astigmatism caused by malformation of the lens or the eyeball. **Many cases have been observed in which irregular astigmatism following scars on the cornea have become less or have disappeared.**

Many authorities believe that most cases of astigmatism are congential or that people are born with astigmatism. Others believe that it is usually acquired. I do not know which is correct but I do know that whether acquired or not it can always be benefited or cured by treatment. As this always happens in my experience I believe that astigmatism is always acquired.

After the cornea or front part of the eye becomes affected with an ulcer and the ulcer heals it leaves a scar. The irregular contraction of this scar results in a malformation of various parts of the cornea. Even when the center of the cornea is clear the contraction of scar tissue at some distance away from it changes the shape of the central part of the cornea in a very irregular way. These cases of corneal opacity are usually benefited or cured by various methods employed to obtain relaxation. In general I believe that the long swing always helps and that practice of the short swing of the normal eye is usually followed by a permanent cure. Some cases of corneal astigmatism of considerable degree, 5D or more have been cured by practice of the swing.

In the November issue of BETTER EYESIGHT, page two, is described the VARIABLE SWING. One very remarkable case of corneal astigmatism and conical cornea with irregular astigmatism of more than 5D was benefited by the swing described in one visit and sufficiently for the patient to obtain temporary normal vision without glasses when at the beginning glasses did not succeed in obtaining normal sight. The variable swing has been a great help to many patients.

Sinus congestion and neck muscle tension can cause astigmatism: vertical, parallel, criss-cross pattern lines on a sidewalk… moves, looks abnormal, causes dizziness. Use a warm steam humidifier with pure filtered water. Use a nasal pot to rinse the sinuses with warm water and pure organic salt. Local honey acts as a natural immunity against pollen. Honey is made from the bee pollen collected from the flowers, grass…in the environment that the person is allergic too.

Thumb, Finger Movement Swing

Recently a patient thirty years of age, suffering from **squint, near-sightedness, astigmatism** in one eye of minus 5D with myopia and astigmatism in the other, obtained temporary normal vision with the aid of the **short swing** which was regulated by the **feeling of the thumb and finger rubbing against each other, a short distance, a quarter of an inch, from side to side**. The patient obtained better vision when **the body was imagined to move opposite to the direction of the moving thumb** and less benefit when she imagined the body moving in the same direction as the thumb. In less than an hour she obtained normal vision for a short time. The squint became much less and at times both eyes were straight. I expect this case will obtain a permanent cure in a very short time. However, patients with a considerable amount of corneal astigmatism usually require weeks and months before they obtain a cure.

Astigmatism accompanied with a malformation of the lens is not common. Thirty years ago I treated a young girl for progressive near-sightedness. Her vision with glasses, which were very strong, concave 17D combined with concave 6D.C., was only 20/100. With the Ophthalmometer she had no corneal astigmatism. I removed the lens from one eye when the vision became normal, 20/20, without glasses. The case was exhibited at the Ophthalmological Section of the New York Academy of Medicine and many of the men present afterwards practiced this method of benefiting the imperfect sight of very bad cases of near-sightedness. I believe I was the first one in New York to do this operation as none of the members present recalled that anybody else had performed the same operation or published it. Many surgeons are still doing this operation for the benefit of these cases. I never did it again because my patient was not permanently benefited; the myopia or near-sightedness returned. The other eye also had 6 diopters of astigmatism with the cornea normal. For a time relaxation methods improved this eye with the astigmatism of the lens but before she had obtained a cure she stopped treatment. I have seen other cases of astigmatism accompanied by a malformation of the lens and usually a temporary improvement in the vision can be obtained. Some of these cases have been cured. Many cataract patients have an irregular astigmatism produced by the malformation of the lens. After the cataract is cured the astigmatism disappears.

The treatment of **astigmatism** in my hands has been very encouraging. It is so easily produced that it seems to be just as easily relieved. It is so very common that one should realize the facts and study these cases to obtain prevention and cure. School children acquire astigmatism very frequently and it can always he prevented by methods described in the **August issue of each year of BETTER EYESIGHT**. I am quite sure that the fact that treatment always improves or cures acquired astigmatism in school children, that it more readily prevents it.

I cannot refrain from again repeating what I have said so often before that the people of this country must wake up and look after the eyesight of the coming generation, and, on account of the enormous number of children affected with astigmatism some radical steps should be taken for the benefit of the eyes of school children suffering from astigmatism.

STORIES FROM THE CLINIC

STARING IS BAD

By Emily C. Lierman

STARING is one of the greatest evils I believe. School children at the Clinic demonstrate it. I never make any progress in the cure of their eyes if I do not begin the treatment first, to prevent staring.

A little Jewish girl has been coming to us for a year. On her first visit, she told us that the school nurse insisted that her eyes should be examined for glasses. Her mother who was with her, begged me not to put glasses on the child as she had a great dislike for them and she also believed that glasses could not possibly cure her. I was glad that I did not have to spend time convincing the mother that her little girl would not need glasses.

I tested her sight with the test card and she had 20/70 with the right and 20/100 with the left. The girl stared all the while she read the letters and I drew her mother's attention to this fact. I had instructed the child to look away in another direction after she had read one or two letters of a line; she then improved her sight with both eyes, to 20/50. Her mother was a great help to me, by watching very carefully when the child practiced at home. No matter what the child was doing or whenever she read a book or while studying her lessons, the mother told her not to stare. The directions for treatment at home and in school were:—When she was asked to read something on the blackboard, she was not to look at the whole of a word or a sentence at once, but to look at the first letter of a word and blink her eyes, then the word would clear up and she could see the whole word without staring to see it. Then, in order to read a sentence without staring, she was to look at the first letter of the first word and then look at the last letter of the last word of the sentence; but to close her eyes frequently while doing this. How proud I was when last June she was promoted into a higher class without the aid of glasses.

I know, that to the mind of our readers of BETTER EYESIGHT comes this thought and question. Why is she not cured by this time? It is one year now since she first came for treatment. This is my answer: The girl had normal vision with both eyes, at the end of six months. Then vacation time came. Instead of our faithful patient continuing with her treatment until she could retain her normal vision, she stayed away from the Clinic and also punished her eyes in every way possible during the summer months, by straining at whatever she was doing. For the last two months, she has worked with her school studies with apparently no trouble whatever, and I glory in the fact that she was never tempted to put on glasses, which I know so many of Dr. Bates' patients do, when they get discouraged and fail to get along with the treatment, without the personal instructions of the Doctor.

She was so grateful for what we accomplished, that her school teacher who had a very high degree of myopia was encouraged through her to become a patient of Dr. Bates and is now enjoying good sight. The wonderful needle work which was done by this teacher, who by the way has become a very dear friend of mine, is most beautiful.

One of the ambulance drivers connected with the Harlem Hospital, called on us not long ago. He was wearing very heavy glasses and his eyes, as they tried very hard to see, looked about the size of pinheads through his glasses. He had heard of Dr. Bates and his treatment and was eager to obtain some relief from eyestrain. Oculists told him that nothing more could possibly be done for him. His sight was gradually failing and he feared that he would soon lose his position. Dr. Bates examined his eyes and told him that he had progressive myopia, but that he could be cured if he would take the trouble.

Our room never was so crowded with patients and he had to wait some time before receiving any attention. However, while I was busy with a little boy, who enjoyed palming because it improved his sight so quickly, the ambulance driver got busy, too. Shifting and swinging also helped my little boy and he found that it was a great relief to try the different methods which helped him to relax. This interested the man very much, as the smile on his face indicated. I was very anxious to help him too and was glad when the

opportunity came. He stood directly behind my little boy patient and did as well as he possibly could, just what my little patient was doing. When he first came into the room his vision was 10/200 without glasses. Before I had a chance to treat him, he had improved his sight to 10/70 all by himself. He listened while I continually repeated to the boy, not to stare. When I told the boy not to look longer than a second at one letter, because if he did his sight would blur, the man followed my directions carefully, with the result that his sight improved. When I began to treat this man, he told me that he never knew he stared. He found out that when he did not close his eyes often, as the normal eye does, then his vision blurred and he could not see any letter at all on the test card. I improved his sight that day to 10/40. He has not visited us again so far, but he sent in a good report, telling us that he is making steady progress, improving his sight all the time.

If patients could only remember not to stare at any time, they could easily overcome their eye troubles.

Daydreaming, thinking of something pleasant relaxes the mind, eyes and brings clear vision. When daydreaming, let the minds eyes move, shift on the objects in the imagination and let the physical eyes also move. Notice that the physical eyes shift automatically when the mental visual attention shifts on objects in the imagination. Blink. Imagine objects, people, the scenery in motion like a real life movie in the mind: clear, in color, action. This prevents staring. This can be done with the eyes open and closed. Worrying, thinking unhappy thoughts leads to tense breathing, body and eye muscle tension, immobility, staring, strain and unclear vision. Happy thoughts, emotions produce relaxation and clear vision.

A RELIEF FROM WHOOPING-COUGH

BY L. L. BIDDLE, 2ND.

MY sister's children came down with the whooping-cough a little over two weeks ago. She, of course, called in for a regular physician, who said as they usually do, that it looked to him like whooping-cough and that she might as well make up her mind that they would have it for about nine weeks. I think he described it as taking three weeks to fully develop, three weeks at its most severe state and remaining three weeks to get over it. He prescribed two medicines, one of which was to give them relief when they coughed too much.

As he prophesied they continued to get worse, and the last two nights they scarcely slept at all. The youngest one, who is four, seemed to have the worst affects. He would cough for about a minute and then seem to choke or gag until finally yesterday, he spit up some blood. My sister and I got worried, however, as the medicine which the doctor prescribed to relieve the cough whenever it was at its worst, seemed to give him little relief.

Therefore, I asked Dr. Bates whether he could suggest a more satisfactory means of helping the children. He said, in his usual assuring way, "A little child about three and a half years old came to me with whooping-cough. I showed him how to palm; and every time he felt a cough coming on he would put his hands over his eyes, and by doing so lost his desire to cough."

This morning, I went into the nursery and, as usual, found them intermittently going into these terrible fits of coughing, so I explained to them, as best I could, how to palm. I first took the older boy, who is seven, and told him to put the palms of his hands over his eyes, making sure that he did not push the eyeballs. Then I asked him if he could imagine anything blacker and he said, "No, it is as black as anything I ever saw."

I said, "As soon as you think you are going to cough put your hands over your eyes the same way again and imagine it is as dark as possible." He soon exclaimed, "I feel like coughing now." So I told him to put his hands up quickly and imagine everything was pitch black. He did so and did not cough as badly as usual. This was very encouraging, so I said: "See, that has helped you." So the next time you have the slightest idea that you want to cough, put your hands over your eyes the same way and imagine everything black." He did this and it worked magic for he did not cough at all.

The little fellow, who as I said before, is only four, had been watching very intently and as usual was trying to copy his brother, so I had little difficulty in showing him how to palm with the same results.

I came back that afternoon and found the nurse in a very relieved state of mind so I asked her if she had any good news. She told me that it had worked like a charm and instead of their coughing and finally practically choking, as usual, every time either one of them felt like coughing he would put up his hands, remember something very black and prevent coughing. Moreover, the younger one became so expert that several times when he would forget to palm, the older boy would yell at him, "See black Tony, see black," and the little fellow would quickly put his hands over his eyes and the cough would stop almost instantaneously.

MINUTES OF THE BETTER EYESIGHT LEAGUE MEETING ON DECEMBER 12th

THE meeting on Tuesday, December 12th, was opened by the President, Mr. Varney, and in the absence of Mr. Everett, Miss Meder acted as Secretary. Mr. Varney called the meeting exactly at eight o'clock, and told the members that it would be closed punctually at nine, so no time was lost.

A Branch League was started in East Orange, N. J., Dr. Bates attended, and gave a talk about his work, to the assembly. We were all eager to hear his experience there, and asked him to tell us.

When he arrived, Dr. Bates said that the feature that most surprised him, was that such a large audience came just to hear *him* speak. He admitted that he had seen larger crowds at movies, or theatres, but never such a collection of human beings who were perfectly willing to sit quietly, while he did the talking.

The second thing that impressed him was the attentiveness, and quietness that prevailed while he was describing his various discoveries, and method of treating imperfect vision without glasses. He spoke for a little more than two hours, and was interrupted several times while the chairs were pushed closer together, and more set up in the rear. He was asked to speak louder, because the two adjoining rooms were filled with people, and they were hard-pressed to hear distinctly.

At the end of two hours, when the meeting broke up, Dr. Bates was surrounded by individuals who wished him to elaborate on some of his remarks, and demonstrate others. In this manner another hour was consumed.

All in all, Dr. Bates was delighted with his reception, and the success of the meeting. He remarked that such a robust child would quickly out-grow the parent organization, and that we members will have to get in step in this march, quit marking time, out-strip, or at least keep abreast of this East Orange Branch.

An open discussion followed Dr. Bates' story, in which Mr. Varney described how he helped a friend of his. He began by asking that we, as members, should pass along our magazines and books to those who have not heard of Dr. Bates' method. He, Mr. Varney, said that an engineer friend of his had worn glasses for a number of years, and each year they had to be made stronger. This not only necessitated great trouble, but they did not improve the sight. Mr. Varney gave him his copy of "PERFECT SIGHT WITHOUT GLASSES" and explained it to his friend. The last report he had from him, was that he removed his glasses (that was three months ago), and he can now do his close work without the pain and fatigue that he had while using them.

These little personal experiences pleased Dr. Bates very much, and while we were still discussing Mr. Varney's story, one lady, whose name I do not know, spoke to us in such a sincere enthusiastic way, that we could not help but catch her enthusiasm. The gist of her speech was that we all should strive with all our might to remove from the eyes of our friends, relatives, and acquaintances, the crutches that do not support, but hamper and in most cases, destroy, good sight.

The thought that rankled her heart most was that now DOLLS are being exhibited that have miniature glasses. A woman will stroll along with a little girl, also wearing glasses, and will exclaim with ecstasies, that it is the cutest thing she has seen in a blue moon, and she is going to get *her* little daughter just such a pair of tortoise-shelled glasses. Our speaker has discovered the fact that people are under the illusion that glasses add to one's dignity, and also look studious. This feeling is one that has to be overcome by common sense, and the application of Dr. Bates' treatment.

One of the new-comers among the members leaned forward and seemed intensely interested in all that went on. She spoke up and said that she was a teacher in Erasmus Hall High School and read the book "PERFECT SIGHT WITHOUT GLASSES," and from it was able to lay aside her glasses, and become able to use her eyes more comfortably. Recently, she corrected more than 100 examination papers, and each time she corrected five, she palmed for a few minutes, and was benefited. After hearing the various comments from our members, she asked Dr. Bates how she could go about having the system installed in her classes. She was sure that it would promote efficiency along with better eyesight. She also gave us an idea which we will discuss more fully at the January meeting. She asked why couldn't we have a mass meeting such as that of East Orange. She alone would bring all her school teacher friends, numbering from twenty to twenty-five. This excellent suggestion was very encouraging. We hope that in January we can get together and think of a way to spread this doctrine of BETTER EYESIGHT in a way that will take in everybody who is the least bit interested in their own sight, and the sight of those who are troubled by imperfect vision.

What really was the keynote of the meeting, though, was preserving the sight of school children. They are the innocent victims of their parents' ignorance. If we can reach then, through the school authorities, it will eventually come to the notice of their parents, and in this manner it will become known, and be helpful to the present and future generation. With these plans in our mind for the subject of our next meeting, Mr. Varney called the meeting to order, and we adjourned. The next meeting, which we are going to make exceptionally interesting, will be held here on January 9th, at 8 P. M.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

February, 1923

THE OPTIMUM SWING

THE optimum swing is the swing which gives the best results under different conditions.

Most readers of this magazine and the book know about the swing. The swing may be spontaneous, that is to say when one remembers a letter perfectly or sees a letter perfectly and continuously without any volition on the part of the patient he is able to imagine that it is a slow, short, easy swing. The speed is about as fast as one would count orally. The width of the swing is not more than the width of the letter, and it is remembered or imagined as easily as it is possible to imagine anything without any effort whatsoever. The normal swing of normal sight brings the greatest amount of relaxation and should be imagined when one is able to succeed when it becomes the optimum swing under favorable conditions. Nearsighted persons have this normal optimum swing usually at the near point when the vision is perfect. At the distance where the vision is imperfect the optimum swing is something else. It is not spontaneous but has to be produced by a conscious movement of the eyes and head from side to side and is usually wider than the width of the letter, faster than the normal swing, and not so easily produced.

Shift left and right on the letter and see the letter move, swing in the opposite direction the eyes shift/move to – The Swing.

When one has a headache or a pain in the eyes or in any part of the body the optimum swing is always wider and more difficult to imagine than when one has less strain of the eyes. Under unfavorable conditions the long swing is the optimum swing, but under favorable conditions when the sight is good, the normal swing of the normal eye with normal sight is the optimum swing. The long swing brings a measure of relief when done right and makes it possible to shorten it down to the normal swing of the normal eye.

Eye Strain When Sleeping

By W. H. BATES, M. D.

MANY persons strain their eyes when sleeping. When they awake in the morning, they feel pain in their eyes with imperfect sight and often with severe headache. They may feel all tired out, not refreshed or rested by a sleep of eight hours or longer. In some cases the sleep may not have been disturbed by dreams. Dreams are not always remembered for any great length of time. There are people who can recall dreams in their early childhood twenty, thirty, forty years ago, but their recent dreams cannot be remembered longer than a few minutes or a few hours after awakening. To keep accurate records of dreams requires that they be recorded as soon as possible. Pleasant dreams do not always mean relaxation, but dreams of snakes, nightmares, fighting, crimes and horrible experiences of all sorts are usually followed by imperfect sight caused by eye strain.

Some of my patients with a severe trouble of the eyes have told me some very awful dreams. During sleep the ticking of a clock or the outside noises in the street may be the starting point of a very exciting, disagreeable or uncomfortable dream which is due to strain.

I am tempted to relate my personal experiences in dreams. Recently I awakened in the morning with a feeling that I had been

dreaming. I got into a fight with a drunken man and had socked the bedpost with my fist with disastrous results to the skin of my knuckles. Afterwards I noticed that the white tiled floor instead of being white the blocks were alternately pink and blue and this illusion continued for a half hour when it gradually disappeared. On another occasion, I awakened after a dreamless sleep and noticed that the ceiling was covered with a very white cloud similar to a veil. This illusion disappeared in five or ten minutes.

Many patients ask: "Why do I have so much pain, discomfort, imperfect sight in the morning after a good sleep?"

My answer is: "Because you strain your eyes and all the nerves of your body when you are asleep."

But for me to explain the facts further is something I cannot do. All I know is the fact that it is so. New born babies, half an hour after birth and later, by simultaneous retinoscopy produce a deformation of the eyeball, nearsightedness (myopia), farsightedness (hypermetropia), astigmatism of variable degree, at short intervals of a few hours. At one time, myopia will be found of the same amount in each eye; or one eye may be normal while the other eye may be myopic. At the second examination, both eyes may be normal, hypermetropic, or with any form of astigmatism. The child may produce any combination of errors of refraction by eye strain when asleep which may persist for a longer or shorter period when awake. At times the eyes become normal when the child is awake. Squint or strabismus in its various forms always occurs and is also variable. The use of strong atropine, 3 ½ per cent., instilled into both eyes does not prevent the manifestations of eye strain in new born children when asleep.

In adults, simultaneous retinoscopy demonstrates the production of near-sightedness and other deformations of the eyeball by eye strain during sleep but which usually become less or disappear and the eyes resume their normal shape in a few hours after awakening. Just as in babies atropine does not prevent, during sleep, the results of eye strain.

Hypnotism, ether, chloroform and nitrous oxide gas are all accompanied by well marked eye strain during sleep produced by these agents.

Eye strain during sleep may produce in the normal eye severe pain with hardness of the eyeball simulating the increased tension of an attack of glaucoma. In all diseases of the eyes, inflammations of the eyelids, cornea, iris, lens (cataract) retina and optic nerve eye strain during sleep increases the severity of the symptoms with a corresponding loss of vision, temporary or more permanent. Detachment of the retina has been aggravated or produced by eye strain during sleep.

The results of eye strain during sleep are so disastrous that I believe proper treatment is essential. Some patients have been benefited by **"Palming" for half an hour or longer before dropping of to sleep. "Go to sleep while palming. Palm if you wake up during the night. Practice the long or short 'Swing' before retiring,"** I advise.

Some people seem to sleep longer than is necessary and the eye strain may appear increased. Some observations made of a four hour period of sleep during the night with or without a nap in the day time seemed to show less eye strain.

Posture during sleep has been studied. Lying on the face has generally been accompanied by an increase of eye strain. Sleeping on the back with the arms and limbs extended with slight flexion is undoubtedly better than sleeping on the right or left side. A cramped posture is always wrong. The patient is not always conscious of his posture when asleep. In a number of cases observed by friends of the patient, one or both arms were held behind the head while asleep and strenuously denied by the patient when awake.

The correction of this and other strained positions of the arms and limbs has been followed by decided benefit to the vision.

Eye strain during sleep produces or increases the symptoms of strain in various parts of the body.

Some months ago I suffered from an attack of the grippe and had a very strong cough without expectoration. This cough was spasmodic and did not bother me very much during the day and when it did it was very easy for me to obtain sufficient relaxation to control it. But at night it was terrible, it would wake me up a few hours after I had retired and the coughing would be so severe and continuous that it was impossible for me to obtain relaxation of the eye strain while the room was dark. I was compelled to get out of bed and light the light in order to practice the long swing which gave me relief in an incredibly short time, a few minutes or less. I would then go back to bed and sleep for a few hours or the rest of the night without being disturbed by the cough. It was interesting to me that the relief of the eye strain was also a benefit to the bronchial or other lung tension.

For some years I had been afflicted with a chronic tuberculosis of the right elbow joint which at times caused great pain. When I became able to relax the eye strain, to remember or imagine perfect sight, the pain in the elbow disappeared. One evening I retired as usual and slept very comfortably until one o'clock when I was awakened with an intense pain in the elbow. The pain was so severe that I lost all control of my mind and became practically insane. I was unable to remember even my own name or any of the letters on the Snellen Test Card which I read every day. The doctor who was summoned gave me a hyperdermic with morphine every little while but without any appreciable relief. I kept saying, "Somebody help me to remember black," but my attendants sat around the room saying nothing and all they seemed able to do was to watch me suffer and give me morphine. This continued for four hours. During all this time I instinctively was trying to remember or imagine something that I had seen before. All of a sudden I remembered a large black C and the pain let up. In a few minutes I became able to remember all the letters on the Snellen Test Card and fell asleep. I woke up an hour later, six o'clock, apparently perfectly well without any sign of pain or soreness in the elbow. I dressed without any trouble, went downtown to the office and did a day's work without any return of the eye strain or pain in the elbow.

Stories From the Clinic

By EMILY C. LIERMAN

UNUSUAL CASES

NOT long ago a little colored girl, eleven years old, came to us for treatment. The school nurse was puzzled about the condition of the child's eyes and feared that the little one would be hopelessly blind within a very short time.

After Dr. Bates had examined her he said her trouble was Interstitial Keratitis caused by syphilis. Such cases do not recover usually without atropine locally.

At first, I could not do anything with her. She would not look at the test card when I asked her to, neither would she look at me. I was not annoyed at her for this because I knew that the poor child was suffering. I tried speaking softly and kindly to her and it worked like a charm. She obeyed when I told her to keep her eyes closed for a little while. Closing her eyes and resting them helped. Her eyes were a little more clear after resting them and she read 10/70 with both eyes. I told her to again close her eyes to prevent

staring, and while her eyes were closed, to remember the last letter she had read on the card. The last letter of the 70 line on the Clinic test card is an E and when she tried to remember the whole of the letter she said her eyes began to pain her. So I told her to remember one part of the E at a time. This she liked to do because it was easier than to remember all of the letter at one time. I stood close to the test card pointing to the letter below the E and when I told her to open her eyes again she saw the letter right off. This was the 50 line. I was sorry that I had to send her home at that moment. I wished to treat her for at least a half hour longer but others were waiting and I had so little time. She was advised to practice palming and resting her eyes regularly six times a day and to return in two days for further treatment. Her first visit began two weeks before Christmas, so each time she was treated I mentioned the possibilities of a gift for her if she would do her best, in practicing at home and doing what she could do for me at the clinic. She is progressing very rapidly much to the surprise of Dr. Bates. He informed me that her case was so bad that he did not expect much improvement for a month or more. At the present time she reads 15/30 and her eyes look much clearer. I notice, also, that she no longer keeps her head down and she does not complain that the strong light hurts her eyes, as they did before her treatments began. It is not at all easy to treat this poor little girl, because she sulks and I spend at least five minutes sometimes trying to encourage her and to make her understand, that working with her eyes, while it is hard work, it is surely worth the trouble.

One day a doctor, who was a stranger both to me and to Dr. Bates, came to our room and careful watched us, as we encouraged and benefited each case. The only remark he made to me was "Why don't you fit them with glasses and be done with it. You can get rid of these poor individuals so much quicker. They don't pay anything, so why waste your time." I was so upset when he said this, that I lost my temper. I confess that I have a very bad one, although it isn't anything to boast about. Dr. Bates rescued the Doctor and very kindly ushered him out of the room.

I am anxious to tell about a mother who came a few days ago with her two children. Dr. Bates told her to wait for me and when I was ready, I would test the children's eyes. The mother kept looking at me, smiling all the while. She asked; "Don't you remember me? Don't you remember my little girl? I brought her to you and Dr. Bates six years ago. She had alternate squint when she was three years old and Dr. Bates cured her without an operation." Hundreds of cases have been treated and cured in that time, and this dear little girl has grown from a wee tot of three years to a big girl of nine. The mother waited patiently for me to say yes. I tried my very best to remember, for my memory is usually good, but I failed this time. Before I knew it I answered, "Yes, surely I remember." How grateful this mother was because I did not forget her dear little girl and how sorry I was because I told a fib. She just knew that I would not forget, so I could not convince her that I did. If Dr. Bates had had his retinoscope handy, he would have found that I was near-sighted. When one tells an untruth, the retinoscope always reveals the fact. The subject usually becomes near-sighted at that time. The children were sent home from school because they could not see the letters on the blackboard. The mother thought of Dr. Bates immediately so she brought her boy and girl to be treated without glasses. The trouble in both cases was eyestrain and the girl's vision improved from 15/50 to 15/15 with each eye separately by palming or just closing her eyes often to rest them. Her eyes are perfectly straight and the mother boasted about how she was cured. Dr. Bates had prescribed atropine drops to be applied every day and then to have the little girl look at distant objects as well as near objects, such as tall trees and flowers and other things. The mother would go to the park every day and have the child practice these things with each eye separately. The little boy was difficult to handle at first because he did not wish to be bothered. A perfectly normal boy would rather play ball or play a game than to sit still and fuss with his eyes. I could not win him over until I pretended to box with him. He was ready to be a prizefighter anytime he said. He very soon got tired of the game and willingly read the test card. After the test, his vision was 15/50 and after he had rested his eyes by palming his sight improved to 15/20 with the right eye and 15/30 with the left. If they obey their mother and practice at home every day, I feel sure that my two little patients will soon have normal sight.

Minutes of the Better Eyesight League

By Emily A. Meder

We had a most interesting and exciting meeting in January. All formality is thrown aside, when we meet, and there is a general discussion. So was the case at the January gathering. In these discussions various things relative to the League are threshed out, and the members tell what they have done during the month to promote better eyesight.

Miss Shepard cited an experience with a friend of hers. She took this friend in hand herself, and from what she knows of Dr. Bates' treatment, being a patient herself, she proceeded to treat her friend. After removing her glasses, she could only read 10/40. She was given explicit instructions to practice palming for twenty minutes each day, and at the end of a month, she could read the whole card. The pain in back of her eyes had disappeared entirely.

Miss Shepard is one of the most energetic of our members. She does not stop at helping her friends, but tells about Dr. Bates to all her acquaintances. She introduced the method into one of the Public Schools in Orange. She will go in February to test the children's eyes, and we hope to have an interesting report in February.

Dr. Ingham, who also practices by Dr. Bates' method, is going back to Oregon. She will have access to the orphanage, and expects to start the system there free of charge. Dr. Ingham is a true member of the League. She not only gives her time, but her valuable experience in curing defective eyesight. She is most enthusiastic and we hope to hear very favorable results of her work in Oregon, and that a BETTER EYESIGHT LEAGUE is established there.

Dr. Bates spoke for a while telling of his lectures during the past month, and the ones scheduled for the future. We attended his lecture at Erasmus Hall High School on Thursday evening, January 11th, and were delighted at the number of people who came to hear his message. The library was full, and people were standing in the hall trying to catch what he was saying. The teachers showed great interest, and after the meeting, they asked further information from some members of the League. Their interest in Dr. Bates' work was very gratifying, as they have right at hand the ones who need his help most.

One of the members of the League at the BETTER EYESIGHT meeting at Madison Avenue, talked for about twenty minutes on the advisability of having a definite program mapped out for the members. That is, she would like to start a campaign, and stick to it. If it were to be a school campaign, have each member select a school and get to work. If it were to lecture, then appoint a speaker. Her views did not meet with much enthusiasm, for, according to the reports that the members brought in during the meeting, each one has to go about his work in his own way.

The meeting was closed with a hearty resolution by all to work diligently, and show that not numbers but results count.

The next meeting will be held at 300 Madison Avenue, Tuesday, February 13th, at 8 P. M. Bring your friends.

Meeting at East Orange, N. J.

By Minnie E. Marvin

A MEETING of the Better Eyesight League of the Oranges was held in the Library at East Orange, N. J., Friday evening, January 5th, at which there was an enthusiastic gathering of about two hundred. Mrs. E. C. Lierman, Dr. Bates' assistant, was the speaker.

Dr. Gore, one of the sponsors of the League out here, introduced Mrs. Lierman. She had already endeared herself to the greater part of the audience through her "STORIES FROM THE CLINIC." Although she has come in contact with thousands through the BETTER EYESIGHT MAGAZINE, the fact that she had to speak personally to this large assemblage almost awed her, but when Mrs. Lierman started to talk about her work, her personal feelings disappeared, and she carried the lecture off with honors.

The evening was a very enjoyable one to all, and much amusement was afforded by Mrs. Lierman's little stories of humorous events and happenings at the Harlem Hospital, where she and Dr. Bates are conducting their clinic. It isn't all joy and happiness, however. There is a great deal of sorrow and pathos, too, as in the case of the old lady, seventy-six years of age, having no living relatives, who is afflicted with cataracts. Then there is the old lady, seventy-nine years of age, who has absolute glaucoma, and the blind girl, who was born with cataracts in both eyes, and is now beginning to actually see. There are hundreds of other cases similar to these, but Mrs. Lierman cited a few of the most interesting. She has the faculty of taking these poor afflicted patients right into her heart, and showing her love for them, while they in turn, reciprocate, by loving her and trusting her implicitly. The result is that her instructions are followed faithfully, and the patient gradually regains his or her sight.

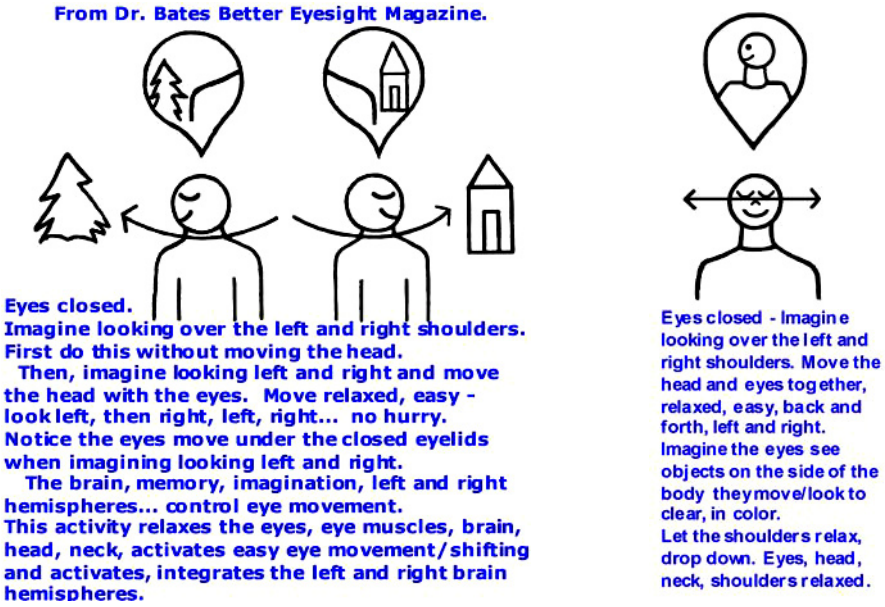
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

March, 1923

THE MEMORY SWING

THE memory swing relieves strain and tension as well as does the long or the short swing which has been described at various times. It is done with the **eyes closed while one imagines looking over first the right shoulder then over the left shoulder when the eyeballs may be seen through the closed eyelids to move from side to side.** When done properly it is just as efficient as the swing which is practiced with the eyes open whether short or long.
The head can move left and right, to the left and right shoulders with the closed eyes. Do this relaxed, easy and the neck, head and eyes will greatly relax.



The memory swing can be shortened by remembering the swing of a small letter, a quarter of an inch or less when the eyes are closed. The memory swing has given relief in many cases of imperfect sight from myopia, astigmatism and inflammations of the outside of the eyeball as well as inflammations of the inside of the eyeball. One advantage is the fact that it can be done without attracting the attention or making one more or less conspicuous to others. **It is much easier than the swing practiced with the eyes open and secures a greater amount of relaxation or rest than any other swing**. It may be done wrong just as any swing may be done wrong. When done right one does not imagine things are moving necessarily. **All that is important is to move the eyes from side to side as far as possible or as far as one can move them when the eyes are open.**
(Comfortably, easy. No force.)

Rest

By W. H. Bates, M. D.

THE normal eye when it has normal sight is at REST. When the normal eye has imperfect sight it is not at rest. When the diseased eye is at rest it has normal sight. When the diseased eye is not at rest the sight is imperfect. There are no exceptions to these statements. In the treatment of imperfect sight without glasses it is very important that we should understand as clearly as possible what is meant by REST. The normal eye is at REST when the sight is normal or when the individual remembers or imagines normal sight. All persons with high degrees of nearsightedness have moments when the eye is normal and when the vision is normal but these moments are so short that there is not time enough to be always conscious of the normal vision.

I have a patient with myopia of 40 D measured with the retinoscope. When the patient looks at a blank wall where there is nothing much to see and does not try to see, the retinoscope demonstrates moments of longer or shorter duration when the eye is normal but just as soon as the patient plans to read the Snellen test card or to see ordinary objects the retinoscope always demonstrates this high degree of myopia.

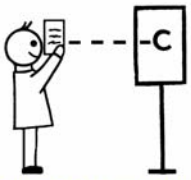
It can always be demonstrated that when the normal eye looks intently at one point the vision always becomes imperfect. The normal eye, with normal sight does not stare and to avoid the stare is continuously moving. When it moves from side to side the letter regarded appears to move in the opposite directions but usually the movement is so short, so slow, so easy that most people do not notice it.

The shift of the eyes causes the opposite movement of the object: Because the eyes can shift very fast, very short, tiny shifts causing the opposite movement to be very fast, tiny; the movement is not always noticed. Even oppositional movement from long eye shifts may not be noticed when the eye is relaxed, moving, blinking normally. It can be seen if the person looks for it.



+ Eyes closed. Imagine shifting left and right, top and bottom.... on a small letter o and
+ see the o move in the opposite direction as the eyes shift on it and
+ feel the closed eyes produce small movements.

The eye with imperfect sight does not usually see things moving because it is usually staring. The eye with imperfect sight can be benefited by practicing seeing things moving. This can be done properly, successfully or it can be done wrong, without benefit. When done properly the eye is at rest, when done improperly the eye is under a strain and this strain can usually be felt by the patient when his attention is called to it. It is a great help to the cure of imperfect sight to have the patient demonstrate what is wrong. When you know what is the matter with you that makes it possible to bring about relief. In my book I describe many methods for the improvement of the vision. None of them are a benefit unless the patient by practicing them obtains rest. One can practice the swing and make the sight worse; one can close the eyes and strain them terribly. Many people are unable to rest their eyes by palming,- the more they palm the more they strain. It is a very difficult matter to convince some people that to have a strain is a bad thing, that perfect sight can only come when the eye is at rest. Perfect sight comes to the eye when nothing is done; therefore when you do anything you are always doing something wrong. Perfect sight is passive. We do not see, things are seen and when things are seen with maximum vision no effort whatever is made. The eye is constantly at REST. No work is being done and the longer one uses the eye with perfect sight the more continuously is the eye at REST. Not only is the eye at REST but every nerve of the body is at REST. The body is at REST. With constant use of the eyes with perfect sight no work is done, no fatigue is felt and one feels perfectly comfortable because the eyes are perfectly at REST.



Distant vision improvement. Read fine print close to the eyes with clear vision to rest the eyes. Then: 'Flash' the distant card, shift on a letter for 'fraction of a second'. Read the fine print again and repeat. Use identical, familiar small close and large distant charts.

The eye when it is at rest is very sensitive. It does not require much of an effort to destroy to a greater or less degree the feeling of perfect REST. If the mind remembers things perfectly the eye is at rest. When the mind remembers or imagines things imperfectly the sight is disturbed because the eye is not at REST with the memory of imperfect sight. With the eye at REST the imagination of things seen or remembered is perfect but when the imagination of things seen or remembered is imperfect the eye is not at REST and the sight is imperfect.

It should be emphasized that when one practices any method in which the vision is improved that it is necessary that rest be secured to the eye and mind or else the vision is not improved. Nearsighted patients who have good vision at the near point can improve their sight for the distance very frequently by alternately reading the fine print with perfect sight close to their eyes and regard the letters on the distant Snellen test card in flashes. Reading fine print with normal sight is a rest and if one can flash the distant card without effort or strain the vision is improved as rest is maintained. However, it is possible to fail when practicing this method by doing something which prevents rest of the eyes. It is an interesting fact that when the eye is at rest one can flash letters on the Snellen test card for a short fraction of a second without interfering with the rest or relaxation of the eye.

I shall never forget the experiences that I have had with a few patients whose sight was imperfect for the distance and who were unable to read a newspaper. They were unusual in this respect that they were cured very promptly of their imperfect sight by closing their eyes and resting for a half an hour. Their vision was normal as soon as they opened their eyes and looked at the Snellen test card; they were able to read diamond type without difficulty from six to eighteen inches; the benefit was permanent. They did what very few people accomplish: they were able to obtain perfect rest by just closing their eyes.

Stories From the Clinic

By Emily C. Lierman

PROGRESSIVE MYOPIA

BEFORE I begin my story, I wish to apologize for making so many explanations throughout the article. I thought it best to do so for the benefit of those who may have the same difficulty that this poor girl had.

A girl, 23 years of age, came to us in a very pitiable state. Her trouble was progressive myopia and one of the worst cases I have ever seen. The glasses she wore were so thick that her eyes seemed like very small miniature eyes when looking at her. Our book, PERFECT SIGHT WITHOUT GLASSES, has become quite popular in Philadelphia, Pa., where her home is and it was through a friend who has the book, that she heard of Dr. Bates. She is her mother's only support which made it very hard for her to leave a good position as typist and come to our big city to see Dr. Bates, whom she was sure could cure her eyes when others had failed. Being

poor, she could not afford to come to his office for treatment, so she came to the Clinic. The clerk at the desk informed her that she could not have treatment there because she did not live in the district of the hospital. She was admitted that day, however, for just one treatment and to have the privilege of an examination by Dr. Bates. After Doctor had examined her eyes he asked me privately what on earth could be done with her in order that we could treat her there. When a severe case like this comes to us I long for a Bates Institute or something like that. My friends, some of whom were cured by Dr. Bates have been very liberal in their support financially but so far there is not enough funds to start an institution. I asked the girl if she could establish a residence near the Clinic so that we could treat her. She said she would try. Dr. Bates then examined her eyes and said her only trouble was progressive myopia. With her glasses off she could not count my fingers at two feet from her eyes. She could see the two hundred line letter, the largest letter on the test card at the same distance but no further. I improved her vision that day to 3-100 which was double what she had before. Her case required more time than I could give her, so she was instructed to palm her eyes for long intervals all through the day in her room and also in the evening and to come again just as soon as she could. She was told never to wear her glasses again. What a shock this was to her. How could she possibly get through the streets without them, she said. I told her I could not undertake the task of trying to improve her vision unless she did so. How well I knew the hardships she would go through and I was so sorry, but I had to be firm to succeed. As she left the room I could see how helpless she was; but before she reached the end of the corridor, on went her glasses again. She had lost her courage but I did not lose faith in her. Any girl who would leave her mother, home and position to have her eyes cured would not give up altogether, even though she was tempted to put on her glasses again. Two days later she returned and displayed her admittance card, showing that she was living in that district. She was anxious for me to know that she obtained a position as an attendant where she also had a home. Then, she also wished me to know that her glasses were broken. This was the best thing that could have happened because I knew she would try all the more to be cured.

I placed the test card three feet from her eyes and all she could see was the 200 line letter. The short swing and blinking helped her and in ten minutes her vision improved to 3-100, the same as on her first visit. She comes every Clinic day and is always there ahead of time. Her progress was slow but sure and her face which looked all the world like a stone image with slits for eyes, has now a natural appearance. She now reads 4-10 with both eyes and I am working diligently with her so that she can go back to her position and to an anxious loving mother.

She is now enjoying the movies for the first time in her life. Her sight was failing her with glasses on so she never attempted to indulge in such luxuries. She has now been under treatment two months, which seems a long time to her. She is happy because she can go along the streets and other places without fear of an accident. At a recent visit she flashed letters on the 10 line of the test card at 10 feet.

A short time ago she asked me if I go to church. The question was so unexpected. I told her I did go to church and that I was proud of the fact. I consider the Clinic my church also. Hundreds of poor souls enter our room there, just craving for a kind word or two. The Jews stand alongside of the colored folks, the Germans with the Irish. We also meet the Spanish and Italians in small numbers. Some are Catholic, others are Protestant and many other kinds of religions, but the one God is worshipped by them all. A kind word and a smile is necessary for us all and so we give it to them in abundance. The Jewish girl apologized for asking me that question. She had noticed that the kindly feeling which existed in most churches also prevailed in our Clinic.

A New Outlook

By MILDRED SHEPARD

IF ONLY I had known of Dr. Bates' work while I was still in school! If only I had known how to use my eyes better without glasses than with them; how to go to sleep on my back, swinging the little black "F" on my thumb nail; how to read fine print so that it would be a rest and not a strain; and how to enjoy life generally.

Looking back over the last eight or nine years, I find the remembrance of a headache, long continued days and weeks. All this time I was wearing glasses and receiving treatment from the best oculists I knew, but with no help to the headaches or to my sight, which became worse and worse. There seemed to be no cause for the headaches, and no relief except for part of a day following several consecutive nights of from ten to twelve hours' sleep. Shopping or trips to town were concluded by the always to-be-expected extra heavy headache.

But now everything is different. One year ago last September Doctor Bates told me to take off the glasses that I had worn for fifteen years. It was hard for the first month or two,—dreadfully hard. But the glasses were never put on again. Instead, I have been **palming** and **swinging** and **shifting** and **flashing** and **imagining** and **remembering** until now I have learned, in part, how to get better use of my eyes without glasses than I could with them. Now I am looking forward, and in fact, have begun to restfully read all those books that were put aside as being a "strain on my eyes," before I knew how,

Little by little the old "wozie feeling" in my head melted away, and now a headache is a rare thing. A few hours of restful sleep now take the place of the long hours required before I knew how to go off to sleep on my back, swinging the little black "F" on my thumb nail—a trick which I wouldn't part with. My sight has improved from 10-70 to 10-15, while I see 10-10 temporarily, which means that I will be able to keep it (normal sight) before long, I hope.

That is my one great ambition now, to be "plumb cured," so that I may go on helping other people to cure themselves. One of my friends cured herself with my help, and several, others are on the way.

I say, "If only I had known of Doctor Bates and his work while I was still in school"; I might better say, "How glad I am that I know about them now!"

MILDRED SHEPARD.

Crumbs for Bores

By James Hopper

MY trouble is eye strain. When I first went to Doctor Bates he told me that eye strain came nearly always of mind strain. I did not believe him. The theory seemed mystic to me, and displeasing to one asking for very tangible, physical causes.

A short time later, though, I discovered that the Doctor was right. I discovered this in a way which some will find amusing and others tragic.

In those days, every afternoon I took a walk up Fifth Avenue; and walking Fifth Avenue would practice some of the doctor's diabolisms—such as swinging the signs and conjuring black points, I soon found that, on some days these queer exercises worked perfectly—and that on other days, they wouldn't. There were days when to the exercises my eyes relaxed deliciously and lost all strain, and then I walked on air. But there were days when, to the best of my efforts the eye strain remained stubborn.

After a long search I finally found the reason for these discrepancies.

I discovered that the days when my eye strain was stubborn and refused to yield were exactly the same days on which, in the morning mail, I had found several big bills. And the days when the swing and the black dot so easily got the best of the eye strain were the days when, in the mail, no bills whatsoever had come.

I have not as yet discovered any absolute remedy for this state of affairs. But I will now go on to another example of mind strain causing eye strain; one which is more pleasing in that I have in this case discovered an efficient and simple remedy, which I can recommend to all.

At the same period of my life when I walked every afternoon up Fifth Avenue, I dined every night in a certain restaurant, in Greenwich Village. This restaurant had no small individual tables, but only long tables. So you sat with friends, or acquaintances, or with people who were neither.

I soon found that, dining at this restaurant, some nights my eyes were altogether relaxed and free from strain while on other nights, they strained badly, in spite of all I could do. For some time I thought this was a matter of the lights.
But long and close observation finally convinced me that the lighting had nothing to do with it. And finally I discovered the real reason.

It was this. When I sat with people whom I liked, and who amused me—who listened to my stories and laughed at them and did not tell too many of their own—my eyes remained nicely relaxed; I had no strain. But when I sat with bores—with people who insisted in doing all the talking and never giving me a chance,—then my eyes began to strain and continued to strain.

But I found a remedy. It's crumbs.

Almost at any table where you eat, if you will look close enough you will find on the cloth—or the linoleum—a crumb. It may be a small one—but the smaller the better.

I find such a crumb. I look at the right of it and see it better than the other side; I look at the left side of it and see it better than the right side. I practice on the crumb central fixation. I get it a-swinging—a short, slow swing. And feel my eyes relax, the strain leaving as if by magic.

Meanwhile the bores talk on; I let them talk. I sit there happy and at ease; I seem to be listening profoundly; they are tickled to death with themselves. But I am not listening; I am swinging my crumb. Swinging it, swinging it, and feeling my eyes, my whole being, deliciously distend.

I use this now not only at that restaurant but everywhere I go. And I go to many places now, for I have become extremely popular as a dinner guest. I am such a good listener, you see. I listen so quietly, with such profound and flattering attention.

Well, I don't. I swing crumbs.

Minutes of The Better Eyesight League

Minnie E. Marvin

OUR meetings of the Better Eyesight Leave become more instructive and interesting every month. There was a gathering of about 50 members on Tuesday evening, February 13, and I know it was a very enjoyable evening to all.

The meeting was called to order by Miss Hurty who acted as Chairman in the absence of Mr. Varney.

Some of those present came to learn about the work Dr. Bates is doing. Others came bursting with enthusiasm to make known some of the wonderful things that had been done for friends under their supervision during the past month.

One lady present told of having cured a family of five, mother, father and three children, who had worn glasses for years. It is a peculiar fact that, this lady, able to help so many, as she has done, is still unable to leave off her own glasses. Dr. Bates analyzed her condition and found that though she was *preaching* Central Fixation she was not *practicing* it. This was the secret of her failure in her own case. She was not able to "visualize." Dr. Bates told her how to improve her memory, and we know that she is going to give us a favorable report of herself at the next meeting, as she did of her friends this time.

Another interesting topic was the case of a gentleman teacher in Erasmus Hall High School, Brooklyn. He told of having an "Undergraded" class, of thirty-three boys and girls. These children are "sub-normal," and of course, defective sight always follows in the wake of ill-health, etc. This gentleman has cured himself and is very interested in trying to help his class. We shall be pleased to hear of his progress at our next meeting in March.

One of the "boosters" of the Better Eyesight League is a lady of about 70 years old. She has worn glasses for a great many years, and through following Doctor Bates' book, "Perfect Sight Without Glasses," is now able to read the diamond type cards at about eight inches. She has done good work in introducing the method among her friends, and reported that they are getting fine results.

If all of our League Members would pledge themselves to talk to at least one person with defective sight a week, they would have some *real* business to report at the next meeting. You all know what a relief *you* found in being able to dispense with glasses, don't you realize how much good you will accomplish by making this relief known to them? Every day we hear some one say, "Oh! If only I had learned of this work before I became such a slave to glasses!" There are millions waiting to be told the same thing you were. We are doing our share, we trust you will all do yours.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

April, 1923

WATCH YOUR STEP

WHEN you know what is the matter with you it is possible for you to correct it and bring about a cure. If you do not know what is wrong with you the cure of your imperfect sight is delayed. Some persons have been cured quickly when they were able to demonstrate that to see imperfectly required a tremendous effort, an effort which was very difficult. Some persons are cured in one visit and they readily demonstrate that imperfect sight or failure to see is difficult. Others require weeks and months to demonstrate the facts. Perfect sight is quick, comes easy and without any effort whatever. Imperfect sight is slow, difficult. One cannot consciously make the sight worse as readily as it can be done unconsciously. There is no danger in demonstrating the facts.

Look at a small letter on the Snellen test card which can be seen clearly at ten or twenty feet, a letter O for example. When the letter is seen quite perfectly it is usually seen without any apparent effort. However, by looking intently, staring at it and making an effort to improve it the letter blurs. It can always be demonstrated that the effort to see very soon blurs the letter. Now close the eyes and rest them for a part of a minute or longer and then glance at the letter again. It will usually be as clear as it was before. Again by straining, making an effort, the letter becomes blurred. One can readily demonstrate that to make the sight worse requires an effort, a strain.

Many obstinate cases have obtained a permanent cure only after learning how to make the sight worse consciously. In my book are published Seven Truths of Normal Sight. Prove the facts by demonstrating that the sight becomes imperfect when one or all of them is made imperfect by a strain.

An Opportunity for Teachers

By W. H. BATES, M. D.

THE future of this country is in the hands of the children. The children are in the hands of the teachers. Parents spend relatively very little or no time with their children while the teachers supervise the lives of the children for at least six hours a day. The duties of teachers have been increased very much in recent years. There was a time when the child got all the possible education from the home but now some children do not even get enough to eat at home and the teachers have supplied food, heat, warm clothing, fresh air, exercise and games. We ought to be very grateful to the teachers because they not only supply the necessities but also the pleasures which children need. A certain amount of physiology, a certain amount of morality and religion is important, and the child obtains it from the teacher in these days of enlightenment, much more than the child obtained them in the days of our fathers. I do not believe that most people realize the value of the teachers' services. It is a pity that their salaries are so low.

It is interesting to note that teachers do a great deal more for children than they are expected to do by the Board of Education or the Board of Health. The intelligence of the teachers regulates even the average adult and no matter what the ignorant people of the Board of Education or the Board of Health may insist upon, the teachers open the windows and give the child fresh air and many other things. So valuable are the teachers to the children, so valuable are they in many ways that one cannot lay down laws and rules for the teachers to follow. Quite often they will break a law when in their judgment the law is bad and you take notice the teacher is not expelled.

All the rules for the teachers to follow made by the physicians and other people, are followed when in the teacher's judgment it is best to obey these rules and I like to realize that teachers have the backbone to stand up for the right things as they see them, and to give help no matter what other people may say.

I am interested in the eyes of the school children. It seems to me a crime that young children should have to wear glasses; even children before they enter school, nursing babies, have occasionally been compelled to wear glasses. There was a time when I prided myself on my ability to prescribe glasses, even taught other doctors how to do it but I never fitted young children with glasses because it was very rare to find children under six years of age who could be manifestly benefited by wearing glasses. One teacher told me that the Board of Health of the City of New York not so very long ago sent a doctor to examine the eyes of her pupils. He prescribed glasses for every one of these children and even insisted that she should wear glasses. I told the teacher what to do and she very promptly became able to use her eyes without glasses and without any discomfort whatever. As one child after another lost their glasses the teacher told each child who was not wearing his glasses what to do to improve his sight and finally every child in her class obtained perfect sight without glasses after they stopped wearing them. Furthermore the scholarship of her pupils improved immensely. By practicing Central Fixation her children had no more headaches when they looked at the blackboard or when they read their books. Surely what that teacher did was not a crime and what she did other teachers can do all over the United States. The number of children wearing glasses is steadily increasing. I have many school children brought to me wearing glasses, to be cured of their symptoms without them and I find that in a very large percentage of these cases the glasses prescribed were very weak and entirely unnecessary. By a little rest, palming and swinging, the vision became normal and the eyes perfectly comfortable without glasses. Here is a great opportunity for all the teachers in the public and private schools to come forward and do the common-sense thing for their pupils. Of the hundred and ten million people in the United States when we average five children to a family, the number of children is approximately eighty million. Of course these figures are not at all accurate but even though there were only one million school children in the United States it would be worth while to preserve their eyesight. The majority of people are poor, they cannot afford to pay for eye glasses or to pay the doctor for his examination. The teachers have aided materially in supplying glasses to their pupils because they thought the glasses were necessary. Every teacher cured of imperfect sight by reading my book or practicing my treatment is able to cure every one of her pupils. There may be some exceptions to this but I have found out that so long as the child is able to see to come to school, the child can be benefited by the teacher. From time to time I have published articles on the prevention of imperfect sight in school children. From time to time I have cured teachers so that their sight became normal without glasses. Always I have urged them to do something for their pupils and many of them have, but there are a certain proportion of teachers who lack the courage of their convictions and neglect to do what they are able to do. I wish I could say

something that would encourage such teachers to go ahead and benefit their pupils. They cannot do any harm to a child suffering from headaches; the child can be relieved of a headache by closing the eyes and palming. No eye specialist, no person of average intelligence would object to a child resting his eyes. Taking a rest from his studies is not a crime and most teachers have the judgment which is accurate, and can tell better than anybody else how much rest a child ought to have. Teachers can help individually whereas the general law, where it may be all right for certain people and the majority, is not always proper for individuals. Every day school children come to my office and I tell them to take off their glasses. When the children are allowed to practice my treatment they get well without glasses. I think that is much better than to condemn them to the use of glasses for the rest of their lives. My discoveries in physiological optics have demonstrated that all children wearing glasses can be cured without them.

Stories From the Clinic

By EMILY C. LIERMAN

CRIMINALS



SOME years ago I was asked to go to Ossining (Sing-Sing Prison) to assist in examining the eyes of some of the prisoners. I firmly believe that if the prisoners had had no eyestrain their minds would not have turned to crime.

A foreigner who was imprisoned for arson told me in a few words how sorry he was that he set a building on fire for five dollars. He could not get work he said because he had bad sight and as a new baby was coming into his home where there were already three, he was desperate and so he did as he was bidden for a nominal sum of five dollars. Here was a foreigner who could hardly speak English who was willing to do most anything for his wife for a wonderful new five dollar bill. Four years had already been spent in prison and through the kindness of Warden Osborne, who was at that time doing such wonderful work inside the prison, he was allowed to live in a cell where there was a little bit of sunshine now and then. From being in a dark cell before Osborne came, for one whole year, the sight of his right eye was practically destroyed.

There were so many patients in the room, sent there to be examined by Dr. Bates that we had very little time to devote to each one individually, but I arranged a test card on a desk and placed him about five feet away from it and in just a few moments time I improved the sight of his good eye from 5-200 to 5-50. He was so overjoyed that he fell on his knees before me and held my two wrists very tightly, pleading with me to help him out of prison if that was possible, for he was eager to go to the new baby who arrived after his sentence. Some people might say, "Oh, yes, he told you a hard luck story," but I can understand all about it or at least enough to convince me that if conditions had been better for him when he came to this country perhaps he might never have been there.

So many times I have found that patients who come to us at the clinic are wearing the wrong glasses for their eyes. It is not always eyestrain which causes trouble for some patients but the mistake of the optician who commits a terrible error.

I would like to tell about a recent case, a girl, eleven years of age, who had myopia with glasses on and almost normal vision without them. As I do not test the strength of eye glasses of the cases which come to me, I was not at all sure whether the child was wearing them for fun or not. The first question that came to my mind was, was she wearing her mother's glasses or someone else's, just because she enjoyed wearing glasses, so I asked Dr. Bates to test them and find out whether the child was telling the truth or not. At 15 feet I asked the child to read the test card and with glasses on she read 15-100. I took off her glasses and she just stared at the card and that was all. I told her to do the usual thing, just close her eyes to rest them for a moment or so. When she opened her eyes again and looked at the card she read without a stop from the 200 line letter down to the last letter of the 20 line. She looked at me in great surprise and smiled. The discovery that she made seemed to give her a thrill. I asked her then who fitted her for glasses. She said that the school nurse had called to see her mother and complained that the child could not see the blackboard nor could she read the test card when her eyes were examined in school, so her mother immediately took her to an optician to be fitted for glasses. She said that the optician had charged her mother $4.50 for glasses and for the examination of her eyes. To my mind this was not only an error but a crime.

Sometimes as I go along the streets or ride in a car early in the morning to my work, I watch a policeman as he walks along his beat looking in at each store window because they are told to do so to protect the storekeeper. I wish there were policemen who understood the fitting of glasses who could invade the stores of opticians such as this one who fitted this child with the wrong glasses, and bring them to justice.

This little girl of whom I started to write is not the criminal kind. She is a wholesome kiddie, just full of life, and when I told her that it was a great mistake for her to wear those glasses she promptly put them away in the case and begged me to help her some more. I gave her perfect sight that day and she has not been to me since. Her little friend who brought her the day she came told me that Belle was not wearing glasses any more but sat in the back seat of her class room showing off to her teacher for all she was worth reading the blackboard better than she ever did in her life. She also told me that Belle informed the teacher about our clinic and showed the teacher how to palm. She is what I call a good league member for she is surely spreading the work in the classroom and can do more than I can because she is right there.

Dr. Bates' Lecture

By L. L. BIDDLE, 2ND.

This is the true story of how Dr. Bates discovered Natural Eyesight Improvement, cured his patients eyes, vision naturally without eyeglasses, surgery, drugs in the hospitals, colleges he worked at. Dr. Bates was opposed by other eye surgeons. The surgeons expelled Dr. Bates when they discovered he was curing his/their patients and other doctors with natural treatments and proved that the Bates Method is fact.

FOR the benefit of those who were unable to attend Dr. Bates' Lecture, before the New York Association of Osteopaths, at the Waldorf Astoria on Saturday Evening, February 17th, I decided to take down a few notes which I will now try to compile.

The chairman introduced Doctor Bates by stating that the Osteopaths take away the crutches and Doctor Bates takes away the glasses. After arising to the platform he did not start right in his subject but first rather humorously referred to a previous speaker who had been advising the doctors how to invest their money. I forget his exact words, but the substance of it was that he was impressed by the apparent prosperity of this assemblage. For at all the medical meetings he had ever attended, the doctors had never found it necessary to be advised how to invest their surplus capital. This seemed to strike their sense of humor and put everyone at his ease.

He then commenced by telling how he made his first discoveries and cited the opposition he had to buck against. He stated that his attitude of mind, ever since he was a little boy, was to find out all the facts possible about a subject and then work on these as a basis rather than on a guess or theory. When he commenced practicing medicine in 1885, one of the first patients who came to him had a slight degree of myopia or nearsightedness. Upon examining his eyes with the ophthalmoscope, he found that the patient was not nearsighted all of the time. When the patient was looking at a blank wall and not trying to see anything, his eyes were for short periods, normal. He persuaded this patient to go without his glasses, and his eyes finally reached a point where they stayed normal all the time.

Doctor Bates said that he then started boasting around the hospital about this cure. However, it got so on the house-surgeon's nerves that he brought up a ward patient who was nearsighted, and with him Doctor Bates managed to have equal success. Much to his surprise, instead of the rest of the doctors praising him, and trying to find out how he accomplished these heretofore impossible cures, Dr. Bates suddenly became very unpopular with the rest of the staff. These successes nevertheless spurred him on in his experiments at the New York Aquarium and at the laboratory of the Columbia College for Physicians and Surgeons, and as a result he discovered that the accommodation of the eye is not brought about by a change in the shape of the lens, but by the lengthening and shortening of the eyeball itself, as the bellows of a camera.

When he explained and illustrated this to his doctor friends, it disturbed them greatly. The surgeon who had charge of the laboratory came to him and said: "Do you know that you have proven that Helmholtz is wrong and furthermore if you wish to be accepted by scientific men you will have to show how or why he blundered?" This was quite a proposition, but Dr. Bates continued his experiments and for two years tried to prove that Helmholtz was *right*, but failed, and finally discovered how Helmholtz blundered; which Doctor Bates has illustrated in his book. As a reward for this, he was *expelled* from the University.

This was quite a handicap, but he obtained a small laboratory for himself and continued in his work. He told us of a specific case: A woman wearing very strong glasses brought her daughter to him, because the little girl's eyes were getting so bad that she could not continue at school. When the woman, in her usual cross manner, told her daughter to take off her glasses and read the test card, she was only able to read the top letter. Doctor Bates then very kindly asked the child to close her eyes and rest them. After a little while he asked her to open her eyes, and tell what she could see. Much to their surprise the little girl read the whole card. Her mother was very happy and said that she would see that her daughter would practice every day with the test card as Doctor Bates prescribed. In a few days, however, they returned very discouraged and the mother said that her child was only able to read the top letter on the test card. Doctor Bates said that he asked her who had tested the girl's sight, and the woman admitted that it was she. He remonstrated with her, and reminded her that he especially asked her to stay out of the room when her daughter was practicing, and to have someone with normal sight test her. He then took his little patient as before and speaking to her kindly had her rest her eyes, and she again read the whole card.

Doctor Bates stated that he cited this example to show **how the strain which this woman was under from wearing very strong glasses, was contagious, and harmed her daughter's sight. Moreover, he said that it showed how the child's state of mind directly affected her ability to see. For when she was spoken to kindly and her mind was relaxed, her eyes were rested and she read the whole card. He explained that when one's mind was under a strain one unconsciously tightened the muscles which encircle the eyeball, and consequently squeeze it out of shape and out of focus. But when the mind is at rest these muscles are relaxed and the eyeball is allowed to assume its proper shape and focus. He furthermore stated that all diseases of the eye can be cured by similar relaxation, which can be obtained by methods Dr. Bates has developed. He said that all children under 12 years of age not wearing glasses can obtain perfect sight by reading the Snellen Test Card once a day, first with one eye and then with the other.**

He once more reiterated his old challenge which he first gave before the New York Medical Association ten years ago, declaring that if anyone can prove one of his statements wrong, then all are wrong, He also stated that he has not found a case so bad or so blind that he could not benefit, and that he has not yet met his Waterloo.

He then returned to his seat, but was so applauded and urged to continue that he finally stated that if anyone wished to remain and ask further questions, he would he glad to answer them. This they all did, and fired questions at him until it became so late that in order to make his train, he was forced to break away.

Parents' and Teacher's Page

By EMILY MEDER

WE ARE adding this new feature to the magazine for the benefit of those who are vitally interested in the preservation of school-children's eyesight.

Parents are directly responsible for the welfare of these future citizens but we find that this is lightly shifted to the shoulders of the teachers who only see the pupils one-fifth of the time that the parents do. When this great truth is brought home: THAT ALL DEFECTS OF THE EYE ARE CURABLE; THAT ALL DISEASES OF THE EYE ARE FUNCTIONAL, THEREFORE CURABLE, then we can reach the parents who are criminally placing glasses upon their children. When told in Doctor Bates' own words, it is all so logical and easy, but the difficult part of it is to convince mothers that they are doing the wrong thing. The writer of this article has grown very fond of a little neighbor in the apartment next door. The little girl is four years old and has a very bad case of crossed eyes which is greatly exaggerated by a pair of tortoiseshell glasses. Her mother is constantly admonishing her not to run and jump with Buddy, her little brother, for fear that she might injure the precious goggles. I spoke to the mother about Dr. Bates' methods and that I knew the child could be cured: but when I suggested that she remove the glasses, the idea was met with a shudder. This woman, although having the best interest of her little daughter at heart, was doing the worst possible thing for her. She could not overcome the old set ways of doing things. She accepted as true the theories that are retarding progress and obscuring the light of newer things. We pity the Chinese for their lack of interest in the new world and the thousands of discoveries and inventions which would advance them hundreds of years, but even in our own twentieth century we find cases of this "bowing to old customs."

When Dr. Bates realized the value of his discoveries, he immediately took steps to have this method placed at the disposal of school officials; however, because he could not afford to *pay* the price to these officials for the privilege of giving away his life work and because many obstacles were placed in his path to discourage him from removing glasses from the universe, this great work was retarded and the money and work expended, while great in itself, was only "a drop in the bucket."

The teachers and nurses of schools, however, who do not have to be financially reimbursed are doing good work. They place a test card in the class room and have the pupils read this once every day. A record is taken of each child when he first begins and this is compared with the record taken two weeks later. The teachers are always amazed at the results.

I have in front of me a letter written to Dr. Bates from a nurse who installed this system in her school. Among other reports, is this one of great interest. She said, "the children come to me just before the close of the morning session. They palm and do the swing either with the head alone or with the entire body. Later I found that the swing was more successful than the palming, as the latter was irksome to the child." Another extract reads, "I helped correct squint in a child and his eyes remain straight unless he strains. His sight has also improved in spite of the fact that he practices less at home than any of the others, and needs constant urging."

This letter speaks for itself. These are the worthwhile things and anyone who reads this page, can improve the eyesight of a child with defective vision. We shall be glad to answer all questions through the magazine and give directions. Don't let your boy or girl grow up with imperfect sight. The eyes are truly the windows of the soul and if these are not normal, the whole physical outlook is altered.

If you are a teacher, look at your little charges and see if they need help. It is so easy, and means so much. If you are a mother, you will probably know now, why your child does not romp with the others.

DEFECTIVE VISION COVERS A MULTITUDE OF AILMENTS.

Minutes of The Better Eyesight League

AT LAST drastic action was taken at the last BETTER EYESIGHT meeting. One by one the officers dropped out, and the members themselves seemed to lack interest or ambition or that intangible something which brings results. In lieu of the regular officers, we had to enlist the services of various members who were kind enough to officiate. Miss Hurty had acted in this capacity for the past three meetings, and we were exceedingly glad to have one so capable.

We noticed a greater part of those present were strangers, and people who had inquired about Doctor Bates' work, and had been advised to attend one meeting, and get some idea about his method, and how others are being helped. We were very glad indeed to see these new faces, and to have them hear the wonderful reports some of our members made. Among the most important of these reports, was that given by Doctor Watters. He is practicing Doctor Bates' method, and is keenly interested in the sight of school children. There is a sub-normal school in Orange, N. J., with an attendance of about forty children. Out of the forty which he examined, *five* had *normal* vision. He installed the method by explaining Dr. Bates method to the teachers, and placing in the class room a Snellen Test Card. We shall be very interested to know at the next meeting, what progress has been made.

There is so much work to be done among the children, and we wish every one who reads this magazine, to have the pleasure of saying that they helped cure a child of imperfect vision. The field is so large, and the workers so few.

There were a great many who told how they improved their own vision, and how elated they were, but there were none who told if they benefited others.

Miss Meder, who represented the Central Fixation Publishing Co., said that she desired to have a clear understanding about just what the Better Eyesight League meant, and how the Central Fixation Publishing Co. was affiliated with it. The Company is taking charge of Dr. Bates' publications, and in addition to this, selling optical instruments to other doctors. These, together with the advertising of the book and the regular routine of the office work, was all that the present office force could possibly handle. However, all the work of the Better Eyesight League was thrust upon the manager's shoulders, and this necessitated hiring extra help to apprise the members of the meeting date, get the reports in order, order camp chairs, etc. Also the Better Eyesight League does not pay for itself, and this extra expense was assumed by the Publishers of Doctor Bates' book.

When this was all explained to the assemblage a few of the members were greatly impressed at the enormity of their misdeeds. It had never been expected that the Central Fixation Publishing Company assume any responsibility of the Better Eyesight League. Mrs. Daggett took the floor and her energetic style of speaking was good to hear. She aroused interest in those who were new, and woke up the lagging ones who are members. She appointed a reorganization committee, including Miss Hurty, Miss Reicher, Mr. Biddle, and herself. When they get together and talk things over, we are more hopeful of a brighter outlook. If the members could only

realize the bigness, the importance of this work, we are sure that there would be a better attendance, and a more enthusiastic one. Those who attend the meetings are enthusiastic, but there are not enough of them. Everybody come. The fact that Doctor Bates is willing to answer all questions, ought to he an inducement in itself. If you have the book, and are doubtful about any one thing, he is glad to help you. You know what Dr. Bates is doing. Help him. Most of all help the children. REMOVE THE GLASSES.

The April meeting will be held as usual on the second Tuesday of the month, which falls on the 10th.

The Question Mark

By M. E. MARVIN

For the benefit of those who are undertaking the cure of imperfect sight by following Doctor Bates' book we are adding a new feature to our Magazine and calling it the "Question Mark."

Questions in regard to the treatment are bound to arise from time to time, and these, we shall be pleased to answer either by mail or through this column, according to the request. If personal answers are to be made kindly enclose stamped addressed envelope.

Q - WHAT IS CENTRAL FIXATION?—S. P.
A—Seeing best where you are looking; that is, an object, for instance, a chair, look at the arm or the leg. The object is brought out clearer. Trying to take in the whole chair at once, strains the eyes, and the object becomes blurred.

Q - HOW LONG DOES DR. BATES' TREATMENT TAKE?—L. M.
A—This depends on the seriousness and nature of your defect. The average case takes three weeks. Some are cured in less time and some take longer.

Q – SHALL I HAVE TO LEAVE OFF MY GLASSES WHILE PRACTICING THE TREATMENT?
A—Emphatically yes. No permanent benefit noticed while glasses are worn.

Q - Are cataracts curable without operation?—A.W.M.
A—Yes.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

May, 1923

Teach Others

MANY teachers have told me that when they taught Arithmetic the one who learned the most was always the teacher. Some ministers have made the remark that the one who profited mostly by the sermon was the man who delivered it.

For many years my patients who have been benefited by treatment without glasses have to a greater or less extent enjoyed the pleasure of helping others. When you think that you understand how to practice the swing with benefit try to teach somebody else how to do it. If you find palming is beneficial find how many of your friends who are also benefited by palming. But when you meet someone who is not benefited by what you tell them to do, you have at this time an opportunity of helping not only your friend but your own eyes as well. It seems a simple matter for you to close your eyes, rest them for a half hour or so and find that your sight is improved by the rest. However, there are some people who are not benefited appreciably by closing their eyes and resting them. One cause of failure is the memory of imperfect sight. Many patients failed to improve because with their eyes closed they think too much of their failure to see. Patients who have improved materially usually can demonstrate that the memory of perfect sight is restful, while the memory of imperfect sight is a strain. If you have a near-sighted friend who can read ordinary print without difficulty at the near point and without glasses, you can spend an hour or two of activity in showing your friend how to demonstrate while regarding fine print that it is impossible to try to concentrate on a point without sooner, or later making the sight worse, that it is impossible to remember, imagine or see stationary letters, that it is impossible to maintain normal vision with the eyes kept continuously open without blinking.

The Story of Barbour

***By* W. H. BATES, M.D.**

BARBOUR had the best imagination of anybody I ever knew in my life. I believe this is some praise because every day for many years I am teaching patients how to imagine perfectly and while doing so testing their imagination. There may be schools where the imagination is taught but I do not know where to find them and would be pleased to have someone tell me of others who teach memory and imagination. Of course I have read many books which claim to teach people how to remember better, and since memory is very important in obtaining perfect sight I have been very much interested in these books and have read them very carefully to learn what they might contain. Unfortunately I have never been able to learn anything from these books, which was better than my methods.

It might interest my readers to know that some of my patients are teachers of mental science in various schools and colleges. I never found one who had a correct conception of memory and imagination. Many of them had no mental pictures at all. In fact one very prominent professor of mental science, a dean in his department in one of our well-known Universities could not imagine a mental picture of his own signature or imagine a mental picture of a person's face, a mental picture of a flower or any other object. Before I could help his sight I had to teach him how to remember and how to imagine and so when I say that Barbour had a

wonderful imagination I feel that it means something.

She was eleven years old and was suffering from **alternating convergent squint**. She had normal vision and was wearing glasses for compound **hypermetropic astigmatism** which made her sight worse. When she regarded a small letter on the ten line at twenty feet she said that she could see it when she knew what it was and this was true because when she said that she saw a letter that she knew perfectly she was able to see other letters that she did not know. When there were two letters close together, both unknown and neither distinct she could see both of them when she imagined she saw one after knowing what it was.

She was treated in various ways with temporary benefit for some weeks. She readily demonstrated that resting her eyes, palming and swinging was a benefit. When she regarded a small letter at a near point, about six inches, she could see the white center of the letter O very white and imagine it whiter than it really was, whiter than the rest of the card. She could imagine it moving from side to side not any more than its own width, but when she tried to imagine it was stationary her vision became worse and the letter O was not distinct. When she closed her eyes she would remember the letter O and imagine the white center as white as when she looked at the O with her eyes open. By practice she became able to demonstrate that with her eyes closed she could remember a letter O with its short swing and its very white center perfectly when she imagined one side of an unknown letter correctly. If the unknown letter was a B and she imagined the left hand side to be straight, her memory of the O was perfect. If she imagined the left side was curved or open her memory of the letter O was modified and sufficiently so for her to tell the difference. In the same way she was able to imagine the top was straight, the bottom was straight and the right side was a curve. This description was also that of a letter D. When she imagined incorrectly that the letter was a D her memory of the letter O at the same time was modified. When she imagined the truth that the letter was a B her memory of the letter O still remained perfect. In other words when she imagined the truth of either side of an unknown letter that she had previously regarded without seeing consciously, the letter O remained perfect in her memory. But when she imagined an error, one or more sides of the letter incorrectly she did not remember the letter O so well.

One day I held a page of diamond type, which she had never seen before, ten feet away from her eyes and directed her to look at the top, the middle, the bottom for about a half a minute. She was unable to see consciously a single letter on the page. With the retinoscope she was myopic when she tried to see the fine print but not myopic all the time. By simultaneous retinoscopy her eyes were normal for fractions of a second or longer. I told her mother that the distance was too great for her to read the fine print with her conscious mind but that she saw every letter on the card perfectly with her subconscious mind; and because she saw each letter perfectly she was able, when she closed her eyes, to remember correctly where each letter was located. I asked her to tell me with the help of her imagination the first letter of the fourth word on the tenth line. This she did correctly in the same way as was just described. Then she imagined correctly the second letter of the fifth word on the fourteenth line, a small letter C which was similar to a capital letter C. She was able to imagine many other letters correctly after she was told where they were located. Some letters, an X for example, have all four sides open, and yet in some way she became able to imagine these letters correctly better than incorrectly. The next step, made largely by her own volition, was to imagine correctly the small letters as she already had imagined capital letters. Every day her mother or I co-operated with her in imagining with her conscious mind letters which she only saw unconsciously with her subconscious mind. Her improvement proceeded rapidly until she imagined she saw one letter of a word so perfectly with so perfect a mental relaxation that she imagined she saw the whole word and many words following, one or more lines of letters as quickly as she could at times read them when looking at them at a near point.

The alternating squint disappeared, at first temporarily for a few hours, a few days or longer. She returned home and continued the daily practice of her imagination of letters seen by her subconscious mind. In one of her letters she wrote that after daily practice for forty-four days there was no return of the squint.

Her vision and squint were very much benefited by reading books printed in very fine type. The smaller the print the greater the relaxation of her eyes, and the more was her squint benefited. She became very much interested in reading fine print, and was very anxious to obtain print as small as possible. So I sent her a copy of the photographic reduction of the Bible, in which the print is very small indeed. **(Reading Fine Print Cures Blur, Astigmatism and Strabismus.)**

The following letter was received:

"Dear Doctor Bates:

Thank you very much for the little Bible. It is the cutest thing I have ever seen. My eyes have been straight forty-four days in succession, and I'm as proud as a peacock.

We only have three Christmas presents wrapped up. I hope you have a merry, merry, merry, Christmas, and a Happy, Happy, Happy New Year.

Love,

Barbour.

Stories from the Clinic

***By* EMILY C. LIERMAN**

A CASE OF DIVERGENT SQUINT

ONE day a young colored woman came to us with her little boy age nine years. Every time she looked at him it was plainly a look of disgust. The boy had the most wistful face I ever saw. He kept looking up into his mother's face and his expression was that of a deaf and dumb person. One of his eyes seemed to be looking a way off to the opposite side of the room while the other eye was looking straight at her. When his other eye turned to look at her the former would turn out in the opposite direction away from her. He had alternate divergent squint. My heart went out to James as his mother related to me the fact that her other three children had normal sight while James looked so horrible with his crooked eyes. A chill went through me when I heard her say, "I wish he had never been born." Then with more disgust in the sound of her voice she said, "I can't help it, but I hate him."

Can anyone imagine a mother disliking her own child so much? All because his eyes were crooked. Complaints came to her from the school he attended. His teacher complained that he was stupid. All this time the little fellow looked up at his mother without moving an eyelid apparently. Her question was, "What can be done with him or for him? Can you give him glasses or operate to cure his eyes?" I told the mother that glasses would never cure his squint and neither would an operation. I asked her to watch carefully and see what James was about to do for me. First, I held him very close to me and patted his woolly head. He pressed a little closer for more. He liked the beginning of his treatment. I asked him to say the alphabet for me, but he said he could not remember all of

the letters. He stood ten feet from the test card. I asked him to read, starting with the largest letter at the top. He read a few letters correctly but I soon found out that he did not know many letters of the alphabet. His mother remarked then that the teacher in school thought his mind was affected because of his eyes and that there was little hope of curing him. I had my doubts about the teacher saying such a thing but I did not say so to the mother. What a pity it was to have the dear little fellow hear all this. He looked so worried and restless. Perhaps he wanted to run away somewhere because his eyes caused others so much trouble. I taught him to **palm,** telling him to **remember a small Bible class pin I was wearing on my dress**. In a few minutes I tested his sight with the E card, which is used always in cases where children do not know their letters. At ten feet he saw the fifty line. Again I told him to palm, and asked his mother not to speak to him while he was resting his eyes. In the meantime I attended to other patients. After a few moments I glanced at him and saw two big tears rolling down each cheek. He was weeping silently. His mother was just about ready to find fault with him, but I intervened and walked her gently out of the room to a bench outside the door. I whispered to James that I loved him a whole lot and if he would learn to read his letters at home and could read half of the test card correctly the next time he came, I would give him a nickel. I saw him smile, and when I was able to treat him again I found that his sight had improved to the forty line of the E card. I have been wondering ever since whether it was the Bible class pin on my dress which he was asked to remember or was it a clear vision he had of that nickel I had promised him that improved his sight for the forty line of letters. Two days later James appeared again with his mother and both were smiling. He could hardly wait to tell me that he knew his letters perfectly. His big brother taught him at home, he said, and he hoped I would be pleased as his teacher was, when he read all his letters on the blackboard for her that day.

It was amusing to see James looking toward my purse which was hanging on the wall in the Clinic room. He was thinking of that nickel I promised him. I produced a strange test card which he had not seen. When he began to read the card I placed him fifteen feet away, which was five feet further than the first day. He was so excited that his squint became worse and he could not read. Dr. Bates said his trouble was mostly nervousness. I told him to palm again and reminded him of the letter E with its straight line at the top and to the left, with an opening to the right. Then he became able to see the letters after a few moments' rest. I called Dr. Bates' attention to the sudden improvement in his eyes as he read one line after another until he reached the thirty line, when suddenly his eyes turned out again, but after he had rested his eyes again they became straight. I gave him the promised nickel that day, which made him very happy.

James was able to keep his eyes straight most of the time after he had been coming to the Clinic for a month. The attitude of his mother toward him was decidedly better and she promised to help him with the treatment of his eyes at home. I do not know whether James was entirely cured or not because our work at the Harlem Hospital Clinic has since been discontinued.

Teachers Question Dr. Bates

***By* KATHLEEN E. HURTY**

AS an interesting sequel to the January lecture given by Dr. Bates at Erasmus Hall High School in Brooklyn, there followed a most profitable evening at 300 Madison Avenue, New York City. The January talk was to many such a revelation that some of the teachers were eager for a chance to know more of this remarkable discovery. On April 6th an opportunity was afforded to ply Dr. Bates with questions. About twenty-five teachers from the high schools and a few other friends were present. Practically everyone there had read "The Cure of Imperfect Sight Without Glasses" and no one needed to be convinced of the soundness of the principles involved. Therefore the discussions were largely details of technique, centering mostly about methods with children and particularly in the class-room.

Specifically, Dr. Bates recommended the following procedure:

1. That each teacher hang a Snellen Test Card on the class-room wall. Daily both teacher and pupils should read the smallest letters that can be seen without straining, using each eye separately. He stated that if this course be pursued faithfully over a period of time all eyes would be helped—sight improved and strain prevented.

2. That teachers do as much as possible to re-educate their pupils in the proper use of their eyes. Incorrect habits must be replaced by new correct ones, namely, pupils should be taught that any effort to see produces strain and injures the eyes. They must be taught never to look fixedly at the black-board, teacher's face, or any object. Nor should they ever keep their eyes open for any length of time. The normal eye is always shifting and blinking. Therefore to counteract strain in a child who stares fixedly, simple exercises, such as blinking continuously for a few minutes and swinging should be taught.

3. That children should be informed that if their eyes ache or their sight is blurred, palming is an easy means to get rest and relief.

The final impression left in the minds of those present was that teachers can do a really big work by improving sight and preventing eyestrain so that their children need never have glasses prescribed.

After the conference many stayed to ask further questions of Dr. Bates and to receive help with their own personal problems and difficulties. Some of the teachers were able to testify that they had derived immense benefit from the method. Several stated that they had already abandoned their glasses, with resulting improvement in their eyes.

As an outcome of the meeting ten new members joined the Better Eyesight League.

SPECIAL SPEAKER FOR MAY MEETING

Readers of the BETTER EYESIGHT MAGAZINE will be interested to learn that Mr. Husted, Superintendent of the Public Schools of North Bergen, New Jersey, will address the League at the May Meeting.

As most of our readers know, Mr. Husted installed Doctor Bates' method in his schools, and we feel sure that his report will be most interesting, and of especial importance to teachers and parents.

How My Eyestrain was Relieved

***By* CHARLOTTE ROBERTSON**

I HAVE had such wonderful relief by following Dr. Bates' method of treating imperfect sight and eye-strain that I should like to tell of my experience. It may be the means of giving courage to those who suffered as I did, but who hesitate to leave off their glasses. I had worn glasses but my eyes were not benefited. In fact they became worse. I went to Dr. Bates and am pleased to give some of the "exercises" advised by him which I have found very beneficial.

1. The **Snellen test card** I read upon arising in the morning, at noon and again in the evening, first with two eyes together and later with each eye separately.

2. Palming six times a day or more for a few minutes to half an hour, decreasing the length of time as my eyes improved.

3. I have practiced reading a little **fine print daily**, also some pages from Dr. Bates' book, "Perfect Sight Without Glasses," which I have always found encouraging.



Central Fixation
Shift left and right (dot to dot) on a small o and see it swing opposite the movement of the eyes. See one side (dot) of the o best, clearest at a time in the center of the visual field. Shift on the dot to see it clear. Blink.

At night on retiring I have used the **swing** together with **central fixation** on the small O, and by so doing have lost the wretched strain which I have been conscious of for months, always on awakening in the morning. This exercise consists of swinging the O to the left and seeing the right side best, to the right and seeing the left side best. Also swinging the black period with the O to the left, seeing the period on the right side of the O best, and to the right, seeing the period on the left side of the O best. First by the practice of this exercise, also with a soothing swinging motion as that of drifting in a boat in a comparatively quiet sea, I obtained relaxation when falling to sleep. My morning eye strain had completely disappeared and in its place I awake feeling rested, refreshed and ready for the day's work.

Parents' and Teachers' Page

***By* EMILY C. A. MEDER**

IT is becoming more and more gratifying to us to note the increased activity among school officials, school teachers, and last but in no wise least, among parents, in the promotion of better eyesight in children. The slogan adopted seems to be "an ounce of prevention is worth a pound of glasses."

We are all grasping every opportunity to first, prevent defective vision, and second, to remove glasses from children who already have them.

An incident worth citing occurred in the Central Fixation office recently. A. mother came to purchase a Snellen Chart, and with her was a little girl about three. The youngster had a very bad case of squint and wore glasses that almost obscured the little face. We naturally surmised that the card was for the child, but learned that the mother wished it for herself. She told us she had myopia. She never dreamed that the child's eyes could be cured without operation, and was certainly elated when Mrs. Lierman showed her how to treat the little one. Naturally the child was too young to read the chart, so Mrs. Lierman showed her the game of seeing things swing, with the result that at times the child's eyes were perfectly straight.

We are anxiously awaiting the next report from the mother, who was eager to go home and try treating the little girl herself.

A teacher from East Orange has upset all school tradition by having her pupils shift and blink while she is talking to them. She, like others, was under the impression that if her pupils stared at her and did not move, this was indicative of alertness and intentness. However, upon learning of Dr. Bates' method, she has changed the old regime, and she has since informed us that she is more at ease with her class when they are relaxed.

Coinciding with this report is that received from a lady who taught her daughter, who is now ten, to look directly into the eyes of the one speaking to her. The child followed these instructions implicitly, with the result that the little girl strained her eyes so out of focus that her glasses had to be changed every few months. In desperation the mother brought her to Dr. Bates, who immediately changed the stare into a blink. They returned home within a few weeks, minus her glasses and plus perfect vision. This was mostly due to correcting the stare.

If mothers are at a loss to know where to start, let them watch the children for a short period. They will be surprised to note the prevalence among children of staring. If this is corrected, it is a good step forward.

THE LEAGUE'S NEW HOME!

Those who attended the April meeting of the Better Eyesight League were treated to a novel sensation so far as the League is concerned. The meeting was almost entirely business, as the report by Mrs. Rusk indicates. New Officers were elected and a new program mapped out.

Nothing definite as to the arrangement of the program for the following meetings has been decided, but we know that the officers are going to make these meetings as interesting and instructive as is in their power. One of the new features installed by the committee is to have an interesting speaker at each meeting. We feel sure now, with the League in such capable hands, the work of Dr. Bates will be spread and the fact that *eye troubles are curable* will be made known to thousands.

Dr. Bates is going to give a lecture or talk before some Osteopath students on Monday, May 7th, at 312 West 72nd Street. As this is to be an open discussion, all are invited, and we hope our readers will take advantage of this good opportunity to hear Dr. Bates speak.

The Better Eyesight League will hold its next meeting on Tuesday, May 15th, and according to all indications it will be held in our new office, at 383 Madison Avenue, corner of 46th Street.

Minutes of The Better Eyesight League

By* F. B. RUSK, *Recording Secretary

THE annual business meeting of the Better Eyesight League was held on April 10th, with Miss Hurty in the chair. The chief business of the meeting was hearing the report of the executive committee, the adoption of amendments to the Constitution, and the election of officers for the ensuing year. Mrs. Mabel Potter Daggett, as Chairman of the Executive Committee, suggested the following ways of increasing the funds of the League, enlarging its membership, and widening its influence:

1. Sending printed postal card notices of meetings to all members.

2. Providing membership application blanks for those who express their intention of becoming members of the League.

3. Providing a guest book for non-members who attend meetings of the League.

4. Providing a "Thank Offering Box" for contributions for those who have been cured without private treatment by reading the literature and attending the meetings.

The following amendments to the Constitution were passed:

1. The dues for the League shall include subscription to the Magazine, "Better Eyesight," and shall be three dollars for the fiscal year, except that if there are two or more members of the League in one family, the succeeding members shall pay one dollar and not receive the Magazine.

2. The Annual Business Meeting of the League shall be held the second Tuesday in January.

3. There shall be two secretaries instead of one: Recording secretary, whose duty it shall be to write an interesting account of the meeting and prepare a copy for the Magazine once a month, also to announce in the Magazine a speaker for the next meeting; a corresponding; secretary, whose duty it shall be to send out notices of the meetings and to attend to all the correspondence of the League.

4. The President shall appoint a promotion committee whose duty it shall be to solicit new members at every meeting and promote the sale of literature.

5. The President shall appoint a program committee whose duty it shall be to arrange a definite program, including a speaker for each meeting of the League, and to arrange for meetings in schools, churches, offices and private homes.

The following officers were duly nominated and elected:
President—Mr. H. J. Douds.
Vice-President—Miss Kathleen E. Hurty.
Recording Secretary—Mrs., F. B. Rusk.
Treasurer—Mrs. William H. Marsdon.
Corresponding Secretary—Dr. L. M. Stanton.

The meeting was then opened for discussion. One of Dr. Bates' patients reported a gradual but steady lessening of eyestrain by palming several times a day and swinging the O. Another member told of the cure of a sty by palming, and Dr. Bates added other interesting cases where serious infections had been reduced by palming.
Among the most important points brought out by Dr. Bates in response to questions were the following:
Squint has never been permanently cured by operation. The only permanent cure is through relaxation of the eyes. An ingenious way of treating a young child afflicted with squint is to let him practice the fox-trot, calling his attention to the fact that the objects in the room seem to move in a direction opposite to that in which he is dancing.

GERMANY PAVES THE WAY FOR PERFECT SIGHT IN NEXT GENERATION

***By* M. E. MARVIN**

IN every mail we have evidences of the way Dr. Bates' work is being spread all over the world. We have not only "book patients" and magazine subscribers in Europe, Asia, Africa, etc., but doctors treating imperfect sight according to Dr. Bates' method. These doctors are not among those who have studied under Dr. Bates but who have analyzed the book and with the aid of the many reprints which have appeared in the various medical journals are enabled to carry on the good work. Apropos of the above we have a very interesting piece of news for our readers.

About a week ago a reporter from the Universal Service Staff called at our office to learn about Dr. Bates' work. She said that Norman Hapgood, Editor of Hearst International, who is in Europe now for the purpose of getting inside information on the political and economic situations, had cabled the Universal Service of an interesting discovery which he made incidentally. This was, that while visiting the schools and soup kitchens in Germany he saw altogether only *one* child wearing glasses. Upon asking the reason of this he was told that the authorities are taking glasses off children all through Germany and that they were acting in this under pressure of the oculists. Mr. Hapgood was also told that this method originated in America. The reporter for the Universal News traced the origin to Dr. Bates, hence her request for further details.

Do you realize what this means? Germany, the very source from which the old theories governing our ophthalmologists originated, has at last accepted the only method of curing imperfect sight. Norman Hapgood says, "While fully accepted in Germany it is spreading slowly in America where in time it is bound to be recognized and to be universally practiced."

Why isn't the discoverer so honored by his own country?

The Question Mark

Salt Lake City, Utah.

Q—Am forty-nine years of age and have had to wear glasses for five years, due to gradual weakening of the eyes. Is this curable? S. J.

A—Old age sight is curable, and you can discard your glasses by following the methods as outlined in the book, "Perfect Sight Without Glasses."

Chicago, Ill.

Q—My father, eighty-three years old, has cataracts on both eyes. Can you help him? E. C. V.

A—Without personal supervision, cataracts are very hard to cure. Would advise his coming to New York. I can cure him. In the meantime, read the chapters on Cataract in my book and he will get a great deal of relief.

New York City.

Q—Why are books for small children printed in large type? P. E. S.

A—Because Boards of Education have not yet learned that it is a strain for anyone to look at big print and a relaxation to read fine print.

San Francisco, Cal.

Q—I cannot gaze into the sun without discomfort. Do I do it incorrectly? K. Johnson.

A—Read Chapter XVII in the book. **Do not gaze into the sun but at each side of it alternately. In this way you not only swing it, but allow the rays to shine on the eyes. This is a great benefit.**

Movement, shifting of the eyes, moving the head side to side prevents overexposure, concentration of sunlight on one area, and gets the sunlight moving upon and activating all areas of the eyes, cornea, lens, retina.

If the sunlight is too strong, practice under a tree and let the sun shine through the branches.

New York City.

Q—Am practicing the methods in your book to cure myopia and astigmatism. Sometimes, for short periods, I see perfectly, then things fade away. Can you explain this? M. E. S.

A—This is what we call getting flashes of perfect sight. With continued practice these flashes will come more frequently and eventually will become permanent. Then you are cured.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

June, 1923

Try Dancing
(Squint)

THERE has been repeatedly published in this magazine and in my book that the imagination of stationary objects to be moving is a rest and relaxation and a benefit to the sight. Young children, when one or both eyes turn in or out, are benefited by having them swing from side to side with a regular rhythmical motion. This motion prevents the stare and the strain and improves the appearance of the eyes. It helps the sight of most children to play puss-in-the-corner or to play hide-and-seek. Children become very much excited and laugh and carry on and have a good time and it certainly is a benefit to their sight. It seems to me that these children would be benefited by going to dancing school. Many of my patients practice the long swing in the office and give strangers the impression that they are practicing steps of a dance. One patient with imperfect sight from detachment of the retina recently told me over the telephone that he went to a dance the night before and although he lost considerable sleep his sight was very much improved on the following morning.

Dancing is certainly a great help to keep things moving or to imagine stationary objects are moving, and is always recommended. Some people have told me that the memory of the music, the constant rhythmic motion and the relaxation have improved the vision.

Common Sense

***By* W. H. BATES, M.D.**

MANY people have asked me what I call my treatment. The question was a very embarrassing one because I really have no name to give it unless I can say that my methods are the methods employed by the normal eye. When a person has normal sight the eye is at rest, and when the eye is at rest, strange to say, it is always moving to avoid the stare. When the eye moves it is possible to imagine stationary objects are also moving. When the normal eye stares at one point of a letter or at all parts of a letter the vision always becomes imperfect. Persons with imperfect sight are always staring. Under favorable conditions all persons with near-sightedness do not stare, do not try to see, and the near-sightedness disappears for a longer or shorter time; no exceptions have been observed. In other parts of this magazine I have mentioned this fact and recorded that even patients with 40 D have moments when they are not nearsighted when they do not try to see.

The fundamental truth which should be demonstrated by all persons who desire to be cured of imperfect sight is the fact that the

memory of perfect sight can only be accomplished easily and without effort. Furthermore, the memory of imperfect sight is difficult and requires time and is never continuous. Another truth of practical importance is that one cannot remember perfectly and imperfectly at the same time. What is true of the memory is also true of the imagination and of the vision.

Palming

I am in the habit of testing the vision of persons with imperfect sight at fifteen or twenty feet. **Then I Have them close their eyes, rest them, and if possible forget that they have eyes by remembering other things which are of interest to them.** When done properly, and most people if not all are able to do it properly, the vision is always temporarily improved. I spoke to one of my patients after this had happened and asked the question: "What did you do to improve your sight?"

The patient answered, "I do not know."

This seemed to me a remarkable answer. I asked a second question: "What did I tell you to do?"

The patient answered, "You told me to close my eyes and rest them."

"What helped you then to see better?"

"I do not know," answered the patient.

Then I had to start in and talk and explain and tell the patient that it was the rest that helped the patient and not any efforts that were made. It is a matter of common sense. Most people would realize that if they rested their eyes and their sight got better that the rest must have had something to do with it; and, strange as it may appear, I have seen very few people who could realize or understand this truth.

So many people ask me how my patients are benefited. Is it Christian Science, is it auto-suggestion, is it hypnotism, psychoanalysis, psychology, or has it to do in any way with mental science? The only answer that seems to me to approach the truth is "common sense." Now when I come to review my cases and try to fit common sense to the results obtained I get all mixed up. Most people have common sense, which is ordinary intelligence or the ability to do things in a reasonable, proper way. People who are highly educated, college graduates, professional men, teachers and college professors, would be expected to have a greater amount of common sense than ordinary persons, but I am sorry to say they do not. I have very little respect for mental science because of the numerous assumptions, theories, that are advanced. A theory is always something which makes me uncomfortable. I have never been able to make any progress with a working hypothesis. All my facts which were of benefit to me have no connection whatsoever with mental philosophy. I wish to confess that it gives me a great deal of unholy delight to prove, demonstrate, that all the theories of physiology are wrong. This is not a popular statement to make, but I do not cure my patients by being popular. The sweetest morsel on the tip of my tongue is to say, what somebody else has said before, that logic is an ingenious method of concealing the truth.

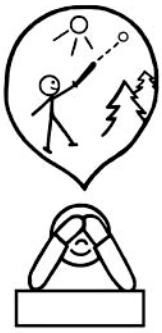
When a problem comes to me which is very difficult for me to solve, instead of starting out with a working hypothesis it is my custom to accumulate as many facts as I possibly can, to analyze these facts in various ways and by every method known to science to try to discover whether my facts are true or not; and, believe me, that is not always an easy thing to do. Someone said to me that it was impossible to scientifically prove that my method for the prevention of myopia in school children ever actually did prevent myopia or near-sightedness; in other words, that it was impossible to prove a negative proposition, or that the children did not or were not prevented from acquiring imperfect sight. It has always given me great pleasure to make the statement that every child with normal eyes who has not worn glasses, who is under twelve years of age, can improve their sight by reading the Snellen test card first with one eye and then with the other, every day. It is a benefit if the pupil learns the letters on the test chart by heart. They all improve; when I say all, I mean all, there are no exceptions. I challenged the ophthalmologists of this country to bring forward one exception to any of my statements. One exception would prove that the statement is not a truth but at best only a working hypothesis. What is it that improves the sight of these school children? I have already stated that when the sight is normal the eyes are at rest. **When the child reads a familiar card with normal sight the eyes are at rest. Common sense, just ordinary common sense, would conclude from this fact that the vision was improved by rest.** Some teachers improve the sight of their children by having them close their eyes for a few minutes or less, frequently during the school session. They told me it always improves the sight when tested either with a familiar card or when tested with an unfamiliar card. When a child cannot read the blackboard his sight is usually improved by closing the eyes and resting them for part of a minute or longer.

The cure of imperfect sight without glasses is not a matter which is complicated, which can only be explained by the abstruse incomprehensible theories of the professors of mental science. The truth is that all can be explained by common sense.

One day I was testing the sight of some school children. The teacher was interested in one boy. In order to illustrate to the teacher and to the children the bad effects of staring I asked the boy to stare at the letter F on the bottom line of the Snellen test card at twenty feet. This card had been permanently fastened to the wall where all the children could see it from their seats and it had been in place for some months. When I asked him to do this he sullenly said to me: "Not for me, I tried it once and it gave me a headache and spoilt my sight. I am too wise to do it again."

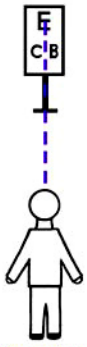
The boy's common sense enabled him to realize that staring was a bad thing. I told the class that if they would all profit by his experience that they would never acquire imperfect sight and need glasses.

Palming
Imagining something that is fun, interesting, pleasant relaxes the mind, eyes, improves the clarity of vision. The boy gains relaxation, clear vision by imagining playing baseball, his favorite subject. He sees the imaginary objects clear, in color and in motion like a movie in the mind: Sees and feels the bat hit the ball and the ball fly into the field, wind blowing the grass, trees... voices of friends. Sees, feels the sun shining.



Read the eyechart with both eyes and one eye at a time for equally clear, balanced, perfect vision in the left and right eyes. Patch the eye not in use.





Shift on letters on the eyechart after palming has relaxed the mind, eyes and improved the vision.

Stories from the Clinic

***By* EMILY C. LIERMAN**

PALMING

ONE day an Italian mother brought her little son, Joey, nine years of age, to the clinic to be fitted for glasses. His teacher in school thought he needed them. After Dr. Bates had examined his eyes with the retinoscope, I tested his sight with the test card and then I told the mother he could be cured without glasses. This interested her greatly. She had wonderful sight herself, for she could read the smallest letters on the card at more than fifteen feet. I gave her doctor's diamond type card, which she read with perfect ease at four inches and also at twelve inches from her eyes. She told me her age was thirty-eight and that she was the mother of ten children. With a great deal of pride, she said that they were all born in this country, and that they were all alive too. Here was a real mother, proud of her big family. I liked to hear her talk, so encouraged her to do so. Like many of her race and sex, she had beautiful teeth and smooth olive akin. Although she was poor, her clothes were neat and clean, and Joey was just as neatly dressed as she was. She looked at him smilingly and said: "Think of it, Joey, you don't have to wear glasses." Before this little talk Joey seemed scared to death, or as though something terrible was going to happen to him, but when his mother began to show confidence in me, he smiled and looked happy, as all normal boys do. Both watched me very closely as I explained the method of palming to them. Dr. Bates found no organic trouble with Joey's eyes, but just near-sightedness. At fifteen feet he read the fifty line before palming. After palming ten minutes, Joey obtained normal sight that day. When he read the card with each eye separately his left eye seemed to be the better of the two, because he made a few mistakes in reading the ten line letters with his right eye. He was encouraged to palm again for a few minutes, and then he became able to read 15/10 just as well with his right eye as he could with the left. His mother stood where she could see all this, and beamed with happiness as she saw her little boy's sight improve. I started to explain to her the necessity of Joey resting his eyes as soon as he wakened in the morning, because be might have strained during sleep. Also to rest his eyes again at noon, after school and before bedtime. She listened very attentively and then she said: "Maybe you think you tell me something new, but I don't think so. All the time when I nurse my babies, I put up my one hand to my eyes as I close them, and I keep quiet while my baby is nursing. Then my baby goes to sleep quicker and easier and I am rested too." I asked her with a great deal of surprise who taught her to do this, and she answered, "Why, nobody did. I found that out myself." She was thankful, however, that Joey did not need glasses, and promised to help him every day until his eyestrain was entirely relieved.

She returned a week later with a good report of her boy. The test card I gave him for home treatment was appreciated by the whole family. Joey's mother tested the sight of all her children and found two of her little girls also had eyestrain. She taught them to palm and cured them herself. Here was a busy mother, with ten American citizens to help support and educate, and yet found time to teach them how to obtain normal sight. Surely they are worthy members of our Better Eyesight League. I saw Joey and his mother but twice, but Joey had suffered no relapse, nor has there been any complaint regarding his eyes from the school he attends.

The last time I saw Joey he was anxious for me to know that his father, who has no trouble with his eyes at all, came home from his work one evening and thought the family were all playing peek-a-boo with him. The mother had them all busy palming, which was a strange sight to him.

Most people, like myself, have not the time to palm daily. However, if I suffer from eyestrain, which sometimes happens after a strenuous day, I find the memory of palming is all that I need to obtain relaxation. The memory swing, which Dr. Bates explained so tactfully in one of our Better Eyesight magazines, has helped a great many patients. So it is with the **memory of palming**, or, in other words, **remember how relaxed you were and how free from strain you were the last time you were able to palm successfully, and this will help you through the day while at work, or at the theatre, or any place where it is impossible to place the palms of your hands over your eyes.**

June Meeting of the League

The newly appointed program committee, with Miss Reicher as its chairman, is most successful in securing interesting and instructive speakers for the League meetings. The committee has the privilege of announcing Dr. Cornelia J. Browne, President of the Better Eyesight League of the Oranges, as the speaker at the meeting on Tuesday, June 12. Dr. Browne is well known not only as a physician but as a speaker of unusual force and charm.

Those who did not have the good fortune to hear the convincing talk of Superintendent Husted, of North Bergen, at the May meeting, will be interested in the brief summary which appears in the minutes of the League.

A "Book Patient's" Experience
(Astigmatism)

AS a result of reading Dr. Bates' book, PERFECT SIGHT WITHOUT GLASSES, I was enabled to discard my glasses, which I had been wearing for twenty-one years. I first heard of Dr. Bates and his book through my old partner, a doctor who had seen him personally, and was able to tell me the details of the Bates' method. This doctor gave me a copy of Dr. Bates' book in March of last year, and after reading it carefully I decided to lay aside my glasses. At that time I had so much **astigmatism** in my right eye that anything at which I looked appeared **double or blurred**. For the first five days after laying aside my glasses I had considerable pain in the muscles in my right eye, but I paid little or no attention to these pains, as I knew they were due to accommodation efforts of the extrinsic muscles of the eye-ball.

(Outer, and inner eye muscles returning to correct function; normal relaxation, contracting, un-contracting, coordination and allowing the eye, cornea, lens, retina to return to normal shape. Tension on optic and other nerves, blood vessels releasing.)

I relaxed as much as possible during this time, used the palming quite frequently and got as much sleep as I could. By the end of three or four weeks I began to **pay no attention at all to my eyes, except to shift whenever I found that my vision was not as clear as usual.**

Before using these simple methods as advocated by Dr. Bates I would have a headache in a few moments' time, due to eye strain, if I read without my glasses.

I did more reading last summer in three months' time than I had done before in a year, and in spite of, or perhaps because of it, my eyesight is better than it has been since I was a boy. I found that if my eyes became fatigued I could easily rest them by reading finer print, and as my work consisted of reading many of the technical journals I found that I could do this with benefit, as most of the technical literature is in fine print.

I take great pleasure in recommending Dr. Bates' book and his method to my friends and patients, and everyone else who is interested in having perfect sight.

Very truly yours,

WM. JAY DANA, B. Sc, D.C.,
North Carolina State College of Agriculture and Engineering, Raleigh, N. C.

"A Chain Is Only As Strong As Its Weakest Link"

M. E. Marvin

IN the lecture given last Monday evening before a body of chiropractic students and others numbering 200 or more, Dr. Bates demonstrated this fact very clearly in explaining his method. For the benefit of those living out of town who are unable to take advantage of these instructive talks, we will try to cover the important points discussed.

To begin with, Dr. Bates was in his finest oratorical form. His little anecdotes were genuinely appreciated, and it must be said here that in these he was not always the "hero."

It is always interesting to the new followers of Dr. Bates to learn how he came to discover the method that is revolutionizing the study of the science of the eye. This he told in his quiet, modest, matter-of-fact way, until those who knew him were almost tempted to cry out to the audience, "Let us tell you how Dr. Bates came to discover the facts he produces, and let us tell you how this scientist has been discouraged, handicapped, yes, and humiliated. Why? Because he thought for himself, and would not accept the theories that were presented to him." Our feelings notwithstanding, we did not say the things in our minds, and we venture to say, nevertheless, that everyone in the audience, be they doctor or layman, was now eager to learn more.

Dr. Bates then cited some of the *theories* under which the eye specialists are working today, and then, in opposition, offered his *facts*, which defy contradiction.

The first theory was that presented by Helmholtz, who was one of the greatest authorities on the physiology of the eye. He says that the eye changes its focus for near and distant vision by altering the curvature of the lens. Dr. Bates has shattered this theory by demonstrating on many pairs of eyes that the lens is *not* a factor in accommodation. In substantiation of the above, he told of an interesting experiment upon the eyes of a rabbit. The lens of the right eye was *removed* each eye having been tested previously with the retinoscope, and found to be *normal*. The wound was allowed to heal, and for a period of two years after electrical stimulation always produced accommodation in the lensless eye precisely to the same extent as the eye having the lens. At a meeting of ophthalmologists of the American Medical Association, held in Atlantic City, Dr. Bates exhibited the subject in the ante-room, and to eye specialists from all over the world. Each one of them admitted that Dr. Bates was right but in their subsequent articles never mentioned the fact.

Don't you see that there are exceptions to their old theories? This makes nothing more than a working hypothesis of the Orthodox Ophthalmology. Dr. Bates admits NO exceptions. Not a single one. As he says so often, "If one exception to any statements that I have made in my lectures or in my book can be produced I will acknowledge my whole method to be wrong."

Secondly, was the theory concerning presbyopia, commonly known as old-age sight. For centuries we have been led to believe that when one reaches the age of 45 or thereabouts, one was to expect an organic change to take place in the shape of the lens, which lessened the power of vision. This theory, too, was annihilated. Dr. Bates has proven that presbyopia is merely a functional derangement in the action of the extrinsic muscles and has cured thousands of this defect, including himself. In various experiments he has proven that age is positively no barrier to one wishing to attain perfect sight. He related the cases of the **old gentleman, passed 106 years of age, and the old colored "mammy" who lost track of her age after the 90th year. Both these were cured of old-age sight, together with other errors of refraction.**

Parents' and Teachers' Page

***By* EMILY A. MEDER**

ONE of the teachers who was attending a lecture at which Dr. Bates was expounding his treatment, explained that she was intensely interested in his method, and would love to be the medium through which the children in her classes could attain better eyesight. She said, however, that inasmuch as she had no technical knowledge of the work, she was rather timid about attempting the method by herself, and that there was a possibility of her doing more harm than good.

For the benefit of those who are in a similar position, we want to say that no technical knowledge is necessary. If one realizes the harm done by glasses, and if one is desirous of helping those wearing them, then the good one can accomplish is unlimited.

The following instructions may be carried out either in the home or in the classroom, and while the form used is particularly applicable to teachers with large classes, it may be used in the home on a smaller scale. The installation of this method requires a little more time than is necessary for its continuation. The first step is to make a list of the children's names, together with their age and the date of the first examination. This requires about two minutes for each child. Place the Snellen test card on the wall, and have each one read as far as she can, first with one eye, and then with the other. The lines on the card are numbered. Place the child at a distance of ten feet, and if she can only see the top line which is a big C and line number 200, then her vision for that eye is 10/200. Her record will read as follows—

for that eye is 10/200. Her record will read as follows—

June 1st, 1923	Age	Right Eye	Left Eye
Mary Anderson	12	10/200	10/100
Date of subsequent examinations			

The above report indicates that Mary's sight is very defective. The line numbered 200 should be read at 200 feet by the normal eye. Here is a point to remember: when the denominator is greater than the numerator the vision is defective.

It is not necessary to keep a daily record, but a general examination should be made every month, and the improvement noted. The results will be astonishing. We have seen cases where the card was read every day in unison by the class, and was the means of raising the average 87%.

Many people question Doctor Bates as to how it is possible for the test card to make such radical improvements in children's eyesight, and he always replies that he is not certain which of the exercises are most beneficial, but seeing those black letters every day, and shifting the eyes from one letter to another, breaks the stare, and tends towards complete relaxation, which is the keynote of the treatment. Concentration is the antithesis of relaxation, and if you are not relaxed, you strain. No good can be accomplished when one strains.

Another point often brought up is that a child may memorize the card. Doctor Bates says that in all the thousands of school children he has examined, many of whom have had the Snellen test card in their possession until the letters were bound to be memorized, he has never seen a case where a child would say that she could see the letter when she could not. You will find that the children are more interested in this than you would be lead to believe. We do not believe children wearing glasses should be included in this, because it is understood that they are under the care of a physician, and since no permanent benefit can be obtained when glasses are worn, we do not think it advisable to include them.

Further information anent (about, concerning) the prevention of imperfect sight in children may be had by writing this office, and enclosing a stamped envelope. We hope to receive many reports from teachers and parents.

REMEMBER: AN OUNCE OF PREVENTION IS WORTH A POUND OF GLASSES.

Minutes of the May Meeting of the Better Eyesight League

By* F. B. RUSK, *Recording Secretary

THE large room of the new headquarters of the Central Fixation Publishing Company was crowded to its utmost capacity at the May meeting of the Better Eyesight League.

Mr. M. F. Husted, Superintendent of Public Schools of North Bergen, New Jersey, was the speaker of the evening. Mr. Husted explained, with the aid of charts, the experiment he has been conducting during the past three years.

In the fall of 1919 a Snellen test of the eyes of all pupils in the North Bergen Schools was made. A Snellen test card was then placed in every class room. Those children whose vision was defective were encouraged to read the card more frequently. In June, 1920, a second examination was made in order to test the value of the methods used. The same experiment has been repeated each year since with amazing results.

After hearing of the remarkable benefits which accrue to children who practice central fixation, a visitor asked if there was any hope for the old folks. One of the audience volunteered that he was acquainted with a lady who had had a **complete cure after wearing glasses for fifty-six years.** As a result of her experience he had traveled 2,000 miles to see Dr. Bates (and attend the May meeting of the Better Eyesight League)!

In reply to the question as to whether astigmatism was curable, Dr. Bates said that if there was any one kind of astigmatism which was worse than the others, it was conical cornea—a condition with which he always had marked success.

Respectfully submitted,
F. B. RUSK, Secretary.

Eyes But They See Not

***By* EMILY A. MEDER**

THE ostrich is known to be the swiftest of birds, and can outdistance the fastest horse with ease. Yet when he is attacked unexpectedly, or run into a cul-de-sac, he foolishly hides his head in the sand. He DOESN'T WISH TO SEE. Naturally his fate overtakes him, and he is doomed. His wonderful body, made especially for swift and long-distance running, his exceptional endurance, are assets which avail him nothing when he "sticks his head in the sand and will not see." I have come in contact with people who have many desirable assets but when a thing looks a little "strange" they become dogmatic and refuse to learn. They literally stick their tails in the air and their heads in the sand. The same thing happens to them that happens to the ostrich. Their doom overtakes them. THEY WEAR GLASSES. As evidence of these "mental errors of refraction" I will tell of two instances which I noticed particularly.

In a popular magazine there appears an article each month by a very noted writer who gives Beauty Hints to women over forty years of age. She gives very minute directions of the care of the hair, skin, teeth and figure generally, and I admit I was very surprised to see an item about the eyes. This, unfortunately, is a part of the physiognomy that is usually neglected by these Beauty Doctors. She explained that from her observations, many people received excellent relaxation by closing the eyes and forgetting that they possessed them, excluding all the light by putting the palms of the hands over the eyes very lightly, and thinking of black

objects which tends to rest them more quickly. This interested me because this is part of Dr. Bates' own method. When I read on a little further, I was disagreeably astonished to read something like this—"that she had heard of a new body of oculists who say that they can cure eyes without glasses. This she says is impossible, because when a woman reaches the age of forty, she simply has to fortify her eyes with glasses, as this has been done for centuries, and it does not seem possible that man has it in his power to cure the defects at this age."

This is a typical case of the ostrich again. Why doesn't this writer make herself more popular by believing this could be done, and by reading the book with an open mind. She is in a position to help thousands suffering with eye ills, and her scope is unlimited.

One more case of "mental blindness."

At a dinner given at the Hotel Astor under the auspices of the Society of Arts and Sciences, Dr. Bates was asked to speak, along with five or six other doctors, all specialists in their respective branches. Senator-elect Royal S. Copeland was Toastmaster, and a very good one he made. Everyone knows the far-reaching results of Dr. Copeland's administration when he was Commissioner of Health of the City of New York. The many improvements he made while holding that position are a credit to him. But even Dr. Copeland has a vulnerable spot that might be pierced.

Doctor Bates was the first to speak, and as he knew many others would talk after him, he limited his remarks to about ten minutes. He gave a brief synopsis of his method of treating imperfect sight, and ended by telling the audience that Germany had adopted his method, and was using it in all the schools. At the conclusion of his discourse and before the next speaker had been introduced, Senator Copeland thanked the Doctor for his remarks, and said that he was sorry that Dr. Bates did not have more time to explain his treatment, but he had worn glasses so long, and besides now being a United States Senator, he was a hard man to convince.

We have no wish to "convince" anybody. If they read the book and assimilate the facts, they will convince themselves. PEOPLE WEAR GLASSES FROM HABIT, NOT BECAUSE THEY NEED THEM.

The Question Mark

Denver, Col.

QUESTION—If one's arms become tired while palming will a black silk handkerchief covering the eyes, produce the same amount of relaxation one gets from palming? "R. E. F."
ANSWER—No. Palming is the best method for relaxation and improvement in vision. When tired of palming, the hands can be removed and the eyes kept closed until one feels relaxed.

Brooklyn, N. Y.

QUESTION—Will it still be necessary to continue practicing the method of swinging and shifting after my eyes are cured? "W. B. D."
ANSWER—No. When you are cured of eyestrain you will not be conscious of your eyes. However, if you strain them you will know what to do to relieve the strain.

East Orange, N. J.

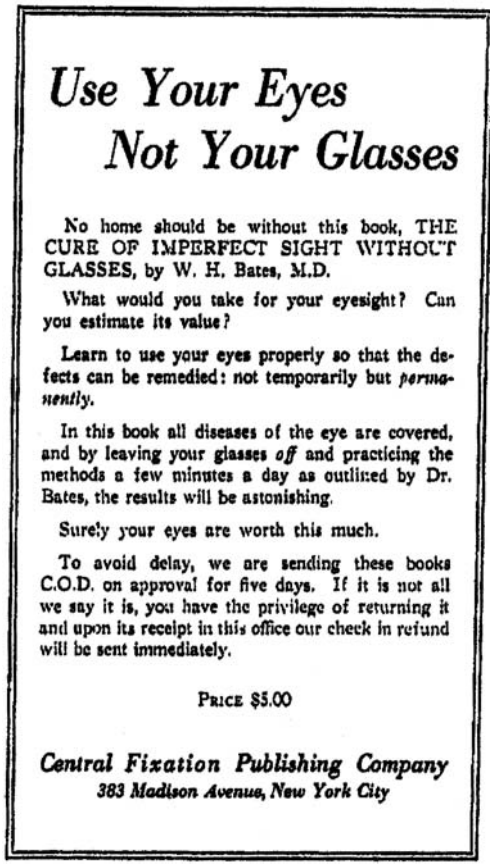
QUESTION—Can squint be cured by treatment without glasses after an operation proved unsuccessful? Does age make any difference? G. A. B.
ANSWER—Yes. No, age does not make any difference.

Cleveland, Ohio.

QUESTION—Can the vision be improved without glasses after the lens has been removed for cataract? L. G.
ANSWER—Yes.

St. Petersburg, Fla.

QUESTION—Does Dr. Bates approve of dark glasses to protect the eyes from the glare of the sun at the sea shore?
ANSWER—No. Dark glasses are injurious to the eyes. The strong light of the sun is beneficial to the eyes, although it may be temporarily painful and blinding.



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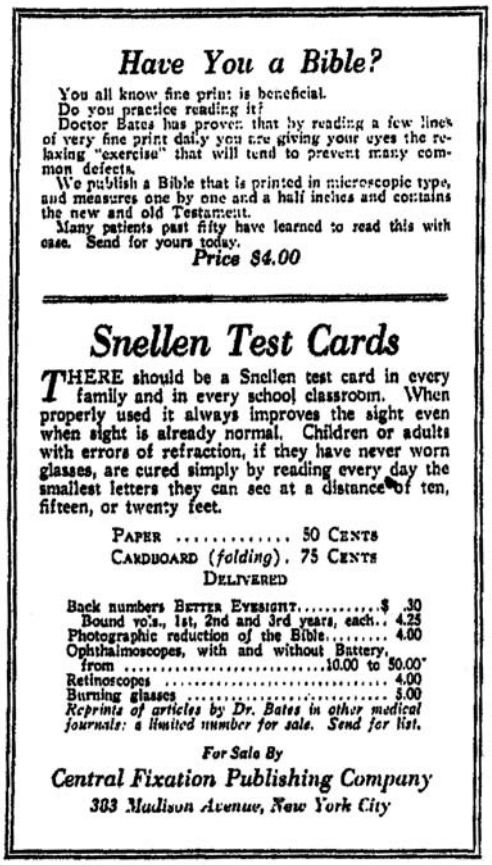

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Many patients past fifty have learned to read this with ease. Send for yours today.
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BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

July, 1923

The Short Swing

MANY people with normal sight can demonstrate the short swing readily. They can demonstrate that with normal vision each small letter regarded moves from side to side about a quarter of an inch or less. By an effort they can stop this short swing, and when they are able to demonstrate that, the vision becomes imperfect almost immediately. Practicing the long swing brings a measure of relaxation and makes it possible for those with imperfect sight to see things moving with a shorter swing. It is a good thing to have the help of someone who can practice the short swing successfully. Ask some friend who has perfect sight without glasses, in each eye to practice the variable swing as just described, which is a help to those with imperfect sight who have difficulty in demonstrating the short swing.

Nearsighted patients usually can demonstrate that when the vision is perfect, the diamond type at the reading distance, one letter regarded is seen continuously with a slow, short, easy swing not wider than the diameter of the letter. By staring the swing stops and the vision becomes imperfect. It is more difficult for a nearsighted person to stop the swing of the fine print, letter o, than it is to let it swing. When the sight is very imperfect, it is impossible to obtain the short swing. Many people have difficulty in maintaining mental pictures of any letter or any object. They cannot demonstrate the short swing with their eyes closed until they become able to imagine mental pictures.

Henry

***By* W. H. BATES, M.D.**

HENRY first visited me in New York about five years ago. At that time he was attending school in Connecticut. The boy was naturally of a friendly disposition. He had many friends, I do not know that he had any enemies. He always treated me with the greatest respect. I became very fond of him, and I believe he was equally fond of me. He had one virtue, which is not always found in New England or elsewhere; he asked no questions and required no explanations of anything that I might ask him to do. With him it was largely a business to be cured without glasses, and he left the solution of it entirely to me.

At his first visit his vision was less than one-half of the normal. He was wearing concave 1.50 DS, combined with concave 0.25 DC 180 deg. I told him that he was curable and demonstrated the fact by curing him temporarily, **improving his sight to 15/10 with the** aid of **palming, shifting and swinging**. He demonstrated that **staring at one letter very soon lowered his vision, and that by shifting from one letter to another his vision improved.** I asked him if he felt any different when his sight was good and when it was imperfect. He answered, "I know by the feeling in my mind, not my eyes, when I am straining and making my sight poor." This was an interesting statement and is remarkable in this way that he was the first patient I ever had who could realize that his myopia was due to a mental strain primarily. The mental strain produced the eye strain. I asked him if he could **remember mental pictures.** He said that he could at times with benefit to his sight, but for some reason or other his memory was poor when he had imperfect sight. He demonstrated that when he remembered some letter of some object perfectly he did it quickly, easily and without any effort; but when he strained and tried hard to remember any mental picture he always failed. Furthermore, when he did remember the mental picture he always lost it when he strained or made any effort to remember it better. I spent a good deal of time with him all through his treatment in "Rubbing it in," as I called it. First he demonstrated that his vision was improved and became temporarily normal by resting, by not doing anything. Then, to see imperfectly," he had to strain, to work hard, and go to a lot of trouble. He was a very thoughtful person with a good deal of common sense and became able to profit from his experience.

Palm to relax the mind, eyes. Imagine a mental picture of a letter (or any object) perfectly, clear. Shift on it point to point. See the letter move 'swing'.



Shift part to part (point to point) on a object to see it clear, relaxed eyes. Alternate palming and shifting on letters on a eyechart or any object.





Shift on a object and it 'swing' in the opposite direction- Oppositional Movement.

Eyechart



+ Shift part to part when looking at a letter.
+Shift from one letter to another.
Staring, no eye movement = strain, blur.
Shifting, eye movement = relaxation, clear vision.

To me his problem was not learning how to do things with his eyes, but to find out in some way how he could avoid doing anything. He repeatedly demonstrated that when his sight was normal he did not do anything, that anything he did was always wrong or always lowered his vision. He was very fond of shifting because by continually moving his eyes from one point to another, alternately closing his eyes frequently, required the ability to avoid the strain at first occasionally, later more frequently, until he became able to finally avoid the strain continuously. Many of my patients are cured by practicing one of the truths of normal sight, and he was one of them. **The normal eye does not stare as long as it has normal sight; it is continually shifting to avoid the stare.** He learned how to do this for a while, and then his mind would wander, and before he knew it he was staring and producing imperfect sight. He knew the proper thing to do and knew how to do it, but he often failed and lost his mental control. I said to him one time, "You have a bad habit of straining, you would be better off if you didn't have that habit." **One way of getting rid of a bad habit is to acquire a beneficial habit. When you strain it makes you uncomfortable. When you shift and avoid the strain you are comfortable.** (Shifting - Correct Vision habit) Surely you should not hesitate to make the right choice. Keep shifting, enjoy yourself and be comfortable. Keep that in your mind a good deal of the time and as long as you are perfectly comfortable you know that you are not straining because the straining always makes you uncomfortable. As long as things are going all right and you are doing the right thing, then you do not need to ask yourself questions about shifting and palming and swinging, you are doing these things when you are perfectly comfortable.

Shifting part to part on a object and object to object produces relaxation and clear vision. **When the eyes can shift small point to small point the vision becomes fine tuned, detailed, very clear.** The eyes shift from part to part, object to object but the fovea centralis, exact center of the visual field is shifting tiny point to tiny point producing clearer than 20/20 vision in the center of the visual field.

Here was a boy who, like many boys, had his faults, but somehow or other they were not conspicuous. All his friends spoke well of him, and he had many. His best friend, the one who knew him the longest, was his father. Unfortunately his father was a very busy man, who believed that he was doing the right thing by attending to his work and looking after his business affairs. Someone has said that the principal business of the world is children. If it were not for the children, no country would have a future. I believe this is a true statement and I believe it to the extent that I feel that the principal duty of every man, of every woman, is the business of looking after the children. Of what use is it to accumulate many dollars when your child goes around half blind wearing glasses? He is uncomfortable and not happy because of those glasses. I shall always criticize Henry's father. I do not believe I can criticize him too severely because he did not realize, and I could not make him realize, that for the best interests of his son that he should cure his own eyes for the benefit it would be to Henry. There wasn't very much the matter with his eyes, he could see perfectly at the distance without glasses, he only wore them occasionally when he had to read. Henry could have cured him of that. The father wearing glasses disturbed the mind of the son, and I have found during all these years that one of the greatest difficulties in curing children is to counteract the evil influence of the parents wearing glasses. Nearsightedness is contagious. Children are great imitators, and they consciously or unconsciously imitate the habits of their parents, even to the smallest detail. I have talked until I was all talked out trying to explain this fact to the parents of children who were wearing glasses. I have tested the sight of many thousands of children in public schools, and was very much impressed to find that in those classes presided over by teachers wearing glasses the percentage of imperfect sight in the pupils was very much increased, while in those classes where teachers did not wear glasses imperfect sight was less frequent.

Now, Henry was an easy case to cure, as I said in the beginning; he obtained temporary perfect sight at the first visit. But why

didn't he hold it; why did he have so much trouble in obtaining permanent benefit? The answer is that his father was at fault.

Henry enlisted and passed the eye tests without any difficulty. After the war was over Henry called to see me. Of course, my first question was, "How is your sight?" His laconic answer was, "Good."

As he had not been to see me in a long time, some years, I was more or less doubtful about his vision and tested him with a card that he had never seen before. I remember how he stood backed up against the opposite wall in order to get as far away as possible, and the speed with which he read the whole card with normal sight.

"How did you do it?" I asked.

He replied: "Shifting."

Some years later my attention was called to an article in a popular magazine which attacked my method of curing imperfect sight by treatment without glasses. In the next issue of the magazine appeared an article defending me, and signed with the initials of my dear friend, Henry.

Stories from the Clinic

***By* EMILY C. LIERMAN**

SARAH

A FEW years ago there came to our clinic at the Harlem Hospital a curly-headed girl named Sarah, aged twelve years. As she stood among patients who were waiting for treatment, I noticed how pretty she was. She was standing sideways with her right side toward me, and as I did not see her enter the room, I received a shock when I discovered that the left side of her face was distorted. I pretended not to notice anything wrong with her, because she seemed very sensitive. However, her left eye appeared ready to pop out of its socket any moment, and both upper and lower eyelids were terribly inflamed. Dr. Bates explained the history of her case, and also the cause of her affliction, and then left her entirely in my care. She told me that at the age of four she became ill with cerebrospinal meningitis, and all of the left side of her body became paralyzed. Until she came to us she had been receiving treatment from nerve specialists, both in England, where she was born, and also in New York. Electric treatments were given without success. Money was not spared and all of her family sacrificed every penny for Sarah's medical treatment to bring about a cure. When one doctor failed, another was recommended by their friends. Finally, the family bank account dwindled to scarcely nothing, and Sarah stopped treatment, believing that she could never be cured. Later, as I learned to know her better, I noticed that she was ever conscious of her trouble and would always turn the good side of her face toward me. There was one good thing about Sarah, she was never downhearted, or she never revealed it to me, if she was. She was a good scholar at school, and graduated at the age of 14 from the public school.

I tested her sight and she had normal vision, 10/10, in her right eye, and 10/50 with the left. I placed her in a comfortable position and showed her how to palm and told her not to remove her hands from her eyes while I was testing the sight of other patients. After a few moments I noticed while Sarah had her eyes covered that her face became terribly red and I wondered if she were comfortable or not. I spoke to her and she complained that **she did not like to palm, that it made her nervous**. I thought that she was not doing it right and explained to her again how easy it was to cover her eyes with the palms of her hands to obtain the relaxation which was necessary to improve the vision of her left eye. She very faithfully tried again but I noticed that she was getting more uncomfortable all the time. **Her vision did not improve at all by the method of palming so I tried her with the long swing which proved successful**. I thought in time that Sarah would feel friendly toward the method of palming and that she would improve faster in that way but I was mistaken.

(Each patient is different. Try a different method if one method does not produce results.)

For two years Sarah came to us at the clinic quite regularly and in all that time I could not induce her to palm. She complained that it made her nervous. This was my first experience in all the years that I have been assisting Dr. Bates in that the patient could not be made comfortable by palming. The long swing was very helpful to her, holding her left forefinger in front of her or to the left side of her face, about six inches from her eyes and then slowly moving her head from shoulder to shoulder, blinking all the while she was doing this. At the first visit the vision of her left eye had improved to 10/30. Sarah was encouraged to do this long swing as many times during the day as it was possible for her to do it and she was reminded to blink her eyes very often, which she was not able to do at all with her left eye at the first visit. The upper lid of her left eye seemed stationary and she could not close this eye in sleep which gave her a strange appearance. As I never had a case like hers before, I was deeply interested and studied hard to find every possible way to help her. She was a dear bright little girl and was so willing to do everything that we wished her to do, to help in the cure of her eye. I asked Dr. Bates for permission to try helping her improve the condition of her left cheek and mouth, as well as her eye as I thought that our method of relaxation might possibly do something for her face. Doctor smiled his usual smile and said, "Well you might try,"

On her second visit to the clinic her left vision had improved to 10/15 which was most encouraging to me. She told me that she had tried to palm at home just to please me, but every time she tried this it bothered her, but the long swing helped a lot. As time went on I told her to shorten the swing and move her head slowly from side to side, seeing things move opposite from the way her head was moving and this also gave her a great deal of benefit. Before she had been coming to us a month I noticed that the upper lid of her left eye was beginning to move and the inflammation which caused Sarah so much discomfort had almost entirely disappeared. Her vision stayed about the same, left 10/15, right 10/10. Always when she came, we went through the usual treatment of seeing things move opposite as she held her left forefinger to the left side or in front of her face. I sat before her, doing the treatment with her to encourage her to keep it up. During a period of eight weeks of this treatment her facial expression began to change for the better. It was more noticeable when she smiled. When I first saw her smile I noticed that her mouth would turn way over to the right side of her face.

(To be continued)

Owing to the unusual nature of this case, and of the remarkable results obtained, Mrs. Lierman is going to tell of it in detail, therefore it will be continued in the August number.

The following poem was taken from a current magazine, but its discrepancies were so apparent that I could not pass it unchallenged.

E. A. M.

MY EYEGLASSES

Little helpmates yoked together,
Twin-born servants of mine.
How your presence helps and cheers me.
You barriers of time.

Glistening eyes and dainty rims,
Exquisite mountings, too,
What dreary days of solitude
Had I not met with you.

And then I pause to wonder how
You ever could be here,
What genius burned the midnight oil
To make your portals clear.

Many days have laboring men
In mines across the sea
Spent searching for the components
To solve your mystery.

Sometimes I lay you out of place,
A place I cannot see,
And then it seems part of myself
Has gone away from me.

I have no means to show the depth
Of my gratitude to you.
My eyes will flood with burning tears
When your services are thru.

I herewith seal this solemn vow
That henceforth you will be
Kept clean from dust and fingerprints
While you are serving me.

My Eyeglasses

***By* EMILY A. MEDER**

THE sentimental poem given above evidently required a good deal of forethought and concentrated effort to devise. We wonder, however, if this anonymous genius had spent the time taken to create this gem, by reading Dr. Bates' book, and practicing the method as outlined by him, whether he would not have written a masterpiece. He would have discarded his "twin-born servants," attained better eyesight, and we know, would have been benefited physically.

With apologies to the author, I am going to dissect this "child of his brain" to see what it is made of. As the surgeons say, this might be painful and uncomfortable, but it is for the patient's eventual good.

Like a great majority of people this man believes that glasses have to be put on when one has attained a certain set age. I suppose that we must be grateful that theorists have not ordained that we place splints on our arms and legs to prevent old age attacking them prematurely. However, as all know, who have read Dr. Bates' book, and who have been treated by him, the eyes are no more delicate than any other part of the anatomy. When we read the sentence, "You barriers of time," it seems as ludicrous to us as the opinion people held in the olden days when they ridiculed Columbus for thinking the earth round. We might fittingly change that sentence to read "You hasteners of time."

The author continues to relate the labor men were put to, "to make these portals clear." We admit that a great deal of time was spent to make the glasses ornate. But this did not in any material way add to their usefulness and value. We know that when people purchase glasses they spend a good deal of time making sure that they look well in them. There is always a heated and lengthy debate as to whether tortoise shell or gold is more studious looking, or whether rimless glasses add to one's dignity. Men may have exhausted their energy in "mines across the sea," and I have a mental picture of them using their life forces to attain—nothing. It makes me think of the squirrel on a revolving wheel. The faster he works, the more energy he uses, and he is eventually exhausted, getting nowhere. The trouble with the old oculists is that they were started on the wrong track, and stayed there, without looking for an avenue of escape. Like the labyrinth in mythology, they walked and walked and went back and forward, in a ceaseless round, with no one to show them the one way out. To follow the metaphor you may remember the story of the cruel giant who put all the fair young maidens in the labyrinth and left them to die. But one maiden obtained a ball of twine and fastened it to the entrance of the cavern. As she was lead deeper and deeper into the intricate passages, she let out the cord. Upon being left alone, she called all the unfortunate prisoners to her, and they followed the right path back, as indicated by the ball of twine. This story always occurs to me when I think of Dr. Bates' work. As all the others are lost in a maze of theories, his wonderful truth is the string of hope to cling to when escaping the awful giant—bad sight and glasses.

An Encouraging Letter

***By* ELIZABETH MCKOY**

[EDITOR'S NOTE]—Miss McKay has given us permission to use her letter for our magazine, we feel sure that this will prove of interest and will encourage our readers to impart their information to others.

I WISH to tell of the results of Dr. Bates' methods of treatment on my eyes. Many times I have wished to tell of these results, but not wishing to trouble him have so far refrained.

I saw Dr. Bates first in October, 1921, and since the first visit have not worn glasses. He and Mrs. Lierman taught me to palm and to swing things and told me of ways to help school children. My eyes improve steadily though one of them is most of the time far from perfect as yet. I study the book and gain something from the magazine each month. As a member of the Better Eyesight League I have found that I help my own eyes most when helping others.

My brother has learned that palming and swinging will help his headaches. He came to me one day asking for some medicine for his head; I had nothing, but offered to help him. He declared he had only five minutes. I showed him how to palm and while he did it I sat beside him asking him to think of the different black objects I mentioned. I described shapes and parts of a number of familiar black objects, and he must have done his part well for at the end of the five minutes the headache was all gone much to his surprise! He has been sending his friends to me ever since. My mother's eyes are changing, second sight they call it, she palms when her eyes bother her and after palming finds she can read without her glasses.

In my home in North Carolina the past winter I have interested and helped many people. One woman who was a comparative stranger at first, I told of Dr. Bates simply because I was disturbed by her harassed look and the intense strain apparent in the eyes behind her glasses. She was willing to take off her glasses and also her daughter's glasses. She read my book, subscribed for the magazine, and followed my instructions with much benefit. No one who asks for help fails to be interested in all I can tell them and more than half are willing to take off their glasses just on my say so. Of course those who know me well realize that whereas I was dependent on my glasses for seventeen years now I see as well or better without them. I still have difficulties, but am improving. The study becomes more and more interesting.

I am tempted to tell of some of my experiments which have especially interested me. My sight is excellent for nearby things, but I have astigmatism and cannot see so clearly in the distance. It took me months to find out for myself that I could see distant things best when I did not try to. After a good deal of practice each day I can make myself see the last line of the Snellen Test Card at ten feet with the bad eye. I do it best when I think of something entirely foreign to the subject or when I let people about me claim my attention as I look toward the test card. My little nephew often gets between me and the card and I find it a help instead of a hindrance when I take it calmly. Also, when I can bring up vividly to my memory attitudes and expressions of certain children or picture certain flowers in my garden, the small letters on the card will rush out at me black and distinct.

All winter in Church I had time to practice a great deal. There were letters on a stained glass window above the altar. For months I could not make them out. Finally I discovered that the more closely I followed the thread of the sermon the more distinct the letters seemed, and one day as the minister was describing a scene which I could imagine vividly the letters were suddenly readable. They were gone again almost as soon; but I was able to bring them back. For this purpose one trick which succeeded admirably was to imagine that I could remove the flame-colored wings from the angel in the resurrection picture of the window and place them on the shoulders of the white-robed minister, return them to the angel and take them again and again. As soon as I could do it well, I could read the lettering. Another trick was to pick up with my eyes one of the brass vases on the altar and place it on the pulpit. There it would stand and at times be almost knocked off by the gestures of the speaker or momentarily be occupying the same position as his hand. As I look back on my childhood I remember that children are always imagining absurdities of this sort.

I practice on the streets and when no other letters are near use moving automobile numbers for test cards. I found they generally passed too quickly for me to read. Then I discovered that I could take a glance, close my eyes quickly, then read unhurriedly with eyes shut and still have time to open my eyes and verify the numbers before they were out of sight. This pleased me as much as anything I had learned.

With children I have found that palming helped most when I read aloud to them. They all liked the swing and caught quickly on to it and also to my idea of seeing the letter best with a stolen glance.

I have enjoyed telling of Dr. Bates as much as I have enjoyed anything all winter. I have never once wished to put my glasses on again after the first visit, though for days I had many difficulties especially on the street. Now I do not miss the glasses at all except for quite a distance and at the theatre. One most welcome result of the treatment is in connection with the severe headaches which I have always had. Always when these occurred the pain in the eyes was acute. For the past year without glasses this eye pain has not been intense when the sick headaches came—thanks to Dr. Bates.

I do send him my sincere thanks for the results of his work with me. His book and the magazine have been of much value to me and to my friends. I have felt that the best way for me to show my appreciation was to tell of his work to as many as I saw that needed his help.

Sincerely yours,
ELIZABETH McKOY,
10 Highland Terrace, Winchester, Mass.

An Enjoyable Vacation

***By* M. E. MARVIN**

VACATION-TIME is with us again in all its glory, and most everyone is looking forward to some change in environment during the next few months. Some are pouring over "Blue Books" mapping out their trail for their auto-camping trip. Others are concerned about the mode of bathing-suit being used at the seashore this summer, while the rest are intent on the more dignified pastime of replenishing their wardrobes that they may more appropriately enjoy the splendors of the mountains.

Whether in the woods, at the seashore or in the mountains, we want to say to our friends and subscribers again, "Do not be

tempted to wear "sun glasses." Of course most of you who are familiar with Dr. Bates' book, know the reason of this. He has proven again and again that the sun is very beneficial to the eye. Sometimes one experiences temporary discomfort, but this is not harmful, and when one learns to "swing the sun" properly as advised by Dr. Bates, it always proves a relaxation. Anyone wanting further information on this subject is invited to write us at this office.

This is the time of year, when those wearing glasses, who have not had the good fortune to learn of Dr. Bates' method, find themselves more uncomfortable than ever. Eye glasses are a handicap in every sport or pleasure in which one wishes to indulge, and it is for those who know how they can be dispensed with, to spread Dr. Bates' message. You will meet all cases of defective vision this, summer, and when an opportunity presents itself, prove yourself a true friend, and tell those who will listen, just how the glasses can be left off, and with a few moments spent in palming and swinging, the benefits will be readily manifested.

Last Fall, we received quite a few testimonials from those who had learned of this work on their vacation and with the aid of the book were enabled to discard their glasses. We were also deluged with, inquiries which were the result of these "vacation chats."

You will find that nine out of every ten people wearing glasses are only too pleased to learn how their eyes can be cured without them. They know that glasses do not eliminate the defects. They know that while in some cases temporary relief is afforded by the strong magnifying lenses, it stands to reason the eye is not functioning naturally, since it is straining itself all out of shape to conform to the shape and strength of the glass lens.

While we are anxious for you to help as many people as possible it is also our wish that all our friends continue to practice and help themselves during vacation. The following instance may prove of interest. A lady telephoned to Dr. Bates this week, asking him what she should do in regard to her son who is Dr. Bates' patient. They are going to travel through the state on a week's motor tour, and she was wondering if her son should palm while riding. Dr. Bates said that riding is extremely beneficial. The scenery, the road signs, and houses all seem to move, and this demonstrates the fact that the normal eye should never be stationary, but should continually see things moving. The boy while enjoying his trip, can also practice swinging various objects. If he strains while traveling he can close his eyes and imagine the trees, the road, etc. This is equivalent to palming, and the mental relaxation is immediately apparent.

To get back to the main point at issue. When one meets a friend anxious to learn how to get rid of glasses, and all the attending discomforts, tell him all you know. We are very busy in our new office, but we shall be glad to give all the information at our command, and to explain any parts of the book that may appear ambiguous.

We are looking forward to encouraging reports from all our friends at the end of vacation-time. Take your book "Perfect Sight Without Glasses" and your Snellen chart with you and you will find that your vacation is a happier one in a great many ways.

Announcements

Meeting of the Better Eyesight League

DUE to the fact that our magazine goes to the press a week earlier than heretofore, we are unable to publish the minutes of the BETTER EYESIGHT LEAGUE for the month of June. These will appear in the following issue of the magazine.

We hope that everyone will be able to attend the next meeting of the League, which will be the second Tuesday of July, at 383 Madison Avenue.

Microscopic Print

WE are very glad to announce that, owing to the large demand for samples of diamond type and microscopic print, we have at press a little folder containing chapters of the Bible, etc., printed in this type. We know that this announcement will meet a great need, and we shall be glad to add your name to our list to receive this upon its publication.

The price has not yet been determined, but it is extremely nominal. We shall be pleased to give, on request, further information relative to the benefits of fine print.

IF any of our subscribers have friends to whom they would like to make known Dr. Bates' work, we would be pleased to have you send us their names and addresses, so that we may place them on our regular mailing list. This will insure their getting our literature from time to time and if they make a special request, we will send a sample copy of our magazine.

The Question Mark

Q—Why is it a rest to read fine print. I should think it would be more of a strain? M. F. S.
A—Fine print is a relaxation, large print a menace. Send for the December, 1919, number which explains this is detail.

Q—My son is taking treatment for squint. While on auto trips is it necessary for him to palm continually? A. O. R.
A—No. The finest thing he can do is to see things moving. He can do this to great advantage in a car. If his eyes burn or seem tired, he can then palm occasionally. Chicago, Ill.

Q—I am 75 years of age. Do you mean to say that you can make me see with normal vision? G. W. M.
A—We most certainly do. Old age sight is not incurable. San Francisco, Cal.

Q—I still cannot visualize "black." What else can I use as a substitute? W. H. H.
A—Don't try to see anything. If it is an effort to visualize black, think of something that is pleasant, for instance, a field of daisies, a sun-set, etc. The result will be just as beneficial.

Q—Must the body be at rest before the eyes can be cured?
A—When the eyes are relaxed, the whole body is relaxed.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

August, 1923

The Snellen Test Card

THE Snellen Test Card is used for testing the eyesight. It is usually placed about 20 feet away from the patient. He covers each eye alternately, and reads the card as well as he can. Each line of letters is numbered with a figure which indicates the distance that it should be read with the normal eye. When the vision is recorded it is written in the form of a fraction. The numerator being the distance of the patient from the card, and the denominator denoting the line read. For example:—If a patient at 10 feet can only read the line marked 100 the vision is written 10/100 or 1/10. If the patient at 20 feet can read the line marked 10 the vision is recorded as 20/10 which means that the sight is double that of the average eye. Reading the Snellen Test Card daily helps the sight. Children in a public school with normal eyes under 12 years of age, who have never worn glasses were improved immediately by practicing with the Snellen Test Card. Children with imperfect sight also improved, and with the help of someone with perfect sight in time the vision becomes normal without glasses. School children oftentimes are very much interested in their eyesight and what can be accomplished with the help of the Snellen Test Card. They have contests among themselves to see who can read the card best in a bright light, or on a rainy day when the light is dim. Many of them find out for themselves that straining, makes the sight worse, while palming and swinging improve their vision. Many of them become able to use the Snellen Test Card in such a way as to relieve or prevent nervousness and headaches. Many boards of education hesitate to be responsible for any benefit that may be derived from the Snellen cards in the schools.

Hypermetropia in School Children

***By* W. H. BATES, M.D.**

HYPERMETROPIA or far-sightedness is more frequent in school children than is myopia. The statistics average in the lower grades about ten percent myopia and eighty percent or more of hypermetropia. In higher grades the percentage of myopia is increased while that of hypermetropia is decreased.

It has been generally believed for more than one hundred years that while myopia is usually acquired by school children, hypermetropia is always present at birth. Many physicians who study the eyes of school children have had more interest in hygienic methods of myopia prevention and have recommended better schools, prescribed the early use of glasses and other measures to lessen the number of children who become nearsighted after they were at school. The prevention of hypermetropia was ignored and I have never seen any article devoted to the prevention of hypermetropia in school children. In the first place it is very difficult to prove or to demonstrate the amount of hypermetropia in young children with any degree of accuracy. I spent many weary hours many years ago when I prescribed glasses, trying to measure hypermetropia with the eye under the influence of eye drops. Twenty years ago I first introduced my method for the prevention of imperfect sight in children and kept records of the vision of the children from year to year, for eight years, in one school of about two thousand pupils. In New York City I have acquired a much larger experience. The symptoms of hypermetropta were more uncomfortable and interfered much more with the mental efficiency of the children than did myopia. Most children with myopia were able to read with comfort and their imperfect sight for distance is only inconvenient at certain times, but children with hypermetropia not only have difficulty in seeing near but they also have trouble in seeing objects at a distance. Some hypermetropes have just as poor sight as children who have only myopia. Hypermetropia not only impairs the vision more than does myopia but it is associated often with a great many more uncomfortable symptoms, pain, headache, fatigue. In short, hypermetropia interferes seriously with the school work much more than does myopia. A great many children leave school because they cannot stand the discomfort of their eyes suffering from hypermetropia and those who continue their school work suffer in many ways. They are unable to read without pain and fatigue and the memory is impaired, they fall behind in their classes and their school life is a burden. Surely it is more important to study the problems of hypermetropia than those of myopia.

The condition of the eyes at birth has been a matter of discussion for many years. Some of the early statistics recorded considerable myopia, 90%, others found no myopia and the eyes were apparently normal. It is difficult to draw correct conclusions from most statistics.

For some years I made it a habit to test the eyes of new born children a half hour after birth and to examine the eyes again at regular intervals. Some children's eyes were examined every hour with the aid of the retinoscope and the eyes under the influence of eye drops. The characteristic of them was the variability in the amount of hypermetropia. At certain hours the eyes would be apparently normal, a half hour later they would be hypermetropic in one or both eyes, at a later period, mixed astigmatism in one eye, and the other eye normal or hypermetropic. At a still later period both eyes normal. A week later both eyes might be normal or both eyes might have hypermetropia in the morning and be normal in the afternoon. Usually six months or a year later the eyes became more continuously normal. At four years of age, six years of age, just before they began school, the eyes of the children were usually normal. After being in school for a year or more hypermetropia began to be manifest and increased with each succeeding year. Myopia did not appear to any great extent before the age of ten or twelve and increased while the hypermetropia appeared to diminish. I have seen some children ten years of age with normal eyes, at eleven years with hypermetropia, at twelve years of age myopia, at thirteen hypermetropia, at fourteen the eyes apparently normal. This variability of the eyes of young children is a matter that should be considered very seriously. Those children who practiced with the Snellen Test Card every day with the help of the teachers, improved. The myopia disappeared, the astigmatism disappeared, the hypermetropia disappeared and the eyes became normal. Coincident with the improvement in the sight, teachers informed me that there was a wonderful gain in the efficiency of the children. There are teachers in the city of New York still using my method for the prevention of imperfect sight in children who have obtained so much benefit from its use that they are continuing to practice it although they were ordered by the Board of Education more than ten years ago to stop using my method.

It is a great temptation to put glasses on children for the correction of hypermetropia. The glasses for the correction of hypermetropia are magnifying glasses and their effect is to enlarge the fine print of school books to such a degree as to make it

much easier for the children to read. Children who are under a strain and have imperfect sight find their vision or their ability to read improved very much by glasses, much more so than the children who wear glasses for nearsightedness. There have been many plausible theories which have encouraged eye physicians to prescribe glasses for many children who do not manifest a very high degree of hypermetropia. It is possible to put glasses on children who have normal sight and by compelling them to wear the glasses continuously they develop hypermetropia and become able to see with the glasses. In fact there are very few people with normal sight but who can,—by wearing glasses continuously, become able to see at the distance with glasses for the correction of hypermetropia, when they do not have it. Just as there are children who can wear nearsighted glasses and see with them although their vision may be perfectly good without the glasses.

If a child has headaches and many children do have headaches from nervousness, from stomach trouble, conditions which often disappear by simple treatment and rest, I believe it is much better to have the children rest their eyes when they are in this condition, for a few days or a week or two because many recover without the need of glasses. Very few eye specialists realize the facts, and, without even considering the possibilities that the headaches might come from something else than the eyes, have prescribed glasses whether the children needed them or not. I do not believe that any children with normal eyes, under twelve years of age, ever recover or are benefited to any great extent by their use. It seems to me very much like a crime to compel children to wear glasses when their sight for distance and for near is perfectly good without them. The oculists will tell you all about latent hypermetropia, which means in the mind of the physician, that the child is really in need of glasses although the sight is normal. They believe that the child really has hypermetropia which is concealed or corrected by a strain of a muscle inside the eyeball and that it is the strain of this muscle to correct the hypermetropia which causes the headaches, or the nervousness, or the stomach troubles or any other disease of the body generally. Some have gone to an extreme and claim that epilepsy, St. Vitus Dance, deafness, diseases of the chest, diseases of the liver and many other diseases are caused by a strain of a muscle inside of the eyeball. This theory is wrong and the published evidence is conclusive that no muscle inside the eyeball is a factor in the focusing power of the eye.

Low degrees of farsightedness are readily curable, but in a great many cases which have 4, 7, or more degrees of error, the cure is for most people, or to most eye-specialists, very incredible. One of my patients had 7 D.S. She could hardly see the large letter on the Snellen Test Card without her glasses. To read was impossible. After a few treatments her vision became normal at 20 feet, and she read diamond type perfectly at less than 10 inches. She wrote me a letter recently as follows: "My eyes are behaving wonderfully well. At one time it was impossible for me to read even with my glasses in a moving train. To-day I read three columns of the newspaper without any trouble." Her letters are very legible and written without glasses.

Fine Print Pamphlet

THE announcement in our July issue regarding the little pamphlet of microscopic print which we were about to bring forth was certainly received enthusiastically. The requests have come in so numerously that the initial order is almost exhausted. The benefits derived from this little booklet cannot be compared to the cost, which we have fixed at twenty-five cents per copy.

Place your order now, and learn how to read the smallest printing matter in the world.

Stories from the Clinic

***By* EMILY C. LIERMAN**

SARAH

(Continued from July number)

SARAH seldom missed a clinic day and she was very faithful in her treatment at home. Within a year's time she became able to smile with her mouth almost straight. I decided to try out a few ideas of my own, and suggested to her that a mirror might be of benefit in helping her to speak and smile, with her mouth straight all the time. As Sarah did not like palming, I had difficulty in getting her to imagine things perfectly with her eyes closed. She had no mental pictures. Below I describe how she obtained them. The mirror would help her to watch her mouth while she was talking or studying her lessons. I told her to go into a room by herself and practice for at least an hour every day. She was to study her lessons and recite poetry out loud, while looking at herself in the mirror, and to see how straight she could keep her mouth during this performance. I told her to remember, while at school, how she appeared while looking in the mirror reciting her lessons. I was amazed at the result, and so were Sarah's friends, as well as herself. This is the way she obtained the imagination of mental pictures. I always asked her to repeat the alphabet very slowly each clinic day. After a while she became able to pronounce each letter of the alphabet with her mouth perfectly straight. She could never do this correctly unless she blinked her eyes for each letter. This may sound silly to the reader, but when Sarah did not blink, before repeating a letter after me, she stared, and not only did she say the letter with her mouth crooked, but her left eye would bulge almost out of its socket. After Sarah noticed this wonderful improvement, she very often had a surprise for me when she came. One day we were late for the clinic, but there was Sarah, sitting patiently with the rest, eager to tell me of some wonderful thing she was able to do. When her turn came, she whispered in my ear, "What do you think I can do now? I can wiggle my left ear." It sounded so funny that I wanted to laugh, but Sarah was so serious about it that I dared not. Strange to say, when I asked her to do it for me, before she did the swing, without first closing and opening her eyes, she was unable to move her ear. But when she started to move her head slowly from left to right and began to blink her eyes, she wiggled her left ear, which greatly amused the kiddies awaiting treatment. Two years had passed and Sarah still had hopes that we could cure her, and her mother and father were very grateful because of her improved condition.

She came one day with a sty on the upper lid of the left eye. When I remarked it, she said she had been troubled with sties for many years, and at times they were very painful. I spoke to Dr. Bates about it, and he prescribed eye drops and salve, which gave her some relief, but the sties appeared again from time to time. At my suggestion, Sarah acquired the habit of closing her eyes

frequently most of the time, day or night, while she was awake. She was permanently relieved. She believed, as I do, that rest and relaxation helped in getting rid of the sties altogether.

At school one day she passed one of her former teachers in the corridor. This teacher had not seen Sarah for a year or more. She stopped and asked if she were not a sister to Sarah. "Why, no," she answered, "I am Sarah." The teacher looked at her in astonishment and said, "I did not know you, dear; your smile is so different, and your left eye looks so much better." Sarah told her about Dr. Bates, and his method of curing people without glasses. This teacher had progressive myopia for many years, and suffered greatly with her eyes. What Sarah told her did not convince her at the time, that she might also be cured, but about six months later sixteen girls from her class room came to us at the clinic for eye treatment. When she saw that their glasses had been removed from their eyes, and that they had improved faster in their studies, she called to see Dr. Bates at his office. In less than a year's time she herself was able to see without glasses. Every clinic day Sarah repeated the letters of the alphabet faithfully, until she could say them with her mouth perfectly straight. Then one day she had another surprise for me. Something she had never been able to do in all her life. She learned to whistle with her mouth straight. What a wonderful stunt that was for Sarah. This she could not do unless she first practiced the swing. Rest or relaxation always relieves tension of the body as well as the eyes. I wish to emphasize the value of rest and relaxation obtained by the swing and by blinking in curing all diseases of the eye, no matter what the cause may be.

My experience in the treatment demonstrated that many popular theories of the cause of paralysis of the motor nerves are wrong. For example, it is generally believed that when a motor nerve ceases to function properly, the recovery cannot take place until some disease or permanent organic condition is relieved. Sarah became able to close her eye quickly almost completely, after practicing the swing, which could not have occurred if the paralysis of the nerves was of a permanent nature. I am aware that cerebro-spinal meningitis is caused by a germ, which is an important factor in the destruction of the nerves which control the muscles of the eye and face. I do not think that anybody will maintain that the swing had anything to do, directly or indirectly, with the germs of the disease, or with the results of the inflammation caused by the germs. My experience with the treatment of other cases of paralysis of the muscles of the eyes, caused by infection, confirms my belief that the paralysis is not due so much to local changes in the nerves as it is to mental causes. Sarah was pronounced incurable by many prominent, capable nerve specialists. I believe that one reason why local treatment did not help her was because she had no trouble with the nerves sufficient to produce the paralysis. The only treatment which helped her was mental relaxation obtained by the swing. It was the strain of her mind which produced all the symptoms of paralysis. She had no more trouble when her mind was at rest.

What the Silver Jubilee Omitted

***By* EMILY A. MEDER**

CIVIC interest was thoroughly aroused at the recent exhibition at New York's Twenty-fifth Anniversary. What old, half-forgotten memories surged through my mind as I looked once more at the obsolete horse-drawn street cars. While gazing at these, they seemed to fade away before my sight (complete relaxation, not eccentric fixation), and I recalled the trips I used to take in these cars in the past. With a stiffly starched frock, and, if I were extra stylish, a little hand kerchief tucked in at the waist, I trudged beside my Dad en route to the street car. Upon boarding this we sat peacefully for an hour and a half, before we reached our destination, the Aquarium. One hour there looking at the wonders of the sea, and another two hours to get home. Practically the whole afternoon consumed for what can now be accomplished in about two hours. No wonder we swelled with pride while looking at the evolution of the various vehicles, instruments, machinery, and public conveniences. I only had one regret. Great effort, both physical and mental, was manifested in the production of such superior tools with which the humans work, but the same detailed thought was not given to devise ways for us to obtain the utmost efficiency from the greatest tool of all—our body. I readily admit that great strides forward have been made in medicine, surgery, dentistry, and industrial appliances, but we are, in one respect, just where we started one hundred and fifty years ago. PEOPLE STILL WEAR GLASSES. The Jubilee could have produced no greater thrill for me if there had been a separate showcase with a pair of glasses carefully protected, and marked, like the dodo, EXTINCT.

There is an expression used greatly of late, which, by the way, should be discarded with glasses, and that is, "Better late than never." People who apply this maxim to their daily lives are usually "fired" from their positions or are the onlookers of life, and at the tail end at that. However, to go on, Dr. Bates' work is becoming better known than ever before, and the papers are wildly clamoring for interviews, until it seems as though the public were trying to make up for lost time. We can truthfully say that it is better to come late than not at all, but looking at this from another angle, just think of all the people who could have evaded untold misery, and even agony, if they had known of this work before.

One lady reporter had heard of Dr. Bates' cure of imperfect sight without glasses, and came for an interview about a week ago. Dr. Bates saw that she had imperfect sight, and in order to determine the trouble he applied the retinoscope, which tells at a glance the condition of the patient's eyes. The young lady was intensely interested in this instrument as Dr. Bates explained its use to her. He also told her of one of his discoveries regarding this. Telling lies is bad for the eyes. If a patient lies, the retinoscope will indicate that the shape of the eyeball has been sufficiently altered to make the focus imperfect. Defective vision is caused by strain, and to lie requires an effort or strain. Practice, of course, makes perfect, but even those accomplished in the art of "fine fabricating" have to make more of an effort than they do when telling the truth. The mental effort, therefore, produces a slight strain, which is immediately discovered by the retinoscope.

This piece of news evidently interested the reporter more than the other discoveries made by Dr. Bates, as she wrote an article dealing with the retinoscope alone. Since that time reporters have been writing about this, claiming that Dr. Bates has found a better "truth detector" than scopalamin. We know this to be true, because exceptions have been found in the use of scopalamin, whereas the retinoscope reflects the natural change in the eyeball, and this is infallible.

One of the reporters from a large city paper asked innumerable questions relative to the discovery and use of the lie-exposing qualities of the retinoscope. When these were answered to his satisfaction, I asked him why he was dwelling so much on the novel and sensational properties of this instrument, rather than the prevention and cure of imperfect sight. He answered in a way that rather dampened my good opinion of the sagacity and intelligence of the average newspaper reader. "The public is always on the lookout for something novel that will insure a thrill. Something that they can take in at a glance, which doesn't need to tax their thinking capacity. The retinoscope will supply them with a topic of conversation for a time, and they can make witty quips, about installing one in the home, to find out the true relation of the family budget to the dressmaker's bills." I suppose this is true, but

wouldn't the public be doubly thrilled and excited if it were to be made plain to them that glasses are wrong, that they can dispense with them, and last, but not least, can cure themselves?

I hope that we all may be able to visit the next anniversary of New York City and note some of the great improvements made in the human physique, among and foremost of these being the prevalence of perfect sight, and absence of glasses from all. This is coming gradually to be sure, but inevitably.

FROM time to time we receive letters containing various questions that are supposed to be answered in the subsequent issue of the magazine. Some of our correspondents, however, do not sign their names or addresses. We wish to say here, that while we are very glad to give personal attention to every letter, we will not do so if the letter is unsigned. We think it is only common courtesy for the writer to let us know with whom we are dealing.

A Game to Cure Stage Fright

***By* FLORIAN A. SHEPARD**

"MARIAN is going to clap part of this piece for us before she plays it on the piano," I said to our friends at the June Recital. She wanted to do this because she loves to "clap" any music, and she knew she would play all the better for it.

She knew the piece perfectly, so for the sake of the audience I asked, "What time is this piece written in?" A terrified look came into her eyes, and she stared blankly. At any other time she would have answered readily and delightedly. Here was the time for our "game."

"Shut your eyes, dear," I suggested. "Can you see a picture of the piano keys?" A smile spread over her face and she nodded happily. "Now, can you see a picture of the printed music? Do you see the measure full of chords—one for each beat?" She saw them, counted them, and told us what kind of notes they were; then she remembered the time-sign.

After that everything went happily and smoothly. The memory of perfect sight had helped her to forget her fear and relax while she did her part. It has helped Marian (and other pupils) many times in her lessons when she was disturbed over some mistake or supposed difficulty. If she repeatedly makes the same mistake from a wrong habit formed at home, and fails to correct it when she tries, I get her to close her eyes and see a "picture" of the right finger on the right note at the right time. When she opens her eyes, she usually plays the passage correctly. The memory of perfect sight helps her to relax mentally and physically, and so she gets a fresh start.

I have always asked "leading questions" when a child seemed rattled; but by helping him with "mental pictures," I have demonstrated that a pupil can think and act more naturally and efficiently. This game quiets him when he is excited or hurried, and rests him from strain.

Announcements

WITHIN the past few months we have received innumerable inquiries regarding the use of the burning glass. It is well known that the sun strengthens the eyes, and with the aid of the burning glass the direct rays of the sun are focused on the sclera.

Have you ever noticed that upon emerging from a dark room into a strongly lighted one, or from the dark movies into the sunlight, that you are temporarily blinded? This should not be. The normal eye accommodates to the varying conditions, and if it fails to do so the vision is defective. The burning glass accustoms the patient to the strong sunlight, and strengthens the eye.

We have on sale a burning glass which is a magnifying glass of the desired strength, bound with a german-silver rim, especially constructed for this particular purpose. Price $5.00

Important

The attention of our readers is called to the forthcoming September issue of Hearst's International Magazine, which contains an article by W. H. Bates, M.D., entitled, THROW AWAY YOUR GLASSES.

August Meeting

The next meeting of the Better Eyesight League will be held as usual on the second Tuesday of the month, August 14th, and we hope all our members who can conveniently do so will attend with their friends. Our new quarters are so pleasant and cool that we know the evening will be an enjoyable one in many ways.

Minutes of the Better Eyesight League June Meeting

NOTWITHSTANDING the fact that the New York City Silver Jubilee was at its height only one block away, and that the evening was one more conducive to a nice cool "bus" or boat ride, the meeting-room of the Central Fixation Publishing Company was filled to capacity long before the meeting was called to order.

Miss Hurty, in her very capable and business-like manner, presided, and after discussing some "old business" which has been a source of confusion to a few of the members, introduced Dr. Cornelia Brown, of East Orange, who was scheduled to be the principal speaker of the evening.

Dr. Brown is certainly a strong enthusiast for Dr. Bates' method of curing imperfect sight by treatment without glasses, and she

knows whereof she speaks, for not only has she cured her own eyes, after wearing glasses for twenty years, but she has had great success in treating her patients. A year ago she started a Better Eyesight League in East Orange, and it is growing not only in size, but in popularity, ever since. She told of many experiences, and the results have been such that no one hearing her would have the slightest misgiving about their own particular case, be it ever so serious. Dr. Brown emphasized the fact that what impressed her most was the naturalness, the simplicity of this treatment. When one has imperfect sight, one has to go to a great deal of trouble to keep it imperfect. One strains, and stares continually, which is not the normal thing to do. The normal eye is forever moving, and constantly sees things move, not by making an effort, but by doing the most natural thing in the world—*relaxing*.

Miss Reicher brought a man who is totally blind, having atrophy of the optic nerve. He is undertaking the treatment, and we will tell of his results in a later issue.

Dr. Bates then spoke of the benefits of the sun. He mentioned the case of a young lady who went to an eye-hospital for treatment, where she was kept in a dark room for two years. At the end of that time her condition was decidedly worse and in due time she came to him. Dr. Bates *cured her by the sun treatment*. He quickly trained her eyes to become accustomed to the sunlight until she could look at the sun, swinging it from side to side without discomfort. She finally obtained normal vision in both eyes.

In a New York paper, under to-day's date, there is an article which brings home stronger than ever the fact that the eyes need the sunlight. It seems that a little child of about three years, born with a twisted leg, and considered somewhat of an "ugly duckling" to her inhuman parents, was isolated in a dark hole in the cellar of their home. By accident, a plumber, who was called to make some repairs, unknown to the parents, discovered the unfortunate child, and immediately reported the state of affairs to the local police. The child was taken to the hospital, and all efforts to cure her are of no avail. **She was totally blind, due to lack of sunlight**, and incurably insane.

Another instance cited by Dr. Brown, which substantiates Dr. Bates' statement regarding the benefits of strong light, was her experience with the ultra violet ray. Dr. Brown uses this in her laboratory for various treatments, and she said upon purchasing this, she received explicit directions *not to look into the light* without a shade of some sort. One morning, however, in her haste, she accidentally gazed into the light, and temporary blindness resulted. Knowing that the sun will cause the same discomfort if one is unaccustomed to it, she decided that if Dr. Bates' method was right, this strong light would help rather than harm the eyes. She therefore made a practice of looking into the glare at regular intervals, prolonging the period a few moments each time. She is now able to look squarely into this without the least discomfort, and she says that she knows her eyes have been strengthened as a result.

The Question Mark

Dayton, Ohio.
Q—Which is more beneficial, the short or the long swing? L. P.
A—The short swing, if you can maintain it.

Boulder, Col.
Q—I find that when I imagine a period, and try to hold it, it causes discomfort. Why is this? A. S.
A—You are straining. Never try to hold anything. Imagine the period moving from left to right. This overcomes strain.

New York City.
Q—I have great difficulty in seeing things move. W. M. M.
A—This is the cause of your defective vision. The normal eye sees things moving continually. Read the chapter on imagination.

Brooklyn, N. Y.
Q—Are the movies harmful? T. E. B.
A—No. Quite the contrary. Send for the magazine on this subject.

East Orange, N. J.
Q—Can the layman use the burning glass. J. S. P.

A—Yes. A great many of our readers use this with remarkable success. Directions are mailed with each glass.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

September, 1923

Aids to Swinging

IT IS possible for most people to do a very simple thing—**to move the finger nail of the thumb from side to side against the finger nail of one finger.** This may be done when the patient is in bed or when up and walking around, in the house, in the street or in the presence of other people, and all without attracting attention. With the aid of the movement of the thumb nail which can be felt and its speed regulated one can at the same time regulate the speed of the short swing. The length of the swing can also be regulated because it can be demonstrated that when the body moves a quarter of an inch from side to side that one can move the thumb from side to side. If the long swing is too rapid it can be slowed down with the aid of the thumb nail; when it is too long it can be shortened. At times the short swing may become irregular and then it can be controlled by the movement of the thumb nail. It is very interesting to demonstrate how the short swing is always similar to the movements of the fingernail. One great advantage connected with the short swing is that after a period of time of longer or shorter duration, the swing may stop or it may lengthen. It has been found that the movement of the thumb maintains the short swing of the body, the short swing of the letters or the short swing of any objects which may be seen, remembered or imagined. A letter O with a white center can only be remembered

continuously with the eyes closed when it has a slow, short, continuous, regular swing and all without any effort or strain. The imagination may fail at times but the movement of the thumb can be maintained for an indefinite period after a little practice. One can more readily control the movement of the thumb instead of the eye.

Dodge It

***By* W. H. BATES, M.D.**

WHENEVER your sight improves shift quickly to something else. Dodge your improved vision. Whenever you see things imperfectly shift your eyes quickly to something else. Dodge your imperfect sight. To stare always lowers the vision. Do not stare. Dodge it: It is interesting to demonstrate the great fact that perfect sight comes so quickly that you cannot avoid seeing things perfectly. The long swing is a great benefit as long as you dodge the improvement in your sight. The short swing requires more relaxation, and to dodge the improvement in your vision is more difficult. Practice the swing which gives you the best vision, or the vision that you are able to dodge. The eye should always be sufficiently relaxed so that you will be able to dodge. One patient was wearing very strong glasses concave 15 D. S. with which he obtained vision of only 20/70. Without his glasses he was able to remember a letter or a period perfectly as long as he did not try to see anything. With the retinoscope it was demonstrated that when his memory was perfect his eyes were normal, he had no nearsightedness. As soon as he tested his sight he lost his memory, the myopia or nearsightedness returned, and his vision became very imperfect. By practicing most of the time out of doors, or in the house on ordinary objects he became able to dodge any improvement in his sight, but not enough in the beginning, or not quickly enough to avoid the fact that his vision in a moment became worse. He was unable to do much with the Snellen Test Card at first, and the temptation to stare and not dodge prevented him from shifting from one object to another, quickly enough to retain his perfect memory. He finally became able to dodge any improvement in his sight before his memory failed. At the end of a week he reported one day when he came in to see me that he was cured. I tested his ability to dodge any improvement in his sight and found it as good as that of the normal eye. He could not only dodge the improvement in his sight for ordinary objects, but had at last become able to do it when he looked at the Snellen Test Card.

I asked him, "Can you look at the bottom line at twenty feet for so short a time that you do not lose your perfect memory?"

"Yes," he answered.

"Can you read any letters on the bottom line?"

"I cannot help but read them."

Another patient whose vision had been equally as poor and who had nearsightedness as well was very much benefited by the memory of a short swing of her body, about one-quarter of an inch. She could maintain this swing continuously with her eyes closed, and almost as continuously when she would look at a blank wall where there was nothing to see. When she regarded the bottom edge of the card with a perfect memory of a short body swing, the letters became perfectly black but she could not at first shift her eyes, or dodge the improvement in her sight quick enough to maintain the memory of the body swing. By practicing at all times and in all places, in the house or on the street, her ability to dodge became better. It was such a shock to her to read the bottom line at six feet without glasses, that she became panicky, and lost her mental control, failed to dodge, and lost her improved vision. Perfect dodging of improved vision can only be done perfectly by the normal eye. The normal eye does not have normal sight continuously unless it shifts or dodges what it sees at frequent intervals. (Dodging – to avoid staring by shifting the eyes to a new point.)

When dodging or shifting the shorter the shift the better provided one sees best where he is looking and sees worse all parts not regarded. One may shift to the right of the letter when the letter is to the left of the point regarded and then shift to the left of the letter when the letter is to the right of the point regarded. Every time the eyes move to the right the letter moves to the left, every time the eyes move to the left the letter moves to the right and by doing this a few times most people become able to imagine that when the eyes move the letter appears to move in the opposite direction. This is called the Swing and when one is able to imagine a letter moving or swinging from side to side the letter is not regarded directly, the stare is prevented by the shifting or dodging and the vision is improved. When one regards a small letter of the Snellen Test Card at a distance where it can be seen perfectly and continuously, most people can demonstrate that they do not see the right hand side best all the time or the left hand best all the time, but that they are shifting from one part of the letter to another, and this may all be done unconsciously. If one, however, stares at one part of the letter continuously the vision soon becomes blurred. It is necessary to keep dodging from one part of the letter to another. Every time the eyes move one can imagine the letter moves in the opposite direction. Staring at some point of the letter continuously always blurs the sight.

Letter moves in the opposite direction = The swing, oppositional movement.

CENTRAL FIXATION

When the eye sees best where it is looking it is called Central Fixation. Of course when one sees one point best it must see all other parts worse. It is a great help in accomplishing Central Fixation to ignore or dodge all other objects or letters (objects/letters the eyes are not looking directly at, that are in the peripheral field). To see worse may require in a way greater rest of the mind because in Central Fixation a great many more things are seen worse and only one thing is seen best. It must be borne in mind that dodging may be done right or it may be done wrong like many other methods of improving the sight. Dodging is done properly when things are ignored. We do not think so much of the objects seen worse (in peripheral field) as we do of the one object which is seen best (in the central field). It is impossible to have perfect sight without Central Fixation. Central Fixation is demonstrated to be a passive condition of the mind and is always accomplished without effort. It is necessary then to dodge the objects not regarded.

BLINKING

It is a rest to the eyes to close them and keep them closed for a few minutes or a half hour or longer. When the eyes are open the vision is usually improved for a moment or longer. The normal eye can look at a small letter of the Snellen Test Card and see it continuously but when it does so the letter is always moving and the eyes are not kept open all the time. Closing the eyes effectually dodges perfect or imperfect sight. Usually unconsciously the normal eye closes and opens quite frequently and at irregular intervals and for very short spaces of time. Most people can demonstrate that when they regard a letter that they are able to see quite clearly it is possible for them to consciously close their eyes and open them quick enough and see the letter continuously. This is called Blinking and it is only another name for dodging. Dodging what? Dodging the tendency to look steadily at things all the time. All the methods which have been recommended for the improvement of the vision, central fixation, palming, swinging, blinking can all be grouped under the one word—dodging.

One of the characters in "Oliver Twist," by Charles Dickens, was called the "Artful Dodger." Persons with good sight may not be artful but they certainly are good dodgers.

Stories from the Clinic

***By* EMILY C. LIERMAN**

CURED IN ONE VISIT

A COLORED mammy came to our clinic complaining of great pain in the back of her eyes. She had visited a doctor before she heard of Dr. Bates, and was told that her eye trouble came from indigestion and eating wrong food. After trying a diet for six months which was prescribed for her, with the result that the pain in her eyes still continued, she came to us with very little hope of being cured. After I had taken her record, name, and age which she said was 32, address and where she was born, I asked her if she had ever worn glasses.

"No mam," said she," And you can never make me wear them. I hate them, I do."

She went off on a blue streak relating her family history.

"You know, mam, my mother had only one bad habit until she died, and thank the Lord it wasn't wearing glasses. She lived a good simple life, but my, how she did love her corn-cob pipe. But she never committed the sin of wearing glasses."

Well, this was a new one on me. I have been treating many colored patients for eye strain since my work began with Dr. Bates, but this was the first one who thought that wearing glasses was committing a sin. Most of her kind think it adds to their appearance to wear glasses and many times Doctor was asked to prescribe plain window glass so that they could wear glasses.

I tested mammy's sight with the test card which was 10/30 with each eye. I moved the card only one foot further away and this caused such a strain that she could only see the 40 line. Then I told her to palm and asked her to describe one of the letters she saw on the card. As she did not answer me right off I thought she had not heard me so I repeated it. She answered, "Do you know mam, for a minute I couldn't remember a single letter." I explained to her that such was often the case, imperfect sight, imperfect memory. I pointed to the letter E and asked her to close her eyes and describe it. This she did by saying it had a straight line at the top, also to the left and bottom and that the right side was open. Before mammy opened her eyes I moved the card still further away, which was now fifteen feet to be exact. Mammy had been palming about five minutes, still remembering the letter E of the forty line of letters. I stood beside the card with my finger pointing to the first letter next to the bottom line, called the fifteen line. Then I said, "Before you open your eyes please remember that you must not try too hard to see the letter I am pointing at. If you do not see the letter immediately, do not worry about your failure to do so but close your eyes again and remember your E for a few minutes." Mammy opened her eyes and said the letter I was pointing at was an R, which was correct. We were both very happy at the result but I made her close her eyes again and remember the R better than she saw it. In less than five minutes she stopped palming and read all of the fifteen line correctly. I produced another card which she had not seen, and she was able to read the same line of letters as well. This meant that she had normal vision. Mammy thought she was all cured but I had my doubts as to her being able to read fine print. When I held one of Doctor's diamond type cards six inches from her eyes, one would have thought that I had intended to strike her, for she drew back her head suddenly as the little card came in view. She shook her head sadly and said, "I shall never be able to read that fine print for you. That is too much to ask."

I answered, smiling at her, "No, you don't need to read it for me, read it for yourself."

She said she was willing if I would show her how to do it. I told her to move the little card slowly from side to side flashing the white spaces between the lines of letters without trying to read. She kept this up for ten minutes or a little longer and then she screamed as the letters began to clear up and before Mammy left the Clinic she read the seven truths of normal sight.

Cataract Cure

***By* HERBERT PARRISH**

Rector of Christ Church, New Brunswick, N. J.

AN aged member of my congregation, nearly eighty, who had been accustomed to read the Bible every day of her life, and who could also read the newspaper and thread needles and sew, suddenly lost her sight early in February. She became increasingly blind and by the end of March was unable to do any reading whatever or to sew. Since there was little else that she could do, life seemed to have gone out for her, into darkness, and she was greatly distressed.

In April her daughter took her to one of the best eye specialists in this vicinity who made an examination of her eyes, said that nothing could be done at that time, charged her five dollars for the examination, and handed the daughter a slip of paper as she left the office. The daughter supposed that the paper was a receipt for the five dollars, but on reaching home and opening the paper she found that it contained a single word, "Cataract." The Doctor evidently hesitated to distress the old lady by telling her directly what was the matter. She had gone blind from cataracts.

Shortly after I visited the old lady at her home in order to administer the Sacrament. After the service I told her about the methods Dr. Bates used to cure cataract and I suggested that she should try palming her eyes three times a day and swinging. This she did very faithfully and before the end of the month she became able to read the larger print of the newspapers. Gradually she regained her sight and in the course of a month or two was able to resume her practice of reading the Bible daily and the ordinary print of the newspaper. She also was able again to thread needles and to sew.

She continues the palming and swinging. Her eyes have cleared up and are bright.

What is the Monetary Value of Your Eyes

***By* MINNIE E, MARVIN**

DID you ever stop to think of just what cash value you would place upon your eyes? Would you take a thousand or a hundred thousand dollars for your sight? To the average person this is a great deal of money. One feels that with a hundred thousand dollars one could satisfy most any ambition, be absolutely independent; but *would* you, without your sight?

To the artist, this money would mean a finished education among the old masters of Europe; to the physician it would mean the power enabling him to experiment along the particular lines of his endeavor for the benefit of mankind, and to the mother it would mean luxuries for her babies. But, after all, without sight these things are negligible. The greatest joy comes to the artist in beholding his finished product, and noting the glances of admiration cast upon it by an appreciative throng. The physician is rewarded by the idolatrous and grateful smiles of his patient, whom he has grasped from death's door; and is there anything more wonderful to a mother than to notice the new little charms manifested each day by her young offspring?

No, truly, there is no greater gift than sight; still some thoughtless people hold it lightly. They abuse their eyes in every conceivable way, and then, to cap the climax, cover them with a pair of glasses, and expect them to get well. A great many people spend more time hunting bargains in eyeglasses, and in getting the kind of rims adapted to their particular style of beauty, than it would take to cure their eyes by following the method outlined along the lines of common sense.

In Dr. Bates' book, Perfect Sight Without Glasses, is the material explained in a simple, natural way whereby every person having any form of defective vision can positively cure himself. All that is needed is a little backbone. Leave off the glasses. Allow your eyes to function naturally and see how they enjoy it. A baseball pitcher wouldn't think of binding up his pitching arm with splints weeks before a game is scheduled, would he? No, indeed; the results would certainly be disastrous to him. Neither would a marathon runner neglect his daily sprints that keep him in trim. The same principle applies to the eyes. When glasses are resorted to, the natural functioning powers of the eyes are curtailed, and as a matter of course become gradually weakened.

There has been a great deal of talk recently about some sort of organization which calls itself the Eyesight Conservation League. This League has been distributing pamphlets and circulars *anonymously* throughout the schools, byways and highways of the United States. The object of this League is to *prescribe glasses*. The reports of their representatives, submitted to headquarters at regular intervals, are merely records of the number of glasses prescribed. No mention is made of the number of children benefited.

According to their ideas, their object has been accomplished when the glasses are placed on the children, when as a matter of fact we all know that the sight will never become normal just so long as the glasses are worn. How often do you hear a person say, "Oh, my eyes are perfectly normal. Now, you see, I wore glasses for such and such a time, and the defect has been entirely cured." Have you ever heard it? I never have, and I doubt if anyone else has. Glasses *never* have cured defective vision.

We hope all our Better Eyesight League members and friends who know of Dr. Bates' method of curing defective sight will do all they can to put a stop to this sort of propaganda for "sight conservation." It conserves it, true enough; *preserves* it, might be the better word—preserves it in such a way that the normal vision is never manifested, so long as the glasses are worn.

A Talk to the League

***By* ANTOINETTE A. SAUNDERS**

The following is an extract taken from a talk given by Miss Saunders before the members of the Better Eyesight League at the July Meeting, and deserves special mention.

PLAIN common sense and statistics tell us that glasses have not, cannot, and never will cure errors of refraction; if they could people would wear them for a short while only, and discard them when cured. Have you ever seen a person doing so? We all know that generally the strength of the artificial lenses must be steadily increased, and in many cases it leads to cataract and blindness—and there are still people who believe that they are saving their eyesight by wearing glasses. When, oh when, will they wake up?

I dare say that errors of refraction is an imaginary disease. Dr. Bates can tell you how many patients fitted with plain glasses and even with wrong lenses, are coming to his office daily. How can they see through these ill-fitted lenses?—autosuggestion. Most of these people claim that glasses are a great comfort and they say they cannot see without them—but sometimes we catch them forgetting themselves, their eyes and glasses, and find they can read with perfect vision, an interesting article in the paper or a lettre d'amour just received, until they remember their glasses, and presto the perfect vision is gone. Where has it gone to? You see this is the result of autosuggestion when used in a negative way.

I have suffered long enough to know what I am talking about. From birth up I was troubled with catarrh. My eyes were frequently bloodshot, the lids swollen, inflamed and sore from a discharge. There also was a film over my eyes so that I saw everything as through a cloud. I had worn glasses for twenty-eight years. Some I lost, others I gave away to very poor people believing, at that time, that I saved somebody's eyesight. All of them were fitted by the best eye specialists here and abroad. They told me that it must be entirely my fault if I could not see with them as they were fitted most accurately and I should try to get used to them. Well, I tried hard for 28 years, but day by day in every way I got worse and worse. I was afraid to cross a street because I ran right into moving vehicles: I fell not only up and downstairs, but also over imaginary objects and was the joke of the day for my friends and acquaintances. One day I crossed Fifth Avenue at 24th Street and ran into a rope which hit me on the nose and broke the left lens. When I looked around to find out the cause of the trouble *I saw the rope with my naked eye, but could not see it with my right eye,*

which was still covered with the lens. Then I woke up. I refused to wear glasses on the street, although the doctor warned me, prophesying that I surely would meet with a terrible accident. But after all the experience I had had with my collection of glasses I took the responsibility on my own shoulders and stopped wearing them on the street. At work I had to use them until I met Dr. Bates, who not only improved my vision rapidly, but also cured in a couple of minutes a very severe headache of many years standing.

Today I can read fine print and some of the photographic reproduction print by good daylight. I consider myself cured—at least from the habit of wearing glasses.

I also wish to mention that my health in general has improved immensely at the same time. I have no nervous breakdowns any more. I forget what fatigue is although I am working strenuously from early morning till midnight and longer. The rheumatism which accompanied me for 35 years has vanished completely. I must admit this has one drawback, namely—I lost the ability of forecasting the weather.

In conclusion I will try to answer two questions which I know are on your mind. First:—How did I improve my sight?—simply by following Dr. Bates' personal instructions and also practicing the various exercises outlined in his book. The long swing was most helpful to me.

Second:—How did I overcome the difficulties of working without glasses before my vision was improved?—I watched myself carefully, found out the particular way I used to strain and avoided that particular way of staring and straining. I tried to relax as well as I could and to stay relaxed during work. I gave full attention to my work and forgot my eyes. I do not ask you to kid yourselves by repeating a certain number of times, "I can see, I can see," and actually fail to see; but it is a fact whenever I thought I could see and was sure about it, I always did so without a single exception and whenever I was uncertain and thought "maybe I can see and maybe I cannot see," sure enough I could not see a single letter of any size and at any distance. So I advise you to **think, expect, remember and imagine perfect vision** and you shall have it at that very moment you need it. We all know that our physical body is not made of one big piece of something. It consists of many trillions of tiny little cells, each tiny little cell has its own tiny little brain, it knows its work and is only too willing to perform its duty if we do not interfere with it. To illustrate this statement I will tell you about an experiment which was made in one of our many laboratories.

A scientist took one single eye-cell of a chick's embryo and transplanted it to the back of the neck. The chick was hatched out with three perfect eyes. Two in its normal place and the third on the back of its neck. Now, if a chick's eye-cell knows enough and has the power to multiply so rapidly to make up for lost time and to build up a perfect eye, although out of its normal place, then I should think we need not worry about our eyes and how they can see without glasses. The human eye must be at least just as intelligent as a chick's eye, and if so then give your eyes a chance. Have faith and confidence in yourself and in your eyes.

Announcements

STORIES FROM THE CLINIC

ALTHOUGH the Clinic at the Harlem Hospital has been discontinued, the records of all the interesting and peculiar cases have been kept.

Doctor Bates and Mrs. Lierman visited the Clinic three days a week, the patients averaging fifty or more a day. Mrs. Lierman was always able to reach the human side of these patients, some of them in agony with various diseases of the eye, some blind with Cataract, and others terribly uncomfortable with minor defects. A brief synopsis of all these cases was kept, and we have pleasure in announcing that each issue of the Magazine will contain one of Mrs. Lierman's Stories for some time to come, selected from an unlimited amount of material.

BETTER EYESIGHT LEAGUE

READ the Minutes of the July Meeting of the League, and be sorry if you did not attend! So many different questions arise, are discussed and settled, and so many points in doubt, cleared up, that it is certainly to the members' advantage to attend. It's worth while!

The Second Tuesday falls on the 11th, and we would like to see everybody at the September Meeting.
There will be a Grand Reunion of all the vacationists at 383 Madison Avenue 8 o'clock

BOUND VOLUMES

WE are taking orders for the Bound Copies of the Magazine, which is now at press. The volume contains every number from July, 1922, to June, 1923. It is attractively bound in limp leather, similar to that of the book, and is excellent for reference when used in conjunction with PERFECT SIGHT WITHOUT GLASSES. Send for yours—Price $4.25.

Minutes of the Better Eyesight League

THE speaker scheduled for the evening was Mrs. Gordon, a patient of Doctor Ruiz Arnau. Being troubled with Presbyopia, and severe headaches, Dr. Arnau came to Dr. Bates for relief. Upon being cured, he took the course of treatment under Dr. Bates and is practicing this method with great success. The following reports of some of his patients were received with interest:

Mrs. Gordon could do nothing without her glasses, which she wore for three years. However, as they failed to improve either her vision or her sick headaches, she visited Dr. Arnau, whom, she heard, was using Dr. Bates' method. At the end of three weeks she

was amazed to discover that she could not only leave off her glasses without the least discomfort, but her headaches had disappeared. She can now sew, read, thread needles and continue her work of teaching with ease. Mrs. Gordon explained that if she was cured in three weeks, children ought to make rapid progress and be cured permanently in less time.

The other patients who cited their experience with Dr. Bates' method, under Dr. Arnau, were two little girls, and a boy. The first child to speak said she had a very trying time with the doctor at school. He prescribed glasses for her, but when her parents saw she was no better they took her to Doctor Arnau. He immediately removed her glasses, and had her palm for a short time in his office. When he re-examined her eyes, he saw immediate improvement. The parents were greatly gratified, and sent her back to school without her glasses. However, the teacher was greatly perturbed at this breach of ancient custom, and requested the child to either resume the glasses or remain away from school entirely. The little one went home, and continued the treatment under Dr. Arnau for one week. At the end of that time she was pronounced cured by him, and returned to school *without her glasses*. She was again sent to the school doctor and examined. When he saw that she could read to the bottom line without discomfort, he told her to go back to her class, and the subject was dropped.

The next little girl was troubled with Myopia. While she could read with an effort, she could not see the little words, such as it, as an, etc. Dr. Arnau taught her how to think, see and remember black, by flashing the white spaces, and remembering the little period, she was able to imagine the little words, until they cleared up, and she could actually see them. In a few weeks' time she could read without an effort, and if she did revert to the unconscious strain, she received immediate relief and relaxation by remembering the black period.

The young man of twelve was next to tell of his experience. He explained that the swing helped him, and he demonstrated the various swings, shifts, including the movement of the eyes from left to right to make the objects swing in a slow, easy motion.

Another member gave a brief history of her case, and concluded by saying she receives the greatest benefit from reading the test card every night, before retiring. She has it always in her room, and takes it with her on her vacation.

It is a curious feature of the preceding reports that each speaker claimed a different exercise helped him. The memory of black helps some most, others like the palming, and still others become nervous when palming, and like the different swings. By trying each one, and noting the results obtained, the most beneficial can be adapted to each individual case.

Use Your Eyes
Not Your Glasses

No home should be without this book, THE CURE OF IMPERFECT SIGHT WITHOUT GLASSES, by W. H. Bates, M.D.

What would you take for your eyesight? Can you estimate its value?

Learn to use your eyes properly so that the defects can be remedied: not temporarily but *permanently.*

In this book all diseases of the eye are covered, and by leaving your glasses *off* and practicing the methods a few minutes a day as outlined by Dr. Bates, the results will be astonishing.

Surely your eyes are worth this much.

To avoid delay, we are sending these books C.O.D. on approval for five days. If it is not all we say it is, you have the privilege of returning it and upon its receipt in this office our check in refund will be sent immediately.

PRICE $5.00

Central Fixation Publishing Company
383 Madison Avenue, New York City

PRESS OF THOS. D. BROOKS, INC. NEW YORK

The Question Mark

Newark, N. J,
Q—Please state in detail why fine print is a benefit. L. G.
A—Send for detailed explanation. It requires more of an effort to accommodate the eye to large type than to small.

Wilmington, Del.
Q—Is it really possible to cure oneself by reading the book, PERFECT SIGHT WITHOUT GLASSES? ANNA S.T.
A—Yes. Follow the instructions as outlined.

New York City.
Q—Have had good results with Dr. Bates' book, but as yet cannot leave off my glasses with comfort. May I resume them when I do close work? MRS. CLARKE.
A—No medicine is easy. Put up with the discomfort. Learn how to diminish and abolish this day by day. Leave off your glasses.

East Orange, N. J.
Q—My husband has a fully developed Cataract. Can this be removed by Dr. Bates' method without operation? MARY S.
A—Yes.

Albany, N. Y.
Q—If fine type is beneficial, why do they print Children's school books in large type? JOHN H.—Teacher.
A—For the same reason that people wear glasses —Ignorance of the proper way.

Stamford, Conn.
Q—Trying to make things move gives me a headache. Palming gives me more relief. Why? EAS.
A—Making an effort to do a thing won't help you. When you are walking the street, the street should go in the opposite direction without effort on your part. Some people get more relief from palming, while swinging helps others best.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

October, 1923

Multiple Vision



The speed of the swing is about equal to the time of the moving feet of soldiers on the march.

PERSONS with imperfect sight when they regard one letter of the Snellen Test Card or one letter of fine print instead of seeing just one letter they may see two, three, six or more letters. Sometimes these letters are arranged side by side, sometimes in a vertical line one above the other and in other cases they may be arranged oblique by any angle. Multiple vision can be produced at will by an effort. It can always be corrected by relaxation. One of the best methods is to close the eyes and cover them in such a way as to exclude the light. Do this for five minutes or a half hour or long enough to obtain normal sight. The double vision is then corrected. Practice of the long swing is a great help. When the long swing is done properly the multiple images are always lessened. Do not forget that you can do the long swing in the wrong way and increase the multiple images. **One great advantage of the long swing is that it helps you to obtain a <u>slow, short, continuous swing</u> of normal sight. When the vision is normal the letters appear to move from side to side or in some other direction a distance of about a quarter of an inch. The speed is about equal to the time of the moving feet of soldiers on the march.**

(Since the swing is produced by the movement of the eyes and the eyes can produce very fast, frequent and tiny or larger eye movements – the swing can also be faster, more frequent and smaller, larger but its basic appearance is as described above.

The most important part of the short swing is that it should be maintained easily. Any effort or strain modifies or stops the short swing. Then the eyes begin to stare and the multiple images return. It is a great benefit to learn how to produce multiple images at will because this requires much effort or strain, and is decidedly more difficult than normal single vision which can only be obtained easily without effort.

Failures

***By* W. H. BATES, M.D.**

MOST people with imperfect sight when they look at the Snellen Test Card at twenty feet believe that they see imperfectly without any effort or strain. Some people feel that to have perfect sight requires something of an effort. It is interesting to demonstrate that these two beliefs are very far from the truth. As a matter of fact it requires an effort to fail to see and it requires no effort to have normal sight.

In every case of imperfect sight whether due to nearsightedness or to an injury it can always be demonstrated that the nerves of the whole body are under a strain and in every case of perfect vision it can be demonstrated that no effort whatever is made.

1—Remember if you are able, a small letter O (o) perfectly black with a white center, imagined to be as white as snow. When you succeed you will note that it comes easy, quickly and without any manifest effort on your part. You can choose to remember a letter O and you have it. This letter O, if it is perfect, you can always demonstrate or imagine, to be moving and the movement may be so slow, so short, so easy, that you would not have imagined it without having your attention called to the letter. One can remember one perfect letter O or two letter O's, as in the word "good" and at the same time remember or imagine the whole page of letters to be perfectly black, clear and distinct although one is only able to see them best one at a time. Above all it can always be demonstrated that the memory of perfect sight, the imagination and ability to see things perfectly can only come easily, quickly and without effort. Remember a letter O again with a white center as white as snow and imagine on the right edge of it a little black period. Try and keep your attention fixed on that little black period. Try and remember it the blackest part of the O, try and imagine it stationary when not only is the period stationary but also the whole letter O. One can hold this period black for a few seconds or a part of a minute, but, after a short time it becomes monotonous or disagreeable or requires a strain and the period is lost and the O is lost momentarily although you can get it back again. You can demonstrate quite readily that it is impossible to retain in your mind a period or a letter O by trying to imagine it stationary; or by trying to get your attention fixed on one point, or by staring at one point or two points or more points on the letter O; and trying to see them all at once and stationary is trying to do the impossible. You are straining and the result of the strain is that the memory, imagination and vision fail.

+Remember a small letter o with a pure white center, shift on it part to part and imagine it moving: slow, short and easy.
+Imagine a black period on the right side and stare at it in the mind, eyes immobile and imagine the period and o are stationary. Notice strain, tension is felt and the o fades and disappears.
The same thing happens when the physical eyes stare at a object; the object blurs.
+Now - shift part to part on the o in the mind and imagine it moving. Notice relaxation and the mental image of the o is easy to maintain. When the eyes are open - shift on the o, let it move and it is seen clear. Blink.



We have two classes of patients. One who gets well quickly in a day or at one visit. We have a second class that take their own time about getting well. They are usually under treatment for weeks and months before they recover, if they ever do. Why should some people get well so much quicker than others? One succeeds, the other fails. The facts are that the patient cured in one treatment does at once what he is told to do. He does not think or argue about what he is told to do, at least he does not try to explain why he is asked to do certain things, but simply goes ahead and does it and soon obtains perfect sight. It is something like the belligerent Irishman who did not know the meaning of the word "convinced," who publicly announced in a loud voice that he was willing to be convinced, but he would like to see the man who could do it. A great many patients are like the Irishman, They are willing to be convinced but they have their club. The club has engraved on it effort, strain, hard work.

When you have imperfect sight and look at the first letter of a line of letters on the Snellen Test Card which you cannot read you can always note that you do not see the first letter or any other letter better than the rest. Usually the whole line looks pretty much the same shade of gray. Why is it? Because you are trying to see the whole line at once. You may not know it but most people can unconsciously demonstrate that they are trying to see the whole line at once. If you hold the card up close where you can readily read the same line you will notice, or you can get somebody with good eyesight to show you, that when you distinguish a letter you

do not see any of the other letters so well. To see one letter at a time is much easier than to see a whole line of letters, in fact to see a number of letters all perfectly at the same time is impossible and trying to do it is a strain. One can lift a lead pencil without any apparent effort. To lift a five pound weight requires something of an effort, but to lift ten tons of coal with one hand is impossible, and trying to do the impossible, trying to lift the ten tons of coal with one hand is an effort, a strain, and so it is with the eyesight. You can succeed oftentimes when you look at the Snellen Test Card without any effort to see one letter best at a time, but if you try to do the impossible, try to see the whole line of letters at once you will always fail, because you will have to make an effort. It is not an easy thing at all to fail, it is difficult, you have to try, or you make an effort to do the impossible in order to fail.

This can be demonstrated by nearsighted people who can read fine print close to their eyes. When you see a line of letters you can see one letter better than all the other letters or you can even see part of one letter best while the rest of the letter is not good. Even persons with very good sight for the fine print close to the eyes can demonstrate that to make their sight worse or to see worse is not an easy thing to do. It requires a great effort. To prove that imperfect sight is more difficult and requires hard work, a great deal of trouble, and much effort, is a great benefit.

If you close your eyes and remember a letter or word easily, perfectly, continuously, you will find that to spoil the memory or your imagination is a difficult thing to do. Some people cannot read fine print readily, but they can read the Snellen Test Card at twenty feet with normal vision. To be able to look at the large letters on the card and to strain your eyes sufficiently to blot out the large letters is not an easy thing to do. It is difficult to remember, imagine or see imperfectly, to fail.

There are many patients who are convinced that they can remember or imagine with their eyes closed and oftentimes with their eyes open, letters of the Snellen Test Card perfectly black. Many of them can do it all right with their eyes closed, but fail to do it with their eyes open. When they are cured they become able to remember just as easily with their eyes open as they can with their eyes closed. This has suggested a method of treatment which has been highly successful. Many patients ask how long it will take to be cured. **The answer is when you can remember or imagine as well with your eyes open as you are able to with your eyes closed.** Memory and imagination.



The Story of Lillian

***By* EMILY C. LIERMAN**

AT one time my work was confined to the Harlem Hospital. After awhile it was extended to other places at other times. Occasionally when I visited a department store to make a purchase, the girl who waited on me might be suffering from the results of eyestrain, pains in the eyes or with headaches. It always gave me great pleasure to give them immediate relief with the aid of palming, swinging or in some other way. I could write many stories about the help I gave these girls and their gratitude was something worth-while. I live in the suburbs and commute. The trainmen know me very well and always come to me to remove a cinder from their eyes or to help them when their sight is poor, or when they are suffering in any way with their eyes. Every day during the Fall, Winter and Spring I meet a cheerful group of girls at our station, who attend high school in another town. Some of them I have known since they were babies, and while I am in their company on the train, I forget sometimes that I am grown up and join them in their fun. Several of these girls wear glasses and I offered to cure them any time they were willing to discard their glasses. We said no more about the subject until one day just before school closed for the summer, one of the girls, named Lillian, age 16, who had a higher degree of myopia than any of the rest, appealed to me to help her get rid of her glasses. I insisted that she consult her parents first and if they were willing, and would also help me with her case, I would try my best to cure her before school opened again in the fall. Lillian was very much excited about it all, and begged the other girls to discard their glasses also. One girl said her mother feared that such a wonderful thing couldn't be done. Another girl thought she would wait awhile. I still feel in my heart that they did not believe in me. However, the day after school closed, Lillian called at my home with her sister, Rose, age 13. She had a decided squint of her left eye. Lillian had not spoken of Rose or that she had a sister with squint. She was afraid of imposing upon me and for that reason did not mention that her sister also had trouble with her eyes. But when Lillian came to me, Rose made up her mind that she would be cured also and so she came along with her.

I fastened a test card to an oak tree outside of our house and placed my patients ten feet from the card. I started Lillian first because I wanted, above all else, to cure her as I had planned. With glasses on she read 10/15 and with glasses off 10/70. I taught her to palm and remember something perfectly while her eyes were closed, such as a white cloud, sunset or a little flower of some kind. She did this for a few minutes and then without a stop or making a single mistake her vision improved to 10/40, both eyes. Then I tested each eye separately. Her vision fortunately was the same in each eye, which made it easy to proceed with the treatment. By closing her eyes and remembering the last letter she was able to see on the card she became able to read another line, 10/30. When she made the slightest effort to read the smaller letters on the card the letters would disappear. I explained to her, that when she stared, she made her sight worse and that was her main trouble. I told her to keep her eyes fixed on one letter without blinking her eyes and see what happened. Immediately she began to frown, her eyelids became inflamed and she complained that her eyes hurt her. She said: "Now I know why I have headaches and pain in my eyes."

On her second visit her vision improved to 10/20 after I had taught her the long swing, moving her head slowly from side to side from left to right, looking over one shoulder and then the other. She had to be reminded, as all patients do, to stop staring and to blink her eyes often, just as the normal eye does. All through the summer, Lillian practiced faithfully getting a great deal of encouragement from her sister Rose and her loving mother and father. She came to me for treatment about once a week and a few weeks before school opened we began treatment indoors with electric light instead of

outdoors in the sunlight. I did this purposely because I knew that the light in school was not as bright as outdoors. Lillian became very nervous and frightened when she first read the test card by electric light. All she could see, was the large C called the 200 line letter, at ten feet. Palming for a few moments helped her to relax enough to read several lines, then with the aid of the swing, and looking at one letter and then shifting her eyes somewhere else and looking back again at the next letter, helped her to read 10/15. At each visit she improved and now reads 10/10 all the time. Before she began treatment, she had to hold a book while reading, at three inches from her eyes. This was with glasses on. Since she was seven years old she had worn glasses constantly and in all that time she suffered with headaches every day. She told me that from the day I removed her glasses and started the treatment she had not had a headache or pain in her eyes. She is so grateful that I am almost swallowed up with caresses. Some friends whom she had not seen for a year, called to see her folks and to enjoy a day on their farm. Lillian had worn glasses for so many years that she was not at all surprised when her friends did not know her. She stood in the doorway ready to greet them, but they thought she was a stranger. Her whole facial expression had changed. The eyelids which were swollen from eyestrain were natural looking and her large brown eyes were quite different from the tiny marble looking eyes that tried to see through the horrible thick glasses she had worn previously. When her friends finally recognized her they had to hear all about the treatment and cure.

If Lillian had not been so faithful with the treatment I could not have made such rapid progress. There were many days during the summer when she became discouraged and worried for fear she would have to put on her glasses again. Her mother was a great help to me in many ways. She was very careful to hide Lillian's glasses so that she could not possibly wear them again even if she wanted to.

Well the first day of school came along and of course I was a bit anxious. I met her with the usual group of girls on the train and as she passed me by she pressed my hand and said, "Wish me luck." I asked her to telephone me that evening, which she did. This is what she said:

"When my teachers saw me they were surprised at the great change in my appearance, so I told them all about it and all you did for me. But when I asked to be placed in the last row of seats in each classroom, they were amazed! You see I always had to sit in a front seat near the blackboard," she said, "when I wore my glasses. I was able to read every word on the blackboard in each class room, from the last row of seats where I was sitting. I also read from my readers at eight inches from my eyes without any discomfort whatever."

I praised Lillian and said that I was glad for her. I am more than happy to have given her my time evenings when I needed rest most of all after a day of hard but joyable work.

The interesting history of Rose, Lillian's sister, will appear in the November issue.

New Uses for Relaxation

***By* BESSIE VREDENBURGH**

I HEARD a woman say once that she had followed a certain cult for seventeen years, thoroughly believing in it, but that she had never really put it to the test. This explained what had often been a mystery to me, why certain beliefs and cults could flourish and apparently satisfy so many people, because they were seldom tested.

Not so with the discoveries and teachings of Dr. Bates. They must prove of definite and distinct service, else, they must be discarded, for they make no other appeal than just their own merit. There is no dust thrown in the eyes of the devotees—patients.

This fact was most forcefully brought home to me this summer. I had been greatly benefited by Dr. Bates' treatment in several ways. My eyes responded immediately in that they are now almost cured, but I want to tell of another way in which I was helped, really rescued from the slough of despond and failure. I have suffered many years from a sensitive, irritable skin. Heretofore, this would come in spells and then leave me free again for a little while. I say free, I mean comparatively speaking, for I always was troubled with it more or less. Either the sun was too hot and it became inflamed, or it was too cold and it got chapped and so inflamed, or the wind irritated it or warm clothing; most anything, in fact could cause me trouble.

Of late years it came to stay longer each time so that the periods of so-called freedom became less and less. I tried everything I could hear of to do. Doctors seemed to prefer to let me worry along by myself rather than attempt to cure me beyond suggesting certain diets, etc. I tried mental healing of various kinds also.

To make a very long story short, when I began practicing Dr. Bates' methods for improving my vision I found it rested and relaxed my nerves and also my skin.

I was so much better that I determined to take a little trip that I had wanted to take for some time, but I happened on a terribly hot wave!

My first stop was at St. Louis, and I thought I had never been in a hotter place in my life. The irritation of my skin became intense and my arms, hands, face and neck were red and swollen.

I had a wait of two and a half hours at St. Louis before taking the sleeper on for a point further west. The station was full of hot perspiring people, of all ages and races. I was covered with train dust and perspiration and just about crazy. I realized that I had to get better or go back home, as I couldn't go on like that. I determined to get the short swing more completely than I had ever been able to get it and give it a thorough trial.

I left the hot sultry station and went out into the equally hot and blistering streets, but I had more freedom outside. There I walked for two hours, slowly round and round, trying to maintain the swing. I thought I never could do it. I was under such a strain it seemed utterly impossible to relax. Then when I got a bit of relaxation it seemed as if I couldn't maintain it long enough to get much benefit. But more and more I got it until I felt a great peace and relief. When I finally got on my train for the next step of my journey, I was feeling quite comfortable for the first time in many hours. I was a long way from being entirely cured, but I was better, so that I could continue to get better and have one of the most delightful vacations I have ever had. I stood with equanimity a daily temperature of 110 degrees in the shade. I was out in the open fields, and so in the sun most of the time and did nothing to ease myself from what a person with a normal skin would do. I believe that I could have a normal skin at all times if I would continuously do as Dr. Bates suggested to me; but I forget it so often, and sometimes it seems easier to just let myself get nervous and my skin irritated than it is to try to relax. But it isn't easier in the end, and I envy people who have stronger wills than I have. For all the most wonderful methods in the world won't help those who fail to put them into practice.

Minutes of the Better Eyesight League

August Meeting

THE meeting of the Better Eyesight League was very successful, although it came in the middle of the vacation season. The large Central Fixation office was filled to capacity.

The regular officers were still on their vacations, and Miss Saunders informally opened the meeting. Many questions were asked of Dr. Bates, the most important of which are answered on the question and answer page of this magazine.

Miss Gertrude Berdine was the speaker selected for the meeting. She told in a very interesting manner how she wore glasses for ten years, and was able to discard them by practicing Dr. Bates' method under Dr. Arnau. She accomplished reading her music in two weeks' time after leaving off her glasses. She was bothered with headaches and said the swing and sun helped her. She very rarely has a headache now.

Dr. Cornelia Browne of East Orange spoke of the recent post office investigation, and explained to the meeting how every member could help by stating in a letter to Mr. Keene, the benefits received from Dr. Bates' method. She said that this was the opportunity for the members to get together and turn the investigation into a boomerang.

Many of those present at the last few meetings were not regular members of the Better Eyesight League, but just came to find out more about Dr. Bates' method of treating imperfect sight. The regular members have probably told these new friends about the work, and invited them to come, but we want all the old members to attend the meetings and be kept up on the latest developments. Now that vacation time is over, we hope to continue with the good work, and have all the old members attend regularly.

The Post Office Incident

[EDITOR'S NOTE]—About two months ago the Post Office noticed that we were sending an increasing number of books through the mails. They did their duty and investigated the facts by writing to a number of purchasers of the book. The following is a partial list of letters written to the postmaster, duplicates of which were submitted to us, and are printed at this time for the encouragement of those who desire good vision without glasses. We are grateful to the writers of all letters sent to the Post Office.

"I WAS wearing spectacles for twenty-seven years. A friend of mine made me acquainted with the discovery of Dr. Bates. I bought the book, read it very carefully, and began the exercises and cured myself by following closely the directions stated in the book without consulting Dr. Bates; therefore, from the very day that I began the exercises prescribed in the book I discarded my spectacles and I never had the need of them any more. My eyes by the continual use of the spectacles had acquired a lifeless expression. They now look bright and have acquired their natural expression of my young days. I read, write and use them with remarkable comfort for anything that I must do. I recommended the same book to a friend of mine in Nassau, N. Y. Her children and husband, an architect by profession, were wearing spectacles, and they also cured themselves only with the knowledge of the book, and the application of the exercises, in a remarkably short time.

"I am living at ———— for more than fifteen years and therefore my testimonial can be O.Kd. by many persons and acquaintances. I consider a blessing for the future generation the marvelous discovery of Dr. Bates, and personally I will do all that is in my power to impress on my friends the scientific and accurate importance of such valuable work done with altruistic and humanitarian spirit by Dr. Bates.

"If anyone fails to have results it is only because they do not work it out accurately, continuously and conscientiously. The blame, therefore, is in their nature and not in the value of the theory. I hope my testimonial will help the future and present generation to get the just attitude and give support and value to such a remarkable discovery."

———————————

"I HAVE been interested in Dr. Bates' method of treatment for the eyes, for several years, and have known Dr. Bates personally for one year.

"From the results obtained by my patients through the use of his book and methods, I am convinced that he is right in his conclusions, and I have always found him thoroughly honest and reliable in his business methods and also in the sale and delivery of his books."

———————————

"I HAVE enjoyed considerable mental comfort and, I believe, considerable practical benefit from the work in following the instructions. The "palming" process and the mental suggestions connected with it have been followed with pleasure and profit. Dr. Bates' observation with regard to cataracts in some recorded instances having passed away was very encouraging. Believing to the fullest extent in the doctrine that what comes of its own volition should seemingly disappear either similarly or with care, I have been extracting considerable relief from the belief which amounts to a conviction.

"As I have been nearly forty-seven years a practicing attorney you can rest assured that I am neither an infant nor a neophyte, but like the man from Missouri I must be shown and convinced. Dr. Bates has presented certain lines of thought worthy at least of investigation and consideration. I can well understand how efforts may be made to thwart him but with me if his position is untenable it will soon be discovered and so proven. At the present time I can only speak in the most encouraging manner of the work and of his suggestions."

———————————

"IN reference to enclosed letter, I did write for 'Perfect Sight Without Glasses' and sent it on to my wife, as I thought it might interest her. I have not taken the treatment, but intend to do so the next time I take a vacation from business.

"My wife wore glasses for 29 years. Dr. Bates told her to take them off and since that time, over a year ago, she has not worn them, and can see better and longer than when she wore glasses. She is free from headaches she experienced when she wore glasses.

"I believe that Dr. Bates is sincere and that he is working on really scientific lines. I believe that he has been persecuted by narrow-minded physicians who resent any change in the fundamentals of their science. I was as skeptical as could be of Dr. Bates and investigated thoroughly before I allowed my wife to take the treatment, and I am now thoroughly convinced that his method is the correct one in the majority of cases.

"I should be very glad to be of any further assistance in protecting Dr. Bates or the Central Fixation Publishing Company, which, I understand, is his organization, from any interference by the Government.

"Please understand that I have no connection or interest in the Central Fixation Publishing Company. My only motive is that of gratitude because Dr. Bates did so much for my wife and made it possible for my little daughter to do without glasses."

"I HAVE heard the optometrists and the oculists "knocking" the system and have asked each one of the known knockers if they had tried the system. Each said "No." They are the ones who are jealous.

"I have known of very many who have been benefited beyond casual belief by Dr. Bates' system. Of course it is radical. All reforms seem radical till once adopted by the majority. As a rule the discoverer of anything good in the healing "art" has to be dead for about fifty years before he is given due credit for his work."

"I WAS treated for an acute condition of the left eye in the spring of 1922. I was suffering acute pain from the least ray of light, could not bandage my eye closely enough to walk on the street without agony because light would get in, had to ride in a closed taxi cab. Dr. Bates examined my eyes for over an hour, then prescribed immediate exercises which I took in the office, remaining another forty-five minutes to do it. My eye which had been in this inflamed painfully acute condition for five days, was relieved after fifteen minutes. I could see in twenty minutes without great pain, in forty-five minutes I could bear to look at light. I continued the exercises at home by his prescription and my eyes were normal in three or four days' time."

"THROUGH your 'Perfect Sight Without Glasses' I not only could throw mine away almost at once after I began to read your book last Thanksgiving, but the effects of your splendid relaxation system on my high-strung nerves is beyond words."

Announcement

The November issue will contain the minutes of the September and October meetings, and from then on the minutes will appear in the following month's issue.

The League will meet on the 9th of October, 383 Madison Avenue, 8 o'clock.

The Question Mark

Questions and Answers taken from The Better Eyesight League Meeting

Q—Can anything be done for **night blindness**?
A—It can be cured by **sun gazing**.

Q—What can be done for a man, blind for fifteen years who cannot tell light from darkness?
A—Same treatment as is used for myopia and other defects.

Q—How can we see things moving without making an effort ?
A—Things only move when one is relaxed. An effort always stops things from moving.

Q—Why do "movies" hurt my eyes when they should benefit them?
A—Unconscious strain. Do not stare at the picture, but allow the eyes to roam over the whole picture, seeing one part best. Also keep things swinging.

Q—Why do some people see better by partly closing their eyes?
A—People with poor sight can see better by partly closing their eyes, but when they have perfect sight, squinting makes it worse. This is a good test for the vision of ordinary objects.

Q—When does the long swing fail to produce relaxation?
A—When one stares at objects moving.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

November, 1923

The Book Perfect Sight Without Glasses

A GREAT many people have testified that they were cured by the help that they obtained from the book. A large number I believe have failed to be cured with its help although most people have been able to get some benefit from it.

On the first page is described the Fundamental Principle. This should interest most people because if you can follow the directions recommended you will most certainly be cured of imperfect sight from various causes. If you have a serious injury to the eye which destroys some of its essential parts you will find it impossible to carry out the directions. At the bottom of the page is printed: "If you fail ask some one with perfect sight to help you."

It is an interesting fact that only people with perfect sight without glasses can demonstrate the Fundamental Principle. You will read that with your eyes closed you should rest them, which is not possible if you remember things imperfectly. The book recommends that you remember some color that you can remember perfectly because it has been demonstrated that the normal eye is always at rest when it has normal sight. A perfect memory means perfect rest. Should you have perfect rest you have perfect sight. Most people can demonstrate that they can remember some letter or other object or some color better with their eyes closed than with their eyes open. By practice some people become able to remember, imagine and see mental pictures as well with their eyes open as they can with their eyes closed. Then they are cured.

The Treatment of Myopia

***By* W. H. BATES, M.D.**

MYOPIA or nearsightedness is usually acquired by school children and others at about the age of twelve, a period when the nervous system is naturally undergoing a change.

One can demonstrate that when the normal eye stares at one part of a letter of the Snellen Test Card continuously at twenty feet that it is a difficult thing to do; the eye tends to wander; and, to keep the eye fixed on one point requires an effort, a strain which lowers the vision and produces a temporary myopia. In all cases of myopia a stare or strain or effort to see at the distance can be demonstrated. When the vision is normal, as it may be for diamond type at six inches or further, one reads easily, readily, rapidly, without any effort or strain whatever. It can always be demonstrated that the white spaces between the lines, between the words or letters are whiter than the margin of the card. By covering over the black letters the white spaces between the lines are seen to have the same whiteness as the rest of the card or when one sees the white spaces between the lines whiter than the margin of the card one sees an illusion. An illusion is never seen, it is always imagined. We call the white spaces between the lines when whiter than they really are, Halos, which are really never seen but only imagined. The imagination of the Halos, however, may be so vivid that it is difficult for many people to realize the facts. It is most important that the patient should understand that the Halos are never seen, they are always imagined.

A great many cases of myopia have been cured by demonstrating this fact. All that was necessary to bring about a cure was to encourage the patient to imagine the Halos which is more easily done than to see the letters. Halo's = The white glow.

Patients who are nearsighted, when they regard the letters of the Snellen Test Card, see the black letters a shade of gray. When their attention is called to this fact they realize that they are imagining an illusion which lowers the vision and favors the increase of myopia. In some rare instances these facts have been understood by a few patients, who said to themselves: "I do not see these gray letters, I only imagine them gray. As a matter of fact it is easier for me to imagine the letters black than it is to imagine them gray." Then they went ahead and did it and were soon cured.

NO GLASSES

A person who has been wearing glasses to improve the sight of myopia and has worn these glasses for a number of years is quite dependent upon them. When the glasses are removed, the vision is much less than normal and it is a curious fact that the vision without glasses does not depend directly upon the amount of myopia. A person with two diopters of myopia may have just as poor vision without glasses as one who has six or more. When a myopic patient lays aside the glasses entirely for two weeks, when the vision is again tested it is often much improved. The facts demonstrate that wearing glasses always lowers the visual acuity much below what it is when the glasses are not worn at all. It is a matter of common knowledge that when the glasses are first worn that the patient does not always obtain a maximum amount of relief. Some eye doctors when asked to explain matters sometimes tell their patients that their eyes have to become adjusted to the glasses. It is not always easy to explain things satisfactorily, especially when some fault-finding patients complain that what they wanted was glasses to help their eyes and that they hardly expected to be called upon to adjust their eyes to fit the glasses.

When any progress is made in improving the vision of myopia, the wearing of glasses, even for emergencies, usually causes a relapse with loss of all the benefit gained by treatment. The use of opera glasses should be forbidden.
Avoid magnifying glasses for looking close or distant.

PALMING



One of the best methods of improving the sight of myopia is to cover the closed eyelids with one or both hands in such a way as to avoid pressure on the eyeballs. This is called palming. The patient is directed to rest his eyes and to forget them as much as possible by thinking of other things. When properly done the patient sees nothing but darkness or black. It is a failure when one sees red, blue, green, white or any other color. In such cases palming does not succeed in helping the sight. There are many cases in which palming may lower the vision and so one must keep in mind the fact that it can be done right or it can be done wrong. The length of time necessary to palm to obtain maximum results varies with individuals. Most persons can obtain improvement in fifteen minutes while others require a longer time, a half hour, an hour or even two or more hours of continuous palming to obtain any benefit. With improvement in the vision it usually follows that a shorter period of palming may obtain maximum results. The environment of the patient is an important factor to consider. When a patient is palming it is well to avoid all conversation or the presence of a quantity of people. Some patients like to be read to or they enjoy conversation with their friends. These cases seldom obtain any material benefit to their sight from palming. The improved vision obtained by palming is seldom perfect. Other measures usually have to be employed to insure a lasting benefit.

BLINKING

The normal eye when it has normal sight, blinks quite frequently. By blinking is meant closing the eyelids and opening them so quickly that neither the patient nor his observers notice the fact. The moving pictures have shown that in some cases the eyes were closed and opened five times in one second. This is done unconsciously and is rather more than I can do consciously. Blinking is necessary in order to maintain normal vision continuously, because if one consciously prevents blinking the vision for distance or the ability to read fine print are modified. It is interesting to me how blinking, which is so necessary for good vision, has been so universally ignored by the writers of books on diseases of the eyes. Blinking is a rest, it prevents fatigue, and very important, it improves the sight in myopia, and helps to maintain good vision more continuously.

SWINGING



Long Swing
Swing left and right and see oppositional movement.



Short Swing
Shift on a small letter and see oppositional movement.

It has been my custom after a nearsighted patient has palmed for half an hour or longer, to have the patient stand with the feet about twelve inches apart and sway the body from side to side, looking alternately at each side of the room without paying any particular attention to objects in front of him. By a little practice, patients become able to imagine all distant objects not regarded, to be moving from side to side in the opposite direction to the movement of the eyes. When the eyes move a foot or more from one side of a letter to the other side, the letter appears to move in the opposite direction, very nearly to the same extent. This movement of the letter or object is an illusion; and being an illusion, it is not seen but only imagined. A swing of an inch or more might be called the long swing, while a swing of a lesser degree might be called the short swing. When the long swing is practiced properly simultaneous retinoscopy indicates that the eyes are normal. When the short swing is practiced properly a greater improvement in vision usually follows, but the short swing stops from slight causes and the vision is then lowered. The short swing and long swing remembered with the eyes closed and remembered just as well with the eyes open, is a cure of myopia in many cases.

MEMORY

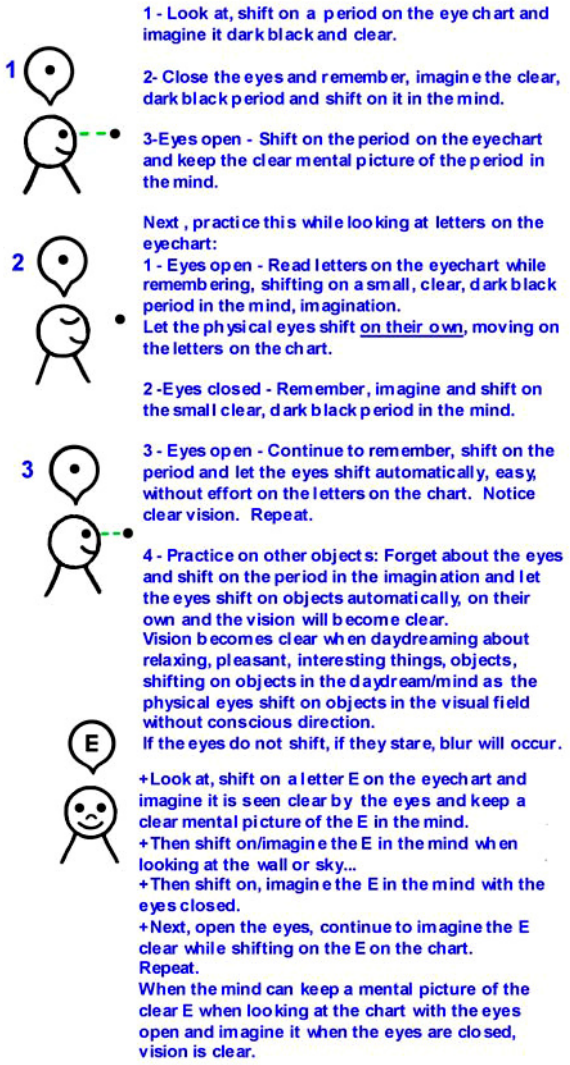
With the eyes closed, one may remember a small black period equally well as with the eyes open, while regarding the Snellen Test Card. When the period can be remembered perfectly at all times and in all places, the myopia is permanently cured.

Some people have difficulty in remembering a black period. They can, however, remember white, red, yellow, or some other color as well when regarding the Snellen Test Card or other objects with their eyes open, as they can with their eyes closed. After treating a girl aged fourteen suffering from a high degree of myopia, concave 15, she unexpectedly became able to remember white very well indeed. One day she announced that she was cured, after nine months of treatment. I tested her vision and found it normal for a familiar card. I then tried her with an unfamiliar card which she also read with normal sight. I asked her the question, "Explain the facts." She answered with one word: "Starch," meaning that the memory of the whiteness of starch with her eyes open as well as she could remember it with her eyes closed, had brought about a cure.

The memory of black and the memory of white seem to be more popular with patients than the memory of other colors.

IMAGINATION

The imagination has accomplished more in the cure of myopia than some other methods. Many people can imagine they see with their eyes open a known letter while looking at a blank wall as well as they can with their eyes closed; but when they regard the Snellen Test Card their ability to imagine that they see a known letter when regarding it, is not so good. Alternately imagining the known letter with the eyes open and accomplishing it better with the eyes closed, has been followed by a great benefit. I have never seen patients with considerable myopia imagine an end letter of each line of the Snellen Test Card with a little practice as well with their eyes open as with their eyes closed. Beginning with the large letters and gradually working down to the smallest letters they obtain normal vision entirely with the help of their imagination.



PREVENTION

The prevention of myopia in school children is very desirable. I recommend my published method because it always improves the vision of school children which means that automatically myopia is prevented.

The Snellen Test Card should be placed on the wall of the class room where all the children can see it from their seats. Once a day the chart should be read as well as possible with each eye, by the children from their seats. Every family interested in the good sight of their children should possess a Snellen Test Card to be read by each child at least once daily. Many adults acquire myopia. As a matter of safety and a benefit to the eyes the adults should read the card at twenty feet with each eye. They usually obtain not only benefit to the eyes but also an increased mental and physical efficiency. Some teachers have told me that palming for a few minutes occasionally during the day is followed by relaxation of the children's nerves which is of great capital value in preserving the health of the children. Each teacher should use the Snellen Test Card in her class room more or less frequently every day.

Stories from the Clinic

45: THE STORY OF ROSE

***By* EMILY C. LIERMAN**

ROSE, aged 13, is the sister of Lillian whose case was reported in the October issue of Better Eyesight. While I was treating Lillian, Rose was present and listened attentively to everything that was said. Rose had **convergent squint** of the left eye and when she became excited or tried to see at the distance, her left eye would turn in so that only the sclera or white part of her left eye was visible. At the age of three, it was noticed that her left eye turned in, and when she was four years old, glasses were prescribed for her. I tested her sight with the test card and with both eyes she read 10/100. Then I told her to palm her eyes and to remember the last letter she saw on the test card. She kept her eyes closed for at least a half hour and when she again read the card her vision had improved to 10/20. Then I tested each eye separately. She read 10/20 with the right eye; and 10/40 with the left.

I thought the improvement in the vision of her eyes was wonderful and Rose was delighted with the results of her first treatment. Her sister Lillian was thrilled as she saw that left eye straighten as the vision improved. She came to me with Lillian once every week for treatment and carried out to the letter, everything I told her to do at home.

She was directed to wear a cloth patch over her good eye all day long and to do her usual duties for her mother as well as she could, with her squint eye. What a faithful child she was, and how she did hate that patch. I asked her every time she came how she

got along with it. "Well, Mrs. Lierman," she said, "I don't like that black patch at all. I want to take it off many times every day. I don't like to have my good eye covered, but I know I must wear it if I want to be cured; and I do want to, so I just think of you and how much better my eye looks and then I don't mind a bit."

On her second visit her left eye improved to 10/20 and her right eye became normal, 10/10. Never did I have a more enthusiastic patient. On her third visit she gave me a package sent by her mother, who tried in her kind way to show her gratitude to me. The package contained delicious homemade sweet butter, my favorite dish. Rose continued her visits and in two months her sight became normal, and her eyes were perfectly straight continuously. She practiced faithfully and the result was that, one week before school started, she was able to remove the patch permanently, without any return of the squint.

Her first day at school was very exciting to her. She said her teacher did not recognize her, but when she smiled the teacher could not mistake her then. When Rose smiles you cannot help but know and love her. Her Aunt says a miracle was performed.

She had no trouble in reading the blackboard from the last seat of her classroom, where she asked to be placed, and she sees the book type much clearer than she ever did. Rose had been going to school for a week or so, when her teacher noticed that a pupil, aged 12, could not read the blackboard from the front seat where she was sitting. The teacher told her to have her eyes examined by an eye doctor and to be fitted for glasses. Rose heard the conversation and promptly met her school mate at the school door. Rose told her how she had been cured without glasses and that she would be willing to show her how to be cured also. The next day at recess instead of joining the class out-doors for exercise, Rose and her school mate went back to the class room and with the aid of a Snellen Test Card, which Rose had taken with her that day to school, she improved the sight of the little girl from 12/70 to 12/15, by palming, blinking and swinging. Every day the two little girls worked faithfully with great success and after less than a week, both children occupied rear seats in the back part of the room where they were able to read the writing on the blackboard without difficulty.

Seeing Without Glasses

***By* CAROLINE GUIGNARD**

THERE are doubtless many men and women who have worn glasses for twelve or fifteen years, suffering annoyance and discomfort through imperfection of the substitute for normal eyesight, who feel that it would be discouraging to become personally interested in a method employed for the improvement of the eyesight of those who have used glasses a short time only or not at all. As I was one of these, but am not one of them now, I feel that I must say a word which may cause someone to read the book, "PERFECT SIGHT WITHOUT GLASSES," who might not otherwise do so.

After reading the book, I put aside my distance glasses and began palming. At the end of three days I could look at an unshaded lamp without pain, and at my fingers at a distance of six inches without pain or nausea, although I saw them very badly. I could see the hands of a watch and approximate the time without glasses. I then put away all glasses, including those I wore all the time for distance; those for reading, bi-focals; for painting, and the hand glass.

I think that I began reading a little at the end of three months familiar things in clear type, "Alice Through the Looking-Glass," "Æsop's Fables" and Kipling's verse, palming before each paragraph or often with each one.

Now at the end of eight months I read anything within reason in a good light, even a little diamond type, two or three chapters at a time of a Bible in pearl, which would be pleasanter if it were not yellowed with age. I can thread a fine needle with 150 thread in a good light. Instead of paining me my eyes feel better after using them.

For a time I think it is necessary to carry around with one the improvement of one's eyesight as an inveterate knitter carries her knitting, and a little of it always could only be a pleasure, to remind one of one's good fortune.

I palm six half-hours or longer daily. I did not at first discover that a half hour of palming the last thing at night left the vision clear the following morning.

The gesture with eyes closed of looking over one shoulder as far as possible, then over the other shoulder as far as possible, can be done for an instant or longer at almost any time.

I find a watch very useful. The one I am using has a white face one inch in diameter and the hands and figures are black. The diameter of the circle of the second hand is three-sixteenths of an inch. I glanced at the watch a great many times through the day and night as well as whenever I was awake. Almost immediately I could see which was the hour and which the minute hand and gradually began to read the figures, which slowly changed from gray to black. Now I read clearly the figures within the circle of the second hand.

Dealing cards rapidly and arranging the hands without trying to see the different cards helped me. Also reading at a glance the black and white numbers on automobiles and the black and white sign boards of filling stations and wholesale districts.

Recently I was ten days in an automobile seeing the mountains of North Carolina. Not having the "Snellen Test Card" with me, I found that reading it in my imagination at night, persisting until the figures became quite black and the card white, relaxed my eyes, as also did the swinging of the small o and period, recommended by Charlotte Robinson in the May magazine. After ten days of rapidly moving trees by the roadside my eyes were improved.

My eyes are not yet perfect, but they are infinitely more satisfactory than they were with glasses.

A Doctor's Story

***By* H. W. WOODWARD, M.D.**



Place the fine print card 6 inches from the eyes. Close the eyes and remember, imagine a small letter o dark black with a white center and shift on the o for a few seconds.
Next: Open the eyes and look at the fine print and see a flash of clear vision.

ABOUT two years ago I visited New York for the purpose of investigating the claims made by Dr. Bates relative to the cure of refractive errors and the restoration of diseased eyes without the use of glasses.

I visited his clinic at Harlem Hospital. Here I found most unusual methods practiced by the doctor and Mrs. Lierman in the treatment of disorders of the eye. I was surprised at the cheerfulness of the patients, particularly the children.

The doctor invited me to call at his office. I did so, and again I found his methods so different from the usual oculist that I was interested at once in finding out how he did his work. The first thing that impressed me was seeing so many patients working in his waiting room. They seemed to be engaged in steadfastly regarding the letters of test cards placed upon the wall.

After I had seen the doctor treat several patients he turned to me and inquired about the condition of my own eyes. I replied that I had reached the age where most people require glasses for reading, but was just beginning to be annoyed by a blurring of vision when I consulted a telephone directory in a dimly lighted room. I knew that this symptom means in the almost universal experience of mankind, glasses, and more glasses, until one becomes dependent upon them. While I was contemplating this prospect, Dr. Bates explained to me that he had been through this experience, having had to wear quite strong lens for reading and that he had cured himself.



Shift on the letter C on the fine print card and imagine it dark black, with a pure white center and clear.
Do this with eyes open, then in the imagination with eyes closed, then eyes open again.
Practice on smaller fine print letters.

He handed me one of his professional cards. On the back of this card was printed in small diamond type seven paragraphs stating seven fundamentals of perfect sight. He requested me to hold this card about six inches from my eyes, then close my eyes and form in my imagination or memory a small letter "o" and to see it in my mind, very black with a white center. After doing this for a few seconds I was to open my eyes and look at the letters on the card. I did this, and to my surprise upon opening my eyes, the letters were jet black and remarkably distinct; but for only a moment did this clear vision last. The letters soon faded away into a blur.

This experience of getting a flash of clear vision, though evanescent in character, was encouraging to me, because it suggested the possibility of conquering this tendency to blurring. In other words, if I could learn to sustain this primary normal position that my eyes relaxed into just before opening them, I would certainly achieve perfect vision. Dr. Bates instructed me to practice what I had just done twice a day. I did as he advised. At first I could not hold this flash of clear vision more than a second or two. It was too subtle. I could not get a hold on it. I continued, however, practicing night and morning for several weeks with but slight improvement. At last, however, I became able to sustain the clear vision for about thirty seconds; but if I would wink (blink) my eyes while seeing clearly, my vision would fade into a blur. In time my patience was rewarded by more improvement, for now I am often able to read the whole card without a blur.

Continued shifting and blinking results in vision remaining clear for a longer time and eventually clear vision is permanent.

Dr. Bates deserves much credit for the pioneer work which he is doing and for the way he keeps on doing it in spite of the hostile criticism continually directed toward him. To know him is a privilege and I am thankful to have had this experience.

Minutes of the Better Eyesight League

SEPTEMBER MEETING

ON the evening of the eleventh Dr. J. M. Watters, an eye, ear, nose and throat specialist from Newark, addressed the meeting. It was an extremely impressive talk, for Dr. Watters brought with him a long and interesting list of cases for whom he had effected cures by Dr. Bates' method. He stated that when he first started this work the results actually astonished him. Eyes responded to the new treatment better than he had anticipated or dared to hope.

The histories included both old and young, men and women, with apparently all the different kinds of eye maladies. **Myopia, hypermetropia, astigmatism, presbyopia and glaucoma all yielded to the eye exercises. A gentleman of 74 with cataract in both eyes, a young man who was hit in the eye with a golf ball who developed a detached retina, a patient with ruptured iris—these likewise were cured by learning and practicing the method.**

Dr. Watters said that he believes best results are obtained if people practice when they feel like it. If they can enjoy it and if the exercises produce no feeling of nervousness, then the work is progressing along the right lines. There is no way of hurrying a cure and a patient must be willing to accept gradual improvement if it seems to come that way.

Dr. Bates himself gave a most valuable demonstration of the long swing. He recommended it as a help in other troubles besides eye ailments, since if done properly it produces relaxation and lack of tension throughout the whole body.

Dr. Watters announced his eye clinic at 2 Lombardy Street, Newark, on Monday and Friday evenings from 7 to 8. He invited the members of the League to send anyone in need of help.

OCTOBER MEETING

PERHAPS no speaker has brought greater encouragement to those endeavoring to gain better eyesight than Miss Florian Shepard, of Orange, N. J. who spoke to our League on October ninth. The special significance of her cure lies in the fact that it has been one of the unusually slow ones. Miss Shepard told the history of her case and related the gradual steps in her progress. At first nothing seemed to work. Palming, swinging, everything produced strain instead of relaxation. It was only by long perseverance that she was able to arrive at any real success. Again and again Miss Shepard spoke of the marvelous patience and understanding with which Dr. Bates helped her find a way out of all her difficulties. Her testimony proves that Dr. Bates can succeed not only with easy cases but also with hard and unresponsive ones.

Miss Shepard spoke of the trick of timing the swing with the thumb and finger, and Dr. Bates later discussed this point. Attention

was called to the fact that the September magazine had an article on the subject.

At Dr. Bates' request Miss Mildred Shepard gave a short account of her cure. The most interesting part of all was perhaps the fact that since her eyes have become normal she is much less tense and consequently less nervous in all phases of her life. She spoke of herself as having become "happy-go-lucky."

LEAGUE BUSINESS

Miss May Secor, of 521 West 122nd Street, has been elected corresponding secretary.

The League has voted to amend the constitution to make the dues $1 a year instead of $3. The subscription to the magazine will not be included. Anyone wishing to join the League now will have paid up to January, 1925.

Of Special Interest

Throw Away Your Glasses

DOCTOR BATES' article in the September issue of Hearst's International Magazine awakened more interest in his method of treatment than any previous writings. Hundreds of letters were relayed from Norman Hapgood, Editor, to Dr. Bates and contained congratulations, inquiries and appointments for treatment. A special notice of this article was placed in the New York Times by the editor of Hearst's.

In view of this fact we have had reprints made of the article and will fill orders immediately upon receipt.

The title is THROW AWAY YOUR GLASSES, and it explains how this can be accomplished. Everyone interested in curing their own sight will be enlightened on many points by reading this reprint.

Don't wait until the initial supply is exhausted before placing your order. Price 35c.

Are You Nearsighted—Farsighted—Astigmatic?
Have You Cataract—Glaucoma?

Then send for the number of the BETTER EYESIGHT MAGAZINE which deals with each of these defects individually. Dr. Bates explains the cause of each and how it can be cured by his treatment. These instructions can be followed by the layman.

ALL BACK NUMBERS 30c.

Bound Better Eyesight
July, 1922—June, 1923—Price $4.25

Bound in leather the same color as the book, and both together make an attractive set. This volume contains many helpful suggestions and instructions for the use of the various swings, shifting and palming. Progressive myopia, astigmatism and other defects are treated and their cause and cure explained. The cure of eye defects in children is described in various parts of the book.

The Question Mark

QUESTIONS AND ANSWERS

Q—What is the cause of cataract?
A—Eyestrain is the cause of cataract, but some times cataract is produced from an injury such as a blow of some kind.

Q—Is a hemorrhage on the outside of the eyeball fatal?
A—Rarely.

Q—Can insomnia be cured by the method of palming ?
A—Yes.

Q—Can a patient while under treatment wear eye glasses?
A—No, this prevents a cure.

Q—Can I overdo the swing?
A—No, not if it is done in the right way.

Q—Does sunlight injure the eyes of children?
A—No.

Q—Does wearing dark glasses injure the eyes?
A—Yes.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

December, 1923

One Thing

BY **CENTRAL FIXATION** is meant the ability to see one letter or one object regarded in such a way that all other letters or objects are seen worse. Some people have been cured by practicing Central Fixation only, devoting little time to other methods of cure.

SWINGING

When the normal eye has normal sight the small letters of the Snellen Test Card are imagined to be moving from side to side, slow, continuously, not more than the width of the letter. Persons with imperfect sight have become able to imagine this illusion by alternately remembering or imagining the small letter moving from side to side continuously. With their eyes open they may be able to do it for a moment or flash it, at first occasionally, and later more continuously, until they are cured.

IMAGINATION is very efficient in improving the vision. Some persons have told me that when they knew what a letter was they could imagine they saw it. By closing their eyes they usually became able to imagine a known letter better than with their eyes open. By alternately imagining a known letter with the eyes open and with the eyes closed, the imagination of the letter often improves to normal when the letter was regarded. The patient who is able to do this is also able to demonstrate that when the imagination is improved for one known letter the vision for unknown letters is also improved. By imagining the first letter of a line perfectly the patient can tell the second letter and other letters which are not known. The imagination cure is curative when other methods of treatment have failed.

The Cadet

***By* W. H. BATES, M.D.**

(Military Story)

WEST POINT is full of memories. Whenever we think of the military school at West Point most of us have a feeling of reverence. The students there are the pick of the young men of this country. They come from prominent families throughout the United States. Their scholarship is of the best. They excel not only in the arts of war, but are prominent in other things as well. When a young man graduates from West Point he is not only an expert in military drill, but he is also trained in the arts of diplomacy, in social life and knows not only how to deal with his enemies, but is also an expert at an afternoon tea.

It is very important, very necessary that a soldier should have good eyesight. He cannot very well handle his opponents properly in a fight unless he can see them. Although the men at West Point are selected for their physical and mental efficiency, they are liable to acquire nearsightedness, apparently just as much as other young men. I believe that such cases should be treated before glasses are prescribed.

Mr. L., aged 20, had normal sight before he entered West Point. After three years his vision began to fail. An oculist prescribed glasses. For a time the glasses gave him normal vision, but after a few months they were increased in strength. The patient did not like to wear glasses. He felt depressed over the fact that his sight was imperfect. Against his physicians' orders he laid aside his glasses most of the time and only used them for emergencies. Someone told him that it was possible for him to be cured without glasses. Full of hope he wrote to me, and asked me what I could do for him. In his letter he wrote:

"My trouble is myopia, brought on, I presume, by the great amount of study I had to do."

I have frequently published that straining the eyes to see at the near point always lessens myopia; it does not cause it. Straining to see at the distance always produces myopia in the normal eye and increases it in the myopic eye.

All persons with imperfect sight are able to demonstrate that they are staring. The normal eye when it has normal sight, does not stare. It is a truth, that imperfect sight is always accompanied by a stare. It is a truth because there are no exceptions. When the stare can be corrected the vision always improves.

Mr. L. called Oct. 14, 1923. His vision without glasses was less than 20/40. By palming and practicing the swing, his vision in a half hour became normal in each eye. He was able to demonstrate that when he remembered a white cloud in the sky, dazzling white with the sun shining on it and moving slowly, blown by the wind, that he could imagine one letter of the alphabet perfectly. For example he could remember or imagine he saw, with his eyes closed, a letter O with a white center, as white as the whitest cloud he had ever seen, but it was always moving. He could remember this and other letters perfectly black. With his eyes closed he could imagine that he put a small black period with the aid of an imaginary pen, on the right edge of the O. At my suggestion he placed another period on the left edge of the O. When he looked to the right of the O, the O was to the left of where he was looking. When he looked to the left of the O, the O was to the right of where he was looking. Every time his eyes moved to the right, the O moved to the left in his imagination. Every time his eyes moved to the left, the O moved to the right. With his eyes closed, imagining that he was looking alternately to the right and to the left, he could imagine the O was moving a short distance from side to side, not more than its own diameter. This he did easily, regularly and continuously.



Eye closed. Remember, imagine a letter O with a pure, bright white center. Imagine a black dot on the left and right sides of the O. Shift back and forth, left and right on the dots and see the O move a short distance, left and right (no longer than its width) opposite the direction the eyes shift to.

He was asked to remember an imperfect O, one which had no white center, a gray letter covered by a cloud which made it so obscure that it might be anything. He found this required a great effort, an effort which was tiresome. Every once in a while he lost the memory of the imperfect O. He demonstrated that the memory, or the imagination of the imperfect O was difficult, very difficult, while the memory of the perfect O was quite easy.

He was a good patient. Possibly it was the training that he had received in school which gave him the wonderful ability to do just exactly what he was told, easily, quickly and without any difficulty whatever. It certainly was a great pleasure to me to observe that

he obtained his improved vision so easily. Nine-tenths of my patients have never been so obedient. Some people talk about soldiers and speak more or less lightly of their discipline. I say lightly, because my conception of discipline was materially modified after my experience with this patient. He gave me a demonstration of discipline which I had not previously read in any book.

At one time I taught some of the simpler arts of military drill as an officer in a militia student company. At that time my conception of discipline was a popular one. I can recall how it annoyed me to have my soldiers do a lot of other things besides what they were ordered to do. This interfered very much with their ability to drill properly. In my private practice, when trying to benefit my patients I have been exceedingly annoyed by the arguments, questions and opinions indulged in by my patients, when I was trying to secure perfect rest or relaxation of their minds.



Stories from the Clinic

46: Our Last Christmas at the Harlem Hospital

By EMILY C. LIERMAN

AS Christmas draws near, I keep wondering if my beloved kiddies, of the Harlem Hospital Clinic, will be taken care of this year, or whether they will be neglected. I am going to miss them so much. We expect to have a tree at our new clinic this year, distribute gifts to our Clinic patients and extend our good cheer as far as it will reach; but my heart goes out to the dear ones we had to leave behind, in that other clinic.

It is about them that I want to write, and try to give our readers a mental picture of our last Christmas with them.

First, I would like to tell of one little fellow, named Patrick, whose age was ten years. He had been coming to us for eight weeks or so before Christmas. His trouble was nearsightedness, and he had great difficulty in seeing the blackboard in school. His teacher had sent him for glasses and offered to pay for them herself. This was explained to me in a note which Patrick had with him. He was such a dear little fellow, and one of the best behaved boys in her class, she said. His family was very poor, but good people, so she wanted to pay for those glasses.

On his first visit, Doctor Bates examined his eyes, and then I started to treat him with the Test Card. His vision was 15/100 with both eyes, and also with each eye separately. He did not like to palm, but he kept his eyes closed as he was told, for over half an hour. His vision improved the first day to 15/20, which was very unusual. I told him to rest his eyes by closing them often every day.

The second week in December, just eight weeks since his first visit, he read 15/10 on the test card.

When he was told the day he would receive his Christmas gift and candies, he begged for permission to bring his baby sister and three brothers also. He did not mean to beg. I believe it was an unselfish thought on his part. He could not very well accept a gift when his sister and brothers had none. He was invited to bring his family to the Christmas party, and when I saw him that day he was radiant with smiles.

Our room surely looked as though Santa Claus had left his pack there. Three dozen dolls were arranged in one corner of the room, waiting with their arms outstretched for the little girls. An operating table came in very handy and was loaded with games and toys for our boys. Large Florida oranges, enough for every one, both young and old, filled another corner of the room. Cornucopias, decorated with tinsel, and filled with candies, were hung all about, and was a pretty sight to see. Doctor Bates himself arranged them on the windows and screens, and wherever they possibly could hang. He was very much excited about it all, and it was a great joy to see his face light up with smiles as the children and adults entered the room. He watched the faces of the little children, and his heart was filled with joy, because his clinic family was so happy.

For several years it had been our pleasure to greet Dr. Neuer, in our room at the Christmas party. It was his delight to take one of the dollies and go from room to room, displaying that doll with all the joy of giving. Children suffering with tuberculosis, of whom many were cured by him, were never forgotten at Christmas time. When his eyes began to trouble him he came to Doctor Bates, and was cured without glasses. He did not mind in the least standing with the rest of our clinic patients, and when Dr. Bates invited him to his office, he said the dispensary was good enough for him. Shortly after our last Christmas party he was taken seriously ill with pneumonia, and died. He was loved so much by the poor of the clinic, that we know they will miss him, as our family will miss us.

Discarding Glasses at 60

***By* DR. ADOLPH SELIGE**

ABOUT a year ago a friend of mine wanted to know what I could do for one of his employees, an old colored man, **72 years of age, who had gone nearly stone blind, and was unable to work.**

I had the book and magazines of Dr. Bates, and was overjoyed to put his theories to a good test, and so I told them to send the old man over.

I am happy to say that old "uncle" went back to work after the most strenuous treatment he ever had gone through in his life, and which he would never had done, if it hadn't been for his niece, a colored woman of fair intelligence, and so trained that she knew how to carry out orders. She made the old man walk the "chalk line," in regards to all the rules and regulations I laid down in regards to palming and reading the test card, and all the other stunts.

But, as I am a Naturopath, and believe that diet plays a most important role in creating causes of abnormal physical conditions of all kinds, he had to live on a very strict diet too, but I had the satisfaction to see some very noticeable improvement after a few days, and was able to send him back to his employer ready to work, in less than a month's time.

I had been a victim of "Glass-o-Phobia," for something like 25 years, possibly more, for the beginning has escaped my memory entirely. My glasses were such a nuisance, my eyes smarted and pained and became sore in spite of them, and every once in a while I had to have my eyes refitted.

I was delighted with the new ray of light that filtered into the thick fog, permeating my brain in the region which is supposed to contain "good common sense in regards to eyesight," and I began to see more clearly, after I had studied the book of Dr. Bates.

I resolved to apply this new knowledge to myself, and hoped to be able to get such fine success with the old negro uncle. There was an obstacle however, I was a busy man, and when I was not busy with my patients, I was either reading or writing, or using my

eyes in some strenuous way, and of course, I could not possibly afford the time to put my glasses away and forego the pleasure of continuing the studies I was so interested in. So I kept on postponing the event and I promised myself to do it at the very first opportunity, until one Saturday night I found myself minus glasses, had forgotten to bring them, and instead of going back to the office, I just took the bull by the horn and decided to start "right now."

I sat and palmed and did the swing, and imagined and did all sorts of stunts and continued to do so on Sunday, nearly all day.

On Monday I just refused to be tempted to use my glasses, and put them on only in cases of the extremist emergency, such as when I had to sign my name to a letter, or when making an "Eye Diagnosis," which required effort more than a magnifying glass alone could afford me.

It was a torture for me to spend my leisure time between treatments, and my evenings and Sundays, without being able to pursue my studies, but I had resolved to stick it out and I did.

I found after a little while, that my sight began to get clearer, and sharper, and I did not miss my glasses so very much. I had carried them with me for emergency purposes, but used them only in very rare cases, finally I laid them away for good, when I went away on a four weeks' vacation.

During this time I took several Post Graduate Courses, made a lot of notes, and wrote under all sorts of conditions, and finally, got where I did not miss them at all.

I returned to my desk three weeks ago, and have not even looked for my glasses, and don't ever expect to.

It is now about three months since I began, I can read the smallest type of ill-printed newspapers at night, when I have a good light to see by, but have no difficulty at all during the day time.

I can feel my sight getting better and clearer right along, and feel that eventually my eyes will see without glasses better than they ever did see with glasses on, even though I am nearing my 60th birthday.

One of the reasons why I have not many cures of eye troubles to my credit is, because people are too comfortable, and do not care to make any effort to regain their normal sight—they would rather wear glasses, because it is less of a personal sacrifice.

As I mentioned before, I am a Naturopath, and believe in the unity of disease and the unity of treatment. I should like to go into this a little deeper, as it is fundamental to health and also applies to cases of abnormal eyesight, but lack of space forbids.

I may say however, that I believe quicker and more permanent results can be secured for relieving eyestrain, and its results, when the entire body gets on a normal basis, in fact I have often found my patients to experience quite a relief for their eyes, even though I was not giving their eyes any special attention, but had merely worked towards a general adjustment of their entire physical and mental being, through diet, rest, exercise, neuropathic and other treatments, and a better mental attitude.

Minutes of the Better Eyesight League

It is our desire to publish the minutes of the Better Eyesight League in each issue of the Magazine. With this thought in mind we printed the September and October minutes in the November issue. We would also like to place the November report in the December Magazine, but, owing to the League meeting late, we are unable to withhold the manuscript from the press until that time.

The December meeting will be held on December 11th, at 383 Madison Avenue, at eight P.M.

The League of Orange, N. J.

AT the opening Fall meeting of the Better Eyesight League of the Oranges, held October 3, 1923, it was voted to hold open monthly meetings through the coming season, and the day decided on was the first Thursday of each month. At the suggestion of the President it was decided to hold clinics twice a week, so as to relieve the eye troubles of everyone possible. Dr. Browne kindly offered the use of her office on Wednesday and Saturday afternoons, and all were invited to come and help.

The Homemakers' Association also invited everyone to a meeting on the eighth, at which Mrs. Lierman was to demonstrate with children, how teachers and parents could prevent and cure eye troubles of children. Dr. Gore then suggested that the league be not only a "Better Eyesight League," but a "Better Health League of the Oranges," and cooperate with other organizations by inviting them to our meetings and having interesting speakers. He suggested several who would give talks, if invited. So the first step toward a sort of federation was a plan that most of our meetings this year, give attention to eyes the first part and then to other organs or general health, for the rest of the time, and also a motion that for the November meeting we have Dr. Philip Rice give a talk on "Normal Unfolding or Growing into Health," and invite federation members. There was a rising vote of appreciation, of the work done by Dr. Gore, and the Secretary was instructed to send him a testimonial letter. Several informal talks were given by members, who told how wonderfully their eyes had improved during the Summer, and the enthusiasm of each was very marked. The meeting closed with a social hour and refreshments. There were thirty-five present.

LEULA BURTON,
Recording Secretary.

The Passing of My Glasses

***By* MILDRED SHEPARD**

[EDITOR'S NOTE]—It was at my earnest solicitation that Miss Shepard consented, after some time, to write a brief account of the mock ceremonies which took place when she formally discarded her glasses.

A SMALL, but impressive ceremony, was held a short time ago, along the shore of a certain lake in Massachusetts. The occasion was the internment or "Near" and "Far," the two pairs of spectacles once worn by one, now through with all glasses forever. This happy figure, posing in black robes, as the bereaved, was preceded in solemn procession by similarly black-gowned attendants. Four pall bearers bore the coffin, upon which rested the remains of "Near" and "Far," now passed all use in this life—God rest their tortoise shells. Sad, slow strains of the Funeral March, painfully drawn from a tissue-paper covered comb, mingled with those of "Mr.

Gallagher and Mr. Sheehan."

With measured strides the little company moved along the lake shore, to the famous memorial boat-landing. There were gathered the chief mourners and friends, attracted thither from the turmoil of final examinations and arriving families, not so much out of sympathy for the bereaved, we fear, as by the promise of a funeral feast of ice-cream cones.

Already the Dumb-Boatman could be seen gliding toward the stone steps. Upon his arrival the coffin was lowered upon the pillows carefully, and in great determination the bereaved climbed into the gondola and dropped upon her knees. With bated breath, the onlookers waited while the tongue-tied man swung the boat out into deep water. A great, glad smile spread over the face of the Bereaved, as she laid to rest "Near" and "Far," her two steady, but now unnecessary companions of fifteen years. Closing words were pronounced by the Dumb Boatman.

"Unseeing Eyes"

***By* EMILY A. MEDER**

WE mortals have been heaped with blessings by the Divine power, and, as wonderful and great as some of them are, the act of seeing is most wonderful. Sight is like a great river, with hundreds of small tributaries, and streams branching from it. One of the streams runs to the mind, another to the heart, and so on. We see something new and interesting, and immediately our mind registers this fact, and causes us to speculate, surmise, and investigate. Then, if it might be a sad sight, the heart is instantly awake. There is no doubt, however, that while the sight is the greatest of God's gifts, it is also the most abused.

When one is interested in seeing glasses removed, and perfect sight prevailing everywhere, incidents relative to the subject are more readily noted. Just as a person going to buy a new hat, glances at all the head-gear which comes to view. The same can be said of shoes, and other articles of apparel. We are at that time, more interested in that article, therefore more note is taken of it. This puts me in mind of a story my teacher used to tell us.

A professor desired to impress upon his young charges the value of observation, regardless of the fact that at that particular time they were not interested in the subject. He sent one half of his class looking for a certain herb, and the other half for a particular specimen of stone. When the first half returned they had gathered quite a bunch of the desired herb, and the second half had some of the quartz, for which they were sent. The professor asked some of the members of his "herb class," if they had noticed any of the quartz while looking for the herb. They replied that they saw none at all. The same answer was given by the second half of the class, when requested if they had seen any of the herbs. If the whole class had been sent for the stone and herbs together, they would probably have had good success, but not being sent for it, they did not look for it or notice it.

This brings me back to the fact that being intensely interested in people with imperfect sight, who wear glasses, many unusual, and in some cases, humorous incidents are seen. One that was comical, if it had not been almost tragic, happened at Forty-Second street and Fifth avenue, just a few days back. A party of motorists was going west, but as the car neared Fifth avenue, the lights on the signal tower changed. The driver stopped, and screwed his face into a knot to try to see the colors. I immediately saw that the man was straining dreadfully, especially as he thought he was holding traffic up, not being able to see the signals. He moved his car nearer and nearer the curb to get a better look, until he was almost on top of the light. When he finally arrived at a point of vantage, where everything was visible to him, he discovered that the lights were yellow. He should have stayed where he was, as traffic was going north and south. In addition to extricating himself with difficulty, he was given a forceful opinion of himself by the angry traffic policeman.

Forty-second street also abounds in large optical stores. The pictures displayed in them are truly wonderful works of art. Some of them afford me great amusement, although they are worthy to be placed in an art gallery to be reviewed by the admiring public. How the artist must hate to spoil these by placing glasses on everyone of them. The most recent was a beautiful girl playing tennis. She had rosy cheeks, and a happy restful expression. In the first place, no one has that look of relaxation and happiness while wearing glasses. Secondly it must have been a dreadful strain to look happy, and balance them while running after the ball. Somewhat like a juggler balancing a feather on his nose!

Has it ever occurred to you that children are always in danger of being run over, by cars driven by people with defective vision? Just take note of the questions the traffic policeman fires at a careless chauffeur, and draw your own conclusions. When they have been remonstrated with for doing something wrong, the officer doesn't ask for a sample of his driving ability. The first order is "Can't you see where you're going? Are you blind?" Another question might be, "Do you see those signals? Why did you go ahead?" While the driver looks sheepish, he is politely told, "better have your eyes examined."

The following incident is a peculiar one, and rather embarrassing to the young lady concerned. She is the office assistant of an optometrist, and helps him fit glasses, and take care of his patients. One of our circulars advertising Perfect Sight Without Glasses was sent to this doctor, who immediately threw it in the waste paper basket. The girl, having heard of Doctor Bates' work before, retrieved it, and sent for the book.

A few weeks later, the young lady wrote me, advising us that she not only discarded her glasses, but her eyes are feeling better than ever. Her enthusiasm, however, placed her in a difficult position. While the doctor was away for a few days' vacation, she was left in charge of the office. A middle aged woman came in, and wanted her glasses repaired. She said her eyes pained her terribly, and the glasses were absolutely necessary. The girl explained that the optometrist was out of town and would not return for a few days. The lady went away, but returned the next day, asking for the name of another doctor who could relieve her of her headaches. She was in a great deal of misery. Our enthusiast felt sorry for her, and showed her how to palm, swing, and remember black. Now this is the trouble—the doctor mended the glasses, but the lady never came back for them.

The Use of the Burning Glass
(Sun-glass)

***By* W. H. BATES, M.D.**

THE normal eye needs light in order to maintain normal health and normal sight. People who do not see the sun always have eye trouble. Miners working in the dark all day long, and never seeing the sun, all have trouble with their eyes. Children living in dark tenement houses acquire a great sensitiveness to the light, and spend most of their time holding a cloth up to their eyes, or they bury their heads in a pillow, shutting out all light. They acquire many kinds of inflammation of the eyelids, and of the eyeball.

The burning glass has a very wonderful effect on some of these cases. I remember one man who had not been able to do any work because of the sensitiveness of his eyes to the light. He was very promptly cured by a few minutes exposure of the eyeball to the strong light of the burning glass.

In using the burning glass, it is well to prepare the eyes of the patient by having him sit in the sun with his eyes closed. Enough light shines through the eyelid to cause some people a great deal of discomfort at first, but after a few hours' exposure in this way, they become able to gradually open their eyes to some extent without squeezing the lids. When this stage is reached, one can focus with the burning glass, the light on the outside of the eyeballs, which at first is very disagreeable! When the patient becomes able to open the eyes, he is directed to look as far down as possible, and this can be done in such a way that **the pupil is protected by the lower lid.** It is not well to use the burning glass when the patient squeezes the eyelids shut. As long as the light is focused on the white of the eye, and is done quickly, all heat is avoided. The length of time devoted to focusing the light on the white part of the eye, is never longer than a few seconds, moving the light from side to side, up and down, or in various directions.

To be used by Experienced Bates Method Ophthalmologists only if all other methods do not work.

Plain Sunning without the sunglass is equally beneficial and completely natural.

Announcements

REMOVAL NOTICE

DOCTOR BATES has removed his office to 383 Madison Avenue.

The hours are from 9 to 6 by appointment.

BETTER EYESIGHT LEAGUE

The program committee is anxious for suggestions regarding meetings. If anyone has a helpful idea, please communicate with the chairman of the program committee, Miss Lillian Reicher, 108 West 115th Street.

CHANGE OF ADDRESS

It will help us considerably, and insure the prompt delivery of the Magazine, if our subscribers will inform us of their change of address.

If for any reason the Magazine is returned to us, we will not ship it again, until we are notified of its non-delivery, and receive correct address from the subscriber.

REPRINTS

Among the reprints that appeared in medical journals from time to time, are the following, which are very instructive:

SHIFTING
THE CAUSE OF MYOPIA
MYOPIA PREVENTION BY TEACHERS
PREVENTION OF MYOPIA IN SCHOOL CHILDREN

The Question Mark

QUESTIONS AND ANSWERS

Q—Can people over fifty be cured without glasses?
A—Yes.

Q—Is the treatment good for nervousness?
A—Yes. As a general rule the long swing is the most efficient.

Q—Is Central Choroiditis curable and does it require much treatment?
A—Yes, Choroiditis is curable and requires a great deal of treatment in some cases.

Q—Is conical cornea curable?
A—Yes, the variable swing has been a great benefit. This is described in "Better Eyesight," November, 1922.

Q—Why do I squint when I am out in the sun?
A—You are not accustomed to the strong light. Read chapter on sun-gazing.

Q—Why do my eyes water?
A—Strain.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

January, 1924

Questions

ASKING questions is all too common with patients who have imperfect sight. There are important or necessary questions which the patient should know in order to bring about a cure. The cause of the imperfect sight should be emphasized. In all cases of imperfect sight a strain, an effort, a stare or concentration can be demonstrated. To see imperfectly requires a great deal of trouble. Even the imperfect memory or the memory or imagination of an imperfect letter is an effort. It is so great a strain that the memory or imagination fail if you keep it in mind for any length of time. Perfect sight can only be obtained without an effort, without a strain. It is impossible to remember or imagine things perfectly by an effort.

One may divide questions into (1)—Proper questions; (2)—Improper or useless questions.

It is a waste of time, an injury to the patient, for him to describe the infinite manifestations of imperfect sight. To know its history minutely and its variations require an effort on the part of the patient to describe these things. And this effort increases the imperfect sight. It is absolutely of no help whatever in formulating methods for its cure. Avoid asking questions about the symptoms of imperfect sight or anything connected with imperfect sight. Any question connected with perfect sight may be a good thing for the patient to know. One may ask questions as follows:

How long must one practice a perfect memory, a perfect imagination or study the latest manifestation of perfect sight?

The answer to this question is a benefit to the patient.

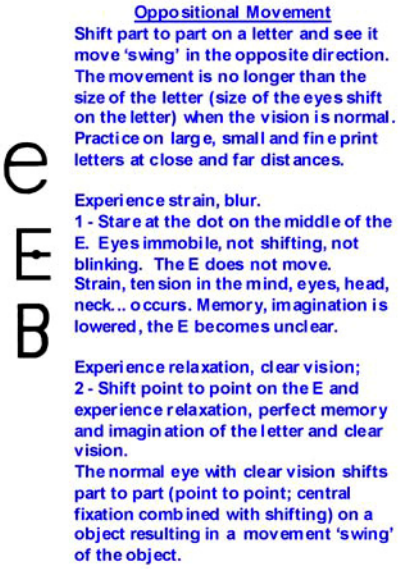
The Optical Swing

***By* W. H. BATES, M. D.**

MOST people when they look at stationary objects believe that they see such objects stationary; but if they observe the facts more closely, they find that when the normal eye regards a small letter of the Snellen Test Card with normal sight, the letter does not appear to be stationary, but seems to move from side to side, a distance about the width of the letter. This is called the *optical swing*.
This is caused by the movement, shift of the eyes from point to point (part to part) on the letter.

During the late war, a soldier, who was rated as a sharpshooter, told me that when he regarded the bull's eye of a target five hundred yards away or further, that he had difficulty in aiming his gun properly because the bull's eye seemed to move from side to side a very short distance. Both he and others who had observed it did not discuss the matter with any great interest.

The movement of a letter or other object from side to side in the optical swing is so short, so slow, that most persons with normal eyes have never noticed it. There is no reference to the optical swing in any publication which I have seen. It is a truth that in all cases of normal sight the optical swing can be demonstrated. In all cases of imperfect sight the optical swing is modified; it may be lengthened, it may become too rapid and irregular. The swing is a necessary part of perfect sight. The importance of it has not been realized. With the short optical swing the vision is good while the mental efficiency and the efficiency of the nerves and muscles is enormously increased.



THE SHORT SWING: When the swing is short, no more than the width of the letter, the vision is normal; when the vision is normal, the swing is short. One cannot have normal vision of a letter, a normal memory or a normal imagination, without demonstrating the presence of a short optical swing.

It can be demonstrated that it is impossible to remember or imagine with the eyes closed a letter, a color or any object without the optical swing. When the swing is stopped an effort or strain is necessary, which may be conscious or unconscious, and the memory or imagination becomes imperfect. Normal vision is not maintained continuously without the short optical swing. **It is not necessary, however, for one to be conscious of the swing in order to demonstrate normal vision.**
(Practicing seeing it improves the clarity of vision.)

Methods of treatment which restore the optical swing are a benefit to imperfect sight. When the short swing can be demonstrated, the vision, the memory and the imagination are normal. One cannot imagine the short swing and imperfect sight at the same time. One cannot remember or imagine pain, fatigue or any symptom of disease and the short swing at the same time. For example, the

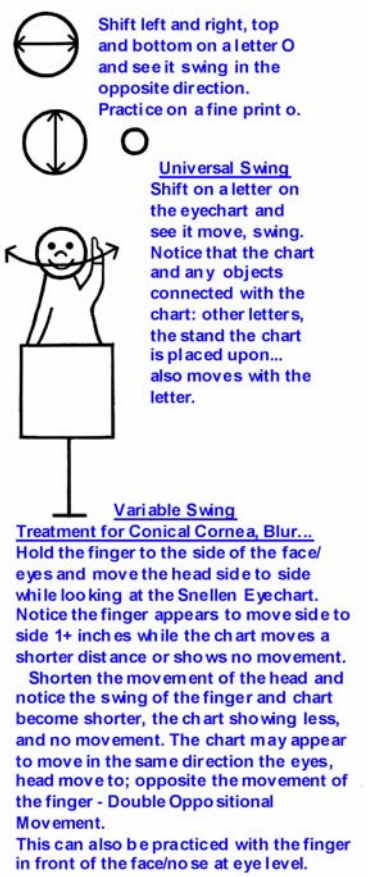
symptoms of acute indigestion have disappeared when the patient imagined the short swing of a letter or some other object. In some cases, hay fever symptoms have disappeared quickly and permanently, through the use of the short swing. Bronchial troubles, the cough associated with influenza and whooping cough, have disappeared quickly when the short swing was imagined quickly.

THE UNIVERSAL SWING: When you hold the Snellen Test Card in your hand, you can imagine a small letter "o" printed on the card to have a slow, short, easy, continuous, regular swing. Of course, when the "o" swings, the card to which it is fastened also swings; when the hand holding the card swings, the card swings and the letter "o" swings. When the letter "o" swings the card swings, the hand swings, the wrist, the forearm, the elbow, are all swinging with the "o". If the elbow rests on the arm of the chair, when the chair moves the elbow moves; when the elbow moves, the card moves. One can demonstrate that a letter "o" pasted on the Brooklyn Bridge moves when the bridge moves, and when the "o" moves the bridge moves. One may think of many objects, one at a time, each one in turn moving with the moving "o". This is called the *universal swing*.
This movement is caused by the movement, shift of the eyes. Moving the head/face, body with the eyes improves appearance of the movement.

The universal swing has been a wonderful benefit in improving many cases of imperfect sight, in the relief of pain, fatigue and other symptoms of disease. It can be demonstrated that when one has the universal swing the sight is perfect. If the universal swing becomes modified, the sight is imperfect. There are no exceptions. This fact has suggested successful treatment for myopia, cataract, and other causes of imperfect sight.

It is well to remember that some people have difficulty in imagining the universal swing. They are very apt to separate the letter "o" from the card and imagine that either the card or the letter moves; and it is difficult for them to imagine the letter and the card fastened together and one unable to move without the other moving. Of course one can imagine the hand moving and the arm stationary, but when the hand and the arm are in a vise or fastened very closely together without any hinges, it is difficult or impossible to imagine the hand is moving without the arm moving as well. Persons who have difficulty in imagining the universal swing should consult others who can demonstrate it, explain it and help them to accomplish it.
The entire visual field moves 'swings' in the opposite direction the eyes move, shift to.

I generally suggest to my patients that they practice the universal swing twice daily, morning and night; or better still, practice it at all times, in all places, no matter where they are or what they may be doing.



THE MEMORY SWING: With the eyes closed you can feel your eyes move under your fingers when lightly touching the eyelids. If you imagine that you are looking over your right shoulder, you can feel the eyeballs move to the right, and a long distance to the right. When you imagine that you are looking over your left shoulder, you can feel your eyeballs moving to the left, and far to the left. One can shorten the movement of the eyeballs by looking a shorter distance to the right, alternately looking to the left. With a little practice one can feel or imagine one feels, the eyeballs are moving the shortest possible distance from side to side. The eyeballs can be seen to move under the closed eyelids. The memory swing is a good thing to practice under conditions which would not be so convenient for the other kinds of swings. One can practice the memory swing in a dark room, on a dark night, in a dark cellar, in bed, and obtain a mental relaxation or an optical relaxation or a relaxation of the nerves which is worth while.

Imagine shifting left and right, top and bottom on a tiny fine print letter and feel the eyes move.
Imagine seeing the swing; the letter appears to move in the opposite direction the eyes shift to. Produces very clear vision.

THE VARIABLE SWING: Some years ago a school teacher called for treatment. She had a conical cornea, which is a very serious disease of the front part of the eye. The cornea bulges and becomes conical. The apex of the cornea becomes ulcerated, and may become perforated with loss of aqueous. Various operations have been recommended, but the results have been usually very unsatisfactory. The vision of the patient was 1/20 of the normal. She was very much benefited by the variable swing. The variable swing is shorter at twenty feet, or further than it is at six inches. In this swing the patient holds the forefinger of one hand to one side of the temple, and while looking at the Snellen Test Card, the head is moved from side to side a short distance. The patient when looking straight at the card, was able to imagine the finger moving from side to side an inch or more, while the test card moved a much shorter distance, or did not appear to move at all. By shortening the movement of the head, the swing became still shorter, until the finger seemed to move no more than its own width, and the card seemed stationary. It was very remarkable how her vision improved with the improvement in the swing. At the end of about an hour of the variable swing, her vision had improved to 1/2 with flashes of normal sight occasionally, which was a great deal better than the vision she obtained with her glasses.



Variable Swing with finger to side of face. Move the head left and right and see the finger move opposite.

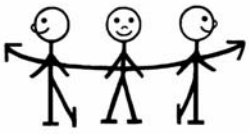
There are some people who can practice the variable swing and obtain good results, while there are others who are not able to use it with any help or comfort. It is difficult for me to explain why or how, some people obtain good results from this form of a swing, while others require supervision with a great deal of mental gymnastics from their medical adviser.



Variable Swing with finger in front, center of face, between the eyes, eye level.

THE LONG SWING: The patient stands with the feet about twelve inches apart, facing one wall of the room. He is directed to turn his body and his shoulders to the right, and in order to do this he lifts the left heel a few inches from the floor. The head is not turned on the shoulders, and the eyes are not moved in the head. The whole movement is brought about by turning the body until the shoulders are square with the right hand wall. Then the body is turned to the left, and to promote this movement the right heel is lifted a few inches from the floor. The body is turned until the shoulders are square with the left wall. It is very important that moving objects are not observed closely: do not try to see clearly objects which are moving.

This is the *long swing*, and it can be done with great benefit, because it relieves symptoms of pain when other methods do not succeed. When the patient is suffering from a severe pain, it is not easy or always possible to imagine the short swing. The long swing is the only one available under these conditions. The long swing is always a relief to some extent; and furthermore, it enables the patient very soon to obtain the short swing, which gives even greater relief from pain than the long swing. Besides relieving pain, the long swing benefits or relieves fatigue.



Long Swing

Swing the body left and right. Head/face, eyes, body move together, at the same time, in the same direction.
See oppositional movement; objects in the visual field appear to move 'swing by' in the opposite direction.
Do not stop to look at the objects. Keep swinging, relax and let them move.

It is a matter of great interest, that the long swing relieves pain, without necessarily correcting the cause of the pain. Pain from an injury or from a foreign body, can be relieved by the long swing. The long swing does not usually give complete relief of pain, but it paves the way to the practice of the short swing, which is a greater relief.

The long swing is also a benefit to imperfect sight. The central vision is improved, and what is also unusual, the long swing improves the field of vision. It improves night blindness, it improves day blindness. The long swing has improved opacities of the cornea so dense, that vision was reduced to perception of light. Yet, although the opacity of the cornea was so dense in some cases, that the pupil could not be seen, it would clear and the vision become normal after some weeks or months. The long swing also helps glaucoma, cataract, diseases of the optic nerve, diseases of the choroid, detachment of the retina.

One needs a sufficient amount of light in order to practice the long swing.

THE DRIFTING SWING: One day there came to the office a patient, who was among the worst that I have ever seen. In the first place, the pain that he had in his head, his eyes, his shoulders, his back, and pretty much in all parts of his body, was the most severe that any of my patients has ever described. It was so severe that I have often suspected that he used a dope of some kind. Beside the pain, he complained of great depression. To hear him talk, he gave you the impression of being very miserable; and for some reason or other, he could describe the condition of general misery more vividly than I have ever had the pleasure (?) of hearing it described before. His misery was mitigated to some extent, he said, when he took long walks with one or more friends, and became interested in their conversation.

(Patient difficult to treat, cured)

This case was remarkable for several reasons. With all my knowledge of various methods of resting the eyes, he failed to obtain the slightest benefit from them. In fact he said that when he tried the treatment, the pain, the depression, and his general misery, were increased alarmingly, and instead of being a rest, it was actually an injury. He did not see a dark shade of black when he closed his eyes, but rather various colors—red, blue, etc.

I tried to have him practice the swing, and I exhausted my knowledge of the various kinds of swings, but was unable to have him practice successfully any swing that was of the slightest benefit; in fact, the more he tried to follow my suggestions, the worse he felt. Again I tried him with memory, encouraging him to tell me of the experiences he had had in Europe, in New York, and in his home town. He had absolutely no mental pictures, and although I had usually been able to teach people how to imagine mental pictures, in this case I failed ignominiously.

I tried many things that I knew and after I had exhausted the things that I had already practiced, I realized that I was up against it, and had to devise and have him practice with benefit, something that I had never recommended before. As he could not think of anything continuously without discomfort, I suggested that he **let his mind drift.** As he had a very active mind and was continually thinking of a great many things, I suggested that he make no effort to keep his attention fixed on any one thing, but **let his eyes keep shifting from one object to another.** I asked him not to strain his eyesight to see the things about the room at all clearly, but rather to remember or specialize or think about objects in some other room. For example, when he looked at a chair in the waiting room, I asked him to remember some other chair or other object that he had seen in some other room.

It is not easy to describe what I mean by the drifting swing. Of course when he looked from right to left, the objects seen moved from left to right; when he looked up the objects moved down, and the whole time that he spent in shifting his eyes continuously to various parts of the room, some of the objects moved opposite to the direction of his shifting. His mental pictures, if he had any,

were remembered with so little responsibility on his part, that he felt no discomfort. Part of the time he spent talking to some of the patients in the waiting room, and I encouraged him to take things easy, and to be as comfortable as he knew how.

In this I believe, he succeeded, because when I invited him to go into another room, where he could test his sight with the Snellen Test Card, he was smiling, a new experience for him. His vision for distance was normal, and the speed with which he read all the letters on the test card was gratifying. The rest had given him, at least temporarily, perfect sight for the distance, whereas before even with his glasses on his vision was less than one-half the normal. He was also unable to read diamond type with or without his glasses. After practicing the drifting swing he read the diamond type rapidly, perfectly and without any apparent effort, at less than twelve inches. Then he said to me,

"Doctor, do you think you can help me?"

I answered him, "Did you read the test card and the fine print perfectly?"

"Yes," he answered and blushed.

That was the first time I ever saw a man blush under such circumstances. The blush was to me an admission that he realized that I had given him a temporary cure.

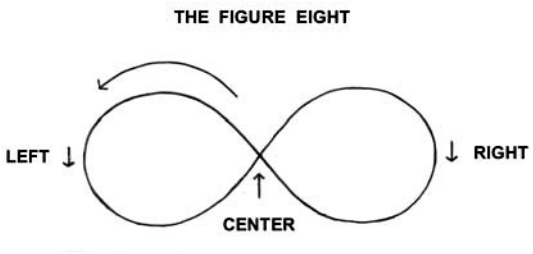
He sends me patients from time to time, who report that his eyes seem to be cured without glasses.

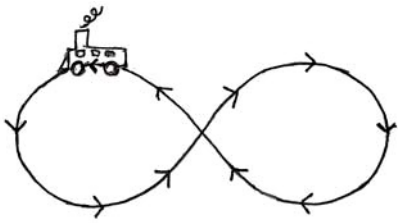
All this happened some years ago, and I have been able in many other cases, to obtain good results with the drifting swing, when other treatment had failed.

FAILURES: There are some people who have great difficulty in demonstrating the illusion of stationary objects moving. Persons with imperfect sight do not ever imagine perfectly the optical swing. By practicing resting the eyes, testing the memory and imagination, they may after some weeks, months, or a longer period, become able to imagine a short, as well as a long swing. The failure to imagine that stationary objects are moving, is always due to a stare or strain. **One can stare in looking straight ahead with the center of sight, and one can stare by trying to see with the sides of the retina, eccentric fixation.**

The normal eye is only at rest when it is moving, and the optical swing can be demonstrated.

Modern improved, combined version of most of these swings is the Infinity Swing, Figure Eight. See pictures below and on last pages of this book.





Stories from the Clinic

47: My Young Assistant

***By* EMILY C. LIERMAN**

ONE evening while treating some patients in my home, Baby Ethel, aged three, who had been living with us for over two years, came into the room and sat in a big armchair observing the treatment and listening to every word that passed between the patients and myself. She has large blue eyes, and when she is excited or interested in anything her pupils dilate and the iris seems to change color.

When I told one of the patients to palm for ten minutes Ethel placed her hands over her eyes also. She kept perfectly still for about two minutes and then we heard a pitiful sigh. I watched and presently two little fingers of her right hand began to separate and she peeped. When she saw me smile she quickly removed her hands from her eyes and for a while she sat quietly. Presently she left the room to join other members of my family. After my patients had departed I discovered her in a room ordering the head of the household to palm. She was pointing with her little finger to an imaginary test card on the screen door. The head of the house certainly needs to do some palming and also to practice other things to improve his imperfect sight. Sometimes those whom we love are not easily persuaded to do the things that benefit them, but here was this little three-year-old very seriously giving him a treatment. Then she demanded: "Take down your hands and read the card. Do you see the R? Now close your eyes and 'member it," she demanded. He did so in all sincerity. "Now open your eyes and read some more." He mentioned several letters and then she said: "Swing your body, side to side, and see letters swinging opposite."

He got up and swung as he was told, as all of us looked on in amazement, not daring to laugh, knowing that the little lady was very sensitive.

"Now," said she, "sit down and read some more letters."

He read very faithfully, following her little finger as she touched various parts of the screen door. All of a sudden she complained: "You are staring. You shouldn't stare; that is bad."

"Well," said he, "what must I do, then?"

"You must blink your eyes. Just let me show you how."

She stood before him, blinking and swinging her body from side to side, looking as serious as a judge. At this moment, to our sorrow, we all laughed. I myself could not hold back a moment longer. That broke the spell, and my little three-year-old assistant began to cry. But since then her efforts have not been in vain, for I notice that her patient still keeps up the treatment. I am grateful

to Baby Ethel in that she was able to accomplish more for him than I could myself.

While we were sitting in our garden one day an aeroplane passed over our place, and as it traveled on he was able to see it miles away until it became so small to our view that it looked like a small black spot. He then closed his eyes for a while and afterward he read a newspaper for a half hour or so. It has been a long time since he was able to read for that length of time.

When our friends called on us Baby Ethel was ever ready to show them how to palm and swing. She directed her mother to palm if her head ached or if she suffered any pain. Ethel was sincere about it all, because, as she explained it, "Dr. Bates helps big people and little people that way in his office."

She knew Doctor very well and would talk to him about reading the test card to help children's eyes. She has perfect sight. Her eyes are never still and she blinks unconsciously all day long. If only adults would follow her example there would be less eye strain. I am very grateful for what she accomplished for my husband. Does not the Bible say: "And a little child shall lead them."

Some Clinic Cases

***By* DR. J. M. WATTERS**

IN the two years we have been using Dr. Bates' eye system in our offices we have discovered that our most interesting and unusual cases are to be found in the free Clinic. When this Clinic was opened last October we expected a few scattered patients to take advantage of our offer of free treatment, but great was our surprise on the first evening to find our offices and even the corridors of the building filled with men, women and children of all descriptions, each one pathetically eager to take one more chance at saving his eyesight. The variety of cases was great, ranging from simple refractive errors to various forms of squint, cataract and glaucoma.

One very interesting case which we treated was that of a man thirty-one years old, who ten years previous had been hit in the right eye with a golf stick. He had been advised many times to have the eye removed surgically, as the eyeball was constantly inflamed. When we first examined him his vision was dim at 10/70, and his near point negative. When our Clinic closed for the summer his vision had improved to 10/15, the inflammation was no longer present, and his near point was positive.

Another interesting case was that of a young man with congenital cataracts of the zonulur type in both eyes. The cataract in the right eye had apparently remained stationary, but the left had started to spread, which was his reason for coming to the Clinic. At that time the vision in the right eye was 10/30 and in the left 10/40. His near point was 12". After eight visits his vision was 10/10 in both eyes and his near point 6".

A man sixty-six years of age, suffering from glaucoma, came for treatment after being told by six different specialists that only an operation could help him. We examined him and found the distant point 10/30 in both eyes, his near point negative, and a tension of 40 mm. of mercury in both eyes. At the time the Clinic closed his vision was 10/15 in both eyes, near point positive, and tension reduced to 25 mm. of Hg.

Another case of glaucoma that was of special interest was that of a man sixty years old who showed the hemorrhagic type of this disease in the right eye, with total loss of vision and a tension of 40. There was also a complicating cataract. The vision in his left eye was 10/30 and the near point was negative. When he discontinued treatment at the Clinic his left eye was normal for both the distant and the near point. In the right eye the hemorrhagic condition had entirely disappeared, the tension was reduced to 23, and the cataract was beginning to disappear. I believe that eventually the right eye will clear up entirely. The astonishing feature of this ease was that an operation had been advised as the only means of relief, and one physician had even suggested removing the eyeball.

We had a number of hyperopic, presbyopic and myopic patients, all of whom responded readily to treatment. Among the myopic type we found several patients with a vision of only 10/200 in both eyes, and in a very short time they were able to read 10/15 and 10/10. Hyperopic and presbyopic patients who were unable to read diamond type when they first came in for treatment were soon able to read fine print as they could large headlines in a newspaper. Patients who complained of constant pain in their eyes, or of the inability to read or sew without discomfort, were greatly relieved and in many cases absolutely cured after a few visits.

We reopened our Clinic on the evening of November 6 at seven o'clock, in our offices at 2 Lombardy Street, Newark, New Jersey. The work will be continued throughout the winter and spring on Tuesday and Friday evenings. We trust that readers of Better Eyesight will take a personal interest in this Clinic and help to make it an even greater success than it was last year.

Report of the League Meeting

By* MAY SECOR, *Recording Secretary

THE November meeting of the Better Eyesight League was held on November 6th, at 383 Madison Avenue. Dr Clinton E. Achorn, an osteopathic physician of this city, was the speaker of the evening. Dr. Achorn is a former pupil of Dr. Bates and has now been practicing the Bates' Method for some time.

The speaker presented a very encouraging report of the results he has obtained, correcting defective vision without the use of glasses. He emphasized the importance of the use of the memory and imagination in this work and reported a case in which the vision improved fifty per cent within twenty-four hours after the patient had secured adequate use of his memory and imagination. Perfect relaxation is also essential in the correction of visual defects. Sight is impaired by strain, and fatigue follows effort.

Many cases of defective vision in children may be cured as the result of one lesson; normal use of the imagination and memory, and the facility with which the child relaxes, are helpful elements in these cases. The absence of mental strain in a child is due largely to the fact that he usually forgets quickly; when his attention is called to a new object, the former object of his attention is forgotten, and so on throughout the day. The application of this principle in the correction of defective vision will prove helpful: one should see best the object or letter at which he is looking; and, proceeding to the next object or letter, he should forget the former object of his attention.

At the close of Dr. Achorn's interesting address, Dr. Bates discussed requested subjects. Dr. Bates explained the failure of hypnotism and faith in correcting defective vision as due to the presence of effort; effort precludes relaxation.

The next meeting will be held on Tuesday, January 8th, 1924, at 8 o'clock, 383 Madison Avenue.

Get a Good Start with Some New Resolutions

***By* EMILY A. MEDER**

SOMEONE remarked recently that "promises were made to be broken." I wonder if the same train of thought is carried out with New Year's resolutions. How many of us conscientiously adhere to them throughout the year. Yet, the fact that we have made them is in our favor, for from time to time during the year they spring to life and we renew them for another week, until forgotten again.

Resolutions, however, are made for one's own benefit—either financially, physically or spiritually. Begin now with the right attitude towards your eyes, and resolve that you will treat them decently. It is not necessary to pamper them; just give them half a chance and they will do the rest. Resolve that:

1. You will not overwork them by staring.
2. You will relieve them from duty by blinking constantly. Eyes are like sentinels; they are tense while on duty and must have systematic relief.
3. Palm frequently. This is relaxation to the eyes and is what play is to the soldier. One always works better for having a little play.
4. Swing and see objects moving. This is good exercise and keeps the eyes "in trim."
5. Read small print as much as possible. This requires relaxation. You cannot read fine print very well if you strain. Large print you can read under a strain.

Let these five rules govern your eye action. They aren't difficult, and become a good habit with practice. After all, your eyes will appreciate it, and perfect sight is worth "resolving" for.

A Glaucoma Case

***By* DR. HAROLD J. GEIS**

MRS. Z., the mother of four children and the wife of a very wealthy farmer, was referred to me by a local physician who apparently believed what I said when I told him I felt reasonably sure that I could benefit a glaucomatous case which he had been unsuccessful in treating for several weeks. He wanted the lady to undergo an operation (an iridectomy) but she refused, thanks to the Lord and Dr. Bates.

When she called on me she felt rather skeptical, but as she said afterwards, "I was willing to take a chance inasmuch as it did not necessitate an operation."

She was unable to recognize the big "C" at six feet. In fact she could not count the fingers on my right hand at five feet. When she tried to read the card I noted a slight tilting of the head, and I felt sure this was due to eccentric fixation. I explained to her that she made an effort to see every character on the card equally well, and that if she wanted to improve her vision and see perfectly she should see one letter best and all the other letters on the Snellen Test card worse. I then had her palm for ten minutes, after which she was able to read the 10/70 line. Then I told her to "flash," trying not to see the characters all equally well but just the one she was looking at should be seen best and all the other letters worse. She was enabled by this exercise to read the 10/40. Her husband, who was standing beside me while I was treating her, said: "Ann, how do you like it?" and she replied, "Dr. Geis has hypnotized me."

After eleven treatments she can read, write, sew, and to her most important of all, go to the movies. She thinks her cure is miraculous and so do her many friends, but as I tell them, "It's all in a day's work" and simple if one understands the fundamental principle, which is muscular relaxation, of the Bates Method correctly applied.

The Question Mark

QUESTIONS AND ANSWERS

Q—When doing the swing, does one move the head or the eyes?
A—The eyes are always moved; moving the head also may help.

Q—Does massaging help the eyes?
A—No.

Q—What causes the eyes to become bloodshot? How is it cured?
A—The cause is strain. It is cured by relaxation.

Q—Is practicing under a strong electric light as beneficial as practicing in the sun?
A—It may be.

Q—Is closing the eyes and resting them during business hours as efficient as palming?
A—Usually not.

Q—Can one remember perfectly and see imperfectly?
A—No.

Q—What is the quickest cure for imperfect sight?
A—Imagine something perfectly. If you imagine the white Snellen Test Card perfectly white, you'll see the letters perfectly black. If you see them perfectly black, you can tell what they are.

Throw Away Your Glasses and See With Your Eyes

Glasses prevent the eyes from functioning normally. They impede the progress of perfect sight and cause greater eyestrain. If you use your eyes right, glasses are unnecessary. Everyone with defective vision is doing something wrong to obtain that bad sight. Give your eyes half a chance to act naturally and the improvement will be amazing.

All cases of imperfect sight are curable.

PERFECT SIGHT WITHOUT GLASSES, the book written by Dr. Bates, contains a detailed explanation of his discoveries, research work, and experiments, which lasted through a period of thirty-eight years. Old fallacies and theories relative to the physiology of the eye have been disproved by his facts. Instructions for self-help are included.

We shall be pleased to send this C. O. D. on approval for five days. If it does not meet your needs, you may return it and receive your check in refund.

Central Fixation Publishing Company
383 Madison Avenue, New York City

Other Publications

Reduction of Microscopic Bible

THE little fine print booklets were a remarkable success. So much so, that many of our book subscribers, and Doctor Bates' patients have written in requesting the same type, but more of it. In view of this fact, we have bought a large shipment of the Photographic reduction of the Bible, which contains the Old and New Testament.

We are now able to sell these for $2.50 instead of the usual $4.00. The book measures one by one and a half inches, and is bound in attractive morocco leather.

We have had additional copies of the following back numbers of the Better Eyesight Magazine printed. Until the supply is exhausted they may be purchased for 20c per copy instead of the usual 30c.

Aug., 1920—School Number
Dec., 1920—Glaucoma—Cause and Cure
Feb., 1922—Pain — Cause and Relief
Mar., 1922—How to Help Blindness
Apr., 1921—Presbyopia
July, 1921—Vice of Concentration
Aug., 1921—How to Help the Children
May, 1922—Optical Swing
June, 1922—Miscellaneous

Burning Glass

ACCUSTOMS the sensitive eye to the sunlight. Also strengthens weak eyes and improves the sight. By applying the rays of the sun on the white of the eye two or three times a day great improvement can be noticed. Price $5.00.

Bound Volumes of the Magazine

CONTAINS one year's issue, including twelve magazines. Bound in serviceable leather, and is very attractive. Price $3.00.

Snellen Test Cards

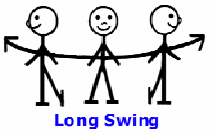
Cardboard.....75c Paper.....50c
Used for the prevention and cure of imperfect sight. Instructions mailed with each card.

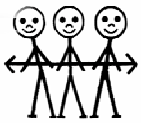
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

February, 1924

The Trinity







THERE are three things which the normal eye practices more or less continuously, which are necessary in order to maintain normal vision.

1—The long swing.
2—The short swing.
3—Blinking or palming.

The long swing has been described repeatedly and most people are able to practice it successfully, especially people whose sight is good. If you have very imperfect sight you may have difficulty in demonstrating the benefit of the long swing. Some patients are indeed difficult to manage. They may be able to practice the long swing when looking out of a window with its light background. By moving the whole body, head and eyes together, a long distance from side to side one becomes able to imagine a cord of the window shade moving in the opposite direction. This makes it possible to imagine the long swing when you turn your back to the window, and look at objects in the room which have a dark background. When the long swing is properly maintained the letters of the Snellen Test Card become darker as long as one does not look directly at the card. Looking above the card or below it is a help in maintaining the long swing of the card when the maximum vision is obtained by the long swing. Never look directly at the card or try to read the letters when practicing the long swing.

By gradually lessening the movement of the body from side to side, the swing of the card becomes shorter and one may soon become able to flash the large letters. The swing of the card can be reduced to an inch or less.



Long Swing in front of Eyechart. See the chart swing opposite the direction the head/body, eyes move to.



Stop swinging. Shift on a small letter and see it produce a small swing, very small oppositional movement =clear vision.

Long Swing in front of a open sunlit window with a shade cord hanging in the center. See the cord move, swing by in the opposite direction the body, head, eyes swing, move to. A long oppositional movement. Distant objects appear to move in the same direction the body moves to.



The rock, Sway. A shorter swing. Face the eyechart and rock the body left and right 1-2 feet. Then 1-3 inches and see a short, small opposite swing of the chart. Rock and shift on a letter. Blink, relax, see a very small opposite swing of the letter.



Fairy Stories

***By* W. H. BATES, M.D.**

Editor's Note—We should read fairy stories for the benefit of our eyesight. It can be demonstrated that the imagination is a benefit to the vision and if fairy stories improve the imagination they will, also improve the sight.

THE BLACK FAIRY.—Zipp, bang, again and again, the cruel boys pasted the little boy with snowballs, calling: "Four eyes, four eyes," at him because he could not see well and wore glasses. The snow got down his neck, inside the collar of his little jacket, it stung the skin of his face, blurred his glasses and hurt him so that he cried in pain. He could not fight them, so he ran as fast as his little legs could travel. He stumbled and fell. It seemed to the little boy that he fell down a long, long way and kept on falling, falling so long that he could not remember how long it was. He closed his eyes for a moment only it seemed and then he stopped falling. When he opened his eyes and looked around him, he found himself lying on the grass and the grass was soft and warm, like it is in fairy land. Above him the branches of the trees were moving from a light summer breeze. Around him were bright colored flowers, with the bees buzzing to and fro. Everywhere was the bright warm sunshine. He fell asleep for awhile and awoke feeling rested. On his breast lay a little puppy fox gazing kindly at his face. He touched it with his hand and gently smoothed the top of its head. Then another little fox puppy came out from the shadow of the grass, poked its nose close to the little boy's face and licked his cheek. Then two more came romping, toddling into view, all anxious to get close to the little boy and to be petted. But suddenly he lost all interest in the puppies, when the mother fox appeared with a tiny black fairy on her back. The puppies and the little boy crowded as close to her as they could. He petted the puppies while the mother fox looked on, happy and contented. A contented fox is not always, or often seen. The mother fox said to the fairy; "Little Black Fairy, we found this boy all bruised and bloody. He is such a good little boy and he is so gentle, kind and good that I wish someone would make him happy. That is why I asked you to come and see him."

And then the puppies began to all talk at once. They begged the fairy to be good to the little boy, the little boy whose heart was so full of love that he even loved baby foxes. The father fox called just then and all the foxes ran away quickly, so as not to keep him waiting. The little boy said to the black fairy:

"How beautiful you are. I like to look at you. Your eyes sparkle like the diamond in my mother's ring, when the sun shines on it, your teeth are white like the pearl necklace my mother wears to parties; your lips are red like my sister's ruby ring; your ears are so like the fine sea shells at the sea-shore; your laugh sounds like the water bubbling over the pebbles in the brook, while your smile

warms me inside my breast and makes me love you. Come closer to me little black fairy. Stay with me always and let me love you more than I have ever loved anybody else. When I look at you, the pain in my head leaves me, my eyes feel rested and cool, the light seems brighter, I can see everything clear, and the fog over the trees and flowers disappears."

After he spoke so nicely to the little black fairy, she giggled and laughed and blushed. She jerked her shoulders up and down, danced around on her toes, waved her hand to him, threw him many kisses and became so excited by her exertions she quite got out of breath. After she quieted down enough so she could speak she called to him:

"Oh, you dear little Foureyes, I love you for what you say. I love you so much that I want to help you as much as a fairy can help you. Let me cure your poor eyes, so that you will always have perfect sight without glasses. Love me enough and I will cure you. Never forget me. Please remember me so well that you will always see me, one tiniest part of me blacker than all the rest of me, see me on everything you look at, no matter how large or how small or how far away. Let me be your sweetheart fairy, the one little fairy you love best, and the world will be for you a heavenly place to live, with your eyes at rest with perfect sight as long as you are true to me, and never forget me."

And then she waved her hand to him and moved farther and farther away, until she appeared as small as a tiny black speck, the size of a full stop in the little boy's reader. But always he remembered that he loved her, and so did as she advised, and found that no matter how far away she was he was able to remember how she looked, one tiniest part of her blacker than all the rest. He loved her so much that he saw her better than everything else. The sight of her rested his eyes. And after she had disappeared from view he loved her so much better than the trees, the grass, the clouds, the flowers, that he believed he saw her better than anything else. And the better he imagined or remembered his little black fairy, or saw her in his heart better than all else, he saw more perfectly the trees, the grass, the clouds and the flowers. He was true to his love, the little black fairy, and she was true to her promise to him that he would see perfectly without glasses as long as he remembered her perfectly. When he looked at a large tree she was a good sized fairy. When he looked at a small blade of grass or a tiny flower, she was the tiniest little fairy that one could imagine.

His sight was good when he remembered how perfectly black she was; but, when she looked less black his sight was worse. He found that he had to remember his love perfectly, to be perfectly true to her in order to have perfect sight. It was all a beautiful dream; and, when you dream of fairy land, sometimes your dreams come true. You, who read this story, can you remember the blackest, blackest little black fairy, the tiniest blackest fairy that ever was? Maybe you can remember the black better with your eyes closed. Can you remember the black eyes of the black fairy when reading your book? And when you do, can you read the words better? The next morning when his mother came into his room and wakened him with a kiss, he opened his eyes wide, with no dread of the bright sunlight which shone on his mother's face. He was all excited, laughing and talking eagerly, rapidly, of the good fortune that had come to him. Among other things he said:

"Oh, mother, I can see you without my glasses. I see the blue color of your eyes which I never saw before. The fog has gone from the pictures on the wall, I can look out the window and see the trees, the grass, the flowers, the people walking along the sidewalk, and there is father talking to a strange boy—oh no, he is the boy who lives next door. He is not a strange boy, but I see him so much clearer now without my glasses, than I ever did before when I wore them. Aren't you glad. Please I want to get dressed quickly, run down stairs and tell father all about it. I want to hurry away to school and tell the teacher I can see everything now without my glasses. And I want to tell all the boys in school and all the girls, the men in the grocery store, the men and boys in the meat market, everybody.

THE WHITE FAIRY.—The teacher was tired. It was very warm, and through the open windows one heard in the distance the birds calling to each other. Her head was aching, her eyes throbbing with pain. She took off her glasses to rest her eyes, and sat for awhile with her eyes closed, and her head resting on her hands. And the pupils were tired, restless, anxious to get out in the bright sunshine, and play on the cool green grass in the shade of the trees. Their eyes were continually looking out the windows.

George Smith saw her first, standing on the window sill waving her hands to the children, smiling such a beautiful smile of love with her tiny rosebud of a mouth. But it was her wonderful black eyes which smiled most. They sparkled and twinkled so merrily, they were so full of life and love and happiness, they were so cheery, so encouraging, so comforting, that all were intoxicated with delight. She was only a few inches tall, but every bit of her from the top of her head to her tiny feet, was formed with a perfection of beauty rarely seen. And how graceful she was. She found her way somehow to the top of a vacant desk; and, after delighting the children for a few moments with the most wonderful, most delightful of fairy dances, sat herself down on the top of an inkstand—but she was not quiet a moment. Her feet and hands, her whole body seemed to swing from side to side, just like the pendulum of a clock swings; and, when you looked alternately from one eye to the other they seemed to swing also. This swing was very noticeable, and the strange thing about the swing was that it was so restful, and did the eyes of the children so much good. Those wearing glasses took them off, and found that they could see the swinging eyes of the little white fairy as well as everything else, quite perfectly. And the teacher noted that the fog over everything she formerly saw without glasses was gone, the pain in her eyes and head was gone. She saw everything clearly, so easily that she quite forgot that she had eyes.

The teacher became interested in the eyes of her pupils. She felt that something should be done to prevent them from acquiring imperfect sight while they were attending school. As a beginning she tested the sight of all the children at twenty feet and made a record. The next day she tested them again and found that the number of cases of imperfect sight was less. This bothered her somewhat, because she could not understand how she had made any mistake. She tested them again on the third day, and was more careful and painstaking than before. Again to her surprise, she found a less number with imperfect sight. Then it dawned upon her that testing the sight of the children with the Snellen Test Card was a benefit. At any rate, she said to herself, that she would test their sight every day for a month and note the results.

Some of the children called her attention to the fact that she had no record of the vision of her own eyes, and to please and encourage her pupils she had them test her sight every day and keep a record. Every time she read the Snellen Test Card it seemed to her that she read it more easily and better, and she found herself looking at the card every once in a while during the day. She acquired a certain amount of pleasure in looking at the card, and she found the pupils doing the same thing.

Standing twenty feet from the card, without her glasses, at the end of the month, she found that her vision with each eye was normal, and even a little better than the average normal vision. Furthermore her eyes, which formerly had bothered her more or less, although she wore glasses prescribed by a very prominent eye doctor, never gave her the relief that she now obtained without glasses, by reading the Snellen Test Card daily.

She was very much pleased to note also that her pupils were brighter and had better memories, and studied for longer periods

without becoming tired or restless. Her attendance was better than it had ever been in any one month before.

One little boy told her that he no longer had headaches from studying his lessons, and that he could read what was written on the blackboard without half trying. Other teachers became interested and they obtained the same beneficial results.

Stories from the Clinic

48: The Blind Girl

***By* EMILY C. LIERMAN**

DURING the month of August, 1922, while our clinic work was still going on at the Harlem Hospital, there came one day to our office a blind girl, aged 25, who was led there by her younger sister.

Dr. Bates and I were extremely busy and at the time, had to turn away many patients, because we already had more than we could manage. As she heard me approaching her she asked for Mrs. Lierman. I said I was that person, and asked what I could for her. She mentioned the name of a doctor's wife who had been treated successfully for cataract by Dr. Bates. A dozen or more patients were in the waiting room at the time, and were listening to all she had to say, for she talked loud enough to be heard. She said: "I came with great hope that you might help me to see." She then handed me a note, written by the doctor's wife already mentioned. It read something like this.



Pictures from the New England Historic Genealogical Society. Helen Keller, age 8, holding her doll with her teacher Anne Sullivan on Cape Cod, Massachusetts. (The doll was used to help her learn to communicate.)

"You have helped so many patients in your clinic, won't you please help this girl if you can? I met her in Prospect Park, Brooklyn, as she sat beside me on a bench resting."

I am sorry to say that I frowned as I finished reading that note. I did not see how I could possibly take another case, when I already had more than I could handle. She could not be treated at the clinic because the Authorities would not allow us to take cases out of the hospital district. I was just about to say that she would have to come some other time when I was not so busy, but I caught the anxious look in her face. A look of hope, a look of faith. I could read in that face the answer she expected of me. No thought of being sent away that day without treatment had entered her mind. I solved the problem quickly and said: "I will take you this minute to our other office and see what I can do for you." At that moment, a gentleman sitting in the room gasped and sighed with relief. He smiled and said: "That was fine of you, knowing how rushed you are at present."

I disturbed Dr. Bates long enough to have him examine her eyes, and to tell me whether there was any hope of her seeing at all. Dr. Bates said she had Microplithalmas in both eyes. She had no red reflex from the pupils. A white membrane was visible in both pupils and the pupils were both very small. She could distinguish light from darkness but that was all. I asked her to tell me when her sight began to fail, or how long she had been blind. What a shock it was to me to hear her say: "I was born blind, so was my mother." What chance had I, if any, to ever help that poor girl to see even just a little of this, God's beautiful world? Was it possible that perhaps our Heavenly Father himself had sent her to me, and that through Him I would be guided in helping her to see? Anyhow these were my thoughts at the time, so I started right in with the treatment, just as though she had sight, and then to help her improve her sight. She had so much trouble with her poor eyes that I did not know just where to begin first. Her eyes moved rapidly from side to side, a condition called Nystagmus. She also had a contraction of the throat muscles which caused a great deal of fatigue generally. Here was a big job ahead of me. I told her I would do my very best to help her if she would do exactly as I said.

Her sister whose age was twelve, had normal vision, and was called upon to assist me in the treatment. She proved later on to be a very good assistant. I asked the patient if her sense of touch was all right and she answered yes. Then I gave her an ordinary pin and told her to feel the size of it, then to feel the point and the head of it. She was told then to palm and remember the touch of the pin. (Put the pin away first, before palming. Never place the hand near the face when holding a pen.., any object.)

She could remember the touch of the pin very well she said, even though it was no longer in her hand. I was very much encouraged when, after a few minutes of palming she removed her hands from her eyes and I noticed that the rapid movement of her eyes had stopped.

But when I asked her a personal question the movement or Nystagmus returned. I then told her to forget the question I had asked her, and to cover her eyes again with her hands to rest them. **While she was doing this I told her what had been accomplished for an old blind man, who was at the present time under treatment. I related how he once had good sight and now after several years of blindness and great suffering from eye operations, he was beginning to see.** I watched my patient very closely and I could see that she was interested in what I was saying, and a smile came, which was good to see. Again I told her to remove her hands from her eyes and I noticed the second time that her eyes were perfectly still. Her sister sat close by holding her breath in amazement and in an excited voice said to me: "This is wonderful. Anna has never been able to control that terrible movement of her eyes for some years. I feel sure she is going to receive benefit from your treatment and care. I want very much to help you if you will tell me how."

It has always been my greatest desire to carry on Dr. Bates' ideas and methods and to follow very closely his directions in all cases. I remembered something he said to me at one time. "If you have a pain, find out what causes it and cure the cause." So I felt with this case, that perhaps if I can cure the Nystagmus and the nervous contraction of her throat, I might be better able to do more for her vision. Her sense of touch was good and her memory of the prick of the pin had helped while she rested her eyes: Now I would try the swing and see if that would help her throat. I told her to put up her forefinger and to hold it about six inches from eyes. Then to turn her head slowly from side to side toward the right shoulder and then toward the left. I explained to her, that even though she could not see her finger, she could imagine she saw it. She answered me just as I wanted her to. She said: "Oh, I can imagine the size of my finger, and when I turn my head to the right my finger seems to move to the left and vice versa."
Practice with eyes open. Then in the imagination with eyes closed; moving the physical head and imagining seeing the finger move.

I encouraged her to keep on moving her head from side to side and to blink her eyes to prevent staring, which had been a habit

since birth. I noticed after a few minutes or so that she settled herself in a more relaxed position as she sat in her chair. Then I called her sister's attention to the fact that the contraction of her throat muscles quieted down until they stopped.

(To be continued)

Helen Keller, blind and deaf at 19 months old learnt to communicate one day when her teacher Anne Sullivan (trained at the Perkins School for the Blind) had Helen pump water from a well, feel the water pouring in her hand as the teacher spelled out the word water in her hand. Helen was also a student at the Perkins School for the Blind.



Palm and remember the feeling of the touch of a pin. Relaxes the mind, eyes, improves memory, imagination, vision. Imagine the sight and touch of any object.

"How Joe Cook Learned to Shift"

IN the January number of the American Magazine, Joe Cook, famous eccentric comedian, says he never has seen a juggler who had to wear glasses. He himself has remarkable eyesight, and this is the way he accounts for it:

"In my work," he says, "I have to be constantly changing the focus of my eyes; adjusting it to different distances and different directions. In juggling several balls, for instance, I look up, down, to right, and to left; so quickly, of course, that even I am hardly conscious of moving my eyes. But I do move them. I am always practicing, and this exercises the muscles of the eye. I believe this keeps them strong, active, and, you might say, young."

"Oculists will tell you that this is true. Exercise your eyes by looking around you, at objects that are at various distances and in different directions. If your regular job is at close work, stop once in a while and look at things farther off. Practice changing the focus of your eyes. Get several small balls and try to juggle them. It will help to keep your eyes young."



The Swing, Oppositional Movement. Finger in front of face, 6 inches from eyes. Turn the head slowly side to side to the right and left shoulders. Eyes move with head. Imagine and see the finger move opposite the direction the head/eyes move.



Turn right, the finger moves left.



Turn left, the finger moves right.

The Use of Eyesight in a Printing Plant

***By* BENDIX T. MINDEN**

SIGHT is well held to be the highest and most perfect of all the senses; whereby we are able to recognize the form, size, color, and distance of thousands of different objects in nature. Indeed, it is wonderful to behold a balloon leave the earth and watch it till it becomes a black speck in the sky. But in a printing plant, this sense is so woven into the countless acts of our occupation that we scarcely appreciate this marvelous gift, so essential not only to the simplest matters of comfort, but also to the culture of the mind and the higher forms of pleasure. It seems to be the mind behind the eye that sees, for in each department of this plant, the employees perform their work rapidly and amazingly accurate.

There is a popular opinion that persons who use their eyes for much reading or fine work are more apt to have imperfect sight than others. A visit to the majority of printing plants would disprove this theory. In the plant with which the writer is connected there are only ten people out of 60 employed who wear glasses, and one of them has had a cataract on his eye since childhood.

In three other plants visited, the percentage ran from 10 to 20 per cent of those who wore glasses.

It is strange to say that the continuous use of the eye in a correct manner, strengthens that organ rather than spoils the vision, which is proven not only by a printing plant, but by intimate knowledge of a juggler.

A juggler's eye, the same as a printer's, is always focusing quickly on moving objects, and it is merely this constant and automatic correct use of the eye which is so valuable for the detection of mistakes in a printing plant.

We will enter the workrooms with a piece of copy, which may be either manuscript or reprint matter. This is given to the foreman, who glances through it quickly and marks the style, size of type, measure of lines, etc. He then hands this copy to the compositor. If it is hand-written, it is not a question of the compositor being able to see, but of his brain being able to decipher the hieroglyphics of the author. In this case, inadvertently the letters were badly written—"u's" looked like "n's", the "i's" were not dotted or the "t's" crossed. This caused a mental strain, and not an eye strain, especially when a name or a word is taken from a foreign language.

When the compositor is through setting the type, the printer's devil pulls a proof. The proof and copy are then handed to the proofreader, who proceeds to read it with the help of the copyholder.

Juggling



Modern Bates teachers use a variety of games, exercises to activate, integrate the brain hemispheres and eye movement.

The eyes 'shift', move when juggling, the eyes following the moving balls, switching the balls between the left and right hands. Shifting improves the vision. Left and right brain hemisphere activation and integration also occurs and this improves the vision. Practice juggling clockwise, counter-clockwise.

The proofreader is called upon to exercise his eye and his brain in unison. His eye is to see wrong fonts, that is, mixed type. He is to detect mistakes in spelling, punctuation, paragraphing, grammar, or other errors. He must not have any optical illusion as to what the letters really are. The letter, the word or the punctuation mark must stand out clearly—exactly as it is.

Fortunately, the light in most printing plants is well diffused. **The desk of the proofreader is placed so that the daylight comes in through the window from above and behind, and over the left shoulder, which is important for the eyes; as daylight seems to be a most soothing, invigorating and strengthening tonic.** The eyes appear to be rested when looking from one object or color to another of a different form or color.



Full spectrum sunlight-healthy reading light: Sunlight through a open window, shining from behind, over the shoulder, onto the page being read.

In going to the Pressroom, we come to another department which calls upon the eyes to see and discern a new phase of sight.

A pressman uses his eyes to note the equality of impression, and to bring out the different shades of a half-tone or cut, so as to make it appear as near real to the object as possible. He is called upon to see both with his eye and his mind's eye the various ink colors. By mixing different inks the pressman can produce various hues, shades or tints. To produce violet he will mix 10 parts of white, 21 parts of red, and 69 parts of blue; likewise in making the color scarlet he mixes 85 parts of red with 15 parts of orange. Thus the pressman must have a good eye in order to understand and see the colors as they are. If he were "color blind" he would be unable to distinguish even red. Our pressman had occasion to mix a color which was to match the blue sky and the green color of a dollar bill. He would look up at the sky and then down at the greenback in his hand. One not familiar with what he was doing would think he was praying for greenbacks. No, he was not doing that, but was matching colors.

We now leave the Pressroom to enter the bindery. Here our eyes are met by the striking beauty of a number of young ladies. The mind's eye is here centered on the fingers, and one cannot help but remark how skillfully they do their work.

Folding, counting, and numbering of sheets are done quickly and accurately. They are done so cleverly that it becomes almost automatic, thus we see a person functioning only by reason of the mind. The ladies at the wire-stitching machines, without a gauge are able, very speedily, to stitch a booklet or a leaflet in the same place almost without an error. We notice a man cutting paper on a big cutting machine. It is most remarkable how the eye can be trained to do its work so nearly perfect. Should the cutter be mistaken in his measurements, he would cut the paper wrongly, thereby spoiling the job.

In passing through the plant, we go to the shipping department. Eyes are even important here, for should the shipping clerk place the wrong address on the case, it could not be very easily corrected. The case may go to Kansas instead of Kentucky. This would not only delay the delivery, but would cause considerable unnecessary labor and expense.

There are innumerable more uses of the eye in a printing plant than described in this article. Best of all, one should visit a printing plant and see for himself the wonderful workings of that valuable organ—the Eye.

Report of the December Meeting

DOCTOR M. E. GORE, of East Orange, New Jersey, was the speaker at the December meeting of the Better Eyesight League. He remarked that it was a pleasure for him to address the meeting, and he hoped that he could say something that would help someone to see. He said it is the easiest thing in the world to have perfect sight, but it takes an effort to have defective vision, and an effort and strain to continue it.

Doctor Gore gave a brief synopsis of how he became interested in Doctor Bates' work, after having heard him lecture. He then attended the Chair, at the Harlem Hospital, where he was amazed at the results Mrs. Lierman obtained with her patients. To test the correctness of Dr. Bates' method, as he was skeptical, he began with a patient who had very bad sight, which was further hampered by a goiter. While he was improving her sight, he was astonished to notice that the goiter was slowly diminishing in size. At the end of two years she had normal vision, and the goiter was gone. He cited a great many other cases, too numerous to mention, by which he proved that Dr. Bates was not only right, but had made a wonderful discovery.

After his talk Dr. Gore invited all the members of the Better Eyesight League to visit his Clinic at 7 West 76th Street, New York City, where he treats patients by Dr. Bates' methods from one to two p.m.

Miss Irwin, President of the Better Eyesight League of the Oranges, was introduced by Dr. Gore, and gave a report of her own eye trouble. Hers was a difficult case, and she deserves a great deal of credit for the tenacity she showed when everyone advised her to keep her glasses on, and not to try any "new-fangled" ideas. Her history, in brief, is that she had to remain home from business at least one day a week. She had frightful headaches, and could not stand the light. Her bedroom was always darkened, and the sun was never allowed to shine in on her. During that period she said she only desired a little dark nook to slink into and be alone with her troubles.

One day she heard Dr. Bates talk, and was so encouraged when he told her she could be cured, that she bought his book, and started immediately. She went through a great many trials before her friends would believe she really intended leaving off her glasses. She palmed on the ferry, on the train, before and after work, and wherever and whenever she had a few minutes to spare. The result was that she left off her glasses, improved her work, and was no longer troubled with headaches. She goes to the movies, and above all, likes the sun. She swings it whenever possible and loves to wake up in the morning and find it streaming over her bed.

On the head of this glowing report of courage and self-control, one young lady in the audience, who admitted blushingly, that she was twenty-one years old, desired to know if she could be helped. She gave a detailed description of all her symptoms, much to the amusement of the meeting, and said she was very myopic. She went on to say she wanted to improve her sight in order to leave off her glasses, and also improve her looks. She was told if she followed Miss Irwin's example she could obtain perfect sight. She pondered this, and asked Dr. Bates couldn't she just try a little experiment of her own. Instead of discarding her glasses immediately, couldn't she get weaker and weaker lens, as time went on. Dr. Bates answered this by telling an amusing little story, the moral of which was, that if she was able to recite symptoms, give the diagnosis and prescribe the treatment, she didn't need a doctor's help, as she was physician-in-chief to herself.

Dr. Bates was kept busy for half an hour answering questions, and explaining imagination in its relation to the cure of imperfect sight. The meeting was adjourned one-half hour later than its schedule, but everyone had learned a little more about their eyes.

The February meeting will be held on the 12th and all are invited to attend.

The Question Mark

Q—Can a child three months old be cured of squint?
A—Yes.

Q—Does the bright sun light harm a baby's eyes?
A—No.

Q—Is being in a dark room with the eyes open as beneficial as palming?
A—No.

Q—Can any other color be substituted for black when palming?
A—Yes, if imagined consciously and intentionally.

Q—How often must one read fine print to obtain benefit?
A—Daily.

Q—What one method of improving the sight is best?
A—Swinging and blinking.

Q—To palm successfully is it necessary to remember black or try to see black?
A—No. When one palms successfully the eyes and mind are relaxed and black is usually seen, but any effort to see black is a strain which always fails.

Announcement

Miss Mildred Shepard, 50 Main St., Orange, N. J., is now a certified teacher of better eyesight. She is well qualified to cure imperfect sight by treatment without glasses. The Editor of Better Eyesight takes great pleasure in recommending her to any who may need her services.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

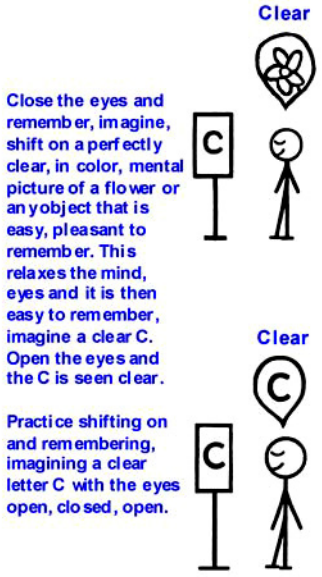
March, 1924

Mental Pictures

MANY patients with imperfect sight complain that when they close their eyes to remember a white card with black letters, they usually fail and remember instead a black card with white letters. The vision of these patients is very much improved when they become able to remember a white card white, with the black letters remembered perfectly black. Imperfect memory, imperfect imagination, imperfect sight are all caused by strain.

One patient could not remember a white pillow, but by first regarding the pillow and seeing one corner best and all the other corners worse and shifting from one comer to another he became able, when closing his eyes, to remember one comer in turn best, and obtained a good mental picture of the whole pillow. One cannot see a pillow perfectly without Central Fixation. To have Central Fixation requires relaxation or rest. One patient who could not remember a large letter C of the Snellen Test Card, with the eyes closed, was able to remember the colors of some flowers, and then he was able to remember a letter C. In order to remember a desired mental picture one should remember perfectly some other things. This is a relaxation which helps to remember the mental picture desired. It is well to keep in mind that one cannot remember one thing perfectly and something else imperfectly at the same time.

In my book is described the case of a woman with imperfect sight who could remember a yellow buttercup with the eyes closed, perfectly, but with her eyes open and regarding the Snellen Card with imperfect sight, she had no memory of the yellow buttercup.

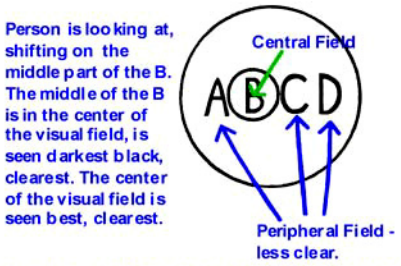


Illusions of Normal Sight

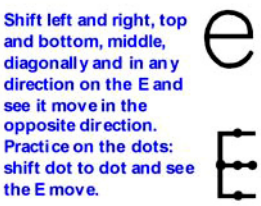
***By* W. H. BATES, M.D.**

AN illusion is defined by the dictionary to be something which does not exist. Illusions are not seen, they are imagined. One cannot have perfect sight without illusions.

CENTRAL FIXATION.—When the sight is normal one is always able to demonstrate that things regarded are seen best while those not regarded are always seen worse. With Central Fixation if one recognizes or sees a letter correctly, all other letters are seen worse. With the best vision that can be obtained it can be demonstrated that one cannot see a letter or any other object perfectly without seeing one part best. No matter how large or how small the letter or object may be, it is impossible to see it perfectly without Central Fixation. Many people believe that when they look at a small letter or a small period that they see it all at once; but, when you notice the facts, one finds that to see or to try to see a letter, a number of letters all perfectly, the vision becomes modified or imperfect. Some persons with unusually good vision can read the Snellen Test Card so rapidly that they have the impression that they see all the letters perfectly at the same time. It requires, in some cases, considerable trouble to demonstrate that this is impossible. In some obstinate cases it has required not only some hours but some days to prove that this is a fact. The letters of the Snellen Test Card are equally black. To see one blacker than the others, or a part of a letter blacker than the rest of it, is seeing something which is not so. The large letters and the small letters are printed in the same ink and all are equally black and although one cannot read the letters unless they see them by Central Fixation it is still, nevertheless, an illusion. One should emphasize the fact that it is possible to have illusions or that one cannot see perfectly unless the illusion of Central Fixation can be demonstrated.



All parts of the B that are away from the middle part that the eyes are looking directly at and other letters around the B are in the peripheral field and are seen less clear. They are seen clearest only if the eyes, central field moves onto them.



SWINGING.—When a small letter of the Snellen Test Card can be seen perfectly and continuously it can be demonstrated that **the letter is moving from side to side about its own width or less or that it is moving in other directions**. To look fixedly at a letter and try to imagine one point of the letter is seen continuously, can be demonstrated to be impossible. One cannot obtain perfect sight by staring or trying to see things or imagine things as stationary. I have never seen this truth stated in any publication. It is just as important an illusion as is **CENTRAL FIXATION** in order to have perfect sight continuously. It can be demonstrated that all persons with imperfect sight stare, concentrate or try to see letters stationary. The illusion that the letter is moving, when the sight is normal, is brought about by the normal eye to avoid the stare and the strain of seeing things imperfectly. The point of fixation changes continuously, easily.

When one looks to the right of the letter, the letter is to the left of where you are looking. If you look to the left of a letter the letter is to the right of where you are looking. Every time your eyes move to the right, the letter moves to the left. Every time your eyes move to the left the letter moves to the right and by alternately looking from one to the other side of a letter one becomes able to imagine the illusion that the letter is moving from side to side. When reading rapidly one does not have time to demonstrate that each individual letter is moving. Here again the imagination is responsible for the illusion of the swing. The letters do not really move, we only imagine it; and, unless we can imagine a letter moving continuously we are unable to see it with normal sight continuously. This is a truth; it has no exceptions. It is a necessary part of normal vision, and yet it has not, to my knowledge, been published in any book or periodical. People who write works on physiological optics have much to learn. So many of my patients who have been benefited by my methods have asked me: "Why didn't Helmholtz, Donders and all those other authorities publish the truths that you have discovered?" Nearly all ophthalmologists put glasses on people because that is all they know. I can recall the time when that was all I knew. If a patient left the office without a prescription for glasses it was not my fault. Now when persons with imperfect sight, wearing glasses, become able to practice **CENTRAL FIXATION** and the **OPTICAL SWING** in the right way, their vision becomes normal without glasses.

HALOS.—When the sight is normal and when one regards a letter of the Snellen Card with a white center, the white part of the letter appears whiter than it really is and whiter than the rest of the card. I use the word Halos for this illusion. This is an illusion which can be demonstrated quite readily by covering over the black part of a letter with a screen with an opening slightly smaller than the white part of the letter, which permits the center of the letter to be observed. When this is done the white center of the letter is the same shade of whiteness as the rest of the card. Some people can imagine the illusion when it is described to them. When reading fine print the spaces between the lines appear whiter than the rest of the card, but only when the vision is good. As a general rule when one can imagine these white spaces between the lines are whiter than the rest of the card, Halos, the black appears more perfectly black and the letters can be read with normal vision. Halos are imagined, not seen. Imagination of the illusion of the Halos is a quick cure of myopia and astigmatism, (farsight, presbyopia) as well as other cases of imperfect sight.



Imagine and see the Halo, White Glow on the white paper around, near the inside and outside edge of the black ink of the O.
The area closest to the black ink appears whitest, brightest. Notice the white area inside the O appears whiter, brighter than areas of the page outside, away from the O.
Practice seeing this on a fine print o.

I am annoyed with myself when I realize how many years it required before I had brains enough to notice the Halos. It seems to me that I must have been awfully stupid to have failed to have noticed them for such a long time. All persons who have normal sight are always able to demonstrate the Halos. All persons with imperfect sight are cured, temporarily or permanently, when they become able to imagine the Halos.

BLINKING AND RESTING THE EYES.—By blinking is meant frequent closing of the eyes. It is usually done so rapidly that it is not conspicuous. Many persons with normal sight have the illusion that they do not blink. They believe their eyes are always at rest and that their eyes are continually open all the time. When their attention is called to the facts it is usually readily demonstrated with persons with normal vision. In one case the patient was able to distinguish a small letter on the bottom line at twenty feet, 20/10. He was positive that he saw the letter, continuously. It was found by observing the movements of his eyes that he did two things. First: He closed and opened his eyes frequently, without being conscious of the fact. Secondly: He looked some distance away from the letter and back again and did it so quickly that he was not aware that he did it. The facts can also be demonstrated, perhaps more accurately, with the help of moving pictures. In all cases where the sight was normal, blinking occurred almost every second. In some seconds the eyes were opened and closed five times. Blinking occurs more frequently with the normal eye when the light is imperfect or when the conditions are unfavorable for perfect sight. When the light is good or the conditions most favorable for good sight, blinking occurs at less frequent intervals. Persons with imperfect sight do not rest their eyes as often as those with normal vision. When they are encouraged to blink more frequently their sight usually improves.

Stories from the Clinic

49: The Blind Girl

***By* EMILY C. LIERMAN**



Blind girl learns the letters of the alphabet and her vision returns by the sense of touch. Example: Feels the shape of a cardboard cutout of a letter C and forms a mental picture of it in the mind using the sense of touch, memory and imagination. Then she is able to recognize a C and other letters on the eyechart. The brain works with the eyes forming and storing in the memory a clear mental picture of every object the eyes look at. Improving this normal function of the eyes, brain improves the clarity of vision.

LAST month I wrote about Anna, the blind girl becoming able to obtain relaxation of her whole body and the muscles of her throat by practicing the swing, with the blinking, which prevented the staring. When I first handed her a test card and asked her if she could see a letter on the card, she answered: "I cannot see letters, I do not know the alphabet. I can only read and write by the sense of touch with the Braille System." Here was another problem. Of course, there was the test card with large and small E's pointing in different directions, which could be used to test the sight, but I had other plans. I wanted Anna to learn to read and write and give up the Braille System entirely. Her sister was called upon to help me. She was directed to cut out of cardboard, letters about the size and thickness of the big C on the test card. Then she was to paint them black and bring them with her next time she came.

Her sister had good news for me when I saw them again. **She had taught Anna some of the letters by the sense of touch. For instance a letter T had a straight piece of cardboard at the top and another straight piece through the center. A letter C was round with an opening to the right.**

We had made a good start I thought, on this, her fourth visit. I handed her a test card, blank side up. At first she could not tell whether there was print on the card or not, because she was very much excited in telling me how quickly she was learning the alphabet. This made her nervous and she strained. I got her busy with palming and while she was doing this, I told her a story. I find that all patients enjoy this, especially when they visualize or follow me closely in what I am saying. I want to say right here that I am a poor story teller but anyhow I do the best I can. If I remember a good short story from a magazine, I tell that, or I might tell about a patient treated by me who had obtained good results. After she had rested and relaxed for ten minutes, I asked her to remove her hands from her eyes and look at the card. She remarked: "It looks all white to me. There seems to be no print on the card at all." I told her she was right. I then turned the card right side out, and as she did the long swing of her body, moving her head with her shoulders from side to side and blinking her eyes with the movement of her body, she pointed to the 200-line letter on the card in her hand and said: "That's a letter C." Can any one imagine the extent of my happiness?

For twenty-five years she was blind, born that way. Never had more than a slight perception of light. Her sister forgot where she was and screamed, "My sister can see." Anna and I cried with joy. We did not talk, just held each others hands. I whispered in her ear: "Anna, thank God with me, will "you?"

"Yes, you bet," says she, "I'm doing that now."

We got busy again, and this time I told her to move the card from side to side, and imagine her body swinging opposite. She kept this up for several minutes and then she saw the R and B of the 100-line of letters.

On September 9th, 1922, after one month's treatment, her vision had improved considerably for the test card. She had to hold the card about an inch from her eyes in order to see the letters. She was directed to place her finger under the letter which she tried to see, then to move her head slowly from left to right and in this way she saw the letters of the 70 line, one at a time. Before Anna left the office that day she said she had wonderful news for me. While walking in the street with her sister she saw moving objects for the first time in her life. In Brooklyn they have Hobble Skirt trolley cars with an entrance in the center of the car. Others have an entrance on one end only. Anna was able to see the difference from the sidewalk and told her sister when a car passed by, just what kind it was. She actually saw a letter-box fastened to a lamp-post and walked towards it without assistance, to place a letter in the box. Later, **Anna's sister cut out figures from one to ten, of cardboard, and she learned to tell them by the sense of touch**.



Look at the card about an inch from the eyes. Place the finger under the letter the eyes are looking at and move the head slowly left and right, and imagine, see the card moving opposite the head, eyes. Relax, Blink, let the eyes move. The letters appear clear.

On September 16, 1922, she began to read the 50 line letters of the test card at one inch from her eyes. The first on that line is a figure five. Anna puzzled over that for awhile and then she said: "The first one does not look like a letter at all, it looks very much like a figure five sister has made of cardboard for me."

I cannot express in writing, how happy she felt when she realized that she had seen the figure five correctly. I placed myself in the sun and immediately she saw a beaded medallion on my gown and also remarked how my beaded necklace sparkled in the sun.

The next thing was to teach her colors. As she never had more than a slight perception of light, the difference between bright red and bright green meant nothing to her. One day while walking with her sister, Anna stopped in front of a store where electrical supplies were displayed. In one section of this shop window was an electric heater and in the center of it was shown a red light. Anna drew her sister's attention to this and remarked: "Isn't that an angry looking thing?" When she related this to me she said: "I can get a pretty good mental picture of Satan now, since I saw that angry light."

By September 30th, she had learned all the letters of the alphabet and all the figures. Her sister very patiently taught her various

colors, so we had many things to work with in helping Anna to restore her sight. I owe so much of our success in her treatment so far, to her dear little sister Ella. (To be continued.)

Preventing Imperfect Sight in School Children

***By* ELIZABETH HANSEN**

[Editor's Note.—The future of our country is in the hands of the children. The future of the children is in the hands of the teachers. I wish there were more teachers like Miss Hansen. She has solved a problem in her school of the prevention of myopia in school children by my methods. How she overcame the usual prejudice of the Board of Health and the Board of Education is interesting.
I recommend her methods not only to all teachers, but also to all parents.
The following letter from Miss Hansen is worth while:]

308 North Prospect Ave.,
Park Ridge, Ill.

Dear Dr. Bates:

I knew you would be interested in the children's compositions—they are wonderful, and the children were just as alive as their compositions.

Four times a day, immediately after the opening of school in the morning, two recesses and noon, the school victrola is rolled in, classical music by piano, violin, orchestra or the principal song from the broadcasted opera is played. The disc chosen is played all week. They were taught to palm and sway. Sometimes they are to use their imagination on the music and weave that imagination into a three-sentence paragraph. Sometimes the memory is brought into play and we have created on paper, sunsets that were as impressionistic and brilliant as any of that class of painters could produce. Another time "Crack the Whip" was used. The papers were full of life and motion. Anything that they are interested in and touch with their daily activities, brings the best results.

Ten or fifteen minutes at noon we wanted to see how well they could read the Test Card, and the few who could stand 30 to 36 feet away and read the 10-ft. line were very proud of their eagle eyes, as they called them.
We kept a record of the improvements. Their own stories tell most plainly how much they enjoyed it, what it did for them and others. These children are now in another room and palm when they feel the need of it. The effect is wonderful.

Lena Bianche was most resentful when she first came to the room, about palming. She would do very little work, she had severe pains in eyes and head. Would not palm because it hurt worse when she tried, but with much persuasion she DID try. She couldn't imagine anything at all, couldn't bring to mind a story or flower or—well—nothing. I asked her what she liked to think about when she closed her eyes. A mourning veil, belonging to her mother—she was morbid to the last degree. Still the feeling between us was strained. This, of course, could not go on. We had a quiet talk, when she told me that she didn't intend to give up her glasses and believed that was what I wanted her to do. After much talking she finally believed and remembered that such a thing as glasses was never spoken of except to ask the children not to wear them when palming. But the thing that gave her faith in me was when I told her that her imaginative powers in her story work were improved a 100%, and that if she would keep up the palming in school (not at home) until June, wear her glasses by all means; they were hers and she had a right to them, that I would bet her a quarter she would believe in me. The case was dropped. I just noticed that she palmed and looked happier.

In the early part of June we were at the Art Institute when she sided up to me and asked if I had noticed anything. I said, "Well, yes, you look more cheerful—you haven't your glasses—are they broken?" She took my hand and confided to me that she did not need them any more. We tested her the next day and she was right—she could see normally. What is more she has taken two prizes for composition work. One of $2.50, a "Thrift Essay," and the other of $100.00 from the Herald-Examiner on the Spark Plug contest and composition.

Now this stuff is just scratched off hurriedly and if you wish to use it, I will be glad to make it more intelligent.

Most cordially yours,
ELIZABETH D. HANSEN.

[These are the compositions of which Miss Hansen spoke. We picked a few of the most interesting from the fifty submitted. They are copied exactly as written, and we know they will appeal to our readers the way they did to us.]

SELECTED ESSAYS ON PALMING BY SCHOOL CHILDREN

Palming has helped me a great deal in my studies and has given me my beautiful imaginations come to me when I am palming. If we did not have palming four times a day I would not get a hundred in numbers from our principal.

The first time Miss Hansen told us about palming I went home and I let my mother palm for thirty minutes and she did it every day and hasn't any glasses to wear, and I sure was happy to see my mother without glasses. It was just like wearing crutches on the eyes.

My eyesight is as strong as electricity, I could see very far in the distance and what do you suppose did it. Palming; which my teacher taught me a year and a half ago in room seventh. Palming is the best to do for your eyes so as not to wear glasses.

I have strengthened my imagination and vision by using the exercise of palming. It has helped me in many of my studies which

were very hard for me to learn. I have won a prize in the Noel State Bank Compositions. It is all I owe to palming.

Palming has done to me a great deal. My eyes are better than they were two years ago. Miss Hansen is the only teacher in the Carpenter School teaching palming.

I taught my mother to palm. One day she said, "Peter go and buy me medicine for the eyes," and I said, "You don't need any medicine, do this, put your two hands to your eyes and shut your eyes and only see black." She did that and I went out. After one hour I came back. I saw her still palming. I said, Ma, how are your eyes? She said, "They are all right now and so I didn't buy any medicine."

While I was palming I was thinking how to do my English. I was wishing for my passing mark. I was willing to try my best for the next grade. We made many mistakes in our English. The Snellen Test Card made our brain think a little better by palming. I thank you, Mr. Bates, for the Snellen Test Card and the palming that the teacher taught us to do.

Palming has increased my eyesight every time I palm. It has made my brains stronger. Whenever I am tired or my head aches I just have to palm and think pleasant thoughts when I am all right.

My father who is not so well is not strong. Last night my father's eyesight was so poor that he had to wear glasses even though they are his enemies. I came home and told him how to palm. He has palmed five minutes every night and now he can see plainly and is much stronger.

Palming is a great helper to me. When I came to room six our teacher Miss Hansen taught me how to palm, and to this day I don't have to wear glasses any more.

One day my uncle told me his eyesight was getting weaker every day and I told him about our teacher how she taught me how to palm. He did the same and his eyesight improved.

Miss Hansen is the only teacher that gives palming in the Carpenter School. Since I have been in Room six my eyes are better. Miss Hansen tested my eyes a few times and I improved a great deal.

My mother had a headache. I told her to put her hands before her eyes, and not let any light get in. She did this and she felt better. My elder sister was wearing glasses, I told her to palm for twenty-five minutes. She did this for one week. She went to the doctor and he was surprised because her eyes were cured and he said, "You don't have to wear glasses any more."

Palming has improved my imagination and eyesight. It also helps me clear my mind, which I call "Making my mind a file and not a pile." What I mean is that it helps me not to forget. Before I knew anything about palming my eyesight was very poor and I had to strain if I wanted to read. From this straining I had many headaches, but now I even can read fine print and I don't know how a headache feels like.

[Editor's Note.—Mrs. Lierman, Dr. Bates' assistant, was so impressed with Miss Hansen's letter and so touched to think that there were teachers who did take an interest in the school children's welfare, that she immediately sat down and wrote the following letter to Miss Hansen:]

This is a true story of Emily Lierman’s childhood.

Feb. 12, 1924.

My dear Miss Hansen:—

When I came to my office this morning Dr. Bates told me about your wonderful letter and asked me if I would like to read it. I want you to know that I feel just as he does about that letter. It is the most wonderful letter I have ever read in my life. Perhaps you do not realize it but there are a million words in between the lines of your letter that I understand very well. They are in your heart and you are able to give what a child needs so much, your wonderful love and understanding.

Your letter reminded me of a little girl of long ago. She was a sickly little girl and while her grandmother, who loved and cared for her, was in the home, she was happy but after the grandmother had left her home, she was a very lonely little girl. She had three brothers, one older than herself. She also had a stepfather who did not understand children at all. Her mother, while she was very tender and self-sacrificing, had to neglect her children a great deal in order to be the bread-winner of the household. This little girl knew nothing but an Industrial School where there were five teachers altogether and a Principal. Every one of these teachers loved her as well as did the Principal. When this little girl graduated from this tiny school she became panic-stricken as she walked into the big Public School to the first grade of the Grammar. She was sickly but did not complain much because one little stranger after another kept coming into her home and that meant more burdens to bear.

With a great deal of difficulty this little girl went on from the first to the second grade of the Grammar and as she was forced to care for the babies after school hours and also in the morning before she left home for school, she did not have the time to do her home studies as other children did. There was no use complaining because she was afraid her stepfather would scold and she feared him very much. She failed in the second grade and had to stay there another term and in both terms she had the same teacher. This teacher was just your opposite, very short in her words, very strict and very unforgiving. She wore glasses and she would stare out of her eyes in such a way that most of the children in her class, strained as the little girl did.

Her last recollection of school days was a lesson in History. Two girls used one history book to read from. The little girl who held her book with her pinched her forearm as she sat very close and instead of the 'little girl crying out loud with pain, she giggled. The teacher asked who laughed. She immediately raised her hand. The teacher ordered her to the front of the class and told them how stupid the little girl was and as an example to the rest she sent the little girl out to the Principal. The little girl had to wait outside on a bench where she was entirely forgotten, until the janitor found her and let her out after five p. m. She told the truth at home and another punishment awaited her by her stepfather. The little girl never went to school again.

She was next oldest to a family of ten children and whenever a new baby came she was appointed mother to the next youngest child. As the little girl grew up she knew very little else but to mother the little ones who loved her so much. There is much to tell, but this little girl never knew that she could do anything worth while outside of giving her love to little ones, until she had grown to womanhood and married and then someone told her that she could really do something worth while. As a patient, she came to Dr. Bates and after he cured her imperfect sight and other troubles, he inspired her to help him in this wonderful work. He has been her teacher, not only in Better Eyesight but also to study other things as well. The little girl I started to tell you about, is myself.

How I wish I could be near you every day and watch you as you give your love and your life to the children in your charge.

You cannot understand now just what you are doing for those children but later on in life they will think back to you and remember all the wonderful things you did for them and how you cured their imperfect sight. Is there anything more wonderful in this world than to make people see? You are not only curing the children's eyes but you are instilling in their minds more wonderful things than better sight. I cannot say too many times to you, God bless you.

When you come to New York please come right straight to me because I love you.

Sincerely yours,
EMILY C. LIERMAN.

Minutes of the January Meeting

***By* MAY SECOR, RECORDING SECRETARY**

THE January meeting of the Better Eyesight League was held at 383 Madison Avenue, on January eighth; a discussion of the various phases of the Bates Method was followed by the annual business meeting of the league.

Among the clinical cases reported were two of special interest. A high school boy who was suffering from myopia was relieved, after one treatment, to such an extent that he was able to dispense with three pairs of glasses which he had been using. An acute case of divergent squint, in a high school girl, was noticeably relieved in consequence of two treatments. Dr. Achorn spoke of the important roles which relaxation, memory, and swinging play in restoring normal vision.

Dr. Bates suggested:

A. Methods for the elimination of myopia in school children, without the use of glasses.

1. In each class room have a Snellen card hanging where it will be plainly visible to the pupils.

2. Have each pupil read the Snellen card several times daily.

3. Have the pupils palm and swing daily.

4. Since perfect sight is contagious, and imperfect sight is contagious, consider it your duty as a teacher, to acquire normal eyesight without the use of glasses.

Note:—Nurses, osteopathic physicians, and medical physicians will find that the acquisition of normal eyesight without the use of glasses will render their work more effective.

B. Points to be considered by all readers.

1. Imperfect sight is the result of hard work; effort produces strain; perfect sight is attained with ease; lack of effort produces relaxation.

2. Tension indicates imperfect relaxation; stare, effort, trying to see—these interfere with perfect vision.

3. Under strain one cannot imagine, remember, nor see perfectly.

C. To read diamond(and microscopic) print:

a. Hold the print not more than twelve inches from the eyes; then move it closer.

b. To eliminate staring, move the head and eyes while reading; also, move the card or book.

During the annual business meeting reports were presented by the treasurer, Mrs. Marsden, and by the secretary; both reports were encouraging, and urged the members to put forth, during the coming year, even greater effort to advance the work of the league. The following officers were elected for the ensuing year: President, Miss Kathleen E. Hurty; Vice-President, Clinton E. Achorn, D.O.; Recording Secretary, May Secor; Corresponding Secretary, Mr. Nicholas A. Weiss; Treasurer, Mrs. William R. Marsden

Next Meeting of League

Miss Secor’s report is very interesting and encouraging. Much benefit and helpful suggestions are received from these meetings, and the officers do their utmost to make the meetings pleasant.

The March meeting falls on the 11th, and we invite everybody to turn out, to make it the usual success.

Announcement

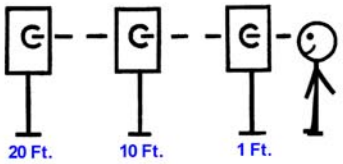
Due to a typographical error the January and February issues of the Better Eyesight Magazine quoted the bound volumes as being sold for $3.00. This should have read $3.50.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

April, 1924

Distance of the Snellen test Card



Practice shifting on letters on 3 identical eyecharts placed at 3 different distances. Example; shift on the C on the close chart. Then shift on the C on the distant chart. Then shift on the C on the close chart, then distant, close...
Switch back and forth from the close or distant chart to the middle chart and shift on the C.
Practice with both eyes together, then one eye at a time, then both eyes again.
Use the memory, imagination: shift on and remember, imagine, see the C clear at different distances with the eyes open, then in the imagination with eyes closed, then eyes open again. Blink, relax, practice central fixation, do the sway, think a positive thought.

THE distance of the Snellen Test Card from the patient is a matter of considerable importance. Some patients improve more rapidly when the card is placed fifteen or twenty feet away while others fail to get any benefit with the card at this distance.

In some cases the best results are obtained when the card is as close as one foot. I recall a patient with very poor sight who made no progress whatever, when the card was placed at ten feet or further, but became able to improve the vision very materially with the card at about six inches. After the vision was improved at six inches the patient became able to improve the card at a greater distance until normal sight was obtained at twenty feet. Some cases with poor vision may not improve when the card is placed at ten feet or further, or at one foot or less but do much better when the card is placed at a middle distance, at about eight or ten feet. Other individuals may not improve their vision at all at ten feet, but are able to improve their sight at twenty feet or at one foot. I recall one patient with 20 diopters of myopia whose vision at ten feet was peculiar. The letters at twenty feet and at one foot were apparently all the same normal size, but at ten feet they appeared to be one-fifth of the normal size. Practicing with the card at twenty feet or at one foot helped him greatly, more than practicing with the card at about ten feet. While some patients are benefited by practicing with the card daily always at the same distance, there are others who seem to be benefited when the distance of the card from the patient is changed daily.

Concentration

***By* W, H. BATES, M.D.**

THE dictionary defines concentration to be an effort to keep the mind fixed on a point continuously. It can be demonstrated that this is impossible for any great length of time, a few seconds or part of a minute. All persons with imperfect sight whether due to nearsightedness, astigmatism, cataract or glaucoma try to concentrate. Since concentration is impossible, trying to do the impossible is a strain. It does a patient no good to tell him that concentration or trying to concentrate is an injury. To obtain real benefit he must prove the facts, experimenting on his own eyes.



+Eyes closed - Remember, imagine and shift point to point on the letter C.
+Next: Stare - keep the minds eyes fixed, (not shifting, immobile) on one point (small part) of the C's notch and tryto keep the C, notch stationary. Notice strain, tension occurs, the memory, mental image of the point, notch, fades, blurs.
+Next: Shift point to point, left and right on the notch and see it move in the opposite direction the minds eyes shift to.
This shifting and oppositional movement (swing) prevents the strain, physical, mental immobility of concentration and improves the memory, imagination and clarity of vision.
+Practice this with the eyes open, closed, open.

Most people can look at the notch at the top of the letter C at ten or fifteen feet and try to keep their minds fixed on one point of the notch continuously. After some seconds all patients demonstrate that an effort is required and that the longer the point is fixed, the greater becomes the effort. The eyes, and the mind become tired from the effort and sooner or later the eyes move away from the notch or the vision becomes blurred. This seems like a simple demonstration, but it may fail with individuals who have the ability to imagine erroneously that they are concentrating successfully and continuously, while unconsciously failing by closing the eyes or blinking or by shifting to some other point. These cases are difficult to manage and usually require a great deal of patience and ingenuity before the patient becomes able to demonstrate the facts.

With the eyes closed the patient may be able to remember a letter C with its notch, continuously, and demonstrate that the eyes are moving from one point of the C to another. If the patient is directed to keep the mind fixed on one point of the notch continuously and endeavor to keep the point stationary, after a few seconds or longer the notch or the point are not remembered. If one looks to the right of the notch the notch is always to the left of where one appears to be looking with the eyes closed. Still with the eyes closed, if one imagines they are looking to the left of the notch, the notch is to the right. Every time the eyes or the mind look to the right, the notch in the C moves to the left. Every time the eyes or mind move to the left the notch moves to the right and by alternating, looking from one side to another, one can imagine the notch of the C moving from side to side in the opposite direction a short or a longer distance. This movement or swing prevents concentration and the memory, imagination or vision usually improve.

The normal eye when it has normal sight does not try to concentrate. If one consciously tries to concentrate the vision always becomes imperfect.

One day a professor of Psychology called at the office to consult me about his eyes. His first remark was:

"Doctor, I have lost the power of concentration. My eyes are very bad and so far I have not been able to obtain glasses which could help me. I am so fatigued most of the time that I find it exceedingly difficult and often impossible to deliver my lectures. I have no appetite; I do not sleep well and feel quite miserable generally."

His vision with each eye was normal, 15/10 and although only 40 years of age he was not able to read the newspapers. The first thing I asked him to do was to try and keep his eyes on the left hand side of the small letter O, 15/15. After a part of a minute I

asked him how he was getting along. He replied: "Badly. I lost the letter O. The harder I try and with all the efforts that I make it is impossible for me to bring back that letter O and, in fact, it seems to me that the harder I try the less I see."

I said to him. "When I try to concentrate on the left hand side of that letter O my vision soon fails, just like yours did."

He jumped out of his chair and said:

"Wait a moment, Doctor," and went out into the waiting room and brought back with him a friend who was apparently perfectly well and who had normal sight. He asked his friend to try to keep his eyes and mind concentrated on one point of the left hand side of the small letter O. In a few seconds the friend looked away and said to the patient:

"Don't ask me to do that again."

The patient asked: "Why?"

The friend replied: "Because it spoilt my sight and worse than that it gave me a pain and a headache and I don't like it."

The patient smiled and motioned to his friend to retire to the waiting room again.

"Pardon the confirmation," the patient said and asked this question:

"If I avoid looking at a point continuously will that help me?"

I answered: "Yes it will help you and if you always avoid concentration you will always be relieved of your eye and nerve trouble."

I suggested that he close his eyes and demonstrate the facts that it was just as impossible for him to concentrate on the memory or a mental picture of a point on one side of the letter O, and that when he tried to do it he lost the memory of the O and the effort to concentrate, while it interfered with his memory, also made him uncomfortable.

I asked him if he had demonstrated sufficiently to be convinced that one cannot concentrate for any length of time when one looks at a point or when one remembers a point with their eyes closed.

He replied: "I am convinced. I wrote a book once on concentration and it had quite a sale. I have been teaching concentration for years and I have many friends who are also teaching it."

My answer was this: "Let me remonstrate with you and with all people who advocate concentration. In the first place you do not know what concentration is, what you are doing, or that you are teaching people to ruin their eyesight and their general health. It is the effort, the concentration which is always present with imperfect sight, with pain, fatigue of the eyes and the body generally. You can demonstrate that with the help of trying to concentrate pain can be produced and other symptoms of disease. It is not possible to improve the eyesight without eliminating concentration or the stare. One cannot see, remember or imagine when concentration is practiced or an effort made to practice concentration."

I taught the patient to shift, to keep looking from one place to another because it prevented concentration. I taught him how to imagine things moving which also prevented concentration. Palming also helped him very much. The swing and the blinking at the same time gave him the greatest relief and I kept him practicing the long swing and the blinking for a considerable time, an hour or longer, when he declared that he felt perfectly well and not only could see the Snellen Test Card with normal sight continuously but he also became able to read the newspaper without any difficulty and also diamond type at six inches or less.

What became of him? I received a letter recently from the gentleman in which he said among other things: "Thank you very much for your inquiry. I have changed my occupation and no longer teach concentration. I feel perfectly well and happy and am full of gratitude for what you did for me."

One day a lady came to see me with a child about four years old suffering, from an alternating squint. Sometimes the right eye turned in, at other times the left eye turned in. His mother said the child was quite nervous and had not been strong or well for some time. With the mother standing and facing me I took hold of both her hands and had her sway in unison with me from side to side. The child was interested. I then took the child in the circle, the mother holding one hand and I the other and we all three swayed from side to side. The child was delighted and enjoyed it very much.

I said to him: "Keep looking up at the ceiling," which he did while swinging. The color came into his face, he smiled and laughed and best of all the eyes were perfectly straight. I advised the mother after her return home to encourage the child to laugh, sing, to play, to dance and to have a good time generally and that she should spend some hours daily playing with the patient.

She said: "I don't know any games."

I answered: "I will teach you a few," and I placed the mother in one comer, the little boy in another, while I stood in the third. When she tried to run from one corner to another, I ran after her and tried to get there first. The child sought another corner and got it, while I tried unsuccessfully to beat him to it. It was not very long before the child was laughing and screaming with delight. We kept this game up for quite a while and some of the patients in the waiting room came and looked in at the open door to see what was going on. The more the child laughed, the more he screamed, the more he ran, the straighter became his eyes.

The mother said: "That is easy to do."

My reply was: "I am not so sure of that. You have many duties and I am afraid you will neglect the child."

She answered: "Oh, no, I promise you."

I requested her to write to me and let me know how he was getting along at the end of a week. At the end of the week instead of writing she called and when the little boy saw me he ran to me, threw himself in my arms and held up his face to be kissed. I was quite willing to kiss him because his eyes were perfectly straight.

'Concentration' from Ophthalmologist Bates 'Medical Articles':

CONCENTRATION

For many years it had been drummed into my mind by my teachers when I first went to school and later by my professors in college, that in order to accomplish things and to make a success of life, one should practice concentration. Recently in New York I received an advertisement from a man who delivers popular lectures, an invitation to attend the lecture with the title "Concentration the Key-note to Success." About the same time one of my patients suffered very much from imperfect sight. The patient bought a book of 500 pages on concentration. He bought the book to improve his memory and sight.

For many years from time to time patients from the faculties of Columbia, Yale, Harvard, Princeton, Cornell and other colleges come to me for treatment of their eyes. They all say that not only are they unable to use their eyes for any length of time but that they are also ill in a great many other ways, physically, mentally, with their nerves all shot to pieces. They complain that they have lost the power to concentrate.

By investigating the facts I find that invariably they have been teaching concentration. It does me a great deal of good personally to get square with them because these are the people who cause so much imperfect sight. It can be shown that all persons with imperfect sight are trying to concentrate. I have repeatedly published and described the evidence which proves conclusively that concentration of the eyes is impossible.

Trying to do the impossible is a strain, an awful strain and the worst strain that the eyes can experience. So many people have a theory that concentration is a help and if we could all concentrate we would all be much better off. The trouble is that concentration is a theory and not fact. If you try to concentrate your mind on a part of a large letter of the Snellen test card at ten feet or twenty feet it can be demonstrated that the effort fails and the vision becomes imperfect.

The same is true of the memory and of the imagination. The dictionary says concentration is an effort to keep your mind fixed on a point. I have tested a great many people and not one of them was ever able to accomplish it for any length of time, and the result is always bad with the eyes, with the memory, with the imagination, with the nerves of the body generally. If the professors of concentration were wise they would avoid trying to practice it. It is only in that way that they can avoid trouble.

Stories from the Clinic

50: The Blind Girl

***By* EMILY C. LIERMAN**

IT is very easy to get into a habit, at least I find it so. I had been in the habit of calling Anna Bernard, My Blind Girl, or, My Blind Patient, but I had to get out of the habit because Anna can now see. Her vision is not normal by any means. No one could expect that. Not if they had seen Anna at the beginning of her treatment. People who have had fairly good sight and then acquired cataract and other diseases of their eyes have a fair chance or a better chance to regain normal vision. I have seen many such cases entirely cured after they had intelligently carried out our treatment. But, Anna, who was born blind, with cataract and also acquired other diseases, was the greatest problem I ever had. I want to say this for Anna: If she would not have had the faith in me or in my ability to benefit her, I could not have helped her. She did as she was told and that was a great deal. For instance, Anna was caning chairs for a living. She could earn at least six dollars per week. But, when I told her that she stared and strained her eyes while caning chairs and that I feared she would be wasting her time and mine, if she continued to do this work while under treatment, she gave it up. It was not easy for her to make this sacrifice, because she was giving up her independence. Her great desire was not to be a burden on her family. She wanted to help instead of being helpless.

Her wonderful mind helped her however to realize that if she could see with eyes that had always been sightless, she would be able later on to earn much more than she could at caning chairs by the sense of touch.

During the months of October and November, 1922, Anna made steady progress. She could read the test card up to the forty line at a foot or so from her eyes but the smaller letters she read holding the card quite close to her face. She came every Saturday morning accompanied by her sister Ella as usual. She had something to tell me. Now she was going to the movies and sitting about fifteen or twenty feet away, she could at times see the heads and faces of people on the screen. She had to keep up the body swing and also to blink constantly, otherwise everything before her became a blank. If she did not keep up the practice all the time, the staring and straining to see always lowered her vision.

One day I had three visitors in our office whom I had invited especially to see the progress Anna was making. One of my visitors was a lady who happened to be in our waiting room the day Anna appealed to me first for help. This lady was a school teacher, a delightful person with a great deal of love for others. I placed her at a desk in one corner of the office, the desk separating her from the patient. To her left I placed a young man, a relative of hers who was also troubled with imperfect sight. To her right sat another young man who was at the time under treatment by Dr. Bates. All objects seen by Anna on the street and elsewhere were seen under favorable conditions, either in the bright sunlight or under strong electric light. While at the movie theatre, all lights being out, she was able to relax enough to see objects thrown on the screen. Now, I was anxious to find out how much she could see as she entered the office, where I had purposely lessened the amount of light. As she stood in the doorway I asked her if she saw anything unfamiliar in the room. Our visitors were perfectly still and intensely interested. Anna began to blink and swing her body from side to side, which was always a benefit to her. She looked about the room and then back again to the right where the visitors were sitting. She smiled and immediately walked unassisted to the desk, and as she kept up the blinking, she leaned over the desk, and said the center figure was a lady with a light colored waist on. There were two gentlemen also; one on either side of her. After praising her, I placed her in a chair to palm and rest her eyes for a little while. This was always necessary because in her eagerness to read or tell what she saw, she strained unconsciously and her vision blurred.

Ten minutes later I asked her to follow me about the room and tell me what she saw. A Brazilian butterfly, in an oval frame hanging on the wall, attracted her and at three feet she was able to see the color of it. As she had never seen a butterfly she tried to tell me what it might be. She remembered that at one time a butterfly was described to her, so she said it might be one although she was not sure. The memory of the form of an object explained to her, helped her to really see it. She was placed before a mirror and immediately she saw what it was.

I never thought when I first saw Anna, that we could accomplish so much. In her home she helps with the housework and picks up things and places them where they belong. She sees the steam from the boiling tea kettle and reads the large headlines and the next size type in the newspapers. When she first learned to write with crayon for me, she wrote something in a note book which I hope to have photographed for my book, so that those who are interested may see what she learned to do. Perhaps not all blind patients could have accomplished what Anna did. Such an extraordinary mind as she has, is very rare. Her cheerfulness, her hope of seeing helped me to help her too. Her smile was with her all the time and her gratitude to me and her faithful sister was great.

She does not come for treatment just now but her letter of February 11, 1924 reads:

"My dear Mrs. Lierman,

It pleased me greatly to receive your letter and I appreciate your interest in me very much. I am not caning chairs any more but am taking a commercial course. With kindest regards, I remain

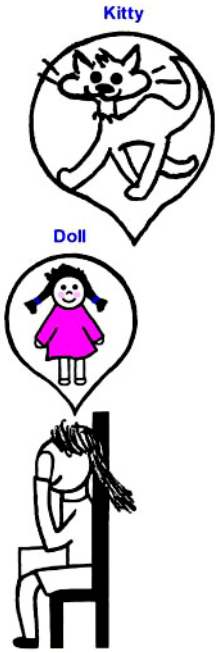
Sincerely,
ANNA BERNARD

Nancy's Mental Pictures

***By* FLORIAN A. SHEPARD**

LAST week, in her piano lesson, nine-year-old Nancy couldn't play one of her "review pieces," and her memory was all mixed up. Something needed to be smoothed out.

"Shut your eyes, Nancy," I told her. "It is easy to remember. You can see a picture of it."
"I don't see any picture," she answered.
"You can see a picture of the page, can't you?"
"No, Miss Shepard."
"Well, perhaps you haven't looked at the music lately. See, here it is: look just at this first little black note on the lowest line. Now shut your eyes and remember it."
"But I can't see a picture of it," she repeated.
"You can see a picture of the piano keys, can't you?"
"No, Miss Shepard." She was trying to do what I asked, but her voice sounded baffled.
"Nancy," I suggested, "have you been making valentines lately?"
"I've made some, but not this year."
"Well, what have you done lately that you like to do?"
"I play with my doll lots."
"Your dolly! What's her name?"
"Betty,"
"And what color are Betty's eyes?"
"They're blue—dark blue."
"Can you see them when you shut your eyes?"
"Yes, I can see her eyes," and she smiled.
"When you look at her right eye, you notice that best, don't you? Then you can notice her left eye best." She nodded. "Now look at her feet, first one foot, then the other. Now look back at her eyes. Do you see her?"
"Oh, yes."
"Now hold her up by the piano. Can you see the music?"
"No, and I can't see her either now."
I had her think of Betty's eyes again; and when she could remember the doll, I told her about the cat that walked across his master's piano so comically that the gentleman wrote a piece about it and called it the "Cat's Fugue." Then I asked her if Betty couldn't walk on the keys and play "fugue," too.
"I can see her walking on the keys!" she cried.
"And can you see the music on the rack behind her?" I suggested.
"She's busy doing something else now," she explained. "She's into the sugar."
Presently we brought her back to the piano keys.
"I can see the piano now and the music, too," said Nancy. We both smiled.
"Well, now, how did we get that picture of the music?" I asked her.
"By thinking of other things first," she replied,—and those are the very words that Dr. Bates has often used in helping patients to improve their memories!
It took only a few moments then to get the piece nicely straightened out, and we went on easily to others. At the end of the lesson, just for fun, I tried something else with Nancy.
"Can you remember the dolly now?" I asked.
"Yes, I can see a picture of her."
"Look at her eyes; now look at her feet. When you look at her eyes, you don't notice her feet so well, do you? And when you look at her feet, you don't see the eyes so well. Now can you look at the eyes and the feet at the same time, and see them all just as well."
"Yes, I can see them all very well."
"I don't think you can, dear," I told her. "I think you are looking first at one and then the other."
"Well, that's the way I do it," she replied, as a matter-of-course.
"But now look at both eyes and feet at the same time," I directed. "What happens?"
"Why, it gets dim," she exclaimed, in surprise. So she found out what happens to any of us, with eyes open or closed, when we try to look at too much at one time. (Improving memory, imagination improves the clarity of vision.)



Remembering, Imagining clear mental pictures improves the memory, imagination, relaxation and clarity of vision.
The girl palms and thinks of her doll, (a favorite thing), remembers, imagines, shifts part to part on her doll seeing one part best at a time (Central Fixation). Doll is imagined clear, in color. This improves the memory, imagination and clarity of vision for other objects.
Remembering mental pictures of a pleasant object, subject relaxes the mind, eyes, improves the vision.
She shifts on a clear mental image of her kitty cat.
Sees it in motion, playing.

Report of the February Meeting

By* MISS MAY SECOR, *Secretary

ON February twelfth the League for Better Eyesight held its regular monthly meeting at 383 Madison Avenue. The meeting was well attended and proved very interesting.

Dr. William West, an osteopathic physician of this city, presented an exposition of the application of Dr. Bates' system to the alleviation of functional diseases of the mind. Dr. West uses the Bates System as a means of assisting the patient to gain control of the conscious mind. The patient is taught the various Bates exercises, and is instructed to practice them several times each day; this relieves eyestrain, and alleviates mental strain. The patient is instructed also to practice the exercises, or to perhaps simply think of the "C" or "O," whenever he finds himself losing self-control. By giving his attention to eyework for even a short period the patient secures relaxation, the nervous strain is relieved, and self-control returns. Dr. West reported the following cases:

Woman 28; profound neurasthenia of suicidal type. In two weeks suicidal thought quelled, and insomnia and hysteria controlled.

Man 20; mental depression overcome in three weeks.

Woman; nervous case, lost voice. Completely cured.

Woman 40; neuralgia of eyes. Completely cured without the use of glasses.

Lack of self-control greatly enhances symptoms of a pathological condition. By means of the Bates System Dr. West assisted two adults to regain self-control, and thereby reduce symptoms. One patient was enabled to eliminate nausea during finger therapy for tonsilitis; the second patient found that self-control thus gained greatly reduced discomfit resulting from hayfever. Other patients were enabled to control intense emotions of fear and anger.

Dr. Bates reported the success of Miss Elizabeth D. Hansen's work in a Chicago school. (Please consult March number of Better Eyesight Magazine for details.) Dr. Bates also called attention to the effect of eyestrain upon the work of the student. Eyestrain causes mental tension which greatly hinders the learning process; conversely, the relief of eyestrain not only renders vision normal, but relieves mental tension, and permits the neurones to function normally. Among the effects of eyestrain are:—irritation of the eyelid and eyeball, "watering" of the eyes, glaucoma, and detached retina.

Following Dr. Bates' discussion the meeting was adjourned.

BATES EVENING AT THE PSYCHOLOGY CLUB

The meeting of The Psychology Club, Mr. Henry Knight Miller, president, which was held on the evening of February twenty-eighth, was given over to a discussion of the Bates Method.

Dr. Clinton E. Achorn, Vice-president of the League for Better Eyesight, presented interesting reports on a number of cases. Dr. Achorn is a former pupil of Dr. Bates, and is meeting with marked success in the correction of visual defects without the use of glasses.

Dr. Bates discussed several phases of his method, and remained until a late hour replying to questions. Mrs. Lierman reported several clinical cases.

The Tin Soldier

***By* GEORGE GUILD**

THE little boy went to sleep with the tin soldier held tight in his hand. After a little while he began to dream and he imagined that he was out in the pretty sunlight with the green trees and flowers and the cool grass; and that there were men, women and children walking around. Off in the distance were a number of targets each with a bull's eye, a round black spot in the middle, with black and white rings surrounding it. There were soldiers and sailors, all made of tin, but with a wonderful intelligence, who walked up to the firing line, aimed their guns at the targets and blazed away. The little boy's tin soldier kept fretting, fuming and scolding, saying over and over again:

"Let me at them, let me at them. I could hit the target, I could hit the bull's eye, I could win the prize."

And so the little boy granted his request and allowed him to march up to the firing line, aim his gun and fire.

With a look of great disgust he came back to the little boy and said:

"It wasn't my fault I missed the bull's eye but the gun kicked me and spoilt my aim."

So the little boy said: "Well, try again."

The little tin soldier loaded up his gun, walked up to the firing line and aimed at the bull's eye. In a few moments he took his gun down, turned to the little boy and said, "Somebody is moving that bull's eye from side to side, I can see it moving. How can anyone be expected to hit the bull's eye when it is moving?"

The little boy soothed him as well as he could and suggested to him that it would be better to do the best he could, even if it did move, to still blaze away.

The little tin soldier aimed his gun at the target and said: "This is outrageous. When I try to keep the bull's eye from moving it all gets blurred and disappears just as soon as I try to imagine it stationary or try to keep it stationary."

Then the little boy advised him that if he could not see it stationary it would be better for him to see it when it was moving, since that was the only way he could see it.

And so the little tin soldier said: "Well I don't care, I will let it move and I know I can hit it." Then he raised his gun, aimed quickly, pulled the trigger and at once the signal came back: "Bull's eye." Then the little tin soldier was so pleased that he tried to dance, which was rather difficult because his joints were all tin. He found it rather creaky and hard to move around very gracefully.

Then he fired the second time, bull's eye number two. Then the third, the fourth and the fifth time and got a Bull's eye every trip. The people became very much excited and rushed up to the tin soldier and praised him and patted him on the back and told him he was the finest tin soldier that ever lived.

All this flattery pleased him exceedingly; and, always when he aimed his gun he waited till he could see the Bull's eye moving and when the movement was slow, short and easy he pulled the trigger and got the Bull's eye and this thing went along pretty much all the afternoon until the little boy got tired of the boasting tin soldier.

The next morning the sun came out bright and strong and the little boy was sitting up in bed when his mother came in to give him his usual good morning greetings. With his arms around her neck he said: "Mamma dear, my little tin soldier beat them all. Oh! he hit the target over and over again while no other soldier came anywhere near hitting it. I am awfully proud of my tin soldier and I hope you will be proud of him too, because he did so well. If it hadn't been for what you told father about Central Fixation and seeing things move or how the normal eye sees things with normal sight, my little tin soldier would not have done so well or so much better than all the others."

In the Office

***By* EMILY A. MEDER**

THE Central Fixation office is a busy one. The regular routine is continually being interrupted by telephone calls, and personal visits from people who demand first-hand information.

One of our recent visitors was a writer who wore very heavy glasses. What I first noticed was that, while I was speaking, she would stare out of the window, as though in a trance, and slowly nod her head from time to time. This was to give me the impression that she was deeply interested in what I was saying, and carefully weighing each statement.

Staring, I told her is bad (I had noticed her doing this so dropped a little hint). She broke forth in smiles and made the astonishing remark that she thought it was bad also, and that she never stared. I politely told her she did, and how.

Our little black circular has been distributed quite widely throughout the United States. The first issue contained testimonials from book readers who were benefited and desired to help others. Owing to the fact that our work is so revolutionary, a great many people think we are boasting when we happen to print a few of these. Here's what one man answered:

"I am glad to advise you that for twenty-one years I have been stone blind in my right eye and the left has been removed and a glass eye placed in the socket. After reading four pages of Perfect Sight Without Glasses the vision in my right eye has become normal, and I can count my fingers at four feet with my glass eye."

Our business of explaining Perfect Sight Without Glasses is a serious one, but as shown above, it has its amusing side.

Questions and Answers

Q—If Dr. Bates' method is practiced without professional supervision can harm be done to the eyes?
A—No harm can be done to the eyes, if the method is practiced properly.

Q—What is the best thing to practice when glasses are removed and eyes are terribly weak?
A—Palming, if it is beneficial.

Q—How long does it usually take for the eyes to get enough improvement to see without glasses?
A—Glasses should always be discarded at once in order to obtain improved vision.

Q—How can one improve their imagination?
A—By improving the memory. When the memory of a letter becomes perfect or one can remember it with their eyes open or with their eyes closed equally well, it is possible to imagine it perfect. (and see it perfect.)

Q—What is the difference between the wink and the blink?
A—Winking consists in closing one or both eyes for an appreciable length of time. Blinking the eyes is closing and opening so quickly that most people do not know they do it.

Q—If your method is followed for a short time and glasses then resumed, do they retard progress?
A—Wearing glasses for emergencies or for a longer time makes it impossible to improve the vision without glasses to any great extent.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

May, 1924

Time to Practice

MANY busy people complain that they have not time to practice my methods. They say that wearing glasses is quicker and much easier. Persons with normal vision or perfect sight without glasses are practicing consciously or unconsciously all the time when they are awake. When one sees a letter or an object perfectly the eyes are at rest. Any effort to improve the sight always makes it worse. The only time the eyes are perfectly at rest is when the vision is perfect. Persons with imperfect sight have to strain in order to see imperfectly. Persons with headaches, pain and other symptoms of discomfort in the eyes or in other parts of the body are under a constant strain to see, which is usually unconscious.

When a patient says he has no time to practice he is mistaken. He has all the time there is to use his eyes in the right way or he can use them in the wrong way. He has just as much time to use his eyes properly as he has to use them improperly. He has the choice and when patients learn the facts, to complain that they have no time to practice is an error.

Some patients object to removing their glasses on the ground that their vision is not sufficiently good for them to attend to their work, and feel that they have to put off the treatment until they have a vacation. Some of my patients have very poor vision and yet find time to practice without their glasses. Some school teachers with 15 diopters of myopia with a vision of less than 10/200 have found time to practice without interfering with their work. In fact practicing without their glasses soon enabled them to do their work much better than before.

Conical Cornea

***By* W. H. BATES, M.D.**

CONICAL CORNEA has been considered for many years to be incurable. It is usually progressive and in advanced cases besides very imperfect sight, many patients suffer with disagreeable symptoms of pain and inflammatory troubles of the cornea. Numerous operations have been performed without any improvement in the sight. In the beginning the cornea of one eye may be the only one affected. After some years both eyes may become affected.

About ten years ago a girl, aged twenty, came to me with a diagnosis of Conical Cornea in the right eye, the left eye being nearly normal. The vision of the right eye was 10/200 not improved by glasses. I told the patient that I did not think I could improve the conical cornea but I might be able to relieve her of the pain and discomfort in her good eye. The palming after a half hour or longer relieved her discomfort temporarily and, much to my surprise, the vision of the eye with conical cornea was improved from 10/200 to 10/50. The patient felt much better at this quick relief and improvement in the sight of the eye with conical cornea, as it was the first encouragement that she had had in a long time. Under the relaxation treatment this patient's vision continued steadily to improve until it became normal after some weeks. The conical cornea disappeared. The patient had not only normal sight for distance but she was also able to read diamond type as close as six inches or less and as far off as two feet. I strongly advised her to practice the palming at least two hours daily and to return for observation at regular intervals. I have not seen her since.

A second case was that of a physician, aged 40 years. He had suffered with imperfect eight and discomfort in the right eye for about fifteen years. In the beginning his vision, he said, had been improved to some extent by strong cylinders but gradually with the increase of the conical shape of the cornea no glasses were found which gave him the slightest improvement in his sight. He was first seen, May 12, 1922. The vision of the right eye was 10/200 and the vision of the left was 20/30.

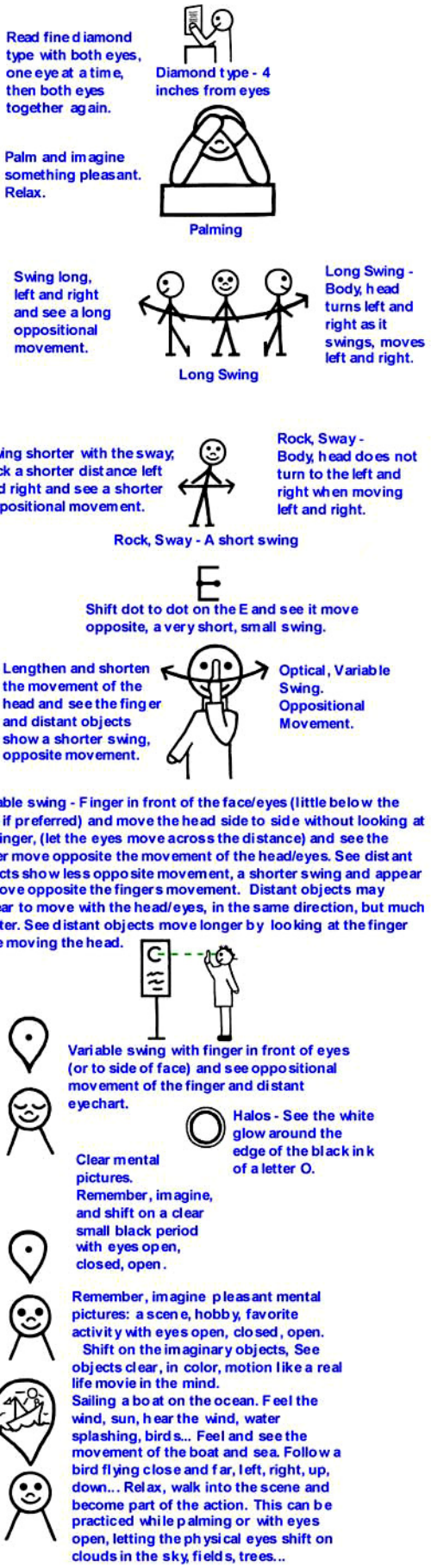
This case was very remarkable in that he obtained in about one week flashes of normal vision in the right eye by practicing **relaxation methods, palming, swinging and the memory of mental pictures**. His treatment was very interesting to me, especially his ability to do things wrong. He was a genius when it came to deceiving himself as well as others. I had considerable difficulty in restraining his enthusiasm to treat all my patients that he met. I told him that I was very anxious to have him treat people after he recovered because I believed that would be a help to him, but until he was cured it would be just as well for him not to talk about his treatment because he did not understand it and not only misled others but it interfered with his own recovery. He stopped treatment unfortunately before he was cured, but he felt that he had improved so much with me that he could go right along in the same way and complete his cure working by himself when he had time to spare from his practice. I believe he had a relapse and was not cured because I have not heard from him since he left New York.

The third case was referred to in the "Better Eyesight" magazine for November, 1922, in the article on page two, "The Variable Swing." She was a woman, aged 24, a school teacher, and was first seen October 14, 1922. She had conical cornea in both eyes. The vision of the right eye was 10/200 while that of the left eye was 10/200 plus.

With strong cylinders she obtained 20/200ths vision in the right eye and about 20/70 in the left eye. She could read diamond type at four inches with each eye, but much better with the left eye than she could with the right. Palming helped her, but her best vision was obtained by practicing the long swing alternating with the short swing. When she held her forefinger (stationary) about one foot in front of her face and a little below the level of her eyes, by moving her head and eyes from side to side, without regarding her finger, she became able to imagine her forefinger was moving from side to side opposite to the movement of her eyes.

While maintaining the swing of her finger she was able to imagine distant objects were moving opposite to the imagined movement of her finger or in the same direction that her eyes and head moved but much shorter. By increasing the amplitude of the swing of her forefinger she also increased the swing of distant objects. When she shortened the swing of her finger, distant objects she imagined had a much shorter swing or none at all. Looking at the Snellen test card with her finger in front of her was somewhat confusing. She got along better by holding her finger some inches to one side of her face, quite a distance from the Snellen test card.

This was a new method of practicing the Optical Swing; and, because the amplitude varied I called it the Variable Swing.



Like many other swings the benefit of it is not always the same. Some people get a great deal of improvement in their vision from it while others obtain none whatever. At the first visit, with the use of palming, the variable swing, the long swing, the short swing, and the imagination of the Halos this patient obtained normal vision temporarily and to me it seemed very remarkable that she should obtain such good vision in so short a time. On leaving she was told to never again wear her glasses, to practice at home the same methods which benefited her eyes while under my supervision, but nothing more was heard from her.

Other cases of Conical Cornea were treated and relieved very promptly in a short time and were kept under observation for a number of years. It was very difficult to prevent these patients from putting on their glasses from time to time without any special reason. Some told me that glasses lowered their vision for a time but that after their removal their vision slowly came back by practicing the relaxation methods. In other cases the vision did not improve at all after wearing glasses for a short time but when they came back under my supervision for treatment of their eyes the vision was again improved to the normal. The time necessary to accomplish this was variable and in some cases required treatment for a longer time than when they were first seen. Sometimes the patients would return to their former doctor who had been unable to help them, who would test them with glasses, which always produces disaster. Naturally one would not be surprised to learn that in such cases the attending physician had libeled me very strongly. When such patients returned to me they had a knowledge of physiological optics as taught in the orthodox way which was quite wonderful. No ophthalmologist of the old school has any conception of the bad mental effect on these cases of conical cornea from the glasses. Any of my patients who came to me for treatment of their eyes usually had a hard time in breaking away from the influence of the orthodox physician.

The truth is very wonderful. It is a truth that persons with normal vision have a good imagination of mental pictures, sometimes best with the eyes open and sometimes best with the eyes closed. When any patient with imperfect sight obtains a good imagination or a perfect imagination the vision becomes normal no matter what may be the cause of the imperfect sight. **A perfect imagination of a period is a cure for nearsightedness no matter how great it may be or how long it may have been present. It is a cure for farsightedness, astigmatism, cataract, glaucoma, detachment of the retina, atrophy of the optic nerve as well as conical cornea.**

Stories from the Clinic

51: Pop
(The Barber)

***By* EMILY C. LIERMAN**

I PROMISED the readers of our magazine "Better Eyesight" that some day, if I could possibly do more for dear old Pop, I would again write about him. As I became better acquainted with him, I encouraged him to talk. He was always cheerful when he came and tried to follow me in everything I directed him to do. He told me a little of his personal affairs, but was very careful not to arouse pity. Even though he has lived in the Home for the Blind for some time, he feels independent. He said, the only sadness he ever had in his life, was when his wife no longer wanted him. That was when he lost his eyesight and could not support her. After she cast him out of her home, she inherited some money and property, but before she died, she lost all her earthly possessions. All he wishes for now is just enough sight to be able to work and also see the faces of his many friends.

We worked together diligently month after month hoping he would surprise me some day and actually see. I want to be very truthful and say that even today I cannot realize that he will ever see enough to get along by himself. Yet, all things are possible and I do not lose hope, even though he is 77 years of age. One day he said, "I know I am going to see again, for once in a while I see my whole hand but it looks like a baby's hand. When I go out in the street I can see the brass railing attached to our front steps. I can see a man's face at times, when I am shaving him but I see his face a gray color instead of pink or a flesh color." Pop has always been a barber by trade.

My main point is to keep up his interest and see that he practices faithfully. In order to earn a few pennies, he caned chairs in the work shop. He stared while he was doing this work and that was a drawback. Yet I had not the courage to stop him from earning his spending money. After a day of this kind of work he complained of seeing bright colors before his eyes, which indicated that he strained while caning his chairs. For quite a few weeks he was not employed in this way, so he practiced more faithfully than ever. Then came a wonderful change in his left eye which in the beginning looked much worse than the right eye. I believe the **Sun Treatment** helped him very much. This was given him, if it happened to be a sunny day, every time he came to the office. He was placed in the sun and while looking down, his upper lid was raised and the sun was focused on the sclera, or white part of the eye with the **Sun Glass**.

The solid white mass which covered the pupil and iris gradually became less. The upper part of the iris and pupil have become visible in the left eye. The constant twitching of his eyes ceased. If I could be with him more, and remind him not to stare, I know the relaxation and rest that he gets from the treatment would give him his wish and also mine,—the return of his eyesight.

Week after week he kept coming, with always the same cheery greeting; "I am glad to see you Ma'am." I became acquainted well enough with him to say: "Now, you big bluffer, you know right well you don't see me." This remark would always bring a hearty Ha, Ha from him and then we would proceed earnestly with the treatment. Dear, dear old Pop, surely God will answer my prayers for you if it is His will that you should have your sight again. It is now the third year that he is coming to us for treatment and neither of us have given up hope yet. Only a short while ago I noticed that he was becoming more feeble and that he is not so sure of his steps as he walks along with his guide, a dear boy of fourteen years. Recently he asked me a question which was indeed hard to answer. It was this: "When do you think I will see again? Do you think in six months or so?" Before I answered I watched him and thought perhaps within six months he may be called to his Heavenly Home where there were no eye troubles; so I said, "You see I don't know for sure, but wouldn't it be great if you will see again in six months." It would be hard to put into print all the wonderful things he has promised me when that time comes. His favorite expression at the office, when he suddenly discovers a sunbeam on the carpet is "Chee Rusalem dats great." Then, in all his excitement, as his vision fades away in the next moment, he asks "Why don't I keep on seeing?" There is always the same answer, for there is only one reason, Strain. When he holds the Test Card five inches from his eyes after palming for a few minutes, he is able to see black spots on the card instead of letters. He shows me the outline of the large black letter C at the top of the card.

One day he said in an excited tone; "This week the Matron of our Home came into my room and while I palmed my eyes, she read something from a magazine to me. I laid down my pipe on a table before I palmed and after the woman left my room, I had forgotten all about my pipe. Later on, as I passed by the table I saw the pipe very plainly and picked it up. I called out to my friends

in the next room and told them about this wonderful thing. I can shave a man's face now, not by the sense of touch always, but I can really see his face sometimes,"

He calls me his Shining Light, Bless his heart. It thrills me and makes me want to do greater things and to be a better woman.

Right now I want to apologize for making an error in the first article I wrote about Pop. I understood him to say that he had once shaved ex-President Taft, but he corrected me after the article was written and said it was Prince Don Carlos and his general staff whom he shaved. This happened in the year 1876 at Newport, R. I.

Now, up to date February, 1924, the upper part of the iris and pupil of his left eye is almost clear. Dr. Bates hopes as I do, for better results in the near future.

The Mind's Eye

(Memory, Imagination Improvement)

***By* EDITH MCNAMARA**

DO you enjoy your mind's moving pictures or your mental pictures? I do. I get four times the value of a trip to the country or any place else by remembering the mental pictures of it perfectly. I was not conscious at the time that while my physical eye was seeing everything around me my mind's eye was making a mental picture of it to be brought back later with the help of a perfect memory. After a few experiments with perfect mental pictures I came to the conclusion that I could only imagine what I remembered. It was impossible to imagine an object unless I could remember it perfectly. If I could not remember it perfectly it became only a jumbled up, hazy recollection of something.

I think its lots of fun playing tag with the memory or mental pictures. I like to dig out of my memory all the perfect mental pictures I can—one by one—for Central Fixation plays a big part in mental pictures, remembering one thing best at a time.

Having once been to Canada my favorite way of getting relaxed is to go there by mental pictures. I go along a beautiful country road, remember a lake that had impressed me, visualize it with my mind's eye and so on. Sometimes I skip a couple of towns and arrive in Canada very quickly and other times I get enough relaxation by just staying in one town for a while.

Why don't you try this? Perhaps someone will tell you a story that will remind you of an incident which happened years ago. Follow it up with the help of your memory and see how perfect a mental picture you can obtain. I am sure that you will find pleasure and relaxation in so doing. If you have to make an effort to form this mental picture let it alone for a while and then go back to it again and start where you left off. This will benefit you in your palming.

There is a man that traveled along the West Coast from Mexico, California, and up north. He lived there and visited every city, town along the sea and inland. He improved his memory and imagination by remembering, imagining he is again traveling, walking around visiting each city, town, one at a time as he moved along the coast south to north; Mexico, San Diego, Los Angeles, Hollywood, every town, small city along the way, San Francisco, Sacramento, Reno, Las Vegas, Oregon, Washington. He would remember and imagine every detail of the cities, towns, imagine walking around visiting places, friends, having adventures, remember, imagine in color, action, motion, feel the sun, rain, wind, hear his friends voices, like a movie in his mind.
This improved his vision.

Lecture to the Psychology Club

DR. BATES' lecture, given before the New York Psychology Club, proved to be intensely interesting. Two outstanding topics upon which Dr. Bates dwelt at great length were concentration, and the prevention and cure of imperfect sight in school children. Everyone knows of Dr. Bates' interest in helping teachers to help the children. He gave a history of the Snellen test card, the discovery of its benefits to everybody, and his efforts to have these placed in the class rooms.

Dr. Bates opened the talk by saying he was glad to speak before these psychologists, and would like to tell them a case of a professor of psychology, who was also a teacher of concentration. This case was printed in detail in the April issue of "Better Eyesight" and we refer our readers to it. It explains how one man not only spoiled his sight, but undermined his general health, by concentrating. The professor was proud of the fact that he concentrated and he believed he did it quite well. He did. So well, that if he had persisted, he probably would have had to resign from his position on account of his inability to see.

This discussion of concentration brought out the fact that teachers in schools like to have their children concentrate on what they (the teachers) are saying. One teacher who is using this method with great success, said that formerly if her children gazed at her in unblinking silence, without moving, she congratulated herself that she was holding their attention. She now has them palm while she describes things, and says that it "sinks in" better. She has them read the Snellen Test Card in the mornings and afternoons, as a sort of refreshing exercise. Reading the card, palming for a few minutes, with the windows open, does away with the afternoon languor of the pupils.

For the benefit of those who had never heard of the Snellen Card, Dr. Bates exhibited one, explaining its uses, and benefits. He explained that while he did not invent the card, he did discover the many benefits derived from reading it daily.

One of the important points brought out relative to the importance of the card was the following: It was placed in the classroom of children who did not fit in any of the grades. The pupils of this class were criminally inclined, maliciously mischievous or backward in their lessons for other reasons. He explained his method to the teacher in charge, and was gratified to find her an intelligent woman, and interested in the experiment. She followed Dr. Bates' instructions, and when he returned some months later, she had an amazing report for him. The children not only improved in their lessons, but had overcome their abnormal tendencies. In fact a good majority of them had "skipped" a class and were promoted to a higher grade.

Dr. Bates brought his discourse to a close with the report of these cases.

Mrs. Lierman was then called upon to make a few remarks. She laughingly apologized for the fact that Dr. Bates dwelt on children so much, and did not once mention any of the adult patients whom he benefited. She said that she also is anxious to help the children, but she thinks that everyone is at heart a child. Her oldest "child" is 77 years old. She calls him Pop and his story is written in this month's issue. (Mrs. Lierman is very fond of Pop, and the patients are delighted every Saturday morning with the cheerful "Good morning Pop" with which she greets him and his own sprightly answers.)

Another case of which Mrs. Lierman spoke was that of a twelve year old boy. He had perfect sight before being operated on for mastoiditis. Through the operation he became totally blind with no perception of light. Mrs. Lierman started him with the Snellen

card. After some practice with the moving Snellen test card held close to his face he became able to imagine that he saw it in flashes. After a half hour or longer he imagined that there was a black spot on the upper part of the card.

This spot became darker until he could recognize the letter C. Before he left the clinic he read letters from the 70 and 50 lines. His mother was so excited at this so-called "miracle" that she had to be placed in a separate room to calm down. (Since this article was written the boy has made such wonderful progress that Mrs. Lierman will write about him in a later issue.)

One of the points that Mrs. Lierman brought out in her talk was that a great many people have asked her if Dr. Bates ever operates. She said that he did so at the clinic and in his own private practice when it is necessary.

At the end of her talk Mrs. Lierman requested those who wished additional information to ask her questions. A great many people took advantage of this offer and the lecture did not end until after 11 o'clock.

Announcement

PRICES OF SNELLEN TEST CARDS REDUCED!

We are pleased to announce that beginning with May 1st, the Snellen Test Cards will be listed as follows:—

Paper – formerly	50c.–	Now	25c.
Mounted	"	75c.–	"	50c.
Others	"	1.00–	"	75c.

Dr. Bates' work is being introduced in schools all over the United States. The Snellen Test Card is a great factor in testing and curing children's eyesight. In order to cooperate with Dr. Bates and propagate his work further we are allowing a special discount on the test cards to teachers.

Additional information on request.

Report of the League Meetings

By* MISS MAY SECOR, *Secretary

March

THE regular monthly meeting of the League for Better Eyesight was held on Tuesday evening, March eleventh, at 383 Madison Avenue.

Dr. Achorn, vice-president of the League, called attention to the necessity of adapting the Bates exercises to the needs and temperament of each patient. The personal equation must be solved in each case.

William James has suggested that when a new theory is presented to an individual, it is well for him to inquire, "Will it work?" and "If it works, is it worth while"? Dr. Achorn advised prospective followers of the Bates Method to consider the method in the light of these two questions. Will the Bates Method work? An answer to this question may readily be found in Dr. Bates' book entitled "Perfect Sight Without Glasses," and in testimonials of Dr. Bates' patients. If the method works, is it worth while? Is it worth while to be freed from slavery to eyeglasses? If doubtful of the reply to this query, consult members of the League who now enjoy perfect sight without the use of glasses.

Dr. Bates discussed the personal equation, and assured those present that he has thus far been able to help all those who have presented themselves to him for treatment. Solution of the personal equation in many cases requires careful thought and much patience; however, it is a vital matter. Dr. Bates again emphasized the great assistance which imagination renders in restoring normal vision, and referred to several cures in which the imagination had played an important role.

It was stated that the elementary schools of several cities are conducting two types of classes for pupils who have defective vision:—

A. "Sight Conservation Classes" which care for pupils whose sight is noticeably below normal, and
B. "Classes for the Blind" which care for children having little or no sight.

Dr. Bates urged that a definite program for the development of vision be included in the daily schedule for all classes of these types. Sight cannot be restored nor improved unless the eyes are used, and used intelligently, in such a way as to eliminate eyestrain. In no case is it advisable to adhere to large print; one may begin with large print, and then train the child to use **smaller print**, teaching him how to eliminate eyestrain,—how to use his eyes normally. Teach the child to **palm,** to **swing**, to **shift**, to use his **imagination**, and to use his **memory**. Follow a definite constructive program to improve the vision of all pupils whose eyesight is below normal.

Dr. Bates stated that the continued use of large print causes acute eyestrain, and that this has been demonstrated in cities which introduced the exclusive use of large print in the lower grades of the schools; acute eyestrain and headaches became prevalent in these grades. The restoration of small print was followed by a great reduction in the number and acuteness of headaches, and cases of eyestrain.

The meeting was adjourned at the close of Dr. Bates' discussion.

April

THE April meeting of the League for Better Eyesight was held on April eighth, at 383 Madison Avenue.

Dr. Cornelia Brown, president of the Orange Better Eyesight League, reported that the Orange league has increased its membership and scope of work. Evening classes for the correction of visual defects are being conducted in East Orange by Dr. Brown and Dr. Gore. Dr. Brown urged each patient who adheres to the Bates' Method to follow the method actively and faithfully. It is by

this means only that the patient may receive a maximum benefit, and that the effectiveness of the method may be demonstrated. The speaker also advised the application of Dr. Bates' Seven Truths of Normal Sight in the performance of one's daily tasks.

Michael Angelo once stated that a man could not build a perfect cathedral unless he could **imagine it moving**. Dr. Bates correlated this principle with **shifting**. Dr. Bates also suggested **palming** and **sun treatment** as a means of securing **perfect relaxation** in the case of **inward turning eyelashes**.

Mr. George Weiss, a student of Erasmus Hall, and son of the corresponding secretary of the League, reported several cases in which he has assisted in eliminating eyestrain and myopia.

At the close of Mr. Weiss' report the meeting was adjourned.

TEACHER'S CONFERENCE SCHEDULED FOR MAY LEAGUE MEETING

The May meeting of the League for Better Eyesight will be held at eight o'clock on Tuesday evening, May thirteenth, at 383 Madison Avenue. This meeting is designed especially for teachers, and will be devoted to explanations and demonstrations of Dr. Bates' method for the cure of visual defects without the use of eyeglasses. Teachers and their friends are cordially invited to be present on the thirteenth, and to learn how Dr. Bates' methods may be applied in the class room.

Fine Print

***By* W. H. BATES, M.D.**

THE **photographic reduction of the fine print can be used with great benefit to patients suffering from high degrees of nearsightedness**. At first it has to be held at a certain close distance from the eyes and cannot be seen so well if placed an inch further or an inch nearer. When read easily or perfectly the white spaces between the lines appear much whiter than they really are and the card seems to be moving from side to side or in other directions, if one takes the trouble to notice it. The eyes are blinking frequently and this is also usually an unconscious act.

More perfect rest or relaxation of the eyes is obtained by reading this fine print perfectly than by doing some other things. By alternately looking at the large letters of the Snellen Test Card at five or ten feet or further and reading the fine print close to the eyes, one can obtain flashes of improved vision at the distance. By practicing, these flashes become more frequent and the letters are seen more continuously. The method is to be highly recommended because it seems to be one of the best methods of improving the distant vision. (Fine print also improves close vision.)

The De Graf Fund
for
The Prevention of Myopia in School Children

MR. JERE DE GRAFF was a patient who derived benefit from the treatment of Dr. Bates, and felt that something should be done to prevent imperfect sight in school children. He subscribed $7.50 for this fund. The money is to be for the purchase of Snellen Test Cards to be given to school teachers for use in the class room. When Dr. Bates learned this he offered to subscribe double the amount of the total subscriptions, provided the teachers who receive the Snellen Test Card will pay ten cents each, agree to discard their glasses permanently, and render a report of the vision of the children, as well as their own, before and after treatment, at least once every six months.

Dr. Bates has also requested the Central Fixation Company to allow a special price on the Snellen Cards for teachers using them in the class-rooms. The price, therefore, to schools will be twenty-five cents for the regular, seventy-five cents, cardboard style.

Questions and Answers

Q—What is the cause and cure of granulated eyelids?
A—The cause is strain. The cure has been accomplished by practicing the universal swing, by palming and other methods of correcting the strain.

Q—What can I do to help my sight when my vision blurs while reading?
A—Palm more frequently or imagine the white spaces between the lines are whiter than the other parts of the page.

Q—What is Trachoma?
A—Trachoma is a contagious disease of the inside of the eyelids. Consult some competent ophthalmologist for diagnosis and treatment.

Q—Does palming help nervousness?
A—Yes, when it is done right. It can be done wrong.

Q—Is Glaucoma curable?
A—**Glaucoma is curable. Some cases of blindness from Glaucoma have been permanently cured by palming for long periods of time.**

Q—Does the cataract become absorbed by relaxation treatment?

A—In cases which have been cured the opacity of the lens disappeared and the lens regained its normal condition.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

June, 1924

Blinking

THE normal eye when it has normal sight rests very frequently by closing the eyes for longer or shorter periods, and when practiced quickly it is called BLINKING. When the normal eye has normal sight and refrains from blinking for some seconds or part of a minute, the vision always becomes imperfect. You can demonstrate that normal vision at the near point or at the distance is impossible without frequent blinking. Most people blink so easily and for such a short period of time that things are seen continuously while the blinking is done unconsciously. In some cases one may blink five times or more in one second. The *frequency* of blinking depends on a number of factors.

The normal eye blinks more frequently or more continuously under adverse conditions as when the illumination is diminished, the distance is increased or the print read is too pale or otherwise imperfect. The distraction of conversation, noise, reflections of light, objects so arranged as to be difficult to see, all increase the frequency of blinking of the normal eye with normal sight. If the frequency of blinking is diminished under adverse conditions or from any cause the vision soon becomes imperfect.

The imperfect eye or the eye with imperfect sight blinks less frequently than the normal eye. Staring stops the blinking. The universal optical swing, the long or short swing when modified or stopped are always accompanied by less frequent blinking.

Blink in the early morning,
Blink when the sun sets at night;
Blink when the sun is dawning,
But be sure you do it right.

Blindness

***By* W. H. BATES, M.D.**

A GREAT many people are blind or have vision so imperfect that they are unable to find their way about a strange place with the aid of their eyes. They are usually an object of interest to their friends and are frequently recommended to try every new form of treatment which comes out that promises any relief. They are too often disappointed.

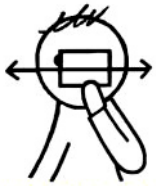
The orthodox ophthalmologist has been guided by a certain number of rules. For example: a patient who has no perception of light is at once considered incurable, no matter what may be the condition of the eyes. The first shock that I experienced in such cases was in that of a girl who had total blindness in one eye only, the other being fairly good. She had been to many physicians, and all pronounced her incurable because she had no perception of light in the blind eye. This was a long time ago, and at that time I did not know as much as I do now and told the patient that nothing could be done to improve the blind eye. The eye itself appeared normal. There was no opacity and no organic disease which I was able to find. She told me that one doctor said she was born with something wrong with the eye center in the brain, which accounted for the blindness in the one eye. However, I treated her, planning to improve the slight, imperfect sight that she had in the good eye. Much to my surprise, the vision in the blind eye simultaneously began to get better. The first improvement the patient noticed was that she could see strong light off to the outer side of the eye, while her vision straight ahead and to her left was still dark. One of the most remarkable things about the case was the rapidity with which the blind eye obtained perception of light when the vision improved for objects and letters of the Snellen Test Card. After two weeks of daily treatment the vision of the right eye had improved to 10/200, and at the end of another week she had 20/20. From the results of treatment and other reasons I believe that this was just a case of blindness from **squint** without the squint, which is called in the text books **amblyopia ex anopsia**. After doing her so much good, I expected that she would return or at least send word how she was getting along. She was not heard from again. I believe, if there had been any relapse, she might have returned. Sometimes these cases do relapse, and I learn the facts from friends of the patient.

About five years ago a patient was led into my office, blind from retinitis pigmentosa. The vision of the right eye was perception of light, while that of the left eye was 5/200. The pupils of both eyes were small, and in order to examine the interior of her eyes her pupils were dilated with a weak solution of atropine. It was followed very quickly by an attack of acute glaucoma. This subsided after about two weeks. The vision of the better eye was lowered to perception of light while that of the right eye, which had been practically blind for many years, had improved to 10/200. This was a great surprise because it was so unexpected. After many months of daily treatment she obtained normal vision in the right eye and almost normal vision in the left eye. She stopped treatment against my advice. The case was published in the New York Medical Journal, February 3, 1917.

Glaucoma is a very treacherous disease. One may have an attack and recover promptly under treatment. The same patient may have a number of attacks of temporary blindness, but sooner or later the patient will suffer an attack of glaucoma with total blindness, from which no recovery follows spontaneously. The patient goes to some competent ophthalmologist, who at once tells him that there is no hope of anything being done. At one time I examined with a microscope six eyes which had been enucleated for

the relief of great pain from absolute glaucoma. Not one of these eyes was imperfect in any way. Quite frequently I have seen cases of absolute glaucoma which came to me for treatment, and which were completely relieved by palming and obtained normal vision in a very few days or weeks, some in even a shorter time. One such case, about ten years ago, had pain so severe that he was unable to attend to his business, and had been strongly advised to have the eye removed. He came to me as his last resort. After a half hour of palming the pain disappeared, and has not returned since in all this time. I saw the patient a few days ago and he is still full of gratitude for the benefit he received.

If my method never did anything more than to relieve the tension and pain of glaucoma, I would feel that I had done something worth while. Whenever I think of those glaucoma cases I relieved, it is a very difficult matter for me to refrain from boasting. There are many eye doctors of my acquaintance who do not believe that palming does much for glaucoma, although I have gone to a great deal of trouble to advertise the fact. So strongly impressed on the minds of ophthalmologists that absolute glaucoma is incurable, that I can understand how difficult it is for men of experience to imagine that any of these cases can be benefited. Some day, soon I hope, some doctor will try the palming on a hopeless case and be gratified to find that these cases can be helped. If he has the courage to publish the facts he will find that his brother practitioners will not be as severe with him as he might expect. Some eye specialists have privately observed my work; and, although they at the time admitted that I was right and everybody else was wrong, they hesitated to indorse any of my discoveries publicly.



Eyechart close to the face and move it side to side. If the vision is very unclear and the movement of the card cannot be seen: imagine it is moving. The letters will become clear. Then practice with the card at farther distances.

Many patients have said to me: "You cured me after other doctors failed. When I went back to some of them and reported the facts, they had nothing to say. What is the matter with them?"

Recently I was asked if my methods were of any benefit to the blindness of babies who have lost their sight from an infection soon after birth. I believe that these cases can be prevented by the well-known simple treatment as most doctors agree, but after the disease has caused blindness very few or no doctors believe that much can be done to restore the sight.

Some years ago I treated a girl, aged fourteen, whose right eye was blind following a severe inflammation of her eyes soon after birth. She was unable to see moving objects with this blind eye, but had perception of light. I had her hold the Snellen Test Card in her hand, close to her face, and to move it from side to side for a half hour or longer. In the beginning she could not imagine that the card was moving, but by appealing to her common sense she admitted that she did move the card, and furthermore that although she could not see it move, she could imagine it. The next day she practiced in the same way, and told me that she could imagine some black specks on this moving card and that the card was beginning to look more or less white. In a week's time she was able, as a result of daily use of the card, to see about half the letters with the card held close to her eyes. In another week she read the whole card. Then the card was placed gradually further off, and at the end of about three months the opacity on the front part of her eye had almost entirely disappeared and her vision had improved to 20/20.

I wish to emphasize that many cases of so-called incurable blindness can be completely relieved. It is wrong for any doctor or group of doctors who cannot cure cataract, for example, without an operation, to insist that because they cannot cure it nobody else can.

Stories from the Clinic

52: A Blind Boy

***By* EMILY C. LIERMAN**

NOT long ago he came to us. Only twelve years old, but blind. His name is Lewis and he is of Jewish birth. If Lewis had been born blind he would not have had so many plans about the future, nor would he have been so sad.

During the month of March, 1923, he was operated upon for mastoiditis. Dr. Bates found with the ophthalmoscope that the boy had atrophy of the optic nerve of both eyes. From the history of the case he believed that the cause of the trouble was probably associated with an abscess of the brain, from the disease of the left ear.

After the operation for the relief of the brain abscess, a cerebral hernia appeared above and behind the left auditory canal. The hernia was about two inches long by one inch wide and projected outside the skull a distance of about one inch. For several months before the boy was seen by us the size of the cerebral hernia, we were told by the mother, had not changed. Before the operation or before the mastoid trouble he was a perfectly normal, healthy boy, full of life and hope. I shouldn't wonder but what he might have been planning to be a bank president or a radio expert, from the discussion we had together, after we became acquainted.

The morning of his first visit to us a telephone message came. A teacher from the school for the blind wished Dr. Bates would see him. The appointment was made and inside of one hour the boy arrived with his mother. Her eyes were staring at the doctor's face as he examined Lewis' eyes, straining every nerve of her body, fearing the verdict might be, "No more hope." After the examination, Dr. Bates came to my office and told me about the case and asked: "Wouldn't you like to see him? I think you could help him to see again." Oh! wonderful faith. It is the faith Dr. Bates has in me that keeps me going. His encouragement has helped me to benefit cases that would otherwise have seemed hopeless to me.

When I entered the room where Lewis was, I saw a very forlorn looking boy sitting all huddled up in his chair, staring out of sightless eyes. His mother talked a blue streak to me, which was something like this:

"Oi, mine boy that he should be blind. Blees do you dink he can vunce more see? Vun year he vus blind, can see nuttink. Before dat he vus beeg and helty."

Of course the mother heart was crying out loud for help, and it was pitiable to hear her. I tried to explain that we would do everything possible for her boy, but I could not get a word in edgeways. I just closed my eyes for a few moments and prayed for help. I then spoke to Lewis as though he could see me and placed a test card in his hands, advising him to keep his eyes closed and relax in his chair as much as possible while he was doing this. I told him it was very necessary not to worry or to think of his blindness. He could think of a sunset, he said, also a white cloud in a blue sky. With just a few minutes of this treatment he opened his eyes and saw that the card was white. I had him close his eyes again very quickly and asked him to remember the whiteness of drifted snow. He said he could remember or imagine he saw the snow, but he could imagine a white cloud much whiter. I said all right, keep remembering the white cloud, but imagine it is moving. He said he could do that easily. After a half hour or more, Lewis opened his eyes and flashed a big black spot on the top of the card. I said: "If you will move the card slightly from side to side you

will become able to see what that black spot is on the top of the card." Another half hour had passed by, both of us doing our very best, when all of a sudden my patient said, "It is a letter C!"

Then the mother screamed: "Ach Gott, mine boy sees." She threw her hands in the air murmuring all the while that her poor boy could see. Then she became hysterical and disturbed all the patients in the treatment rooms. I placed my arm gently around her and led her into my office, and then we both cried. My heart was with this poor mother, but my thoughts were of the boy, too. We had left him all alone and I was worried. I told her to offer a little prayer of thanks to Him who had heard my plea. I said, "Your God is my God, too, so ask Him to help us." I left her to see what Lewis was doing and I found him faithfully palming his eyes.



Move the test card slowly side to side, close to the eyes, blink, and 'flash clear' the letters on the card. Stand and swing (Rock or Long Swing) the body side to side for relaxation, then read the card again.

Although weary and tired after I had worked with Lewis over two hours, I was repaid a thousandfold when he read every letter of the 70 line and 50 line as he moved the test card slowly from side to side, close to his eyes, blinking all the time. He was instructed to stand and swing his body from side to side to lessen the tension of his body; also to blink his eyes all the time to stop staring; then to practice with the test card, many times a day, moving it slowly from side to side as he flashed the letters of each line on the card.

On his second visit he read the smallest letters on the card, the 10 line, but to do this he had to hold the card so close that it touched his nose. On his third visit he read the bottom line, holding the card an inch or more away from his nose. The sun treatment always helps him and he is advised to stay in the sun as much as possible. The cerebral hernia which on his first visit was very much inflamed or red in appearance, had lost most of its redness, and the size of the hernia was less.

On his last visit I placed him in front of a large mirror, and he saw it plainly. He could also see me standing behind him as he looked into the mirror. The sad look in his eyes is no longer there. Lewis informed me that a friend had given him a radio set, which he enjoys when he is not practicing with the test card. His smile is wonderful to see and his mother is more than grateful because of the hope we have given her in restoring the sight of her boy.

Sinbad the Sailor

***By* GEORGE GUILD**

WHY Sinbad? Of what benefit to the readers of this magazine or to people who desire a cure of imperfect sight without glasses can a reference to Sinbad be? In Arabian Nights tales he occupies a prominent place. In his many voyages he described many queer things which happened and which were very wonderful, although not always probable or true. Being a sailor, he used his eyes principally for distant vision. He had good eyesight, but after one of his numerous voyages he returned to his home in Bagdad and complained to his friends that his sight for distance had become poor, so poor that he was unable to recognize people ten feet away. An Egyptian astrologer sold him a pair of glasses for a price which made a big hole in his savings. For a time he was happy because his vision was decidedly improved by the glasses, but it was not long before his imperfect sight required stronger glasses, and the strength of his glasses was frequently increased. In a shipwreck he had difficulty in reaching the shore because the water clouded his glasses so that they became useless. Whenever it rained the glasses became too clouded to help him to see. In many emergencies, when he most needed his glasses, they failed him. When swimming he could not see any better than without his glasses. It embarrassed him very much when trying to reach land, because he was unable to locate it. Other sailors would throw water in his face, fog his glasses, and tease the blind man without risk to themselves. With his glasses he suffered great pain and fatigue.

While visiting a city in a foreign land and walking the streets without seeing much, a stranger handed him a parchment on which was written:

"Go where all things are moving.
Watch and think the livelong day;
The truth is always proving
Your sight will return, I say."

The words gave him some hope and he believed that in one of his voyages he would find some land or country where all things would be moving and nothing immovable or stationary. In a voyage to India he felt that in this country he would find a land where all things were moving. After a long day of traveling he entered a temple where many worshippers on their knees were alternately raising their arms and faces on high and then bowing to the ground, saying;

"Allah is Allah,
God is Allah."

To avoid attracting attention he imitated the others while remembering that the paper of instructions told him to watch and think. He noted that when he raised his head up that things in front of him and to one side seemed to move down or in the opposite direction, and that when he bowed his head down to the ground, things appeared to move up. At last he believed that he had found a place where all things were moving. By going through the motions without the prayer he found that it worked just the same. After he left the temple he was able to notice that when he walked straight ahead things to each side of him, the ground in front of him, appeared to move in the opposite direction. He was able to demonstrate then, without any effort, that the place where all things are moving was wherever he happened to be, and since he was always moving his eyes during the day it was possible for him to see things moving opposite all day long.
(Shifting, The Swing, Oppositional Movement)

Watch and think was ever in his mind. He became able to demonstrate that when he imagined the movement easily that all pain, discomfort or fatigue in his eyes and in other parts of his body were prevented or relieved. It was not long before he found that the light became brighter; and, with this increased illumination, his vision improved.

When the swing was practiced with an effort, very little or no benefit followed. He discovered that the swing was a great help to his vision when practiced at night, and brought him more comfort than the same time devoted to sleep. All this time he believed that he had discovered a *truth;* that the cause of his imperfect sight was a strain or an effort to see, and that he was cured by rest and

not by effort.

He returned to Bagdad overflowing with the wonderful news. He called on the Egyptian astrologer who had sold him his glasses, and with a happy smile on his face reported the facts.

The astrologer was furious and screamed in a loud voice:

"Out upon you, you lying knave. I believed your story of the mammoth bird, the roc, your experiences with mermaids and many others of your queer tales, but this is too much. To be cured of poor sight by rest is too absurd. You must be crazy." Then he drove Sinbad from his house, announced to the mob of people outside to shun him for a liar, a cheat, and a fool.

For many years later Sinbad held his peace, but did not neglect to help the blind until their number became sufficiently great to overwhelm the ignorant astrologer and others like him.

The Black Fairies

***By* MARGARET EDWARDS—AGED 8**

Miss Margaret Edwards is a young subscriber of London, England. She was very much impressed by Dr. Bates' story, "The Black Fairy." Her story will suggest to mothers and teachers an interesting and successful way of improving the memory, physical and mental efficiency of children.

ON the top of a grassy hill the fairies live. All kinds of fairies—flower fairies, butterfly fairies, yellow fairies, green fairies, blue fairies, red fairies, orange fairies and black fairies.

Black fairies, you will say at once? Yes, black fairies; and the black fairies are very small, but very useful.

Perhaps you would like me to tell you what their work is.

Well, early in the morning they creep to the village, and hide in the bushes, waiting for the school boys to come.

Sometimes they see things that make the tears come into their eyes—they see little boys who wear spectacles knocked about by the bigger boys. Then the black fairies come back at night, when the small boys have gone to bed. They creep in at the window, and whisper to the boys in their dreams. The black fairies ask them what they want best, and they say, "To have perfect eyesight." So the black fairies say, "Always remember us, and see us before you in everything."

Then the black fairies disappear, and you can imagine the boys' delight when they wake up in the morning and remember the black fairies, and find they can see perfectly well without their spectacles.

Help Others

***By* EMILY A. MEDER**

WHEN we help others we help ourselves. A teacher of arithmetic learns more than any of the class. This principle so well known is valuable for persons with imperfect sight.

Some eye patients have told me that they did not obtain any permanent benefit until after they tried to improve the sight of others.

In each issue of this magazine there is a report of the meetings held every month by the Better Eyesight League. These reports are merely a boiled down synopsis of the most important topics discussed. It is impossible to tell in detail the pleasure that is derived from this hour's talk, the intense interest displayed, and the many valuable suggestions made.

The League is now two years old and is a "grandmother." There is a League in East Orange, one on its way in the Middle West and in England. We hope to have Leagues in all the large cities before long.

The League was started by a group of Dr. Bates' patients who were cured or benefited and by some interested book readers. The object was to help prevent imperfect sight in school children and others and to meet each month to discuss these cases. Dr. Bates consented to the plan and offered to attend every meeting in order to help the members with puzzling cases.

The membership has steadily grown, and the idea spread, with the results stated above. The original ten or twelve members have increased until there is sometimes "standing room only" in the Central Fixation Publishing office, where the League meets.

A member is one who is desirous of helping others cure their eyes and will give as much help to their friends and acquaintances as they can. It is not essential to attend the meetings. If you know the fundamental principles and can demonstrate them to your own satisfaction and benefit, you are equipped to help your friends discard their glasses.

People are willing to learn, but they are held fast by the old superstition that weak eyes need glasses. They understand that glasses do not cure, but they are afraid of going blind if they do not wear them. These people need help. Tell them the truth about their eyes.

Now that summer is on the way and the sun is becoming stronger every day, people will begin to wear colored glasses. This is very harmful. The sun is man's best friend and especially beneficial if allowed to focus on the eyes. Advise against sun glasses and explain that it is helpful if the rays shine on the closed lids. This will do away with the temporary discomfort and will accustom the eyes to the bright clear light.

One prevalent cause of defective vision is staring. This is usually unconscious, but none the less dangerous. We call your attention to this fact because it is the first thing to correct when helping your friends.

Kindergarten Children Benefited

***By* EMILY C. LIERMAN**

A KINDERGARTEN teacher who attended one of our recent lectures requested me to help one of her little charges who is afflicted with squint. She informed me that the little one is very poor, so I advised her to bring her to my clinic.

To become more acquainted with me, and the way the cases are managed there, this teacher, at my cordial invitation, visited the clinic.

I would like to tell more about the teacher and what she has accomplished with her slight knowledge of our method.

She has a sunny disposition, and I can well imagine a good mental picture of the children as they greet her every day in the classroom. She loves her little pupils, and is also a great lover of nature. It is her happiness to bring the two together in her work.

She explains to her class, in her lovable, sweet way, just how the flowers grow, and makes them understand what happens before the first shoots peep their noses above the ground.

This teacher's name is Cecilia B. Eschbach and the kindergarten is connected with the Brooklyn Orphan Asylum. A short time ago I received the following letter from her which I thought would interest our readers.

"Dear Mrs. Lierman:

"In spite of North Wind's biting breath, the little children of the kindergarten know Spring is here. Their gardens give evidence of it, for the crocuses are up, the daffodils have twelve fat buds; the hyacinths and tulips, too, have grown to quite a size. To create a situation for conversation about awakening Spring I placed eight empty flower pots in a paper bag. The one who opened the bag was called the gardener. He chose eight children, and gave them each the name of a flower, to go with the pots.

"Every child was familiar with the following flowers and could name and identify the real ones: crocus, tulip, dandelion, daffodil, hyacinth, Easter lily, pink sweet peas, rose. The little gardener decided to give away his flowers, but could not remember the name of the eighth one. I said, 'Palm your eyes, William.' He did so, and in a moment said, 'Pink sweet peas.'

"The children have learned to palm their eyes with good results. Two who have a cast in their eyes play the swinging game and keep looking at the ceiling.

"Sometimes we sing it, or sway to the rhythm of the piano. They are improving.

"Hoping this report will be of interest to you and thanking you for your kindness, I am

"Very truly yours,
"Cecilia B. Eschbach."

An Instructive Reprint

An article by C. S.Price, M.B.E., F.R.G.S., recently appeared in "The Herald of the Star," an English Magazine, dealing with Dr. Bates' method. The writer, a layman, handled the subject in a clear, intelligent way, easily grasped by the reader. The fundamental principles of the method are explained, together with a review of the following:

Palming **Memory** **Presbyopia**
Swinging **Mind** **Strain**
Blinking **Myopia** **Sun Gazing**

We recommend this for its ability to treat the entire method in a concise, helpful way.

Reprints of this article for sale.

Price 30c.

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Reprints of this article for sale.
Price 30c.

At the Movies

***By* MRS. A. L. REED**

Mrs. Reed is studying this method, and is practicing at the East Orange clinic. The following report will be helpful to those who experience discomfort at the movies.

Glasses and strain at the movies produced imperfect sight and headache; the removal of the glasses and using the eyes without strain relieved the headache and improved the vision more than with the glasses.

MY patient had not been to the clinic in several weeks and when she entered with a twinkle in her eye I knew something was coming. After a few minutes' work she explained, "I've got to admit you are right. The last time I came you told me something that made me think you were wrong. You said the movies were good for the eyes if we looked at them right. Last week I went to the movies and in a short time I had a headache. Then I thought of what you had told me and decided to try it. First I took my glasses off and tried to relax all over, then I stopped trying to hold the pictures still, and just let them go. I looked at one thing at a time and didn't worry about the rest. After a few minutes I realized that my headache was gone, and my next surprise was when it dawned on me that I was seeing the picture clearer than I had ever seen it with my glasses on. I didn't miss much of the show either after I stopped trying to see it all at once, and straining after every little detail.

When I came out of the theatre I said to my husband, "I guess I was wrong instead of Mrs. Reed and I'll go back to the clinic and get some more help."

I told her that she certainly had profited by the show, thanks to Dr. Bates' method.

Questions and Answers

Q—Should a person who has discomfort in the sunlight, persist in going without a hat?
A—Yes.

Q—What do you suggest for an eight months old cross eyed baby?
A—Swinging with the help of the cradle and the loving arms of its mother.

Q—If closing and resting the eyes is beneficial why won't sleep cure defective vision.
A—Sleep is hard on the eyes because most people strain their eyes more when they are asleep than when they are awake.

Q—My eyes grow so tired when I read, that I usually fall asleep over my paper. Can this be helped?
A—Sleepiness is caused by strain. Strain is caused by imperfect sight. When you read with perfect sight you will not become sleepy.

Q—What is the best exercise for school children with myopia?
A—Reading the Snellen Test Card and palming.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

July, 1924

Curable Cases

PATIENTS wearing glasses for the relief of imperfect sight may expect better vision after they are cured than they ever had before with glasses. Adults who have good distant vision but require glasses after middle life, for reading, are also curable without glasses. Such patients, although they may read very well with glasses, complain that, as a rule, they must hold the page at one distance in order to read with the best vision. This reading distance is usually about twelve inches. Some cases require one pair of glasses for reading books or newspapers, but cannot see clearly at a greater distance without another pair of glasses. Musicians especially find that glasses that give them good vision for reading books are useless to them for reading music or for playing the piano. To see closer than twelve inches may require still another pair of glasses. To see more distant objects may require still another pair. Some of my patients have shown me numerous pairs of glasses, each one adapted for certain specific distances. It is a great relief to such cases to be cured, because then they are able, not only to see perfectly at the distance without glasses, but they can read the fine print as well at six inches as they can further off. The eye with normal sight is able to change its focus at will for all distances without any discomfort whatever.

Patients with cataract, glaucoma and other diseases of the eyes may not be able to see even with glasses. When they are cured by my methods they become able to see normally in all kinds of light, in a bright light or in a dim light. Pain, fatigue and other discomforts of the eyes are all relieved.

Practical Suggestions

***By* W. H. BATES, M.D.**

(Memory and Imagination)

MANY people complain that they are so busy they do not have the time or opportunity to practice my methods with the Snellen Test Card for the cure of imperfect sight without glasses. While the Snellen Test Card can be used with benefit, there are other objects which can also be used just as well. One can obtain perfect relaxation, perfect sight, easily, continuously by the use of a perfect memory. A familiar face can often be remembered perfectly when one fails to remember letters perfectly. Stenographers tell me that they can remember the characters of shorthand better than the letters of the Snellen Test Card. They have in this way obtained sufficient relaxation to correct or cure their nearsightedness without glasses. Such patients can practice when riding in a car, when walking on the street or when occupied in various ways.

If one can find some object which they can remember perfectly, whether it be a hammer of a carpenter, mortar or trowel used by a bricklayer, a brush by an artist, an instrument used by a surgeon, familiar things seen frequently, a cure without glasses may be obtained without the use of the Snellen Test Card.

I recall a case of a musician with a high degree of nearsightedness who complained that every time he looked at the Snellen Test Card he was tempted to strain and his vision was lowered. It was a remarkable fact that he was unable to remember a bar of music. He could play nothing whatever from memory but he could remember a very small area of a black note of music, an area as small as a period in an ordinary newspaper. By practicing with this period and nothing else, dodging any improvement in his sight by shifting frequently,* his memory of the black period improved. If he imagined his vision for a distant object was improved he was compelled to look somewhere else as quickly as possible or else lose his memory of the period. He had to be very careful in order to keep the memory of a period to avoid testing his sight. When the period was remembered perfectly the relaxation which followed was very pleasant and he enjoyed the memory of the period at all times and in all places. He was a very skillful pianist and played very complicated pieces on sight, and told me that the memory of the period was a great benefit to his playing. He became so interested in his period that he said at no time of the day or night when he was awake did he forget his period; and, instead of being a distraction to him, it increased his efficiency, mental and physical, enormously. He became able to walk out at night, even when it rained, find his way about the streets and return home without trouble, which was something that he had never been able to do while he was wearing his glasses. His myopia was only partially corrected by concave 16 D. In less than two weeks he read the bottom line of the Snellen Test Card at twenty feet. Furthermore there was an astonishing improvement in his memory for music. He told me that he became able to read a complicated score of music, sit down and play it right off from memory, a feat which he had never been able to do previously with the most familiar music.

* When seeing a flash of clear vision, avoid staring at the clear object. Keep the eyes shifting, blinking. With practice, more clear flashes occur, last longer, and vision remains clear.

One patient, a lady with myopia, came to me from a distant Western city. She was very frank and told me that she was employed as a stenographer in an office and her income was very moderate indeed. She felt that her sight was gradually leaving her because she required stronger glasses every year. She suffered much from fatigue, pain and other discomforts of her eyes.

Her first words to me were: "Doctor, I will go through any operation or any form of treatment and will do anything that you say in order to get cured quickly."

I tested her statement. While she was holding her glasses in her hand I turned to leave the room, and as I walked toward the

door I said to her:

"Get rid of your glasses."

"How?" she asked.

I answered: "Smash them."

Before I reached the door I heard a crash, and turned around and saw that she had taken me literally by smashing the glasses on the arm of the chair.

She was cured in a few visits.

Another patient who did not have as much nearsightedness as the above asked me what she should do in order to get cured quickly. I told her that the most important thing at the start was to stop wearing her glasses and never put them on again even for any emergency. Then she started an argument and asked me all kinds of questions. What should she do when she went to the theatre when she couldn't see the stage? What should she do about her music when she couldn't see the notes without her glasses? She wanted to know, and insisted upon it, just how much time she would have to devote to practicing. She wanted to know if she would have to practice after she was cured. This was several years ago. She is still under treatment. At times she gets flashes of normal vision. Even now she will do things wrong although she knows it is wrong, apologize and promise to do better.

It is not faith that cures, but a proper use of the eyes.

Imperfect sight is not cured by a club. Mrs. Lierman in her Stories from the Clinic has repeatedly emphasized the value of kindness. In one case, a boy ten years of age was brought to the Clinic by his mother, who was very much excited, annoyed, indignant when the school nurse insisted that the boy should have glasses. The mother was out of patience with the boy because he had lost his eyesight. If he had lost his hat or his shoes she could not have been more excited or upset. Her first words to the boy came with a slap in the face.

"Mind what the lady says. Do as she tells you. Try as hard as you can. See those letters over there and don't cry."

The boy said he could not read any of them and his mother shook him to make him see better. He complained that when he looked at the card it gave him a pain. Mrs. Lierman separated the mother and had her sit some distance away. Then she talked kindly to the little boy, asked him where he went to school and was his teacher kind to him.

He replied, "She is all the time scolding me even when I don't do nothing." Then Mrs. Lierman talked to him about baseball and Babe Ruth and asked him if he liked to play baseball in the summer time. He was somewhat suspicious at first but in a little while he began to thaw. He was asked to smile, which he did with some difficulty. Mrs. Lierman was gentle and very kind to him.

All of a sudden he shouted: "Oh, I can read that card over there," which he did to the fifty line. The boy, with a little persuasion, closed his eyes and covered them with the palms of his hands, while Mrs. Lierman told him fairy stories, which were very hard for him to believe. In ten minutes after he opened his eyes he read almost all the smaller letters on the card, and by repeating the palming a few times, at brief intervals, he obtained flashes of normal vision. He left the Clinic smiling and happy, with his mother following after him in a daze.

You cannot force children to see by harshness, and what is true of children is also true of adults.

Stories from the Clinic
53: Shock Causes Blindness

***By* EMILY C. LIERMAN**

ON July 16, 1923, there came to our office a man suffering with blindness caused by a sudden shock. As I stood before him and asked him what his trouble was, his eyes looked up toward the ceiling and immediately I noticed he could not see me. He had been sent to us in the hope that Dr. Bates would be able to restore his sight. Previous to his visit on that day I received a telephone message from a woman employed by the Compensation Bureau of the City of New York. She told me that he was blind and it was the opinion of eye specialists consulted that there was no hope of his sight ever being restored. Dr. Bates examined his eyes with the ophthalmoscope and found that he had **atrophy of the optic nerve** and that he was under a terrible tension.

With each eye separately he could see the 200 line letter of the test card at one foot temporarily. He could only do this in flashes, because he stared continuously, which blinded him. The variable swing improved his vision to 6/200 and his field was also improved by the swing. He came daily to the office for treatment, and on the 21st of July he read 9/20 after he had palmed his eyes for a long time. Sun-gazing outdoors improved his vision also. His general depression became less and he informed me that he was feeling much better after each office visit. For a long time he did not have very much to say, but after he had become better acquainted with us all he began to talk about his case. He had been working in the moving picture studios for quite a few years and apparently he felt no discomfort in his eyes. This is the story he told me:

"I was standing on the top rung of a ladder readjusting electrical parts used in the studio for taking moving pictures. At the time there was just an ordinary light such as is used in most offices. Without my knowing it, a strong Kleig light was suddenly turned on and I received a sudden shock which caused blindness instantly. I was taken care of, as are other employees in the studio, and then was taken home. Since then I have not been able to work. It seemed as though my troubles were multiplied when my little baby boy took sick and died. I had no money with which to bury him until my wife's parents came to our aid. Christmas came very shortly, with no hope of Christmas cheer for my other child, a little girl just three years old. We were in debt, but I had planned, when I was able to work again, to pay back the money which was used to bury my baby. My wife tried to console me and make me feel that things were not quite so bad, but I saw no hope ahead of me on account of my blindness."

We felt all the more here at the office that our patient should have all the treatment that could be given him in order to restore his sight, if possible, and we worked diligently all through the Fall and Winter with steady results.

During the month of May we had many rainy days with very little sun. This patient has demonstrated to us that the sun is very necessary for the eyes. During all these months of almost daily treatment he has not had such poor vision as he had in the last few weeks. His vision was lowered to 10/50 and he became very much discouraged. After the sun had shone for a day he came to the office feeling light hearted and happy. He was given the sun treatment and immediately his vision improved to almost normal, reading 10/10 at times. Doctor questioned his ability to dodge automobiles at the crossings here in our big city. His answer was that he could get along very well on bright days when the sun was shining, but he still feared the traffic on rainy days. While this conversation was going on the patient was looking very intently at Doctor's face as he stood about three feet away. He did not move an eyelash, but just stared all the while he talked. He had forgotten the very thing that helped him. Blinking. All of a sudden he

exclaimed: "Doctor, now as I look at you, you haven't any head."

"No," the Doctor replied; "seems to me the other day somebody told me I did have a head. But you never can tell; some people don't always tell the truth."

Immediately the patient apologized and hastened to say: "Oh! but Doctor, when I come close enough to you I can see that you have a head."

Dr. Bates has always advocated the movies. Whenever a patient stares he advises him to go to the movies. Dr. Bates enjoys them himself and goes as often as he is able to.

We owe a great deal to the moving picture artists, for a great part of their work is done under unfavorable conditions. The Kleig light, while it is powerful, is not injurious to the eyes of the actors and actresses when their eyes are properly used. Most of them work under a terrible tension, with the feeling that their eyes will be injured by the strong glare. A great many eye specialists no doubt have treated **injury to the eyes apparently caused by the Kleig light**. The light would be harmless if those who work in the studios could keep their minds relaxed and if they could also understand and use our method—resting the eyes all day long.

Dr. Bates discovered many years ago the benefit of strong light on the eyes and I have seen many patients cured by the sun treatment alone. Some of these cases were seriously affected because of their inability to stand even the rays of the sun. It is curious but true that this patient has been benefited mostly by a **magnifying glass which focused the light on the white part of each eye as he looked down while the upper lid was raised**. (Sunglass) In the beginning of his treatment the mere mention of light would make him frown and shrink with fear. Now he enjoys sitting in the sun all day long and realizes that it gives him the greatest benefit. He is steadily improving. While he is not entirely cured, he reads the bottom line of the test card occasionally at ten feet.

He has great hopes of being cured and is so grateful for what has been done for his eyes that he insisted upon my writing to two of our most popular actresses of the screen who are interested in his case. We are striving to cure him so that we can send a note of thanks to those who are interested in him and to try and encourage others, who might be troubled by the Kleig light, to come to us to be benefited as he was.

Nervous Symptoms Relieved

***By* EDITH T. FISHER, M.S., M.D.**

ABOUT seven months ago this patient, who is a physician, forty-one years old, first came to me. He had studied his own case thoroughly and I shall present it in his words as he described it to me.

"Since I was seven years old I have worn glasses, and since then I have had attacks of nervousness, accompanied by headaches, which have become more frequent and more severe as I have grown older. My poor vision is due to astigmatism, asthenopia and hypermetropia, and I think all my nervous symptoms are the result of this condition of my eyes.

"About once a week, sometimes oftener, I have an excruciating headache accompanied by great weakness and nervousness. This always begins with a feeling of constriction in my eyes and spreads to my forehead, then gradually develops into a terrible headache. It continues all day and the following day I am completely exhausted.

"In addition to this weekly headache I have the same feeling of constriction in my eyes and across my forehead continually. This comes on in the morning after I have been up about two hours and it makes me very nervous.

"If I read ten or fifteen minutes this sensation of constriction increases and I become so weak that I have to lie down and rest; then I am able to read again for a short time. If I continue to read without resting one of the severe headaches will develop.

"At times for apparently no reason I suddenly feel an **overwhelming desire to sleep. This usually occurs when I have been in a bright light or under a strain**, as when we are entertaining or being entertained, and I assure you it is extremely embarrassing to fall asleep while conversing with some one. I can overcome this feeling for a short time, but gradually I become so exhausted that in spite of everything I can do I fall asleep. Sometimes I awake in five minutes, sometimes not for fifteen, but I always feel refreshed. This invariably happens if I go anywhere, so I have given up everything and stay at home as much as possible.

"My eyes are very sensitive to the light and I usually wear a pair of dark glasses over my other glasses. Last summer on bright days I wore two pairs of colored glasses so as to protect my eyes as much as possible from the sun.

"I have tried many different kinds of treatment but all without any relief.

(Palming – Example of incorrect and correct way to palm)

"When I heard of Dr. Bates' method of curing imperfect sight without, glasses I tried resting my eyes, but when I close them and try to relax I have a feeling of unsteadiness in the eyeball, which is almost a jerking, and this makes me more nervous. So I thought I was probably palming incorrectly."

I asked him if he had tried to imagine or remember anything while he was palming and he answered "No, I just try to relax, and the harder I try the more nervous I get."

I explained to him that by making an effort to relax he was increasing the strain. While he was talking I noticed that he had not blinked. His forehead was deeply wrinkled and there was a constant twitching of the facial muscles on the right side.

With his glasses he read 10/10; without them, 10/15; with the left eye, 10/15, and with the right, 10/50. He was unable to read the diamond type.

First I explained about blinking, but when he tried this he contracted all the facial muscles. After watching me he tried it again, but without success. Then I told him to sit in as comfortable a position as possible, close his eyes and cover them with his hand in such a way as to exclude the light without making any pressure upon the eyeballs. He said, "I've tried this, Doctor, and the unsteadiness in my eyeballs makes me very nervous."



I then asked him if he could remember the small black letter "o" that he had seen on the test card, but he could not. I asked him about many different objects, if he could remember or imagine them, but the only thing he could remember was a sunset he had

seen last summer. This he could remember if he looked at the sky, then the trees, and then the grass, shifting from one to another and seeing each perfectly. After palming in this way about twenty minutes, I asked him if he could imagine a blue sky with a very white cloud moving across it. This he could do now, but for a short time only, and when he lost it he had to remember the sunset before he could imagine the blue sky and white cloud.

After palming half an hour he read 10/40 with his right eye and half of 10/10 with his left. I reminded him to blink, and though he did not contract all his facial muscles it was still a great effort for him. He said, "I don't think I ever blinked before, and this is the first time I have been able to palm without having that unsteadiness in my eyeballs." Then I explained to him that when he remembered the sunset perfectly his eyes were at rest, and when his eyes were at rest all the nerves in his body were at rest.

After palming again for half an hour he was able to imagine a small black letter "o" on the white cloud, but only for an instant. Each time that he lost it he had to imagine first the sunset, then the blue sky with the white cloud, and finally the letter "o," which he was able to imagine longer each time. He could imagine the "o" moving in the opposite direction as he looked from the right side to the left side of the "o," and in this way developed a swing, but he could keep it for a few seconds only.

The sensitiveness to light, I told him, could be overcome by sitting in the sun every day. He seemed to think he ought to wear his dark glasses until his eyes were stronger, but he promised to follow my directions. Before he left the office that day he said, "I can't remember when I have felt so relaxed."

Three days later I saw him again. He had been **palming eight times a day, half an hour each time**. In addition to this he had been practicing with the **test card**, **swinging**, **shifting** and **sitting in the sun**. He was very anxious to do everything that would help cure his condition.

His vision had improved to 10/30 with the right eye and 11/10 with the left. He blinked easily now, but still stared at times. He told me, "When I notice that feeling of constriction in my eyes I know I have been staring, then I palm a few minutes and that uncomfortable sensation disappears."

There was now only an occasional twitching of the facial muscles on the right side.

His vision improved slowly, and when I saw him the last time, just three months after I had first seen him, he read 10/10 with the right eye and 15/10 with the left. The diamond type he read easily. All the nervous symptoms had entirely disappeared. Before he left he said, "I have read a book in the last three days that it would have taken me at least six months to read before I discarded my glasses. Of course, I am glad to have my eyes normal, but I can't tell you how happy I am to be free from all those other symptoms."

I have heard from him several times since and he has had no relapse.

Notes from Patients
(Palming)

These paragraphs were taken from some patients' letters. We find that everyone has his own way of **palming, swinging**, etc. Some patients like to take **drifting trips while palming**. Others find more relaxation in thinking of black and remembering certain flowers. The way which is most helpful to you is the best to follow.

From a Patient Who Likes to Drift



Palm and remember, shift on a favorite object: flower, colorful stone, jewelry, tree, land, old house... Improving the memory, imagination of clear mental pictures relaxes the mind, body, eyes and improves the vision.

I think by this time I have floated down every river in the world. I am not sure about those of Persia and Patagonia, but otherwise I have covered them pretty well. Geographically speaking, it has been quite interesting, for one can have at will monkeys leaping from branch to branch along the shore or polar bears putting out a paw at one from large icebergs, and all the time being perfectly comfortable. There are really great possibilities in this method of overcoming pain and in improving the sight. I have not had a severe pain since the first one, and the minute one starts off I float and lose the pain.

From a Book Reader



Palm and imagine drifting down a river. See objects in color, clear, motion. Movement of the boat, water, wind, birds flying, sun shining, sparkling on the river, animals walking on the shore, colorful dragonflies... Imagine all the senses; touch, warmth of sun, feel the breeze, hear the water, birds, wind, taste your favorite drink...

In early spring here in this desert country the intensity of the sunlight increases with such rapidity that many people are disagreeably affected in their eyes at that time. I have been wearing a broad brimmed Stetson sombrero for its shade. But I also noted that my eyes seemed unduly sensitive to the bright light. Remembering Dr. Bates' rule that light is good for the eyes, not coddling with shade, **I discarded the sombrero and now wear a cap**, with the result that the oversensitiveness to light is gone.

A Teacher

A girl came into school the other day wearing glasses for the first time. I asked her why she was wearing them and she said that her eyes were tired. The oculist had recommended that she wear glasses for three or four weeks. Her mother had paid him $28 for the examination and the glasses. I watched her carefully to see how steadily she wore them. I think she wore them two or three days, or perhaps a week. After about a month I asked her how her eyes were getting along. She said, "Fine; the doctor says I needn't wear my glasses any more." I said, "It was a rather costly experiment," to which she replied, "I'll say so." I wonder if the doctor knew how little she used the glasses, or whether he cared.

NOVEMBER NUMBERS DESIRED

We wish to procure twenty or more of the November, 1923, issue of "Better Eyesight." If any of our subscribers have one or more copies of these on hand we will be glad to exchange them for a specified back number, the current issue, or twenty cents for each copy.

One of our subscribers desires the August, 1919, and June, 1920, numbers to complete her set. Will any one having these numbers please communicate with this office?

Report of the League Meetings

A REGULAR meeting of the Better Eyesight League was held on the evening of May 13th at 383 Madison Avenue. Anticipating a demonstration of Dr. Bates' method a large audience was in attendance. Miss Katherine Hurty, President of the League, presented Miss May Secor as chairman of the meeting. The latter's experience as a teacher of various grades of the elementary school and as a member of the Speech Improvement Department of New York City's school system enabled her to speak from the teacher's standpoint.

Miss Secor became interested in the method in an effort to find some means by which school children may be relieved of eyestrain. The stammerer who suffers from eyestrain is especially worthy of attention. Miss Secor had worn glasses for fully fifteen years when on March 15, 1923, as a means of investigating Dr. Bates' method, she removed her bi-focals and began daily practice. Upon awakening each morning she devotes twenty minutes to this work, with the result that she has eliminated entirely the use of glasses, and enjoys normal eyesight and freedom from eyestrain, combined with a full daily program of work and study.

Teachers are familiar with the fact that a large percentage of pupils and teachers suffer from eyestrain; these sufferers include many who wear glasses. It is therefore incumbent upon educators to include in the daily program of the kindergarten and of each class in the elementary and high school definite exercises which will tend to relieve eyestrain; **palming, reading the Snellen chart, swinging, shifting, and sun baths** for the eyes may be used for this purpose. When the pupils have learned how to practice these exercises they may do so at odd times during the day. It will then be necessary to reserve only a short daily period for eye work; a part of the time now devoted to physical education could with profit be used in this way. Dr. Bates assures us that eyestrain is frequently produced by coming into contact with persons who are suffering from eyestrain; it is therefore extremely important that each supervisor, teacher and parent should secure normal vision without the use of glasses, thus eliminating eyestrain in his own case.

The speaker had observed that many teachers and librarians who were so fortunate as to work in rooms to which the sun's rays have access darkened their rooms in order "to save" their eyes; among these teachers and librarians were many cases of eyestrain which had not been relieved by the use of artificial lenses. **As early as 1910, probably earlier, eminent oculists began to realize that the sun's rays are beneficial to the eyes; to-day we find that children readily appreciate the value of sun treatment.**

Miss Secor emphasized the value of palming in restoring normal vision. (Reference to Chapter XII, "Perfect Sight Without Glasses," by Dr. Bates.) The meeting then assumed a clinical aspect, Dr. Bates, Dr. Achorn, Miss Hurty, and the speaker assisting the members and visitors to palm; relaxation was secured more readily when the individual was led to assume a **happy mental attitude**. The speaker advised teachers to train pupils in such a manner that the **eye exercises will always be accompanied by a pleasurable emotion**. The use of palming by the student of music was also discussed; in many cases fatigue has been eliminated or greatly reduced by palming for a period of five minutes after each twenty minutes or half hour of practice (vocal or instrumental).

(Eye Chart Directions)

The speaker then called upon Miss Hurty to discuss the use of the Snellen chart in the class room. Miss Hurty reported that many pupils in her "eye group" had greatly improved their vision by reading the chart each day. When difficulty is experienced in reading certain letters on the chart, one or more of the following suggestions are offered: **Palm, swing, and close the eyes after reading each lette**r; **read fine print**, **then read the chart**; **close eyes**, **open**, and **look at left side of letter**, **report its appearance**; **repeat with right side of letter**, **then read the letter**; **walk up to the chart**, **read the letter**, **return to former position and read it (imagination of assistance here)**. The officers of the League then assisted those present in reading the chart.

Dr. Bates was then requested to discuss the long swing. He described and demonstrated the long swing and emphasized its efficacy in securing relaxation and in relieving acute pain. The swing was then practiced by those present. Several class room problems relative to the elimination of eyestrain were discussed. At the close of this discussion the meeting was adjourned.

Questions and Answers

Q—Some days I can read the Snellen Test Card to the 15 line, others only to the 30 or 20.
A—When the eyestrain is less the vision is always better.

Q—By following instructions in the book, can cataract be benefited without consulting a physician?
A—Yes.

Q—Is memory and imagination the same? When we remember an object do we have to visualize it?
A—A perfect memory cannot be obtained unless you are able to imagine that you see or visualize what you remember.

Q—When I try to imagine a black period, it blurs and I get all colors but black.
A—When you fail to remember a period with your eyes closed, open your eyes and see it, then close your eyes and remember it as well as you can for a moment, alternate.
Shift part to part (point to point) left and right, top and bottom, diagonally… on the letter with the eyes open and when the eyes are closed using the imagination, memory.

Q—I am always conscious of eyestrain in church.
A—Eyestrain is caused by a stare or an effort to see. Close your eyes frequently and rest them.

SCHOOL NUMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
August, 1924

The Prevention of Myopia

THE August number of Better Eyesight is a school number devoted almost exclusively to the problem of the cure or prevention of nearsightedness in school children. The great value of the method as a preventive is emphasized by the fact that the vision of all school children has always improved, and when the vision is improved of course imperfect sight is prevented. It is well to remember that my method for the prevention of myopia in school children is the only one that is a success. It has been in continuous use for more than twenty years in the public schools of New York and other cities. Once daily or oftener the children read the card, first with one eye and then with the other, covering each eye alternately with the palm of the hand in such a way as to shut out all the light without any pressure on the eyeball. Teachers who have studied my book or have been patients find it an advantage to have the children palm five minutes three or four times a day. They claim that palming quiets the children and gives them an improved mental efficiency, which is a great help to their memory and imagination as well as their sight. I believe other children should be taught how to palm, swing, blink and improve their vision of the Snellen Test Card. The method is of great value to young children in the kindergarten, children in the high schools, and should be practiced by students and teachers in colleges and universities. In the military school and naval academy the method should be employed for the prevention of imperfect sight.

Modern teachers state: to sometimes keep the eye patch on the patched eye open a little on the outer side of the eye, towards the outer side of the face to allow some light to enter under the patch, into the eye not in use in order to keep both eyes, both left and right brain hemispheres activated and integrated.
Practice both ways: practice with the patch blocking out all light from entering the eye not in use. This will get the other eye (eye that needs improvement) functioning correct because it will not be able to rely on the eye under the patch to do all the work.
Then practice with the patch open allowing some light to enter. This will continue to improve the vision in the eye in use while also keeping it integrated with the other eye.
Notice that when wearing a eye patch on one eye, sometimes the eye in use seems to pick up the image the eye under the patch is receiving: usually darkness if the patch is blocking out all light or low light image if the patch is open a little. Staring, eye immobility causes this image.
To avoid this; keep the eye that is in use shifting, moving and allow the eye under the patch to also move.
Practice with each eye, one at a time. Practice a little more with the eye that needs improvement, then;
Always end by practicing with both eyes together for equally clear vision in the left and right eyes at all distances and synchronized function, movement, accommodation convergence, un-accommodation, divergence in the left and right eyes and integrated, synchronized brain hemispheres.

School Children

***By* W. H. BATES, M.D.**

MOST school children when they enter school have good vision. After some months or a year many of them acquire imperfect sight, others do not. It is interesting to compare the facts connected with children who acquire imperfect sight with the facts connected with children who do not acquire imperfect sight. It is important to consider the problem of the teachers. It is a fact that some teachers who do not wear glasses seldom have children acquire imperfect sight in their classes. Teachers who wear glasses or who have imperfect sight, have a large percentage of children with acquired poor vision while under their care. It is not necessary to theorize on this matter. It is sufficient to know that teachers who have imperfect sight are under a great mental and nervous strain. This strain is contagious. After children are transferred to a room in which the teacher has normal vision, many of the pupils regain their normal sight again.

It should be emphasized that teachers wearing glasses or teachers with imperfect sight should not be allowed a license to teach. There is a school of several thousand children in New York where many of the teachers are wearing glasses.

All the children who are unmanageable, whose scholarship is so low that they can not keep up with their grade, are transferred to special classes. The teacher who was able to handle these misfits without any apparent trouble whatever had normal vision and her temperament had a quieting influence on the children. Ten years ago this teacher introduced my method for the cure and prevention of imperfect sight in school children. The results that she obtained are very important. In a few weeks all her children with imperfect sight obtained improved or normal vision. Some of the children had the truant habit. One boy was under the supervision of the Truant Officer three or four days a week. The teacher had him practice with the Snellen Test Card which improved his vision very much and relieved his headaches so that he became able to study his lessons without discomfort. The practice with the Snellen Test Card was a great relief to his nerves and gave him more benefit than running away from school. He became an enthusiastic pupil and his truant propensities were permanently cured.

Many of her children complained that they could not read the letters on the blackboard and when they tried it gave them a headache. After using the Snellen Card the headaches disappeared, their vision improved and they were able to read the writing on the blackboard without discomfort. To me it was a remarkable fact that every one of her children was cured with the help of the Snellen Test Card and the cure of their imperfect sight was accompanied with a cure of their eye and other discomforts.

Some school teachers wearing glasses for imperfect sight were able to obtain a cure without glasses by the help obtained by reading my book. Now it is an encouraging fact that patients soon after they are cured without glasses have a great desire to help others, and the more they try to help others, the greater the benefit to themselves. One teacher was so enthusiastic that she not only cured all the children in her own class but encouraged other teachers to send their children to her, who had imperfect sight. Her practice increased to such an extent and produced such a favorable impression upon the principal that she was allowed four periods a week in which to devote all her time to the cure of the children.

A kindergarten teacher reported some wonderful results obtained in two cases of **squint**. Both of these children were wearing glasses for the benefit of their eyes but they obtained no decided or permanent benefit. As these children did not know the letters of

the alphabet a card was used by the teacher which had printed on it large and small letters E which pointed in various directions. When the children had good sight they were able to tell in which direction each letter E was pointed, either up, down, to the right or to the left. The card was placed about fifteen feet away from the children. Each child would stand, cover one eye with the palm of the hand and regard the chart with the other eye. If the pupil could not see the direction in which the small letters were pointing, with the open eye, this eye was covered also with the palm of the hand. In a few seconds, one hand was removed for a moment, just long enough for the pupil to determine which way the E pointed; but if the child failed, the eye was again palmed for a few moments or part of a minute. This process was repeated until the pupil became able to tell in which direction the letters E on the bottom line pointed.

One time the two children with squint developed measles and were sent to the hospital for two weeks where they did not wear their glasses. It is well known by physicians and others that measles is often hard on the eyes. Some children acquire imperfect sight during an attack of measles and this imperfect sight may continue during the lifetime of the patient. The teacher was very much gratified to learn that in spite of this handicap the two children with squint returned to school with their eyes no worse than before. Avoid glasses and straining the eyes during illness.

The teacher held the two hands of each child in turn and had the child look up and swing for a time with her. Then the teacher would look at the cheeks of the child and remark on the condition of the redness of the face following the exercise, avoiding any mention of the eyes. The children were led to believe that the exercise was not for the eyes at all but just to see if it gave them a better color in their cheeks. **This was quite important because if attention was called to the eyes of the children who had squint, the squint was very apt to become worse. When the eyes were ignored the practice of the swinging always improved the squint and these children were soon cured.** The teacher was so encouraged by her results that she recommended the method very strongly to other teachers and to the parents of the children.

When a child first enters school it is well to keep in mind that children in school have a great many new and unexpected things to contend with. They are brought in contact with many other children who are new, strange and different. Their own teachers and the teachers in the other classes have an effect upon the child. Going to and from school, the child meets many strangers and these strangers have an effect upon the mind of the child. Children are great imitators. They learn to walk by watching others walk. They learn to talk and play from the influence of other children. Being great imitators they absorb many bad habits as well as new and strange ones. While it is a good thing for a child to be taught how to practice habits of decency and order at the same time they are absorbing a great many habits which are an injury to them. If a child has a nervous teacher with imperfect sight, who is constantly straining her eyes to see, the child would be very apt to imitate the eyestrain of the teacher. If, on the other hand, however, the teacher has good eyesight and good nerves, the child may absorb or acquire habits of great benefit. It is well to emphasize the bad effect of the strain of a teacher with imperfect sight and nerves upon the mind of the child. We may say that children in schools are exposed to influences both good and bad which are different from those in the home. Sometimes the influences in the schools are more beneficial than what the child meets with at home.

Stories from the Clinic

54: School Number

***By* EMILY C. LIERMAN**

WHILE our clinic at present is not as large as it was at the Harlem Hospital, we have very interesting cases, and some of them are school children.

One little chap, aged seven years, whose name is Fredrick, is one of the brightest boys I have known. His father is one of the carpenters who helped make the partitions in our office. We were treating patients long before our present office building was completed. He therefore had the opportunity to see some of the patients as they came to our clinic, and also saw the patients leave the office after their first treatment. One day he remarked that some cases appeared so much improved after only one treatment, that it seemed as though a miracle had been performed.

He, being a poor man, I offered to help him or any of his family, if they at any time needed treatment for their eyes.

"Oh!" he said, "I have two little boys but they have nothing wrong with their eyes."

But he thanked me just the same and said he would remember my offer.

On April 12, 1924, just a year after I had spoken to him, his son Fredrick, whom I have already mentioned, came with his mother. How I wish I had a son like him, or a couple of them. He was very attentive while I was talking, and his big blue eyes looked into mine. I think he was speculating whether I was all right or not. He seemed to feel very much at home with me right from the start, so I had no difficulty in improving his vision. His mother told me that the school nurse had sent him home with a note saying that he needed glasses. His father refused to get them and suggested that the mother bring him to me. As Fredrick answered my questions he looked directly at me and there was no sign of a frown or strain of any kind, but I did notice that he listened without blinking, for more than two minutes or longer. As the normal eye blinks unconsciously every few seconds, I soon realized what his trouble was and that he could be cured in a short time. Dr. Bates examined him with the ophthalmoscope and said there was nothing organically wrong with his eyes, only eyestrain.

The letter test card troubled him at first, so I had him read the card with E's pointing in different directions. As he looked at the card, his facial expression became entirely changed. His forehead was a mass of wrinkles as he tried to see in what direction the E's were pointing. His vision with both eyes was 10/20. With each eye separately he read 10/20 right and 10/30 left. I left him for half an hour after I had told him to palm and to be sure not to open his eyes until I said so. When I returned to him, I tested his vision again and he read 10/10 with each eye separately and blinking after seeing each letter, with no sign of a wrinkle or change in his face whatever. His mother purchased a test card and promised to help the boy with his eyes every day at home, before and after school. She was told to bring Fredrick to the clinic again in a few weeks. On May 3, 1924, I saw him again and he appeared very happy. His mother very proudly told me that his report card showed the highest marks in all his school work. I wondered why Fredrick did not look toward his mother while she was praising him. I did not have to wait very long, however, to find out the reason. She had warned him before they arrived that she would tell me how careless he was with his stockings, and he did not wish me to know. Yes, Fredrick had only one fault. But only one, said his mother. There is not a day passes without his mother discovering holes in the knees of his stockings. Of course, I said this was a terrible crime, but putting glasses on him would have been a worse crime. Fredrick gained a point when his mother smiled on him. The school nurse who had ordered him to get glasses, noticed that Fredrick

did not frown any more. He sees the blackboard at any distance now without trouble. My little patient was really cured in one visit.

Two high school girls are also getting good results in the clinic. Their teacher had trouble with her own eyes and had cured herself with the help of Dr. Bates' book. Later she became a student, and took a private course of instruction from Dr. Bates, just because she realized what a great help she would be to her pupils in school. She has been successful in benefiting the sight of a great many school children and feels that it is all worth while. One of the two girls mentioned is named Rita. She suffered with progressive myopia and for two years her sight was steadily getting worse. The whole card seemed gray and blurred to her, the letters were indistinct. After palming for five or ten minutes at a time, her vision always improved. In six months' time she became able to read 12/30 on the test card with both eyes. She also sees the blackboard clearer and better than she has for over two years. When Rita's teacher came with her on her first visit to the clinic, she was much surprised to see her do so well with the test card for the first time.

The other girl named Erma, has divergent squint of her left eye. When she first came, which was six months ago, the left eye was turned decidedly to the left. When she covered her right eye, she could not read the test card very well with the left. It was difficult for Erma to keep her head straight as she tried to read the card. After she had palmed both eyes for ten or fifteen minutes, the letters of the card cleared up and now she reads some of the letters on the ten line, eight feet away from the card. She has become able to keep her head straight when she reads with the squinting eye. Her left eye becomes perfectly straight when she covers her right eye, but it turns out again when reading with both eyes. The squint however is very much better and she is determined to keep on with the treatment until she is cured.

Palming Compositions

***By* THE PUPILS OF MISS HANSEN, Chicago**

1. Palming is one of the works that has helped me in room six. While writing a story it would help me in my imagination. When I first came to room six Arithmetic was very hard for me to learn, but now it is as easy as punk.

2. About a month ago I told my sister Annie to start palming. She has glasses and I would not like her to have them any longer. She has started, and it looks like she will soon have eyes that will not need glasses.

3. Palming and the Snellen Card did me a great deal of good. It gave me more strength in my imagination, and I can do my work much better every day. I am not sorry in knowing how to palm, because in the beginning I did not like to put my hands over my eyes.

4. I told my mother to palm, it would help her, but she did not believe me. One day I said, Mother, Palm. She said, All Right. Finally a week later she could see clearly. She said, "I am glad I did what you told me."

5. Palming is a wonderful treatment for the eyes. It has done much during one and a half years. It has strengthened our imagination, rested our eyes, and kept them from wearing glasses.

6. We have a palming lesson four times a day. While we are palming we have a little music to think of something pleasant. It has cured many headaches from some of us. It is spreading everywhere, and we see lots of people doing it now.

7. It is very good for me. It settled my mind. I do not get so excited, and can add my columns easier. I can palm, if I get nervous.

Report of the League Meetings

***By* MAY SECOR, Secretary**

THE June meeting of the Better Eyesight League was held on June tenth, at 383 Madison Avenue. Many of the members had requested further practical work, and this was conducted by Dr. Bates, Miss Hurty and the secretary. The following exercises were practiced: palming, reading the Snellen card, reading fine print, and the long swing.

Miss Hurty offered the following suggestions for reading fine print: Look at the diamond type without trying to read the print; look at the white lines between the lines of print, and at the white spaces between the letters; move the head from right to left; select, on the Snellen card, a small letter which you can see well; close the eyes; when you remember the small letter perfectly, look at a letter on the small card; see this letter moving just the width of the letter. It is helpful, also, to **hold the small diamond type card between the forefinger and thumb of each hand, and, while reading it, to move the card from left to right, a distance equal to the width of one letter.** (This keeps the eyes shifting, central fixation on the small letter and the appearance of the swing = clear vision)



Drifting swing with visualization, memory of clear, familiar objects. Imagine lying relaxed on your back in your canoe or boat, floating on the river down stream. Brings relaxation, improves memory, imagination and clear vision.

Dr. Bates spoke of the difficulty that some persons experience in recalling visual images of familiar persons and objects; Dr. Bates has found the **drifting swing helpful in these cases. To practice the drifting swing, imagine that you are lying comfortably on your back in a canoe, floating down a stream; float on, and on, and on. This will facilitate visualizing by inducing relaxation.**

Dr. Bates described the "period" as a "small, perfectly black area which has no special size or form." One does not imagine the period perfectly unless one imagines it moving. The memory of the period has been found helpful in alleviating or preventing pain and fatigue, physical or mental.

JULY MEETING

A regular meeting of the Better Eyesight League was held on July eighth, at 383 Madison Avenue. Miss Cecelia Eschbach, a kindergarten teacher of the Brooklyn Orphan Asylum, presented a report of her work with Dr. Bates' method. Miss Eschbach has relieved many cases of eyestrain, and has corrected two cases of squint. She offered the following suggestions for the daily kindergarten program:—

1. Rest periods to be spent palming.

2. Swinging and palming to be combined in a swinging game in which two children join hands and swing (music). Beneficial for all pupils. In cases of squint have children look at the ceiling while they swing.

3. Game with splints. Keep the E or "pot-hook" eye card hanging in the room. Have children sit at a table 10 or 15 feet from this eye card, and facing it. Request children to make a picture with splints of the fourth line (or any other line) of characters on the card. Train the children to palm whenever they have difficulty in seeing the characters on the card.

4. When "reading" this E card the child may indicate which way each "E" points by pointing the open hand in the same direction.

Miss Elisabeth Hansen, a Chicago teacher, also reported her eye work. She is thoroughly convinced that the Bates' Method should be introduced in all schools, because of its great educational value.

Dr. Achorn, vice-president of the League, spoke of the advisability of eliminating strain throughout the body, as well as in the eyes, in order to lessen fatigue. Dr. Achorn believes that permitting a reasonable amount of movement throughout the body, is comparable to blinking and shifting in order to relieve eyestrain. For this reason he advises an "alert" sitting posture.

The resignation of Miss Lillian Reicher, chairman of the program committee, was accepted with regret.

The Fairy Convention

***By* GEORGE GUILD**

THE fairies were holding their annual meeting in a large wood where many of them perched themselves on the branches of the trees and looked down on a large flat portion of ground covered with nice, soft, cool, green grass. The white fairy was unanimously elected to be the leader and chose for her assistant the black fairy and they both sat on a toadstool in the center of the open space where they could be seen by all. The white fairy made a speech of welcome and recommended that the first order of the evening would be a dance by all the fairies, and then they all danced in time with the white fairy. The white fairy swayed from side to side and whirled around on her toes waving her arms in all directions to all the fairies who danced with her and imitated her to the best of their ability. At first she danced slowly and then as she became warmed up she danced faster and faster until it made one dizzy to see her whirling around. The black fairy was able to keep up with her most of the time and the other fairies did the best they could, but there were none there who could do the things the white fairy performed. She kicked her feet higher than her head in front and smacked her shoulder blades when she kicked backwards and every time her foot hit a shoulder blade you could hear the sound all over the place. As the dance proceeded, one by one the fairies fell to the ground completely exhausted and in time they had all stopped. The applause was considerable, and it was not very long before the other fairies became anxious for fear the white fairy would do herself an injury by her exertions and so they called to her, they pleaded with her to stop and rest, which she finally did. Then the white fairy called on the others to tell in turn some of the good things that they had done during the year. One told how she visited a sick child who was dying from diphtheria and when nobody was looking she danced on the chest of the sick child which stimulated the little one so much that she smiled. When she smiled she began to breathe better and in a little while, much to the surprise of the doctor, the child recovered.

Another fairy told about a drunken father beating his wife and children almost every day. One of his little girls came out to the woods one day and although she did not see any fairies she called them softly and then very loudly to come and help her and so they did. Her father became very much frightened the next time he started to drink a glass of whiskey for he saw on the edge of the glass three red devils who were apparently pouring poison into his whiskey. This worried him so much that he was not able to drink it. When he threw the whiskey away the fairies appeared before him, bowed and smiled to him, which pleased and delighted him very much. He finally became a loving father. But when he told his friends about the fairies they laughed at him and said that he must have been drunk or he would not have imagined such things. He had such a good time with the fairies when he behaved himself that he did not care whether he imagined it or whether it was true. He was quite certain that he felt very much better when he pleased the fairies.

Similar stories were told by many of the other fairies and then there came calls for the white fairy to tell what she had done. She told the story of a teacher who was very loving and kind and conscientious who had a hard time teaching her class. Most of the children had poor sight. Many of them had poor memories or suffered from headaches and pain and the teacher did not know what to do. One day she took a walk in the woods and rested her tired eyes looking at the green and almost unconsciously called out:

"Nobody helps me; I wonder if the fairies would help me?" The little white fairy heard and appeared before her, dancing and moving around until the teacher, tired out, laid down and went to sleep, and all through her sleep the white fairy talked to her and told her what to do, and these are some of the things she told her to do:

"When your children are tired, common sense will suggest that they ought to rest. When they stare at the blackboard, the harder they stare, the more they strain the less they see. Every teacher knows that or should know it. Do not have them stare; let them look from one place to another, keep moving."

And so the next day the teacher had the children close their eyes and cover them with the palms of their hands so as to rest them, and when she tested their sight she found that it was benefited. When the children complained of pain and headaches she would have them close their eyes and palm four times a day. Every day the children would cover their eyes with the palms of their hands for five minutes or longer while the victrola played some popular music. The benefit was great, because all the children obtained normal sight and became able to study their lessons without fatigue, headache or pain. They enjoyed going to school. When the other teachers saw the benefits of this kind of treatment they practiced it and they also got good results.

Then the white fairy appealed to the other fairies and beseeched them to help the eyes and the nerves and the minds of the little children in the public schools and in other schools. All the fairies applauded the white fairy for a long, long time, and she bowed her head, and the black fairy would bow her head and all the other fairies bowed their heads, and every time they bowed their heads down the trees and the things they were not looking at seemed to go up. When they raised their heads upwards the trees and everything moved down. It was such a pleasant sensation to see those trees moving up and down that they kept it up for a long, long time, and I guess some of them are doing it yet. They found that when they looked to the right the trees seemed to move to the left. And when they looked to the left the trees seemed to move to the right This was also a very pleasant feeling. They kept this up also for some time. They became very happy and very enthusiastic and had a beautiful time.
(Oppositional Movement)

The Eye Class in Erasmus Hall

***By* GEORGE J. WEISS, Pupil**

AIDING my fellow pupils in the eye class at Erasmus Hall High School has proved very interesting to me. There is no end to the little demonstrations that are in themselves proofs of Dr. Bates' method.

In one case, a boy who could only read at ten feet the line that is normally read at forty feet, was surprised to find that he was able to read the ten-foot line at ten feet. This came about in an unusual manner. The boy, whose name is Fred, was doing some chart work with me when I noticed him bending slightly forward and trying to see the letters. I knew that it would be useless for him to continue in such fashion, so I had him close his eyes after reading each letter. This eased him a great deal and he was able to read more than he expected. Fred became anxious again and tried to see all the letters on the bottom line without closing his eyes. I knew to let him go on that way would do him more injury than good. He gradually relaxed while I talked to him, and when he accidentally turned to the chart he saw all the letters on the ten-foot line at ten feet. This was a great revelation to him, for he not only proved the statement with his own eyes, but it taught him to stop trying to see.

Nearly everyone who comes to us has some fault which is the cause of his poor sight. This fault is sometimes discovered the first week, and usually no progress is made until the fault is found and corrected, as in the case of Fred. Many of our pupils stare, and as faults are mostly habit, so is staring.

It sometimes happens that they do not realize they are staring, and when they come to the next lesson they wonder why they have made no progress. This fault is always corrected by practicing the exercises regularly and conscientiously. We have found that the pupils who do so are always the quickest to be restored to normal sight.

Reminders for Summer Eye Practice

***By* KATHLEEN E. HURTY**

Miss Hurty distributed these instructions to her patients for use during the summer. These are the Fundamentals of Dr. Bates' method and are important to bear in mind at all seasons.



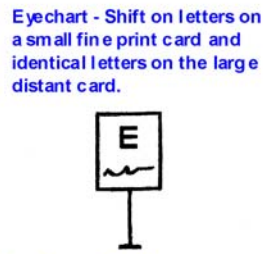
Palming—Do this at least three times a day for not less than five minutes each time. Always palm a few minutes just before going to sleep.

In palming best results are obtained when the whole body is comfortable and relaxed. While palming let the imagination play with pleasant scenes and let your mind drift laxly (relaxed, free flowing). Never follow a definite train of thought.



Long Swing—Practice this as often as possible. Keep an easy, lazy, rhythmical motion. Things should appear to move in the opposite direction.

Snellen Card—Practice with the card at least twice daily, using the fine print, your memory of a letter, a short swing, blinking, etc., to help you see the letters on the card.



Sun—Let the sun shine on your closed eyelids for short intervals. Choose preferably the early morning sunlight. It is the light rays which benefit the eyes rather than the heat rays. The sun loses some of its effect when it comes through glass.
Move the open fingers of the hands up and down, left and right in front of the closed eyes for 'Saccadic Sunning' to induce eye movement.
See the Natural Eyesight Improvement book for directions. (Free with the printed version of this book.)



Blinking—Normal eyes blink constantly. If you have unconsciously formed the habit of staring, practice the quick blinking exercise in order to overcome this tendency. Practice it often.

+General Directions—Try to see things moving all day long.

+Never make an effort to focus. Let things come to you.

+Do not make a task of your eyes exercises. Make a game out of improving your vision.

+If you get a chance, teach someone else. It will help you.

+Never let a feeling of strain continue. Stop and practice one of the methods of relaxation. Let me hear from you at least once during the summer.

Aim to Cure One Child

FOR the month of August the following School Numbers will be sold for 20c. instead of 30c. The titles of the most important articles are listed below:

* AUGUST, 1920
The Cure of Imperfect Sight in School Children
Save the Children's Eyes—Editorial
Imperfect Sight Contagious—W. H. Bates, H.D.
School Children at the Clinic—Emily C. Lierman
The Snellen Test Card in Newton—U. G. Wheeler (Supt.)

AUGUST, 1921
Children May Improve Their Sight by Consciously Doing the Wrong Thing
Sight-saving in the School Room—Edith Gavin (teacher)
My Experience in Treating Myopia
School Children at the Clinic
Better Eyesight in North Bergen—M. F. Husted (Supt.)

AUGUST, 1922
School Children's Eyes
College Men Fitted for the Army
Many School Children are Helped at the Clinic
Work of League Producing Results

AUGUST, 1923
The Snellen Test Card
Hypermetropia in School Children
What the Silver Jubilee Omitted
A Game to Cure Stage Fright

* Particularly instructive.

Any reader desiring further information relative to helping the children will write this office. We hope that when school begins in the Fall every reader will have one cured child to boast about. It isn't difficult. Children want to leave off their glasses. They follow instructions without question and their improvement is usually so rapid that it surprises the instructor. Dr. Bates is interested in the children and he is willing to answer questions and give advice through this magazine.

Let us help you to cure them.

The article: PERFECT SIGHT is repeated often on page 1 of Better Eyesight Magazines. It is typed only a couple times in this book.

PERFECT SIGHT

If you learn the fundamental principles of perfect sight and will consciously keep them in mind your defective vision will disappear. The following discoveries were made by Dr. Bates and his method is based on them. With it he has cured so-called incurable cases:

1. Many blind people are curable.
2. All errors of refraction are functional, therefore curable.
3. All defective vision is due to strain in some form.
4. Strain is relieved by relaxation.

You can demonstrate to your own satisfaction that strain lowers the vision. When you stare, you strain. Look fixedly at one object for five seconds or longer. What happens? The object blurs and finally disappears. Also, your eyes are made uncomfortable by this experiment. When you rest your eyes for a few moments the vision is improved and the discomfort relieved.

Have some one with perfect sight demonstrate the fundamental principles contained in Dr. Bates' book, "Perfect Sight Without Glasses." If the suggestions and instructions are carried out, and glasses discarded, it is possible to improve the vision without personally consulting a physician.

"Perfect Sight Without Glasses" will be sent C. O. D. on five days' approval. Price, $5.00.

Central Fixation Publishing Company
383 Madison Avenue, New York City

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

September, 1924

Permanent Improvement

MANY patients find that while it is easy for them to obtain a temporary improvement in their sight by palming a sufficient length of time or by other methods, they do not seem to hold it permanently. In this connection it is well to remember that the normal eye with normal sight can only maintain normal sight permanently by consciously or unconsciously practicing the slow, short, easy swing. When the normal eye has imperfect sight it can always be demonstrated that the swing stops from an effort. When the normal eye has normal sight, the eyes are at rest and all the nerves of the body feel comfortable. When the swing stops, one always feels more or less uncomfortable. To have perfect sight can only be obtained easily, without effort. To have imperfect sight always requires a strain or an effort which stops the swing. Near-sighted patients who have normal vision for reading at the near point become able, when their attention is called to it, to demonstrate that they are more comfortable when reading the fine print than they are when they fail to see distant objects perfectly.

One of the great benefits of the drifting swing is the comfortable relaxed feeling it brings. The retinoscope always shows that the eye is not near-sighted when no effort is made.

Persons with imperfect sight should imitate the eye with normal sight by practicing a perfect memory, a perfect imagination, a perfect swing, without effort, with perfect comfort all the time that they are awake. As I have said before many times, it is a good thing to know what is the matter with you because it makes it possible to correct it.

Quick Cures

***By* W. H. BATES, M.D.**

CHILDREN are more easily cured of imperfect sight than are adults. Children twelve years of age or younger who have never worn glasses, who can read 20/100 or better, may obtain normal sight in two weeks or less by reading the Snellen Test Card four times a day after palming and practicing the swing for five minutes or longer. To obtain a permanent cure it is necessary that such children should devote at least five minutes a day to palming, swinging and reading the Snellen Test Card as long as they attend school. There is a great difference in the minds of children. Some have good memories and can maintain mental pictures perfectly for long periods of time. Many of these cases have been cured temporarily in one visit by palming for an hour or longer while remembering mental pictures perfectly. Those children who were unable to remember or imagine mental pictures were not so readily cured, yet many of them were taught how to remember mental pictures at the first visit, and, with the help of palming and swinging a sufficient length of time, they also obtained normal vision at the first visit.

A small boy who plays baseball frequently becomes able to see, remember or imagine mental pictures connected with a game of baseball, and the better he remembers the ball game the better becomes his vision.

Squint, which is more or less prevalent in young children, is oftentimes **relieved promptly by playing games which require running**. If the children enjoy the game the strain of the eyes will be relieved and they will become straight temporarily. By repetition the squint will become permanently corrected. The use of glasses in such cases should be condemned because they interfere with the cure without glasses.

People who have imperfect sight and do not wear glasses soon learn to find their way about the streets without much trouble. School teachers have been surprised to find how well they could get along in school without their glasses. A quick cure cannot be accomplished unless the patient stops wearing glasses. Some people who have worn them for thirty or forty years or longer have been cured in one visit. The patients who have been cured quickly make a lot of trouble for the doctor, because their friends who may apply for treatment expect as quick a cure. When such a thing is not possible their disappointment is very decided and their conversation may be very disagreeable.

(Presbyopia)

Quick cures of patients over forty years of age who have lost their ability to read the newspaper or any printed matter at the near point occur from time to time. One day five patients over fifty years of age, who were unable to read at the near point without glasses, obtained normal vision temporarily in one visit. Each one demonstrated that the memory of imperfect sight required an effort; that it was difficult, tedious or fatiguing, and that imperfect sight could not be remembered or imagined continuously for any great length of time. They demonstrated that when they stared at one part of a large letter of the Snellen Test Card at twenty feet, after a few seconds an effort was required and the vision very soon became imperfect. When they looked at the diamond type at ten inches from their eyes they had the same feeling of strain and effort when they failed to distinguish the letters. They were able to demonstrate that when they stared, tried to concentrate or tried to imagine the small letters were stationary their vision became worse. When they rested their eyes and imagined things were moving their memory, imagination and vision improved. Some of them soon became able to imagine that the white spaces between the lines were whiter than the margin or the rest of the card. By closing their eyes they felt a measure of relief and rest, and by keeping them closed or by palming for five minutes or longer, they became able to imagine the white spaces much whiter, the letters much blacker, and to imagine the card with a slow, short, easy swing of less than a quarter of an inch.

Some years ago a remarkable patient came to see me. The first thing she said was that she had to catch a train which left in a few hours. She apologized by saying that she would have called to see me before but she had only just heard of me from a lady that she recently met at a luncheon. Her eyes, she said, were a great trouble to her and all the glasses she had worn had not been satisfactory.

I asked her if she wanted to be cured quickly. She answered:

"If you please."

Then I said to her: "You can be cured quickly if you do just exactly what I say."

She replied very solemnly: "I promise to do whatever you say."

I handed her a small card on which was printed some lines of diamond type. I asked her what she could see. She said:

"I see a gray card with a lot of blurred gray letters. They all seem to look alike and there are no spaces between the words or the letters and not always between the lines."

I said to her: "With your eyes closed, can you remember such a thing as a sunset, a red sun and different colored clouds?"

She said: "Yes."

"With your eyes still closed, can you remember or imagine a white cloud in the sky, dazzling white with sun shining on it?"

She answered: "Yes."

Then I gave her the following directions: "Close your eyes, keeping them closed until you can remember a white cloud in the sky, dazzling white with the sun shining on it, then open your eyes and glance at the fine print, still remembering your white cloud, but be sure and close your eyes before you have time to read any of the letters." I watched her do this for a few minutes and saw that she was following my directions properly, then I left her to practice by herself. After about half an hour I returned and asked her how she was getting along. Her face was a little bit flushed and in an apologetic tone she said: "I tried to do just exactly what you told me to do, Doctor, and I am sorry to say that although I only looked at the card for a second at a time, in flashes, contrary to your instructions, I read every word on the card." Then I explained to her that of course at the first visit she was not expected to do what I asked her to do exactly, but, under the circumstances, I thought that she had done very well indeed. I gave her some other fine print to practice with in the same way, but to hold it not more than six inches from her eyes. With her eyes closed she remembered the white cloud as before, keeping her eyes closed until her memory of the white cloud was perfect, and then she flashed the white spaces between the lines for a second. I watched her for a while, and I said: "What is the trouble?"

"Nothing," she said. "I close my eyes and remember the white cloud. I also remember it very well with my eyes open. When I do I cannot help seeing the white spaces perfectly white and the black letters perfectly black, but I am sorry to say that I cannot avoid reading the letters."

Then I held out my hand to her and said: "Shake hands. I am very well pleased with you and this time I will forgive you for not

avoiding reading the letters." She then departed for her train.

I tried the same method on a great many other patients but very seldom did I find one who succeeded as well as she.

Stories from the Clinic

55: A HOSPITAL PATIENT

***By* EMILY C. LIERMAN**

DURING the hot summer days while we were still treating patients at the Harlem Hospital Clinic, a little girl named Estelle, about eight years of age, was brought in and placed in the children's ward of the hospital. She met with an accident which destroyed the sight of her left eye. Not being a Clinic case, another doctor took charge of her. One day this doctor came to our room and asked Dr. Bates when he expected to take a vacation. Dr. Bates answered: "I take a vacation every day. Why do you ask?"

The other doctor answered: "I am serious, Dr. Bates. When do you go away for a rest?"

Dr. Bates replied: "When I am treating my patients it rests me, so I don't have to go away. Is there anything I can do for you?"

"Yes," said he. "There is a little girl in the children's ward upstairs and while I am away I would like to have you take care of her case. When I return I shall remove the injured eye, for it is in bad shape and the sight is completely destroyed."

Dr. Bates agreed to care for the little girl and asked me to help him. We called on Estelle soon after and the nurse in charge of the ward led the way to the tiny cot in a far corner of the room. Rows upon rows of cots we passed and on each lay a young child. Some of them were the dearest little pickaninnies you ever saw. A number were crying with pain, while others looked wistful as we passed them by. I could feel their loneliness, away from their mothers, and my heart ached. I glanced at the doctor's face and I could see that he, too, felt sorry for the little ones. Finally the nurse stopped beside Estelle's cot, and the poor child looked very much frightened as the doctor and I came along. We could only see part of her face as she lay there, because the whole left side was covered with a bandage. Before Dr. Bates could say a word to her she began to cry and beg the new doctor to please not hurt her, like the other doctor did. The nurse began to remonstrate with her, but the doctor soon quieted her when he promised in his gentle way that he would not hurt her one single bit. She stopped weeping instantly when the doctor asked her if she would like to see how really funny she looked in a mirror. Was there ever a girl or a woman who didn't want to see herself in a mirror? Estelle answered: "But I haven't any mirror."

"Oh!" said the doctor, "Mrs. Lierman always carries one in her purse."

I produced it quickly, before the child lost interest. As she held the mirror and looked at her bandaged face I noticed that the nurse was bored; all this was a waste of time. She had other duties, undoubtedly, but Dr. Bates believes in taking his time and he surely did on this occasion. The doctor very carefully directed the child to remove the adhesive plaster herself, and in this way the bandage was removed without discomfort or pain. After the doctor had examined the eye, which was almost healed, he turned to the nurse and asked: "Why on earth is this child kept in bed?" The nurse answered: "Because of the injury to her eye."

"So I see," said the doctor, "but the rest of her body is not sick or injured. Why cannot she get up and walk around here?"

The nurse replied: "But I am obeying the doctor's orders."

"All right," said Dr. Bates, "I have charge of her case now, and I think she ought to be out of bed."

Before the nurse could tell Dr. Bates that the child would have to be dressed, he put out his arms toward Estelle and her arms went out toward him with a smile. If our reader has ever visited a patient lying in a hospital bed, why need I explain just what Estelle had on at the time. She didn't care, neither did the doctor. He lifted her gently out of bed, and as she readily gave him her hand both walked slowly down the whole length of the ward. But, coming back, she ran with him. Of course her steps were uncertain, for she had been in bed for two weeks, which made her weak, but she had full confidence in the big doctor who held her hand and who surely would take care that she did not fall. What a funny sight she was! Bare feet, a smile, and practically nothing else. The nurse looked on disdainfully, but I must confess that I giggled. The other children in the ward became interested in the game of the doctor and Estelle. There was a grand exodus of most of the children from their beds, who were anxious to join in the fun. During this time Estelle was not quiet. She was so happy that she screamed with delight, while the other children added their voices to the riot. The nurses had a lively time for fully ten minutes or longer getting things settled again.

Back again to the other end of the ward ran poor little Estelle, with Dr. Bates trotting alongside of her. Coming back, the doctor stopped beside a cot where a baby lay swathed in bandages from head to foot. She had been horribly burned. Neither of her tiny hands was free to hold a dolly or some other play-toy. Over in a corner of the room was a box with all sorts of toys. At the doctor's suggestion Estelle produced a dolly from the box and held it up so the poor baby could see it. Her moans changed to smiles right off and in an instant two little girls forgot their pain. To go back to Estelle's trouble. She told us how she had been playing on the sidewalk near her home when she slipped and fell against the curbstone. A piece of a broken glass bottle lay in her path and it penetrated through her upper closed eyelid and cut the eye so badly that the sight was destroyed completely. Dr. Bates treated the eye later so that it did not have to be removed. Even though she could only see out of one eye, anyone observing her could not have guessed that the sight was destroyed in the left eye. Both Estelle and her mother were very grateful to us, and at every visit Estelle would fill the doctor's pockets with fruit and candy which she was only too glad to share with the big doctor who did not hurt her.

A Personal Experience

***By* HENRIETTA C. CLINTON**

FOR more than twenty years I had suffered from what the doctors call migraine headaches, with the usual digestive disturbances, which greatly interfered with my general health, both from their frequency and the medical remedies supposed to be necessary in such cases. I fortunately refused to wear glasses except for about three years of that time. At forty-six my vision was very bad for the near point and I had double vision in each eye. My headache became almost continuous, and I was very thin and nervously wrought up all the time.

One of the leading ophthalmologists of San Francisco told me that double vision meant incipient cataract. I walked the streets trying to realize blindness, because his opinion was that I should wear terrible lenses and wait until the cataract developed and got

hard enough to be cut out.

Fortunately I did not give up my attempts to read. One day at the library I came across the article in an old "Scientific American" of January 12, 1918, about Dr. W. H. Bates' discoveries in regard to curing the sight without glasses. I immediately wrote to the doctor, but it was some time afterwards before I understood anything about how to apply the principles toward a cure.

I am now fifty-one years old and my sight is almost perfect. I can read the photographic reductions readily and I can stand in the window of my office on the ninth floor of an office building downtown and read the numbers on the automobiles as they pass in the streets. The stenographer, who is in her early twenties, vies with me in seeing the most difficult things she can think of, and sometimes she beats me and sometimes the reverse.

I do not yet consider my sight perfect, because I can only see the ten line on the test card at fifteen feet. My ambition is to see it at twenty or even thirty feet, and I have a great ambition to see Venus as a crescent. Shortly after I purchased Dr. Bates' book, "Perfect Sight Without Glasses," in which he says that some people see the rings of Saturn and the moons of Jupiter without glasses, I saw an article in the "Scientific American" in which the writer told of a tablet dug up in Asia Minor in which a priest made a prophecy. It said that "When the north horn of Venus was over a certain star certain things would happen, and that other things would happen when the south horn of Venus was over another star, showing," the article said, "that the Babylonians knew Venus to be a crescent," and added, "that the ancients must have had lenses, because it was not thought possible that the human eyesight could be ever acute enough to see Venus as a crescent."



Telescopic vision
See the rings of Saturn,
Moons of Jupiter.

That interested me greatly. At that time I had great difficulty in seeing newspaper print. I would squint and make my head swim with pain in order to read without glasses. I hated them, and I made up my mind that I should some day see Venus as a crescent.

The first thing I tried to do was palming. It was impossible, because I tried to see the inner field black, and the more I tried to see it so the more the lights would come. I tried to read the photographic reduction. It was impossible, because I would squint and strain. I got worse daily. I tried central fixation. I could not do it, because every time I looked at a thing I would out-stare it until my eyes seemed to pop nearly out of my head.

I could not seem to know how to relax until I conceived the idea of using my imagination. The first time it occurred to me to use my imagination I was at the table and imagined that black ants were crawling over the tablecloth. To my delight I instantly saw the threads of the tablecloth. In two weeks I learned to relax enough to read newspaper print easily. I remembered that when I was a child and shut my eyes, they were shut, not merely the lids, but the whole paraphernalia of sight was shut. When one "sees lights" he does not shut the centers of sight. I kept imagining that I was a child sleeping in my little crib and that the black night was all around me. The first time complete blackness was all over the inner field it startled me so much that the lights came on worse than ever. You see, I had begun again to regard the lights with my centers of sight and forgot to relax. But persistence gave me the power to disregard those bothersome lights.

Colors, moving, swirling, seen when the eyes are closed can indicate eyestrain, mental strain and need for more relaxation. They are also a sign of headache, poor nutrition, sinus congestion placing pressure on the eyes.

The memory of a period escaped me until I imagined a spot of black molasses on the tablecloth. It was very black and some black ants ran all around the black fluid. I got so that I could disperse those ants and leave the very small spot of blackness moving slightly back and forth on the whitest surfaces. My period! Palming and going through that scene over and over again gave me such relaxation that I would open my eyes and read a line or two of the photographic reduction before the glaze of staring would come back. I do not know at what stage I lost the double vision. The headaches went while I was trying to see fine print, even staring and squinting at it before I learned to relax.

(Headaches cured by reading fine print.)

Another mental image I found relaxing was that of a black velvet cloak I once owned. I thought it had a rip and I had to take several spools of black silk and match the blackness of the cloak. One spool of silk would not be black enough, then I'd take another and another, until I could get a spool as black as I could possibly conceive blackness.

I was also benefited by remembering some word of photographic reduction and have the letters rapidly change places with each other and spell different things. I find that in reading the test card at a distance I can see them more distinctly if I imagine a black wand slowly pointing out the letters to me. I think it is the unconscious swinging that I do of the letters as the imaginary wand approaches the letters that helps me to see them more clearly and more centrally fixed.

One thing that may interest other fifty-one-year-olds is that almost all the wrinkles which had been around my eyes have disappeared, and people meet me and tell me that I look ten years younger than I did ten years ago!

The Fairy School

***By* GEORGE GUILD**

IT was very hot. The school windows were wide open, but not a breath of air was stirring and the teacher and pupils were very uncomfortable from the heat. Freddie was only eight years old and he could not be blamed when his mind wandered from his work. In spite of all that he could do his head would nod, his eyes would close and he would drop off to sleep. Then he heard the White Fairy talking to the children while she sat on the teacher's desk, waving her hands and dancing around to the amusement of the children. Her eyes were so bright and full of sympathy, kindness and love that not one of the boys or girls could keep their eyes from her face. She said:

"Now watch me as I swing from side to side. Please, all of you stand up, with your feet slightly apart, facing me, and move your whole body, your head and your eyes from side to side while I am moving."

"Now sit down, close your eyes and cover them with the palms of your hands, resting your elbows on your desk. While you are doing this remember me standing up, smiling at you and loving you with all my heart." In five minutes she said: "Now open your eyes and watch me while I dance."

Freddie noticed how much more distinctly he could now see the face of the White Fairy.

Then all of a sudden the White Fairy stopped dancing. At first the smiling eyes were very clear, but in a few seconds or so they

began to blur and fade away. It was not long before he was unable to see her face or her tiny feet; they had become just a blur. He felt uncomfortable, and he must have looked uncomfortable because the White Fairy called out: "Freddie, swing your head from side to side." Freddie was only too glad to swing from side to side, and it was not long before he became able to see her tiny feet, her eyes and face just as clearly as before.

Then the White Fairy said: "Now, Freddie, close your eyes and remember me as well as you can. If you love me you will remember me."

And Freddie closed his eyes, and I am quite sure that he remembered the face of the White Fairy, because he loved her so much. After he had kept his eyes closed for a few minutes the White Fairy called out:

"Open your eyes and tell me what you see. And when Freddie opened his eyes the school-room was gone. It seemed as though he was in the woods; it seemed as though he was a fairy and that all the other children were fairies, and he enjoyed being a fairy because when he imitated the look of love on the face of the White Fairy he thought of his mother and his father, his brothers and his sisters and other people that he could remember. He seemed to love all of them a great deal more than he had ever loved anybody in his life. The White Fairy invited him to dance with her. It was very strange to Freddie that he could dance for a long time without getting tired, and the more he danced the better did he feel. Then the White Fairy told him to stop dancing, and while sitting on the grass she walked around him, touching his head with the tips of her fingers until he fell asleep. When he woke up the teacher was petting his head and loving him. At once he called out:

"Oh, teacher, the White Fairy taught me to dance, how to see, and now I feel just like studying." When the teacher heard him say this she said:

"Freddie, I am curious. Show me what the White Fairy helped you to do." And so, before the whole school Freddie showed how the White Fairy taught him to swing, shift and palm and how she showed him how staring and straining made his sight worse and that by moving his head and eyes from side to side his sight got better. Right away the children all did it, and after they had practiced with Freddie for a short time they were all very happy and told the teacher that they also felt a great deal better, and, like Freddie, they wanted to get to work because they felt just like studying.

The Better Eyesight League

AUGUST MEETING

THE vacation season is in full swing now and the August attendance at the Better Eyesight meeting was small. Miss Hurty, the President, is away for the summer, and Miss Secor, Secretary, is away during the month of August. Owing to the small gathering, Dr. Bates informally opened the meeting and gave a lecture which lasted about an hour and a half. During this time he demonstrated the various swings and explained their value.

One visitor remarked that she is a high school teacher and interested in the results obtained in schools. She wished to help her children, but when practicing the method she failed to see things move. She emphatically said that when she looked at a chair it stood still, and no feat of her imagination could make it move.

She was a very difficult subject, inasmuch as she stared at everything instead of taking things easy and relaxing. Dr. Bates explained the principle of the swing, admitting that it was imaginary, but no more so than the moving of the telephone poles when one is riding in a train. The other members present benefited by her errors, because they were being shown the wrong way to do things and the correct method of improving the sight by the use of the swing.

Before the visitor left she saw the chairs moving by looking first over one shoulder and then over the other, glancing at the chairs as she swayed but not staring at them.

The most important fundamental principle to keep in mind is that defective vision is caused by strain and cured by relaxation. One of the greatest causes of strain, and the beginning of many unpleasant symptoms, is staring. This is due to an unconscious effort to concentrate and to put the utmost energy into every act or movement.

The subject of seasickness was then discussed. Dr. Bates said this also is caused by strain. People who relax and allow their bodies to sway with the movement of the boat never become sick. A sailor's walk is spoken of as a "rolling gait." If he were to stand stiff, stare at the waves, and strain to resist the movement of the ship he would never become a sailor.

Dr. Bates told the story of one of his patients who would never ride in an elevator if she could avoid it. She detested going into the modern office buildings because the elevators were so swift and the buildings so high that she became ill before she was half way up. She told Dr. Bates she had to steel herself to the ordeal of boarding one, and at the end of the trip felt as though she had just crossed the Atlantic Ocean in a rough voyage.

When Dr. Bates invited her to go with him for a ride in the elevator of his building she opened her eyes in amazement, thinking he lacked sympathetic qualities. He explained to her that steeling herself to take a ride was wrong, in addition to being a dreadful strain. He told her to look at the operator and not at the walls gliding past. This helped her to such an extent that she insisted upon riding up and down several times to see if the cure was permanent. It was, just so long as she did not strain to hold the floors stationary.

Same method works in the subway: avoid staring at the passing trains. Le the eyes move on the trains, move with them.
Look at a stationary post or sign and shift on it, blink, sway and relax.

A wonderful report was received from the superintendent of nine schools who installed this method in his classes. This proved without a doubt the value of Dr. Bates' method, especially with children. The report will be read at the September meeting of the League. We hope all the members may be able to attend, because the report of the summer work will be worth-while and helpful.

The September meeting will be held on the second Tuesday, as usual, which falls on the ninth.

Chief Four Eyes

***By* EMILY A. MEDER**

A LADY called at the office and introduced herself. She was one of our regular correspondents and I remembered her name because she had such a great deal of trouble with her thirteen-year-old son, Dick. She explained in her last letter that he is a normal, active boy who finds more enjoyment in playing baseball and leapfrog than doing his home work. As Dick wouldn't wear glasses she decided to see what Dr. Bates' method accomplished.

There is a vacant lot near her home, used by a band of "wild Indians," with her son as "Chief." The band, however, objected to a leader with glasses, and Dick became quite ingenious in inventing ways to wear them and still not wear them. She said she watched him continually. He walked innocently past her with the glasses gracefully perched on his nose, but in some mysterious way they disappeared before he reached the sidewalk. This became a nervous game of hide-and-seek between them. He said he would not be called "sissy," and she was equally sure that he would have to wear glasses in order to be cured.

About this time news of Dr. Bates' work reached the mother's ears and she wrote to us for information. She bought the book and told Dick that if he did as she instructed he could leave his glasses off for two weeks. At the end of that time she found that he could not only go without his glasses but his sight had improved.

Dick enjoyed the palming, much to her surprise, and he did not have to be told to do it when his eyes felt strained. He is proud of his test card and his "Indians" try to outdo each other in reading it at the farthest distance. It has become a modern Indian rite.

"The best of it," Mrs. Jamison said, "is that I can look at my boy now without the suspicion usually attached to a murderer, and he lost the hated nickname of 'Chief Four Eyes'."

Questions and Answers

Q—Is there any power in the lens of dark sunglasses? Are they harmful?
A—Yes. Dark glasses are very injurious to the eyes.

Q—I improved temporarily by your method, but I am at a standstill now. What is the next step?
A—Practice the swinging.

Q—I enjoy palming, but it makes me drowsy after ten or fifteen minutes. Is this helpful?
A—When palming is done properly it does not make you drowsy.
Natural deep relaxation leading to restful sleep is beneficial.

Q—Is a case of detached retina likely to respond to treatment?
A—To cure detachment of the retina requires in some cases a year or longer.

Q—Could a little colored girl cure a cataract on her eye by blinking and swinging?
A—Yes, but the patient should practice many hours daily and it should be kept up for many months under the supervision of someone with perfect sight without glasses.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

October, 1924

The Rabbit's Throat

DURING the past ten years a method of breathing has been practiced which has improved the vision of many patients after other methods had failed. It consists of depressing the lower jaw with the lips closed and lowering the tongue and muscles below the chin. At the same time one breathes in through the nose and throat in a manner somewhat similar to snoring and when done properly one can feel a coolness of the air while it passes down into the lungs. This method of breathing is accompanied with the eyelids being more widely open in a natural way without staring. **The ear passages, nose, and throat dilate. The tube which goes from the throat to the middle ear becomes more widely open, with improved hearing in chronic deafness which does not respond to any other treatment.** If one rests the chin with the thumb below it and the forefinger just below the lower lip, one can feel with the thumb the hardening of the muscles below the jaw accompanied with a decided swelling. By practice, the swelling and hardness increase. This suggested the title of the Rabbit's Throat because of a similar swelling below the rabbit's chin. The **tension of the other muscles of the body becomes relaxed.** There is a wonderful increase of muscular control.

Music teachers have told me that the singing voice becomes much better because of the **relaxation of the muscles of the throat**. The involuntary muscles of the digestive tract become relaxed in a striking manner with the relief of many symptoms of discomfort. **Redness and inflammation of the mucous membranes of the eye, ear, nose and throat and the rest of the body are relieved in a few minutes with the aid of the Rabbit's Throat.**
The Rabbits throat method improves breathing, relaxes the muscles in the neck, head, improves ear function. This helps to improve eye muscle and eye function, clarity vision. The visual system is connected/functions with the ears, balance system. Other breathing methods are found in yoga exercises, abdominal/diaphragmic breathing.
Relaxed throat, neck = improved circulation to the head, ears, eyes = clear vision.

Imagination Cures

***By* W. H. BATES, M.D.**

THE normal eye when it has normal sight IMAGINES it sees many illusions. When the normal eye sees one small letter of the Snellen Test Card on the bottom line, it can be demonstrated that a Swing from side to side can be imagined. If the letter does not appear to swing or if the swing is stopped, consciously or unconsciously, the vision becomes imperfect.

The White Spaces between the lines of letters are always seen whiter than they really are. This is of course an illusion that the normal eye is able to imagine.

With normal vision the form of each letter is imagined correctly. For example: if the letter O is a perfect circle and is imagined to be an oval with the long axis vertical or horizontal the imagination of the O will not be as perfect as when the O is imagined to be a circle.

When a word is regarded, the letters are sometimes apparently transposed, and when this illusion is imagined the vision is always imperfect.

Size: If a letter is imagined much larger than it really is, it can be demonstrated that the vision is imperfect; if the letter is imagined smaller than it really is, the vision is also lowered.

Normal vision can only be demonstrated when one sees a part of a letter best, the other parts of the letter being blurred.

The eye with imperfect sight has also an imperfect memory of a letter, its form, size or location. The white background or the spaces between the lines are less white than the margin of the card.

The stare can always be demonstrated.

The swing is also modified, being either too short, too long, too rapid, too slow, irregular and not continuous. These facts have suggested methods of treatment which have been very successful.

The best distance to practice with the Snellen Card varies widely. If no improvement is manifest in a few minutes, it is well to try practicing the vision of a letter on one card at a near point where the vision is good and to Flash the more distant card alternately.

One patient, a girl aged 18, had myopia of concave 4.00 D.S. Practicing without her glasses at fifteen feet did not improve her sight. The card was brought closer, to six feet, where her vision was 6/70. She held another card in her hand and practiced looking at the first letter of the 10 line, a letter F, at one foot where she could see it quite perfectly with a slow, short, easy swing, and at the same time imagine her body was swinging with the F. This she became able to do by moving her head and eyes. Later she imagined the swing of the F without having to move her head. She alternately regarded the F at the near point and imagined her body was swinging with the F and then flashed the first letter of each line of the Snellen Card at six feet without modifying or stopping the swing of her body. Her vision rapidly improved so that she became able to read the 10 line at six feet. The card was then placed at fifteen feet and by practicing in the same way she became able to read all the letters without stopping the body swing. She then practiced with cards that she had never seen before and was able to read the bottom line as quickly on the strange card as she could on a familiar one. When she looked at the large letters at first she unconsciously made an effort, stopped her swing and failed to read them. By looking between the lines of letters and planning to test her swing without testing her sight, she was able to maintain the swing of the letter F or the swing of her body, swinging with the letter F, which improved her vision decidedly. She had more trouble in reading the larger letters than she had in reading the small letters on the bottom line.

A very interesting case called recently, a woman aged 61. She complained that the doctors had repeatedly urged her to wear glasses for reading but none of the glasses gave her any benefit. When she looked at the Snellen Card at twenty feet she could read the bottom line without any trouble; and it seemed to her, that the letters were always moving and that this was something wrong with her eyes. It took me about half an hour to prove that the movement of the letters was necessary and that when she tried to stop the movement, her vision always became worse. In her business she had to read very fine print most of the time. I tested her with fine print and found that she could read it perfectly as close as six inches and as far off as she could hold it. Then I asked her: "How do your eyes trouble you?"

"They don't trouble me at all when I forget about them, but when I notice what happens when I am reading it troubles me a great deal. I found that even a small letter regarded is moving. If I try to stop it from moving it disappears and my eyes feel uncomfortable. I can usually read page after page without any trouble but if I try to increase my speed by reading a whole sentence at a time, it causes me a great deal of discomfort."

Again it required some time to have her demonstrate that when she read with perfect comfort she read without any effort; as soon as she made an effort to see, she lowered her vision and produced headache or pain in her eyes. In various ways I emphasized the fact that when she had normal vision it came without any effort to see, but to see imperfectly required an effort and the greater the effort she made the less did she see and the more uncomfortable did she feel. I told her repeatedly that she had perfect eyes. There was no disease of the retina, there was no disease of her optic nerves and she had no sign of a cataract. The doctors also complained that her sight was too good and that she must be under a terrible strain to see so well; and, when she replied that she did not have any discomfort when her sight was normal she got into an argument which was more disagreeable than beneficial.

I think I helped this patient a great deal by just telling her the facts, that she had normal eyes and that she knew how to use them.

It is interesting to know how many cases with normal vision use their eyes wrong and suffer from pain, fatigue, imperfect sight or other eye discomforts.

The imagination is a very important factor in vision. One can, by imagining a letter imperfectly, increase the hardness of the eye ball immediately, which is an important symptom of Glaucoma. Conversely, the imagination of a letter seen perfectly softens the eye ball in Glaucoma with great benefit to pain and imperfect sight of this disease.

+Imagination of imperfect sight has produced cloudiness of the lens or increased the opacity of the lens in Cataract.

+In Myopia the eye ball is elongated. The imagination of perfect sight is accompanied immediately by a shortening of the globe to normal, and the patient obtains, temporarily at least, improved or perfect sight. One can produce Myopia by the imagination of imperfect sight.

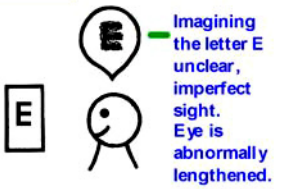
+In Hypermetropia the eye ball is shortened. The imagination of perfect sight is followed by the lengthening of the eyeball to normal, and the patient may have normal vision temporarily. The imagination of imperfect sight for near always lessens the length of the eye ball, produces or increases Hypermetropia.

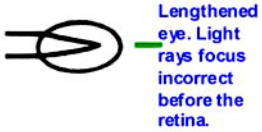
+All forms of Astigmatism can be produced or increased by the imagination of imperfect sight. They are all cured temporarily or permanently by the imagination of perfect sight.

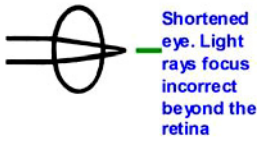
Wonderful cures have been accomplished, after all other methods had failed, of many eye diseases by the proper use of the imagination.

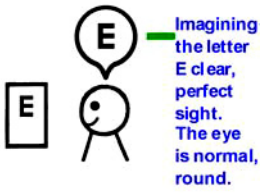
+Imagining imperfect sight when looking at a distant object causes a lengthened eyeball, incorrect focus of light rays in the eye and unclear distant vision.

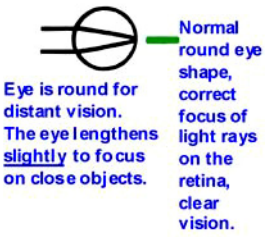
+Imagining imperfect sight when looking at a close object causes a shortened eyeball, incorrect focus of light rays in the eye and unclear close vision.











Stories from the Clinic

NO. 56: SCHOOL CHILDREN

***By* EMILY C. LIERMAN**

PUBLIC school children come to the clinic in great numbers throughout the whole year and are eager to be cured without glasses. Not always does the child have a guardian or mother near to encourage him while he is waiting to be treated. Sometimes they come alone, and sometimes with three or four other children.

At the office the Doctor sees the patient for one-half hour or more, but those at the clinic can have only five minutes or a little longer, as the time is short on clinic days. School children are cured quickly, however, whether it be at the office or at the clinic. When they discover that they can be cured without glasses, we have very little trouble in treating them. They are always eager to discard their glasses, with a few exceptions, of course. Some children feel dressed up in them, because their parents wear attractive ones with gold or tortoise shell rims. Occasionally these people come to have their glasses readjusted and the doctor finds that these are often practically window pane glass, without any strength whatever.

A little girl named Betty, aged 13 years, usually found a convenient corner of our room where she could see each patient having their eyes treated. She had no trouble with her eyes, but always came with her school chum who was under treatment. She listened attentively as I encouraged the patients but never was troublesome nor asked any questions at any time. Somehow she obtained a Snellen Test Card and helped some of her playmates recover their vision. She brought several of them to me to be sure that they could get along without their glasses. One of them was a boy twelve years old named John, who had worn glasses for five years and was very nearsighted. At the age of seven, the school doctor ordered glasses for him. Dr. Bates examined them and discovered that the boy was wearing farsighted glasses for myopia, or nearsight. When they were changed one year before, the optician who sold them, had made a terrible error. No wonder Johnnie was willing to have Betty help him. She told me that he could only see the 50 line of the card ten feet away without his glasses. When I tested Johnnie he placed himself fifteen feet away from the card and read every line of letters without a mistake. Then he told me how Betty spent an hour with him almost every day for three weeks until he became able to read the card at any distance Betty desired him to read it. I'm sorry she stopped coming to the clinic. Her parents moved away and I lost a very good assistant.

Then a mother came to the clinic with her two little girls. Marjorie, the oldest, had been to us some years previously and was cured. The youngest child was sent home by the school nurse and was told to see a doctor about her eyes. Dr. Bates told the mother to wait for me and when I was ready, I would test the children's eyes. The mother kept looking at me, smiling all the while. She asked; "Don't you remember me? Don't you remember my little girl? I brought her to you and Dr. Bates six years ago. She had alternate squint when she was three years old and Dr. Bates cured her without an operation." Hundreds of cases had been treated and cured in that time, and this dear little girl had grown from a wee tot of three years to a big girl of nine. The mother waited patiently for me to say yes. I tried my very best to remember, for my memory is usually good, but I failed this time. Before I knew it I answered, "Yes, surely I remember." How grateful this mother was because I did not forget her child and how sorry I was because I told a fib. She just knew that I would not forget, so I could not convince her that I did. If Dr. Bates had had his retinoscope handy, he would have found that I was made nearsighted by telling the fib. When one tells an untruth, the retinoscope always reveals the fact.

Marjorie's both eyes were as straight as mine, but everyone in the clinic who would listen to the mother that day, heard how we had cured her child of cross eyes.

Her sister Katherine, aged 7 years, stood by, wondering what we were going to do with her. Both girls were dressed with the greatest of care and Katherine looked very much like a big French doll with her head just covered with curls. Dr. Bates examined her and said she had myopia but was not a bad case. I placed her ten feet from the test card and she read every letter correctly down to the forty line. As I walked over to where the card was placed to assist my little patient, the mother got ahead of me, and in a soft tone of voice, encouraged Katherine to palm and remember the last letter of the forty line of the card. Katherine did so, but she had only covered her eyes for a minute when she removed her hands and opened her eyes to read again. I wanted to tell the child that she had not palmed long enough but before I could say a word, she began to read the next line of letters as her mother pointed to each one. After each letter was read, her mother very gently told her to blink and that would help her to see the next letter without a strain.

The mother did not stop when Katherine finished reading all of the thirty line without a mistake, but kept right on to the next line, pointing to one letter and then another until she read all of the twenty line.

Then the mother advised Katherine to swing her body from side to side and to notice that everything in the room seemed to move in the opposite direction. While her mother was advising her what to do, the child did the best she could to read the card. The mother smiled when she saw how amazed I was to see her improve Katherine's eyes without my help. I asked: "Where did you learn how to do it?" She answered: "From reading your articles in the Better Eyesight Magazine. I have been a subscriber for a number of years."

Some months later the mother called with Katherine to learn if she was cured. Her vision was 10/10 in each eye. It is interesting to report that the child was cured entirely by her mother.

The Method in England

(We have been extremely encouraged by the reports sent in from time to time by our English correspondents. No one is professionally using Dr. Bates method in England, yet the results obtained by book patients have justified the opening of a Better Eyesight Clinic.

Miss Taylor's interesting letter to Dr. Bates explains the origin of the Clinic. Her first-hand information from Head-Quarters there is typical of the various reports sent to us.)

Dear Dr. Bates:—

I AM so glad I got those addresses from you before I left New York. I have had the most interesting time and want to tell you about it as I am sure you and Mrs. Lierman will be interested.

I found Captain Price was out of town for several weeks but I saw his friend, Major Galloway, who is on the Council of the Better Eyesight League over here. I introduced myself as a former patient and friend of yours and Mrs. Lierman's and he was just as nice as he could be, and told me all about the work they are trying to do. He said I must see Miss K. Beswick who is Capt. Price's assistant, and was the one who got him interested in the beginning. I invited Miss Beswick to tea and she told me how everything began. It seems her mother had been blind from **glaucoma** for 8 years and they had tried everything including operations, without success. All she had was perception of light. Someone suggested they try osteopathy for her general health so she took her to a well known American here. He gave her treatment of course, but also told her about the wonderful discoveries of an American, Dr. Bates, and said he had bought your book and before he had had time to read it a patient noticed it and borrowed it. The patient had bad myopia but cured it in three weeks with the book. Miss Beswick bought the book, went to see the woman who had cured herself and then began on her mother. That was six months ago. I met the mother a few days ago. She took up a magazine and read the big print for me, very slowly of course. Then she told me I had on a brown dress and was dark myself. As you know my skin is dark to begin with and now I am almost black from sunburn. Then I walked down the street with her. She avoided the people all right. She could see the curb to step up but not to step down which was exactly my trouble when I first took off my glasses. Once we came to a place where the pavement changed from dark to light and she thought it was a step down, which is natural enough.

When Miss Beswick saw her mother's improvement she told her friend Capt. Price about it. He tried it and immediately saw the wonders of it so both of them began to practice on all their friends. When they felt more confident they opened a clinic with three patients. That was last April and now they have forty. Capt. Price is going to send you a report on the clinic cases in a few months. They have had some wonderful successes. I asked Miss Beswick how it was possible they could know how to treat patients with no more to go on than your book and a few letters from you. She said the explanation of course, was that it was the truth that you had discovered and it worked.

I will tell you a few of the cases to give you an idea of what they have done in this short time.

Some of the quick temporary cures were:

Man, myopic, has worn glasses long time. Sight very blurred 10/200. In twenty minutes read 10/40 with ease. When he went home his family persuaded him he had been hypnotized so he has never returned.

Boy, 6 years old, bad squint in one eye, vision faint 10/200, other eye normal. In less than an hour read 10/10 with bad eye on strange card. The squint was cured temporarily for a few seconds at a time. Has had only that visit but will return after the holidays.

Miss Beswick said Miss Clutterbuck was the only person she had met who knew you so she asked all about you and your work. She wanted to know if Mrs. Lierman was as charming as her articles in the magazine, and I told her she was even more so.

It is wonderful what they are doing to make the method known. Capt. Price is being asked to speak in some of the big cities and Miss Beswick too.

Miss Beswick has one or two friends who are members of Parliament. She has gotten them interested and they are working with the Ministry of Health and Education to get the system installed in the schools. She was formerly a teacher in London and she has friends who are working with the London County Council and she hopes before long to get it included in the course required at the normal schools for Teachers run by the County Council. One big London high school has already installed it.

Recently a delegation was sent to England from the German Government to investigate the most modern ideas in education in England and to report with recommendations for the German schools. Miss Beswick's friend who is in Parliament suggested that the head of the delegation see Miss Beswick with regard to your method as applied to school children. He had several interviews with her.

Several doctors are using the method and are on the Council of the Better Eyesight League, but **the medical profession as a whole have not waked up to what is going on. Miss Beswick expects great opposition when they do**. In the meantime she hopes the League will be in a strong position with titled people on the Council, etc. She has already gotten an article in a well known magazine of the "Save the Children Fund," which is backed by the biggest medical men in the country and that has given the method prestige.

You mark my words it will be just like adrenalin and will come to the United States from England before the **A. M. A. has finished their attacks on you**. If you only live long enough I believe you will have the Nobel prize. I am leaving London in a few days but I expect to see Miss Beswick again. Please show this letter to Mrs. Lierman if she can read it.

Yours very sincerely,
(Signed) MARY M. W. TAYLOR

The Magic Carpet

***By* GEORGE GUILD**



Magic Flying Carpet

A LITTLE boy wearing a black velvet suit with a large collar which covered his shoulders was getting very restless. His nurse was trying to guide him through the crowded streets and while she held his hand and helped him along, the velvet suit with the white collar seemed perfectly willing to go with her but the large tortoise shell-rimmed eye glasses that he was wearing over his painful eyes dragged him always in the wrong direction. The little boy with his beautiful clothes was quite frequently banging up against rough men who knocked him to one side and every lamp post that he met welcomed him with a bang that made him cry out with pain. Finally he became so tired that he could not stand up any longer and dropped down to the curbstone and sat there for quite a while in spite of the efforts of his nurse to drag him further. When the nurse was not looking, her attention being attracted to a young soldier, a nice old man with a queer hat spoke to the little boy pleasantly, sympathetically and so kindly that the little boy looked up into his face and tried to smile. The nice old man gave him a handful of candy to eat while he led him away from the nurse and sat him down on a nice green carpet in a neighboring store. The little old man came and sat down beside the little boy and told him the story about the Magic Carpet. When you sat on the magic carpet and said a little prayer and then called out loud some place where you would like to go, the carpet would carry you there very quickly. The little old man said to the little boy: "When you are tired of staying here just say a little prayer that your mother taught you, call where you want to go and you will soon be there."

The little boy said his mother was a very wealthy and important person and did not have any time to teach her little boy to say his prayers. He was so disappointed that he burst into tears and cried and cried. The little old man tried to comfort him and said: "Never mind little boy I will say a little prayer and I will say where you want to go and then we will have a nice time going there."

Then the little old man said a little prayer and said out loud that he wanted to go to the home of the little boy in the black velvet suit. Right away the carpet rose from the floor, moved out of the doorway and up toward the sky. It all seemed so wonderful, so new, so pleasant, so agreeable and the louder he laughed the more he clapped his hands, the better did he become able to see. In a very short time the carpet arrived on the lawn of a very beautiful house which was where the little boy lived. Then the little old man said to the little boy: "How is your sight?" The little boy scowled and said: "The doctor told me I must wear my glasses all the time."

The little old man removed the glasses from the little boy and said: "Wouldn't you like to see perfectly without your glasses?" This seemed a new idea to the little boy but a very pleasant one and he smiled.

The little old man then told him some nice stories about fairies and about nice little boys who grew up and became very nice big men when they learned to say a prayer at night that their mothers taught them. The little boy was rudely shaken and he awoke and found that he was leaning against a lamp post, the little old man and the carpet were gone and the crowds were greater than ever. His nurse cried: "Where are your glasses?" The little boy said:

"I never want to wear those horrid things again because the little old man told me that I would feel a great deal happier if my eyes were cured without glasses." He looked up into his nurse's face and smiled and said: "Do you suppose I could get mother to teach me a little prayer when I go to bed at night?" The nurse was shocked and shook him some more but she could not shake the smile from his face or the happiness from his heart because he found that he could see without his glasses a great deal better than he had ever been able to see before with them.

Bates Method a Success in Schools

The following report was submitted by Mr. Husted, Superintendent of the North Bergen Schools. He is a pioneer in eye education in schools, and in spite of critical opposition and half-hearted co-operation, has had remarkable success with it.



Eyechart
Read, 'shift on' small letters on the chart daily.
Both eyes together, one eye at a time, then both eyes together again.
If vision is less clear in one eye, practice a little longer with that eye.

EARLY in October, 1919, the Superintendent of North Bergen Schools directed our school nurse, Miss McNamara, to take a Snellen Test of the eyes of all of our pupils. A novel health experiment was begun, a campaign for "Better Eyesight." In June a second test was made in order to measure the extent of progress in this phase of health work. The June test of 1920 shows marvelous, practical, successful results. Only the skepticism of principals, teachers and pupils and lack of complete faithfulness in carrying out its conditions, prevented the wonderful results achieved from paralleling those of an Arabian Nights Tale.

A Snellen Test Card is placed permanently in the room. The children are directed to read the smallest letter they can see from their seats at least once every day, with both eyes together and with each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure on the eye ball. (Use of Eyepatch is better: avoids muscle tension, fatigue in the arm, shoulders, neck from holding the hand up) Those whose vision is defective are encouraged to read it more frequently, and in fact need no encouragement to do so after they find that the practice helps them to see the blackboard, and stop the headaches, or other discomfort previously resulting from the use of their eyes.

1923 RECORDS

Special effort for exactness in Records has been an aim in 1923. Out of 3,636 pupils receiving both first and final tests, 741 pupils were found below the Normal Standard of 20/20 or 19%, and of these, 565 were present at the second examination test which showed 234 of them or 52% having improved sight. As the percentage of pupils below standard becomes less, the same percentage of Better Sight gains become more difficult as the more serious cases carry over to the following year and are less amendable to treatment and should therefore receive special persistent and systematic attention.

Not only does this work place no additional burden upon the teachers, but, by improving the eyesight, health, disposition and mentality of their pupils, it surely lightens their labors.

CURATIVE RESULTS AND RECORDS, 1924

A different plan for eyesight conservation was followed for 1923-1924. Every class room in North Bergen Schools, Grades II-VIII became a Conservation of Vision Class. Each class room was visited by the Superintendent and the Values of Good Eyesight for pupils were dwelt upon. The method to be used in its attainment was carefully explained. Our Nurses were invited to attend several of these class room talks. Pupils with good sight volunteered to aid those with defective eyes during this special campaign To Educate the Eye To FUNCTION WITHOUT STRAIN and thus prevent and cure defective vision. Pupils have engaged in this work with a helpful enthusiasm and teachers with a renewed interest. As this work is a physical training for the education of the eye, teachers were instructed to use some time assigned to Physical Training or Hygiene to guide the Below Normal Vision pupils to sufficient proper eye practice for Curative effects and the Normal Vision ones to sufficient practice for Preventive defects.

Great care has been taken to make these reports accurate. The tests were all made by two nurses assisted by the class room teacher and the reports were all made under Nurse supervision. That 66% or 782 pupils have improved, 342 of them or 43.7% to the degree of Normal Vision is certainly a wonderful and worthwhile bit of health cure work and is indicative of what may be attained by this educative process under more systematic, intelligent and persistent practice.

Report of the September Meeting

A REGULAR meeting of the Better Eyesight League was held on September 9th at 383 Madison Avenue. A large attendance indicated renewed interest in the work of the League.

Miss Hurty, president, presided. After a short business program the president discussed the aim of the League and of Dr. Bates' method. Instruction in palming was then given by the officers.

Dr. Bates emphasized the importance of the personal equation in applying his method. Palming proves most helpful in some cases, swinging in others, and the use of the imagination in others.

Mr. M. F. Husted, Superintendent of Schools in North Bergen, New Jersey, reported the result of his having used Dr. Bates' Method to reduce retardation among pupils in his district. As a means to this end the method proved highly successful; furthermore, the lessening of retardation among pupils made possible a reduction in the educational budget. Last fall 4,155 children in Mr. Husted's district were examined and 1,244 cases of defective vision were recorded. During the year the pupils were merely encouraged to read the Snellen Card daily. At the close of the year 43.7% of the defective cases had attained normal vision, while 21.8% showed marked improvement. The cases of defective vision included 129 in which glasses were used; 75% of these cases were greatly improved.

Mrs. Lierman discussed the work of her clinic. Six months ago one clinical case was diagnosed as total blindness; this girl now reads the Snellen Card at two feet. Mrs. Lierman reported improved vision also in a case of cataract in a woman seventy-eight years of age and improved condition in a case of drooping eyelid in a five-year-old boy.

The meeting was adjourned at the close of Mrs. Lierman's report.

Questions and Answers

Q—I find conscious blinking a strain, because I close my eyes temporarily and seem to hold the eyeball stationary. If I shut my eyes for a longer period would that be blinking?
A—No; the normal eye blinks consciously or unconsciously without effort, without strain and quickly.

Q—You mention the black period in your book. Must this be any particular size? I only imagine large round black objects like cannon balls, the centre of a target, or a moving football. This is restful, but is it beneficial?
A—No. Anything that is restful is beneficial.

Q—My little daughter has temporary perfect sight while palming, but her eyes turn in when she plays excitedly or strenuously. I thought play was relaxing.
A—Play may be relaxing and should be beneficial, but like other things, it can be done wrong with a great effort, without benefit.

Q—Please give me a simple demonstration or example of the swing. I cannot see objects moving when I know they are stationary.
A—When you ride in a railroad train which is traveling fast, and look out the window, you may see the telegraph poles and other objects moving in the opposite direction.

MYOPIA NUMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
November, 1924

Eye-Strain During Sleep

MANY people complain that when they first wake up in the morning, they are tired, that they have headaches, and that their sight is very imperfect. Later on in the day their eyes feel better, and the vision may become normal.

I have examined with the Ophthalmoscope the eyes of many people during sleep and found much to my surprise, that **most people strain much more in their sleep than they ever do when they are awake**. Of course, people when unconscious of their acts during sleep, are not aware of this eye-strain.

The prevention of eye-strain during sleep is usually a very difficult matter. Some cases are benefited just before retiring by palming for one-half hour or longer, or until they go to sleep while palming. Others by practicing the long swing for fifteen minutes, have found that the eye-strain becomes less. In some serious cases with imperfect sight, when the eye-strain is not prevented by palming or the swing, they are often materially benefited by shortening their hours of sleep with the help of an alarm clock. One patient had the alarm set for 3 a.m. He would then get out of bed and practice the long swing, alternating with palming for an hour or longer with the result that he slept the rest of the night very comfortably, and awoke the next morning with little or no evidence of eye-strain during sleep.

Some people have told me that they have lessened their eye-strain during sleep materially, by moderate muscular exercises for one-half hour or longer. They find that they obtain the best results when the exercise is continued sufficiently long to produce muscular fatigue.

The Cure of Myopia

***By* W. H. BATES, M.D.**

THE problem of curing each case of Myopia or near-sightedness requires a sufficient number of facts. Each patient has to demonstrate individually those facts which help that particular patient or which suggests successful treatment.

The cause of Myopia is an effort to see at the distance. Most patients can demonstrate that when they read the Snellen Test Card at fifteen feet or further, at ten feet, or nearer, staring at one point of one letter for two seconds or longer, always lowers the vision. This fact is evidence that treatment which prevents the stare improves the sight.

When a near-sighted patient reads fine print with normal sight, an effort to concentrate or stare at one letter or one part of the letter seen perfectly is very soon followed by imperfect sight at the near point. All nearsighted patients can demonstrate that with the eyes closed, the memory of one letter is easy or continuous when it is imagined to be moving, and that an effort to concentrate on one part of the letter remembered requires a strain, which is soon followed by the loss of the memory of the letter.
Shift on the letter in the imagination to: see it move, maintain the memory picture of the letter, and see it clear in the mind.

Near-sighted patients can always demonstrate that closing the eyes and covering them with the palm of one or both hands for one-half hour or longer, always improves the distant vision temporarily. It is good practice to have each patient prove over and over again by various methods that imperfect sight requires an effort, requires a strain which is disagreeable, not easy, or that with imperfect sight one has to work hard and take a lot of trouble. It is usually quite a shock to them to demonstrate more or less thoroughly, that perfect sight can only be obtained easily and without effort. Even after the near-sighted patients demonstrate these facts for a time they usually keep on straining their eyes when they look at the distant Snellen Test Card.

All near-sighted patients are temporarily cured when their sight becomes normal at some distance, even patients with very high degrees of near-sightedness, 10 D or more, when they read with perfect sight at four inches without glasses, accommodate just the same amount as a normal eye does when it reads perfectly at four inches. They do not have an accommodation of four inches plus the amount of their Myopia.

+ I discovered that under favorable conditions, when a near-sighted patient had a perfect memory, the Myopia disappeared and the eye became normal.

+ I also discovered that when a near-sighted patient had a perfect imagination of a mental picture of some letter or some object, the Myopia disappeared and the eye became normal.



Mental picture in the mind is clear, good memory, imagination.

+ It is a fact that we remember only what we see.

+ We imagine only what we remember.

+ We see only what we imagine.


Vision is clear.

+ A near-sighted patient who reads perfectly at the near point, may obtain a perfect memory by regarding one letter at the near point with perfect sight, closing the eyes and remembering it as well as he can. By alternating, the sight and the memory improve until the patient becomes able to see and remember equally well.

+ After this is accomplished the patient becomes able to regard a letter with normal sight at a near point and then when looking at a distant blank wall, to remember it. By practicing, the patient becomes able to remember with the eyes open as well as he can see.

The next step is to help the patient to remember a mental picture of some letter seen perfectly at the near point just as well as when regarding the Snellen Test Card. The time it takes to improve the memory of mental pictures, varies much with different patients. Some cases with a high degree of near-sightedness I cure in a reasonable length of time, while others with a moderate amount may require a much longer time.

The imagination is also improved by alternating with the memory. Many patients find that they can remember a letter fairly well, but when they regard it, they do not imagine they see it, then again practice helps at the near point. When a near-sighted patient regards a letter, "O" for example, the white center may appear to be whiter than it really is, or whiter than the rest of the card. To prove that this is an illusion may require some trouble. It helps to cover the black part of the letter, exposing only the center which then appears to have the same shade of white as the rest of the card. When the screen is removed, exposing the black part of the letter, the white center flashes whiter. The patient, after a few trials, may become able to imagine the white center whiter than it really is.

One needs to convince the patient that this is an illusion, just as a ghost is an illusion. You never see a ghost, you only imagine you see it. The white center of the letter "O" is never seen whiter than the rest of the card, it is only imagined.

After this is accomplished at the near point, it becomes possible for the near-sighted patient to imagine this illusion at a greater distance. Those patients who are thoroughly convinced that they do not see the white center of the "O" whiter than the rest of the card, but only imagine it are soon cured, because while they find it difficult to see the letter O at a distance, it is easier to imagine it.

Acute Myopia is usually cured by very simple treatment. Children under twelve years of age who have never worn glasses are usually temporarily cured by alternately reading the Snellen Test Card and resting their eyes by closing them and covering them with the palms of their hands for a few minutes. Many teachers in the public schools have placed the Snellen Test Card permanently on one wall of the class-room in a place where all the children could see it from their seats. When the children read this card as well as they could every day, the vision usually improved without any other treatment. All the children become able to remember perfectly each letter of the Snellen Test Card. They not only remember what the letter is, but they also remember its blackness, the white spaces, its form, its size and its location; furthermore, they become able to imagine that they see perfectly the letters that they remember perfectly. They also discover sooner or later that a perfect imagination of one or more of the letters of the Snellen Test Card helps them to read the writing on the black board which is unfamiliar. **In other words, they demonstrate that a perfect imagination of a known letter helps them to see perfectly, letters or objects that are not known.** They also become convinced that a stare or strain to see the writing on the black board lowers the vision just as it lowers the vision for the letters of the Snellen Test Card with which they are perfectly familiar. This is a fact of the greatest value in the cure and prevention of imperfect sight in school children. Every teacher should know this.

The Snellen Test Card, while it is of value as a test for the ability of the children to see, is of far greater usefulness as a means for improving the sight.

I have found that in schools where the Snellen Test Card is visible continuously, the vision of the pupils is always improved and that the children in the higher grades acquire a more perfect sight than they had when they first entered school. Most children demonstrate that the Snellen Test Card, while it improves the vision is also a benefit to their nervous system. It prevents and cures headaches, lessens fatigue, encourages the children to study, and increases the mental efficiency.

Stories from the Clinic

NO. 57: CASES OF MYOPIA

***By* EMILY C. LIERMAN**

I HAVE been asked to write about Myopia cases now under treatment in the Clinic. Within the last year we have had quite a number of patients who were cured of Myopia in one or two visits. Some of them were not bad cases, therefore it did not take very long to cure them.

A woman of middle age, who had worn glasses about two years, told me something of interest which I think our readers would like to know about. She had very little to do at the time, so to amuse herself she would stare at an object until it became distorted. She stared so wonderfully well that the object became two instead of one. Later she became able to see the object triple and she boasted about her ability to do this, to anyone who would listen to her. Then one morning, after she wakened from a sound sleep, she could not see the hands of her clock. The figures were blurred. Everything in the room seemed to be covered with a veil. She tried her old stunt and stared just as hard as she could, thinking that it would help her to see things clearly. Instead, her vision became worse, so she called on an oculist. He told her that she would probably have to wear glasses for the rest of her life. He fitted her with glasses and told her never to be without them. Six months later she had to have stronger lenses. When I first saw her I thought her eyelids were stationary. I looked at her for fully three minutes without seeing her blink once. Then she told me what I have already written. I said I believed or was sure that she had brought on all this trouble herself. And she surprised me by saying: "Well, if I could make so much trouble with my eyes, surely I can undo it with your help."

She did exactly what I told her to do, and more. She practiced more often than I said, and she never talked about her eyes to anyone until she was cured. She practiced palming for an hour every morning, from six until seven o'clock. She traveled every morning and night for one hour on a railroad train and never opened her eyes the whole time she was on the train. Her friends never troubled her after she asked them not to speak about her eyes. She never used a test card but practiced whenever she had time, with a newspaper or book type. She worked with a typewriter every day, and she found that her memory helped in her work.

Sometimes she remembered a large white imitation pearl of her earring or she would remember the sparkle of a little diamond in her ring. A black period was out of the question entirely. If I just mentioned a period to her she would begin to stare.

She said it reminded her of the blurry things she saw, when her eyes first troubled her. She surely demonstrated that to remember an error is a strain.

Just six weeks after I first treated her, she was cured without glasses. She now sees things clearly at the distance, but, only when she blinks, which is just what the normal eye must do to keep the vision normal. Her friends have a good time with her, when she is in the mood, for she is constantly reminding them to blink.

A young man age 23 had worn glasses steadily for ten years. With his glasses on he read 10/15 and without them 10/30. His face became a mass of wrinkles as he tried to read the letters of the test card. He complained that the white of the card was a dazzling white and gave him great pain as he tried to read the letters.

After palming for a few minutes, the wrinkles temporarily disappeared. I placed him in the sun, and as he looked down, I raised his upper eyelid. I then focused the bright rays of the sun on the white part of each eye with the sun-glass. This did not take but a

minute. We returned to the test card, and without a mistake, he read every letter. I told him to sit in the sun as much as possible, and let it shine on his closed eyelids, and to palm every day for at least an hour altogether.

He never came back for another test, and I am still wondering if he was cured.

At the present time we are treating a little girl, nine years old, who was quite near-sighted, and had very poor sight even with her glasses on. I was told that while her vision was poor before she had put on glasses, her eyes became much worse during the last year. She has worn them only one year, and I believe that they made her worse. The first day her vision without glasses was 7/200 with both eyes, and with each eye separately. I told her she would have to stop wearing glasses if she wanted to be cured.

The little girl was afraid to do that because her school teacher told her she should always wear them. Of course I became less enthusiastic about the cure of her eyes.

I gave her a treatment that day and improved her vision to 7/70 by having her palm for ten minutes or so, and then look at a letter on the test card that I was pointing at. I did not expect to see her again at the clinic, because she was going against my wishes by wearing her glasses, but she was there the next Clinic Day, holding her glasses in her hand. She said she had worn them every day only during school hours. At other times, after her home-work was finished, she practiced with the test card and palmed her eyes as much as possible.

I was very much surprised to find that her vision had improved even though she wore her glasses. Dr. Bates and I have been surprised more than once to find a patient get well although they had worn their glasses at times.

This little girl has been to us four times and she now reads 8/40.

I would like to make another report of her case when she is cured.

Unless she has the courage to leave off her glasses entirely, I fear it will take a long time to cure her.

Thanksgiving Fairies

***By* GEORGE GUILD**



Fairy
Vision improves by imagining clear, colorful mental pictures when reading, listening to stories, music. Comic books help the memory, imagination by providing color pictures and improves eye shifting as the eyes move from picture to picture. The mind, eyes, eye muscles relax when reading, looking at, imagining something fun, interesting.

WE have fairies in the Spring Time, fairies in the Summer, fairies at Christmas and New Year, and also fairies at Thanksgiving.

The table was all set for a large dinner party which included not only the grandmother, the grandfather, the loving mother and the proud father, but many friends.

The Little Boy was wearing eye glasses which were so conspicuous that they quite concealed very much of his face. He was only ten years old, but he had an appetite for everything that was good, more so than any person present. His father filled up his plate with all the good things that it would hold and without a word to anyone, he started in to eat as he had never eaten before. Before he was half way through, he was suddenly attacked with **acute indigestion** which caused him such intense pain that he began to cry. His mother started to take him from the table, but he could not stand it to leave all that food behind. When he saw his mother coming, he stopped crying and begged her to leave him alone for a few minutes. All eyes were watching him, wondering what he was going to do next. After a few moments' thought, he suddenly removed his glasses, closed his eyes and covered them with his two chubby hands, with his elbows resting on the table. The color soon came back to his face, the pain left him, and in a few minutes he began to smile and was soon all right.

He started in to eat again with increased energy. His father who had been watching him with a worried look on his face was very much astonished.

"What do you think of that," he said, "Where did the child find out about **resting his eyes to cure his stomach-ache?"**

Everybody at the table seemed dazed but had very little to say. In a little while however, things got back to their normal state just as they were before the Little Boy became ill. He passed his plate back for more, which his father reluctantly filled again. The Little Boy began to talk, but the only words anybody could hear him say with his mouth continually stuffed with food were, "fairy," and "palming," and "teacher," and the "Snellen Test Card." His mother could not stand it any longer. She got up, took the Little Boy in her arms and carried him to another room, held him in her lap while she asked him questions to find out what it was all about. "Oh, mother, that was a nice turkey and all the other things were awfully good, and the little Thanksgiving fairy with many other fairies are dancing around on the table and they are bowing to me, they are bowing to grandpa, to grandma, and to everybody else, but principally, they seem to be paying more attention to me. The Thanksgiving fairy all dressed in green is holding out her arms to me and she says:

"Little Boy, don't grow up to be a four-eyed man. Take off those terrible glasses and you will have perfect sight without them, if you will only love me and never forget me. Whenever you are ill, think of me, and you can think of me best when you close your eyes and cover them with the palms of your hands."

There was a ring at the door bell, the Little Boy's father answered it, and ushered in the Little Boy's teacher, who had come to make a short call.

When the teacher was told about the little boy with the attack of indigestion, and how he discarded his glasses, closed his eyes and covered them with the palms of his hands, which was followed by a very prompt and complete cure, the teacher said:

"I have called to ask you to try for a time having the little boy do without his glasses. A great many other children have been cured of near-sightedness in a short time, and I feel that the little boy will also be cured, so that he will get along much better without his glasses, than he ever did with them."

The father's face brightened and he said to the teacher with a grateful smile, "It is so ordered."

El Uso Natural de La Vision

(The Natural Use of Vision)

***By* R. RUIZ ARNAU, M.D.**

(Spanish Natural Eyesight Improvement Book)

THIS book should appeal to Spanish-speaking people, because it contains numerous demonstrations of the truth which make it possible to cure imperfect sight by treatment without glasses. In the magazine, "Better Eyesight," of May, 1920, is an article by Dr. Arnau with the title "My Headaches" in which he describes at length how he was cured of chronic headaches and imperfect sight by treatment without glasses. As a result of his cure he has become able to give relief to his patients.

The author's most important contribution is his claim that the true use of the ciliary muscle is not to increase the curvature of the lens when the eye is focused for reading at the near point, but just the opposite: The ciliary muscle prevents any change of form in the curvature of the crystalline lens.

He has written a great deal about mind strain as the real and only cause of defective eye-sight. He discusses the unconscious movements of the vegetative functions of the body, circulation, respiration and the constant mental shifting as entirely in accord with the new ideas of Einstein, Korbzyski and others.

The Tachorthoscope was discovered by Dr. Arnau. It is an apparatus for the treatment of patients who are not benefited promptly by other methods.

He has also investigated the use of music by which some patients find an easy way to obtain a short swing through the auditory memory.

The Acrobatic "F"

***By* EMILY A. MEDER**

AS I look out the window the crisp air is blowing the colored leaves about like little fairy carpets. Autumn is here, with weather that delights the hiker's soul. No one but a true hiker can realize the joy of tramping in the woods or along a road, with arms swinging, eyes shifting from object to object, and the ground and trees seeming to glide slowly by as the walker passes.

This form of exercise and recreation has become very popular along with other outdoor sports. It is a good thing to call to your attention the fact that no matter what kind of sport, recreation or work you indulge in, you can rest the eyes and improve the sight while doing it. Recently while ice-skating in an indoor rink, I became dizzy going around and watching the white ice moving under my feet. I stopped for a few minutes, rested my eyes, and went on again. Instead of looking at the ice, I swung my body slowly from side to side, shifting my eyes from one skater to another. I just forgot the dizziness, and don't know whether it disappeared immediately after I palmed, or when I began to swing.



Ice skating in the winter on the frozen swamp 'Frog Pond' in Brookfield Massachusetts. We used to skate through the woods and then fast down the frozen brook, mini waterfall then grab onto a low tree limb, fly into the air to stop at the bottom of the falls. Spinning left and right, jumping over logs, falling on purpose and sliding on the back, side or stomach over the ice.

I wonder how many people find palming monotonous? One subscriber told me that he tried to palm, but found it so dull and boring, that he dropped it entirely. I asked him what he did when he palmed, what he thought of. He replied that he tried to think of black, and nothing else. Usually he saw all colors, from light gray to startling green, and he gave it up. He could not get black, so his mind returned to his business problems and other worries.

I was in sympathy with this man's state of mind, because I tried to see black, with the same results. If I let my mind drift, without charting its course, it would inevitably go over the unpleasant happenings of the day, or the work unfinished, or worse still, I would become drowsy! I was always more relaxed if I could imagine black objects, so here's the scheme I used to good advantage:

The little black "F" in the corner of the test card is a good friend of mine. I can think of it and remember it more easily than any other letter. The trouble is that it is too active and as soon as I experience benefit from its company, it hops all over the place. When I try to hold it stationary, the better to look at it, it disappears entirely. I decided to put this surplus energy to work and planned a daily dozen for Mr. "F" to do. When I palm, I summon him and he stands at attention like a soldier while I inspect him, from head to foot. If he passes, he is a perfect black. Then he starts his drill. His two arms are pointed to the right when he begins. I imagine them moving to the left, and back. Then one arm is pointed to the left and one to the right and my "F" is a "T." Both arms are then stretched up, forming a "Y." He is very versatile, and never drills twice in the same way. At one time he tried to change his straight lines to form a "C," but this was too much for even his acrobatic powers, and was painful for me to watch. He now confines himself to straight letters only, with a variation of the figures, four and seven.

These athletic exhibitions can last fifteen minutes or longer, at a time, without my becoming drowsy or bored. Try it with a letter "L" or an "O." Perhaps with training and close association it will become as dear to you as my little "F."

Fine Print

***By* W. H. BATES, M.D.**

MANY near-sighted patients can read fine print or diamond type at less than ten inches from their eyes, easily, perfectly, and quickly by alternately regarding the Snellen Test Card at different distances, from three feet up to fifteen feet or further. The vision may be improved, at first temporarily, and later by repetition, a permanent gain usually follows.

It is a valuable fact to know that when fine print is read perfectly, the near-sightedness disappears during this period. It can only be maintained at first for a fraction of a second, and later more continuously.

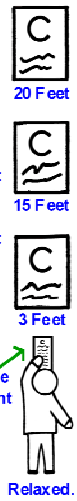
Near-sighted patients and others, with the help of the fine print can usually demonstrate that staring at a small letter always lowers the vision and that the same fact is true when regarding distant letters or objects.

With the help of the fine print, the near-sighted patient can also demonstrate that one can remember perfectly only what has been seen perfectly: that one imagines perfectly only what is remembered perfectly: and that perfect sight is only a perfect imagination.

A great many people are very suspicious of the imagination and feel or believe that things imagined are never true. The more ignorant the patient, the less respect do they have for their imagination or the imagination of other people. It comes to them as a great shock, with a feeling of discomfort and annoyance that the perfect imagination of a known letter improves the sight for unknown letters of the Snellen Test Card.

It is a fact that one can read fine print perfectly with a perfect relaxation, with great relief to eye-strain, pain, fatigue and discomfort, not only of the eyes, but of all other nerves of the body.

Look at, shift on a letter on a chart at a clear distance. Practice with the eyes open, then in the imagination with eyes closed, then open. Next, switch to a chart at a different distance and shift on the identical letter on that chart while keeping the clear mental picture of the letter seen on the chart at the clear distance.



Three identical eyecharts placed at 3 different distances. Fine print card is identical to the eyecharts. Shift on the letters on the fine print card and 3 eyecharts. Shift t on the C on the fine print card. Then shift on the C on the distant, 20 foot card, then back to the fine print card, then the distant, then fine print... Then shift on the C on the fine print and 3 foot, or 15 foot card. Switch back and forth in any order on the 4 cards, shifting on the C on each card. Then practice on smaller letters. Practice until all letters are seen clear at all distances.

Fine print card can be placed on a table at eye level to avoid tension in the arm from holding the print up with the hand.

Regarding fine print, even when not read, is also of use in improving the distant vision of the Snellen Test Card, and the ability to read at a near point in patients whose imperfect sight is caused by Astigmatism, Hypermetropia (far-sight), Presbyopia and others. Reading fine print brings clear close and distant vision.

This simple, effective cure has been hidden from the public by the optical/medical industry for years!

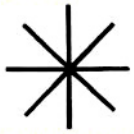
Report of the October Meeting

***By* MISS MAY SECOR, Secretary**

A REGULAR meeting of the Better Eyesight League was held on October 14th at 383 Madison Avenue. Miss Kathleen Hurty, President, presided. A number of visitors were present, and for this reason the Secretary was requested to explain the Bates Method.

Among important facts presented were the following: The prevalence of visual defects and eye-strain is evident to anyone who gives the matter his attention. Formerly, but one course of action was open to the sufferer—to visit an oculist, have his eyes tested, receive a prescription for artificial lenses, procure them, and then endeavor to become accustomed to wearing these optical crutches. The efficiency of the eye is variable. During an eye test the patient is able to read smaller letters on the chart at one of myopia, hypermetropia, squint, or cataract. (The above sentence is a misprint. The true sentence may be: During an eye test the patient is able to read smaller letters on the chart at different times, even when the eyes contain myopia, hypermetropia, squint, or cataract...)

Look at, shift on one line of the astigmatism clock at a time. Central fixation. This is the natural way to test for astigmatism. If some lines are blurry - practice shifting on them with both eyes and one eye at a time.



Astigmatism Clock

When the eye Doctor tests the vision for astigmatism using the astigmatism-producing clock dial the patient can see certain lines most clearly at one time, and others most clearly at another time. The lenses prescribed are such as "fit" the patient when his eyes register a certain number of degrees of astigmatism and myopia, for example. In order that the patient may see with the prescribed lenses it is essential that he produce the said number of degrees of astigmatism and myopia; this produces eyestrain. (This maintains the astigmatism in the eye that would have been temporary if the glasses with the astigmatism correction were not prescribed.) The need for a more efficient method for correcting visual defects is obvious.

It is here that the Bates Method functions. This method is based upon the fact that visual defects are caused by eye-strain; it therefore offers methods for the relief of eye-strain. Insomuch as the method corrects visual defects, it proves the fact to be true. Be the case one of myopia, hypermetropia, squint, or cataract, **Dr. Bates removes the glasses, and assists the patient to use his eyes with relaxation.** This is accomplished by means of various methods: **palming, reading the Snellen card, shifting, swaying, swinging, sun treatment, and other methods involving the use of memory and imagination.** These methods are described in Dr. Bates' book entitled "Perfect Sight Without Glasses."

(Read the original edition: The Cure of Imperfect Sight by Treatment Without Glasses.)



Rocking Chair
Keeps the body, eyes, mind relaxed, body, eyes moving, activates the swing of the body, eyes and appearance of oppositional movement. Prevents muscle tension, arthritis.

Dr. E. G. Kessler (M.D.), expressed his gratitude for his son's cure. Dr. Kessler then discussed the importance of relaxation in securing mental rest. In this connection the doctor spoke of the use of the rocking chair, and quoted authorities who decried the "rocking habit." Dr. Bates expressed his belief that a moderate use of the rocking chair facilitates relaxation, if one "sees things moving" as he rocks; a moderate use of cradle-rocking and "swaying" was advocated for infants.

The rocking chair also keeps the body, joints, muscles relaxed, moving.

Dr. Bates demonstrated the long swing, and spoke of its helpfulness in securing relaxation. The long swing relieves eye-strain and other types of physical distress. When pain is very acute, visualization of the letters of the Snellen card is advised also. Miss Hurty

discussed the work of A. Rollier, M.D., at his sanitorium at Leysin, Switzerland. Dr. Rollier uses **sun treatment in curing tuberculosis**; he finds, however, that additional results accrue, **visual defects are corrected, and eye-strain relieved**. This confirms Dr. Bates' claim that sunlight is effective as a cure for visual defects.

Mr. Nicholas Weiss reported several cases in which he secured relaxation by describing a horse race or a baseball inning while the patient palmed. Dr. Achorn emphasized the important role which memory plays in the Bates Method. He advised the prospective followers of the method, to begin at once to practice the various methods, investigating their physiological and psychological significance, as a parallel line of work. Correct use of the method will improve the vision immediately in most cases. At the close of Dr. Achorn's discussion the meeting was adjourned.

Questions and Answers

Q—If sun and light are beneficial, why do you advocate the shutting out of these two by palming?
A—To obtain relaxation. The sun strengthens the eyes and palming relaxes them.

Q—My left eye turned in and was corrected by operation. Now it turns out. What method will cure this?
A—You need more than one method. Complete relaxation will relieve the strain and correct the squint.

Q—After palming for ten minutes or longer, my eyes are rested, but I feel sleepy.
A—The palming is not perfect. Try imagining stationary objects to be moving when you palm.

Q—I was given glasses for headaches. Discarded them by your method; headaches have gone, but I strain while I sleep and my lids are swollen in the morning.
A—See page 2 of this issue.

Q—Is a great amount of floating specks indicative of cataract? When I am weary these look like a flock of bees crossing my eyeballs.
A—No. Your particular strain produces floating specks. A different strain produces cataract.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

December, 1924

Suggestions

1. *Imagine things are moving all the time*.
When riding in a railroad train, when one looks out of the car window, telegraph poles and other objects, although they are stationary, appear to be moving. To stop the movement is impossible, and the effort to do so may be very uncomfortable. The greater the effort, the greater the discomfort, and is the cause of heart sickness, headaches and nausea. It can be demonstrated that any movement of the head and eyes produces an apparent movement of stationary objects.

2. *Blink often*.
By blinking is meant, closing and opening both eyes rapidly. When done properly, things are seen continuously and they always move with a quick jump in various directions. Regarding stationary objects without blinking is an effort, a strain which always lowers the vision.

3. *Read the Snellen Test Card at fifteen feet as well as you can, every night and morning*.
School children and others are often cured of imperfect sight by reading a familiar card, first with both eyes and then with each eye separately. It is the only method practiced which prevents Myopia in school children.

4. *Fine Print*.
Read fine print at six inches when possible every night and morning. If not possible, do the best you can. Just regarding the white spaces between the lines of fine print without reading the letters is a benefit.

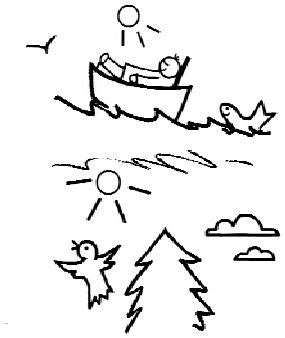
5. *Palming*.
Palm for five minutes, ten times daily when convenient.

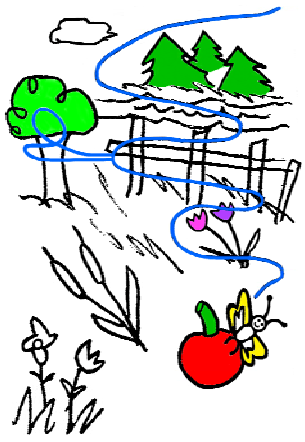
Palming

***By* W. H. BATES, M.D.**

(Memory and Imagination while Palming)

Palm and imagine something happy; a scenery, sailing down the river... See objects clear, in color, motion.





Palm and imagine a colorful butterfly. See it land (at a close distance) on a apple in a tree. Shift on it. See small fine details. Watch it move its wings, antennas, walk around on the apple. Watch, follow it as it flies about through a field (see the blue line in the picture) stopping to land on the tall grass, flowers, trees, flies along the distant river. Imagine the objects in the scene clear, in color, action. Walk into the scene, move about, enjoy looking at objects.

BY **palming** is meant that the eyes are covered with the palms of one or both hands with the eyes closed. The object of palming is to obtain relaxation or rest of the eyes and mind. With the eyes closed and covered, the patient does not see. When properly done, the field is black and the patient does not really see anything. Most patients when they palm however, imagine they see a great many things, especially different colored lights, red, green, shades of blue and white lights in a single or multiple form, for various periods of time. Some patients imagine they see these lights so vividly that it is difficult to convince them that they only imagine what they see.

When the patient palms successfully and obtains perfect relaxation, he imagines he sees a perfect black. The number of people who can do this is small, and it can only be accomplished by individuals who have perfect sight

While palming, one does not obtain relaxation by any kind of an effort or a strain. When nothing is done, one does not do anything. It is well to realize that palming may be done properly, or it may be done wrong.

It has been demonstrated that all persons with imperfect sight have a conscious or unconscious strain when they try to see. Palming can only accomplish relaxation when the patient does not try to see while palming. Some people realize that when their eyes are closed and covered with the palms of the hands, it is not possible to see anything, and so they do not try; but other people may strain their eyes to see while palming, although they know it is wrong. In such cases, it is very evident that mental control is lost. They do things that they do not plan to do. Some people can let their minds drift from one thing to another without much, if any effort. Some cases become able to palm more successfully than others.

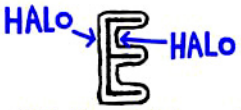


Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear.

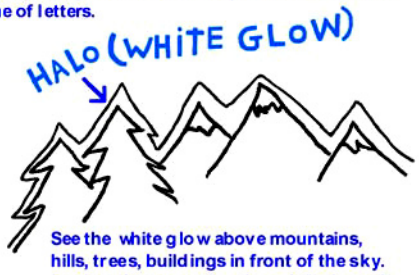
One of my patients discovered a very simple and efficient method to improve palming. While treating a friend who previously had never obtained any benefit from palming, she told him a story of a black ant. This black ant came out of the dark soil and climbed up the stem of a beautiful rose. It was slow work with the ant, but it kept on climbing, going on to the extremity of first one branch and then another, crawling to the extreme tip of every leaf until finally it located the flower. It crawled with great labor over the petals, until it found deep down in the center of the rose, a little white cup filled with honey. The patient could picture the ant carrying off some of the honey, crawling to the top of the flower, and then down back to the stem, finally meeting another ant on the ground, with whom he had a short talk with much gesticulating of heads and feet. Then the second ant started off on the same journey.

The patient, while palming, listened very attentively to this talk, which was drawn out for fifteen minutes or half an hour. He volunteered the information that at last he could see black, and when he removed his hands from his closed eyelids, and opened his eyes, his vision for the Snellen Test Card was unusually good. Before he palmed, he was unable to see a single letter and was practically blind. After palming and visualizing the story of the ant, he was able to see his way about the room without being led, and to read some of the letters of the Snellen Test Card.

The story of the ant with its successive mental pictures, suggests other stories of other things with other mental pictures. Some persons are able to let their minds drift while palming. It is normal for the mind to think of many things that come and go without any effort or strain being made. It is quite an art to let the mind drift and think of all sorts of things without any effort or without trying to see one thing in particular. As long as we are awake, it is perfectly normal to think of many things which come into the consciousness without any effort.



See a White Glow (Halo) around letters. The glow appears on the white page next to the edge of the black ink of the letter. Shift around on the paper and the black print to see the glow appear. The white glow also appears as a thin glowing white line directly under and above a line of letters.



See the white glow above mountains, hills, trees, buildings in front of the sky. Look at the mountain, then shift above it to the sky and see the glow appear. Explanation: Contrast between light and darker objects, energy in/around objects (aura, chi), photographic effect of eyes similar to camera.

Seeing the white glow indicates normal eye, brain function and improves the clarity of vision.

A school teacher who suffered from eyestrain with severe headaches, was able to obtain relief almost immediately by imagining herself in a boat which was drifting. She enjoyed drifting down some river of the north, with a scenery consisting mostly of ice and snow. For a change, she would select some tropical river with its tropical vegetation, birds and animals. She had seen a bird of paradise in captivity and enjoyed the memory of its brilliant feathers. Crocodiles seemed very interesting, and the play of the monkeys in the trees was also of interest and gave her mind much to think about. While drifting down these rivers, she became so interested in her imagination of the change in scenery, that she quite forgot her eyestrain and her headaches while palming. When she noticed or thought of her palming, she found that she was seeing a perfect black, which means that she saw nothing at all with her eyes closed and covered with the palms of her hands.

One patient who had great difficulty in palming successfully was very much disturbed by seeing different colored lights. When she tried to get rid of them by an effort, they became much worse, and her discomfort was increased by the palming, instead of being relieved.

I suggested to her that she think of some enjoyable trip she had made going to Europe. She replied that she was always seasick, and the trip did her no good. The only thing that she could remember without discomfort was a walk in the woods, making note of the names of the different birds she saw. She was much interested in Botany, and could tell the names of most of the wild flowers near her home.

Some people while palming can remember the branches of trees or high grass moving in the wind. The running water of a brook can be remembered with benefit, provided no effort is made. A trip to the seashore becomes restful, enjoyable when one imagines the rollers or waves flowing in and out. When riding in a rapidly moving train, the scenery observed when looking out of a window appears to be moving and is usually restful to the eyes and mind. When riding in an automobile, the driver imagines the road moving toward the car without an effort and is more relaxed than a passenger who is interested in the moving scenery and strains to see it and tries consciously or unconsciously to stop the movement.

If one makes an effort to see things stationary, a headache, eye pain or some other discomfort may be felt. Palming becomes restful and beneficial when the memory of moving objects becomes perfect or when one can remember the imaginary movement of stationary objects.

By remembering stationary objects apparently moving when palming as well as they can be imagined when riding in a car, one may obtain the desired relaxation.

The memory of **halos**, when palming as well as they can be imagined with the eyes open is also a great benefit. Alternating is a benefit to the sight as well as to the memory and palming becomes improved with a greater amount of relaxation.

Flashing or palming for a brief moment, alternating with the eyes open for a longer time, improves palming and the vision.



Stories from the Clinic

No. 58—CHRISTMAS

***By* EMILY C. LIERMAN**

I WISH everyone who is interested in our clinic, could have been with us last year at Christmas time. We had our first tree. Not only did our clinic patients enjoy it, but, our private patients as well. I fear too, that on more than one occasion, a private patient was kept waiting much longer than he cared to wait, while Dr. Bates hovered around that Christmas Tree. He never takes a vacation because he loves his work so much, but that tree needed his attention he thought, even though he was keeping his patients waiting. His orders were not to purchase anything cheap. His clinic family is precious to him and must have the best of everything. When it came time to distribute the toys and candies to the children, I saw him peeping in at the doorway. The children all love him because he does so much for them. All this added pleasure of having a tree for them did him a world of good.

At the Harlem Hospital we were not permitted to have a tree in our section, but the Christmas spirit prevailed in our room there just the same. Deep down in my heart I wished each year to have a tree in addition to gifts for my big family at the Clinic. With a reserve which was left over from the year before, and also big enough to bring happiness for all, we were able to have gifts and a tree that reached from the floor to the ceiling.

Everyone connected with our office helped to trim the tree. It stood in a corner of our reception room where it could be seen by all. Pretty dolls for the little girls peeped from beneath the lower branches. Games and mechanical toys were placed where every boy could choose the one he liked best. There were toys also for the smaller children and suitable gifts for the men and women and boxes of candy for everyone. One of our patients at this time was suddenly taken away from his wife and two little children. He was suffering with tuberculosis and was sent to an institution. He told me before he left that he did not mind his suffering at all, but he was thinking of the cheerless Christmas his wife and family would have. However, it was not as cheerless as he expected it would be. A friend of mine supplied them with a turkey and our Santa Claus did the rest. You never saw such a happy family. We were doubly repaid for our labor of love, because every patient at the time responded to the treatment. Some were cured before Christmas time, but were invited to come and share in the Christmas cheer. Many of them came.

Something happened which was not at all expected nor planned. The son of a multi-millionaire who was being treated by Dr. Bates at this time, came at his appointed hour. He stood and looked at the tree with great approval. It was aglow with colored electric lights. Then he spied the toys and shouted with joy. All of a sudden he disappeared. He was found later with Dr. Bates, asking the doctor questions that had nothing to do with the treatment of his eyes. Some of his questions were:

"Which toy is mine Doctor? Can I have the one I like best? Did Santa really leave this one or that one for me?"

His aunt who was with him was mortified. She made all sorts of apologies, imploring the doctor not to listen to him. "Why," said she, "He has money in his pocket now, to spend as he sees fit."

The doctor apparently paid no attention to her. His eyes were fixed on the little rich boy who could appreciate a toy meant for a poor little laddie. Dr. Bates informed him that the Clinic Santa Claus would be pleased to have him select the toy he liked best, for we really had more than enough to go around.

There were fishing ponds and mechanical boxers, supposed to be Jack Dempsey and his opponent. The latter was a great delight to the little fellow, so we did not have to guess which one he wanted.

A dear old man from the Blind Man's Home was very grateful for a package given him by a private patient.

One little girl, after she had chosen her dolly, said she didn't know Santa Claus loved her so much.

I want to thank my friends who made all this possible and to wish them a Merry Christmas and a Happy New Year.

Nervousness

***By* EMILY A. MEDER**

WE all know that anything that is accomplished under a strain or tension is never done correctly. A good demonstration of this was given in the Central Fixation Office just a few days ago. Dr. Bates entered, with a visitor who wished to help others. Upon testing the man's sight, Dr. Bates was surprised to find that it was very imperfect. He explained that to help others he would first have to benefit his own vision. "To begin with," Dr. Bates said, "Read the Snellen Test Chart every day."

Unexpectedly, Dr. Bates called upon one of the stenographers to read the test chart, standing about 12 feet away. She stopped her work, a little in confusion, and began to read. She reached the twenty line, when she could read no further. This surprised me, because this same girl had previously read the 10 line at 15 feet, better than normal.

In turn, each girl in the office was called. Those who were waiting became nervous, while the first girl's failure left a bad mental effect upon the rest. All in all Dr. Bates was disappointed in the vision of his office force.

But—just as soon as Dr. Bates and his visitor left the office, excuses and alibis were heard from all sides. One girl went up and read the card better at a further distance than she did while she had an audience. This showed that we all were timid of saying the wrong thing, made an effort to see, and saw nothing at all. Another girl remarked that the card hangs before her all day, and she knows it by heart, but even then her nervousness made her forget the letters.

This occurs during eye exams resulting in unnecessary prescriptions for glasses, increased vision impairment, stronger and stronger eyeglass lenses being prescribed.

Eye Education

Miss Robinson, a school teacher, and patient of Dr. Bates, has been able to help a great many of her friends, although she herself is not entirely cured. Her own failures enable her to direct her pupil in the right and wrong method. We are publishing a few of her cases which she benefited.

MYOPIA

MISS P., a school teacher, had worn glasses for fifteen years. She said she came from a nearsighted family, and her right eye was very prominent. After removing her glasses she read R.V. 10/70, L.V., 10/30.

In a few weeks of practice read Right, 10/15 and Left 10/10. In a little over a month she started to teach again.

A year later Miss P. reported that she sees 10/10 with each eye and is having no trouble with near or distant vision. The prominent right eye now looks like the other.

EXOPHTHALMIC GOITRE

Mrs. K. had worn glasses for six years. Her vision with both eyes was 10/10. She was discouraged with her eyes, however, because they were very prominent, with dilated pupils. One physician told her she had a goiter disturbance. She could not see the moving pictures without her glasses, had a great dread of bright lights, and her eyes were constantly inflamed.

Mrs. K. had no faith in the new method of treatment, but tried it as a last resort. She did not cooperate very well, but in six weeks she caught the trick of relaxation. Her eyes became more comfortable and she used them for all purposes. Six months later this patient reported that while she had no further trouble with her eyes, she had to practice the palming and swinging every day to keep relaxed.

SQUINT

The left eye of Darwin was injured by instruments at birth. It turned in frequently when he was a baby, and became noticeably worse when he attended school. Darwin was twelve and wore glasses for three years, but the oculist who treated him said the eye was no stronger as a result. The vision after removing glasses was Right 10/10, Left 10/200. Palming improved his sight in flashes, and the squint became less noticeable. At the end of three months he read 10/30 on a strange card. In five months he could read diamond type a little, and ordinary type slowly. His left eye tired quickly, and he didn't have the patience to practice.

The left eye is straight practically all the time, and the boy's appearance is greatly improved. He can read 12/10 on the chart when using both eyes.

Darwin is so comfortable that he has lost interest in practicing further, and the parents are satisfied with the eye straight. For this reason there may be no further progress.

Use of forceps on the baby’s head during birth delivery can misalign the bones of the skull. This impairs function of the eye muscles, nerves, blood vessels near and attached to the skull bones, eye socket resulting in wandering/crossed eyes, impaired eye movement, relaxation, contraction of the muscles, unclear vision and other eye problems.

Caesarean birth also causes health problems. Natural alignment of the bones of the baby’s skull occurs as the baby’s head passes through the birth canal during a natural birth. Caesarean birth prevents this.

HEADACHES

William, ten years old, had almost constant headaches. He read 10/15 badly on the test card. Type and figures blurred so much in his school books that it was difficult for him not to make mistakes. He made little progress for about two weeks and would always report that his headaches were just as bad, and that he could read no better. Then one day he announced that he had one headache at noon for only half an hour. He also read better, then stopped coming for lessons.

William returned in four months to have his eyes tested and read 10/10 with each eye separately, with no headaches. A year later he visited me again, and his eyes looked splendid. He read 12/10 with either eye, no headaches, read as long as he wished to, and had no trouble with school books, as far as seeing was concerned.

Christmas Fairies

***By* GEORGE GUILD**



Christmas Fairy

Yes, he was very unhappy. The rich man with all is wealth lived alone in his big house. He sat in an easy chair suffering from a violent headache. It was Christmas Eve, but for him there was no joy, no pleasure. Then came a little white fairy who danced and smiled before him. He was puzzled because all his life long he had never seen a fairy and consequently never believed in their existence. But now he had to believe the evidence of his own eyes. She climbed to his knee and he felt her tiny feet as she finally reached his shoulder and took the glasses off his eyes. For some unaccountable reason, he felt better. The little white fairy was never still a moment. She interested him. He watched every movement she made. And then came other fairies, who danced around him on the floor, on his lap, his hands, and his head. Their eyes were full of a wonderful kindness and love.

He became more and more interested and finally asked "What can I do for you all?" The little white fairy replied:

"Come with us and see the newborn baby."

And then, guided by the fairies, he walked out on the street, through crowds of people until he came to a tenement in a darkened street. He climbed many stairs until they reached a closed door at the top of the building. He opened the door and entered a room where poverty, dirt and sickness were very evident. On a soiled bed lay a sick woman with her newborn child. She was thin, awfully thin, with eyes full of pain and mental suffering. There were five children in the room who looked very miserable indeed; but when they saw the fairies come dancing in, they began to smile and clapped their hands with pleasure.

The rich man looked around the room for a few moments, beckoned to the white fairy and both left the room. They were not gone long, but when they returned they brought with the help of others, a Christmas Tree with all that goes with it, baskets of food, enough to feed them all for many weeks to come. And then there were dolls for the girls, toys for the boys, bedding and clothes for the mother. The men who brought the things arranged the tree with its many ornaments and candles. What a lot of laughter was there. Even the sick mother had to smile. The white fairy fixed the Star of Bethlehem at the top of the tree when all knelt for a few moments, even the rich man knelt and also the men from the stores. The rich man had never been so happy in his life. He kept swinging with the fairies. He tried to dance. It was a happy time for all.

The neighbors became interested in the proceedings. First one and then another child edged to the open door, with that look of fear so sad to see in the eyes of the children of the poor. They were invited to come in and see the fairies dance, and to see them climbing all over the Christmas Tree, arranging everything in some way better, all with a smile and a laugh. It was quite contagious.

It was impossible for the saddest person there to look sad, feel sad or have a grouch of any kind. The fairies had dissipated all the darkness, the evil, the suffering and the pain. One even forgot to notice the dirt. After the children came the grown-ups, the young wives, young mothers, old wives, old mothers with many men, pushing and shoving to get into the room where the fairies were. The festivities continued for several hours, but nobody paid any attention to the time.

After the fairies had gone and the rich man found himself in his chair without his glasses and without his headache, perfectly comfortable, with his sight better than it had ever been before in years, he acquired a lasting smile. He always says, "The fairies took off my glasses and I will never wear them again."

Tension

This patient was told he was an incurable case and needed to wear glasses for the rest of his life. We hope this report will encourage our readers to continue with their practice, even though they fail to see immediate improvement. This case is remarkable in that the patient had the perseverance to follow the instructions outlined in the book, in the face of this discouraging verdict.

Dear Dr. Bates:

I TAKE great pleasure in thanking you for the help which I have received from studying your methods of treating defective vision.

On March 20, 1924, a family friend, herself one of your patients, brought me a copy of your book, "Perfect Sight Without Glasses." At that time my eyes were in wretched shape. Since birth I had suffered from what some oculists had diagnosed as atrophy of the optic nerve, others as prenatal malnutrition of the optic nerve. There was supposed to be a small area in the center of the retina with normal vision, while the outer portions of the retina were said to be dead. I also suffered from a high degree of myopia, which glasses failed to correct. The left eye turned in. The eyeballs themselves were hard and fixed in a dull stare, and were so sunken and lifeless in appearance that many people thought I was blind.

At various times other oculists in New York and other cities, fitted me to glasses, tested my fields, and said there was nothing more to do.

(Shifting)

I had read only a short way in your book when I realized that I was trying to accomplish the impossible. Two days after I began studying your methods I discarded my glasses. I began at once to exercise my eyes by **shifting them from point to point**. At first

this shifting required constant effort since the eyeballs had been without movement for more than twenty years (I am now twenty-six years old and had worn glasses since the age of four). Gradually the shifting became easier, until now it calls for no effort. It is not yet so rapid as it should be. There must have been almost a paralysis of the recti muscles, and the minor pulsation of the eyeballs, which you describe as occurring in the normal eye at the rate of from seventy to several thousand in a second, is still absent. I look to time to make this condition right. (Saccadic Shifting and other eye movements)

(Accommodation)

There has also been some improvement in accommodation. When I discarded my glasses I could not read the largest letters on signs across the street. Now these letters and other smaller ones are clear. I believe that eyestrain, continued through many years, has caused a spastic condition of the muscles of accommodation, and that with the relief of this strain accommodation will become normal. This may take six months or a year, but it will come.

Near-sighted as I am, I am able to see more clearly without glasses than I ever did with them. I have less trouble in getting about, and no longer feel confused in the midst of street traffic. While I was wearing glasses I could never play ball or take part in other sports, so that my friends thought that I was "just naturally studious." A short time after I gave up my glasses I started to play "catch" with a tennis ball. It was hard work at first, and I usually missed the ball. The rapidity with which I improved was amazing. When I can see the ball against a plain background, such as the sky or a blank wall, I can now catch it nearly every time when it is thrown from a distance of even fifty feet or more. You bet I get a "kick" out of it! Within a year I expect to be playing tennis.

(Neck tension, relaxation)

In my case eyestrain was accompanied by a **rigidity of my whole body**. The **muscles of my neck, especially, were contracted**, and I could turn my head only with difficulty. Whether this condition resulted from or helped to cause the eyestrain I do not know. At any rate, this stiffness in my neck has worn off as my eyes have grown better. About two weeks ago my **neck relaxed**. Now, for the first time in my life, I can move my head without effort and am no longer conscious of my body at every step.

I shall keep you informed as to my progress. This progress I owe to your book. I hope that it will help others as much as it is helping me.

Sincerely yours,
WM. R. ANDERSON, Jr.

Report of the November Meeting

***By* MISS MAY SECOR, Secretary**

A REGULAR meeting of the Better Eyesight League was held on November 11th at 383 Madison Avenue. Miss Kathleen Hurty, President, presided.

Dr. G. M. Watters, of Newark, N. J., reported cases of the following visual disorders which he has **successfully treated** during the past year by means of the Bates Method:—**myopia, hypermetropia, convergent squint, corneal ulcer, simple glaucoma, atrophy of the optic nerve due to syphilis, and central scatoma.**

Mrs. Frederick Schaefer presented a case of myopic squint in which there had been a decided bulging of the eye. Glasses were voluntarily discarded before the first lesson. Twenty-four hours after the initial lesson the bulging was almost entirely relieved. Two weeks' practice noticeably relieved the squint, and improved the vision.

Dr. Bates spoke on the use of his method with children. **To cure squint in an infant**, Dr. Bates advised the mother to hold the child in her arms, and sway, and also to move the child up and down. If the child is older, one may have him play swinging games, and dance; these forms of exercise are usually more effective if accompanied by music. The necessity for acute vision in the case of the athlete appeals to boys.

The doctor reported a case of central scatoma in which there was no sight in the scatoma eye; parts of the eye were destroyed by disease. Dr. Bates treated the other eye to improve the vision, and at the end of two weeks was surprised to find that sight had developed in the scatoma eye. In this case normal vision was restored in both eyes.

Dr. Bates urged those present to bear in mind that his method is one of eye education. In order that cures may be permanent, it is essential that the patient shall live up to the Bates standard of relaxation, and consequently be free from eyestrain. If the patient permits his eyes to function normally the cure will be permanent.

The meeting was adjourned at the close of Dr. Bates' address.

SUPPLEMENT TO OCTOBER REPORT

Two cases were presented. When seen at the June meeting, these cases were both wearing glasses for general use. Alfred Kessler, age 12; 315 East 87th St., New York City; wore glasses 2 years—close work, 3 years—general use, total—5 years; father, medical physician, removed the boy's glasses early in June, 1924; one hour lesson given to boy by a league member, Mrs. Frederick Schaefer; boy then spent summer at camp, and practiced occasionally; no history of eyestrain since glasses were removed; boy in good health, attends school.

Miss Louise Talma, age 18; 1115 Amsterdam Ave., New York City; pianist; wore glasses 7 years—general use; voluntarily removed glasses June 10, 1924; obtained instruction from Dr. Bates' book, and from officers at league meetings; June 10—read large "C" of Snellen card at 2 feet, and music at 3 inches; Oct 14—reads entire chart at 12 feet, and music at 11 inches. Practice of Bates Method—June—1 hour daily; July, Aug., and Sept—short periods occasionally; enjoys good health, and carries full program of work.

Questions and Answers

Q—When palming and remembering black, is it advisable to keep the image stationary and to keep the same image, or is it just as good to shift from one object to another?
A—When palming and remembering black, one should imagine everything remembered to be moving and not stationary. It is necessary to shift from one image or from one object to another. Shift continually from part to part on objects and object to object on mental pictures in the imagination.

Q—Would the reading of fine print at four inches be helpful?
A—The reading of fine print at four inches is usually helpful.

Q—My little son becomes fidgety while palming. Do you prescribe something else equally beneficial?
A—Your little son may become able to palm for a few minutes at a time. Sometimes swaying from side to side helps.

Q—I am presbyopic (old-age sight). How can I improve my vision by *reading* fine print, when I can not even see it?
A—You can improve your vision for reading fine print by alternately remembering the whiteness of snow for a second while looking at the white spaces between the lines of print, then close your eyes and remember or imagine the same white more continuously, better and more easily. By alternating, you may become able to remember the white as well when flashing the card, as you can with your eyes closed with improved vision.

Q—I cured myself by following the directions in your book, but cannot seem to benefit my mother. She is nearsighted and doubtful of good results in her case.
A—The fact that you cured yourself by following the directions in my book, makes it possible to cure your mother in the same way. You will waste your time unless your mother has the courage to discard her glasses permanently.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

January, 1925

Sun-Gazing

***By* W. H. BATES, M.D.**



IT is a well-known fact that the constant protection of the eyes from the sunlight, or from other kinds of light, is followed by weakness or inflammation of the eyes or eyelids. Children living in dark rooms, where the sun seldom enters, acquire an intolerance for the light. Some of them keep their eyes covered with their hands, or bury their faces in a pillow and do all they possibly can to avoid exposure of their eyes to ordinary light. I have seen many hundreds of cases of young children brought to the clinic with **ulceration of the cornea**, which may become sufficient to cause blindness. Putting these children in a dark room is a blunder. My best results in the cure of these cases were obtained by encouraging the patients to spend a good deal of the time out of doors, with their faces exposed to the direct rays of the sun. In a short time these children became able to play and enjoy themselves a great deal more out of doors, exposed to the sunlight, than when they protected their eyes from the light. Not only is the sun beneficial to children with inflammation of the cornea, but it is also beneficial to adults.

When the patient looks down sufficiently, the white part of the eye can be exposed by gently lifting the upper lid, while the sun's rays strike directly upon this part of the eyeball. In most cases it is possible to focus the strong light of the sun on the white part of the eyeball with the aid of a strong convex glass, being careful to move the light from side to side quite rapidly to avoid the heat. After such a treatment, the patient almost immediately becomes able to open his eyes widely in the light.
Plain sunlight (without use of the convex glass) is also very effective. Glass filters the light causing unbalanced, unhealthy (not full spectrum) sunlight to contact the eyes. The convex glass is only used by a experienced eye doctor and only in cases of extreme vision impairment, blindness and is not applied too often. Looking at the bright area of the sky on a sunny day,(not directly into the sun) and closed eye sunning while facing directly at the sun are safer alternatives.



Sunlight shining on the sclera, white part of the eye. Person looks down, eyes pupil under the lower eyelid. Upper lid is pulled up to expose the sclera to the sunlight.

Mental Strain

***By* W. H. BATES, M.D.**

IT can be demonstrated that all persons conscious of imperfect sight have a mental strain. To try to do the impossible is a strain. It is impossible with the eyes closed to remember or imagine a small black area continuously black and stationary. Persons with perfect sight or a perfect memory, when trying to imagine a small black period stationary, notice an effort or mental strain very quickly, in a few seconds or less, while persons with imperfect sight or an imperfect memory may strain for a longer time before they become conscious of as effort. To concentrate the attention on a point for any great length of time usually causes discomfort, fatigue, or pain, in the eyes or elsewhere.

MYOPIA, or NEAR-SIGHTEDNESS, is caused by a strain or an effort to see distant objects. It can always be produced in the normal eye temporarily, or more permanently, by trying to see distant objects. With perfect sight the eyes and mind are at rest. All

the sensitive nerves of the body are passive. Myopia is never continuous. At frequent intervals, lasting for a fraction of a second or longer, the patient is conscious of flashes of better vision. To test the facts, the retinoscope is reliable. When a patient with myopia looks at a blank wall without trying to see, or remembers something perfectly, the retinoscope, used at the same time demonstrates that there are, periods of time when the eye is normal. This fact can be demonstrated in all cases.

Even patients with thirty of forty diopters of myopia are not myopic all the time. This fact is offered as evidence that myopia, as described by many authors, is not a permanent condition of the eyeball. It can also be demonstrated that when the mind is at rest, and there is no mental strain when the patient remembers or imagines a letter, a color, or some other object perfectly, the myopia disappears. To have imperfect sight from myopia requires much mental effort, time, and trouble to produce it. Every person with myopia has to maintain a mental strain with all its discomforts, in order to maintain a degree of myopia. These facts suggest successful methods of treatment. Since mental strain, or an effort to see distant objects, is the cause of myopia, mental relaxation or rest is followed by benefit. By closing the eyes for five minutes or longer, while letting the mind drift from one thought, or memory, to another, slowly, easily, and continuously, rest of the mind is obtained, and when the eyes are opened, the vision is usually improved for a short time, or for a flash.

Blinking, in which the eyes are opened and closed frequently, is a great help, because the eyes and mind obtain a measure of rest when the eyes are closed, even momentarily. Many patients obtain a greater amount of rest by closing the eyes and covering them with the palms of one or both hands for a few minutes, or longer. We have to consider individuals because, while there are many cases benefited by palming for a half hour or longer, there are others who do better when they palm for a few minutes only, or for short periods of time. Mental strain is usually unconscious. It is a bad habit. When myopic patients learn that they have this unconscious bad habit of mental strain, or when they find out what is the matter with them, it helps in the cure. When patients think it is no fault of theirs that they have imperfect sight, treatment becomes more difficult. To change the unconscious bad habit of mental strain to a habit of relaxation and rest, requires that the patient consciously practices relaxation and rest until the conscious practice by repetition becomes an unconscious habit.

HYPERMETROPIA, or FAR-SIGHTEDNESS. The length of the eyeball is shortened in hypermetropia, which is the opposite of myopia in which the eyeball is lengthened by a mental strain to see at the distance. The cause of hypermetropia is a mental strain to see near objects. When a patient reads fine print with normal sight at twelve inches, with the use of the retinoscope at the same time, it can be demonstrated that the eye is accurately focused for twelve inches. But when the patient fails to read perfectly at twelve inches or nearer, he usually feels the discomfort of mental strain, and the retinoscope demonstrates at the same time that the eye is focused for a greater distance than twelve inches. In all cases examined, the mental strain to see near objects produces not myopia, but just the opposite, hypermetropia.

When hypermetropia is not great enough to prevent reading fine print perfectly at a near point, the retinoscope demonstrates that the eyes are accurately focused for that distance. As occurs under similar conditions with normal or myopic eyes, the hypermetropic eye can only read perfectly without a mental effort. If the hypermetropic eye fails to read fine print perfectly, the retinoscope always demonstrates that the eyes are focused for a greater distance. The vision of the hypermetropic eye is improved by the same methods which improve the vision of the myopic eye. Since the cause of hypermetropia is a mental effort, its cure is obtained when the mental effort disappears.

PRESBYOPIA. When the vision for the distance remains good, while the ability to read at the near point fails, the condition is called presbyopia. In most text-books, if not all, on the eyes, the statement is made that presbyopia begins soon after the age of forty, and increases gradually until the ability to accommodate is entirely lost. Most ophthalmologists have observed that sometimes presbyopia may begin before the age of forty, or it may not appear until a much later date. I have seen patients over sixty years of age, who had normal sight in each eye for the distance, and the ability to read the diamond type at six inches or less with each eye. A popular belief of the cause of presbyopia is that it is due to hardening of the lens, which prevents the lens from changing its shape. I have quite frequently published facts which demonstrated that the lens was not a factor in accommodation, and that the cause of presbyopia was a mental strain when trying to see or read at a near point. Such patients, when they read the distant test card with normal vision, feel comfortable, but when they plan to read the newspaper or fine print at twelve inches or nearer, they are conscious of mental strain or effort, and the greater the mental strain, the less does the patient see. Presbyopia is cured by practicing relaxation methods. Closing the eyes and resting them for five minutes or longer, may enable some patients to read fine print at twelve inches or less in flashes. Blinking is a benefit to some patients, but not to all. Very gratifying results have followed palming for an hour, or longer, in some cases, while in others palming was a failure. Any method which secures mental relaxation is always a benefit.

Presbyopic patients are often cured quickly by a perfect imagination of the halos, which are the white spaces between the lines of letters that appear whiter than the margin of the page.

The eyes, when reading perfectly, do not look directly at the letters, but at the white spaces or the halos.

(Modern teachers state to look directly at the letters (central fixation) when reading. Look at the white spaces to rest the eyes when not reading.) Dr. Bates also states this in other articles.

ASTIGMATISM is caused by mental strain, and is cured by relaxation of the mental strain.

Stories from the Clinic

No. 59 Mental Strain

***By* EMILY C. LIERMAN**

AT one time a young man, aged twenty-seven years, came to us suffering from severe mental strain. His large staring eyes would make anyone uncomfortable just by looking at him. I approached him in the usual way asking him what his trouble was. He smiled and said:

"Now, that's just what I am trying to find out. Nobody seems to want me. Everybody thinks I am crazy."

I answered, "You are wrong. I don't think you are crazy."

Just the same, this poor fellow did make me feel sort of creepy. I was just a little afraid of him, but did not dare to show it.

He had much to say, but the main thing he wanted me to know was, that he was not insane. When he calmed down a bit, I said, "Now let me say something. I know that you are staring so badly that if you don't stop it, you can easily become insane or blind."

I wanted him to understand that I could not help him, nor anyone else, if he continued staring his eyes out of his head.

I asked Dr. Bates to examine his eyes and to tell me what treatment was best for him. The doctor said there was nothing organically wrong with his eyes, but that he was under a terrible mental strain. I understood very well what was before me when Dr. Bated said, "I think you had better knock on my door if the patient tries you too much."

After I had taken his name and address, I asked him where he was employed. His eyes protruded and he stared without blinking, as he answered, "Didn't I tell you that no one wants me? I cannot get any work. America is at war, does Uncle Sam want me? No, I have been to all the recruiting stations here in New York, and all of them have refused me. I want to fight for my country's flag, but they won't give me a chance." He actually wept, and I could not refrain from crying too. His mind was affected, yes, but when he was calm, all he could think of was Uncle Sam, and how he wanted to fight for him. I was not acquainted with him a half hour when I understood easily enough why the United States could not use him. He demonstrated to Dr. Bates and to me very clearly that one can not have normal vision with a mental strain. I placed him ten feet from the test card and told him I wanted to test his vision. He answered, "I hope you will be able to improve my sight, because I think my nervousness will also improve."

He read a few lines of the card, but when he reached the fifty line he leaned forward in his chair, wrinkled his forehead and his eyes began to bulge. At that moment a small mirror from my purse, came in very handy. I held it before him, and the expression of his face changed immediately from strain and tension, to a look of amazement.

He waited for me to speak, and what I said affected him terribly. He covered his face with his hands and wept. I kept very quiet, but touched his shoulder lightly to reassure him. When he raised his head a few moments later, he said: "Maybe that is why they refused me. I guess they saw what you saw. No wonder they thought I was crazy." I feared more hysteria, so I said that if he would let me help him, no doubt the United States Army would be glad to admit him into the service. He left the office after his first visit, feeling very much encouraged. I could not improve his vision beyond the fifty line that day, and I decided not to test each eye separately. All I could record was 10/50 with both eyes.

One week later he came again. Apparently he had forgotten to practice anything he was told to do. His vision was still 10/50 with both eyes. I directed him to cover his one eye, and read the card with the other. His vision with each eye separately was the same, namely 10/50.

He told me that I had encouraged him so much that he tried again to enlist. I said, "You cannot expect to win out unless you take time to practice. This you must do all day long. When you tire of palming, keep your eyes closed and imagine something perfectly." While I was telling him all this, he had his eyes covered with his hands, and was moving his body from side to side, very slowly. What he did next certainly frightened me at first.

While his eyes were still covered, he asked me in a loud voice, "Do you mind if I sing 'America' while I am reading the card?"

I answered, "No, but perhaps the other patients might object. Just wait a moment and I will ask the Doctor."

Dr. Bates said if singing was his way of relaxing, by all means let him sing. That was all that was necessary. This poor fellow sang every word without a mistake. After each verse he would stop long enough to read the card. After the first verse he read two more lines 10/30. When he finished the hymn, he also finished reading the whole card without a mistake, 10/10. He blinked his eyes as he moved his body from side to side, and there came a great change in the expression of his face. I directed him to sing "America" when he practiced reading the test card at home every day. He left us in a very happy mood, and promised to practice as he was told.

We did not hear from him for a whole year. One day there came a letter from him, written in Bellevue Hospital, but mailed by a friend outside. He stated in his letter that he was all right, although he was confined. He also explained why he was sent there. It seems that when he applied at a recruiting station for enlistment, they found his vision imperfect. When he insisted that if they would only let him sing "America," his vision would at once become normal, the officers of the recruiting station considered this statement so absurd that they believed he must be crazy.

He was sent to the insane ward of Bellevue Hospital, where he was promptly admitted. While there, he wrote a play of three acts, all about the doctors, the nurses and patients. It was well written, and after he had persuaded some of the doctors to read it, they recommended his discharge.

He called to see us, and I found his vision was normal, 10/10.

His mental strain was relieved and did not return except temporarily, when he became excited and talked rapidly.

A Teacher's Experiment

***By* EDITH WOOD, Allendale, N. J.**

(This is a fine example of the results that can be obtained by teachers, parents and others, who have charge of children.)

IN September, while testing the eyes of my pupils, I came across Stephen Bodnar, a boy of ten, who was apparently blind in his right eye. In testing him, I brought him so close that his nose almost touched the test card, and still he said he could see nothing. I concluded there was nothing to be done. Some days later the pupils were lined in the yard, when an idea came to me. I called Stephen to one side so that we would be out from the shadow of the building. I covered his left eye with his cap, and turned his face directly toward the sun. Then I asked if he saw anything. He said, "No, it is all yellow." Next I passed my hand back and forth so that the shadow would pass over his eye. He said, "It gets light and dark." I knew then that there was sight there, so I arranged with Stephen to come to my room at one o'clock the next day.

I fixed a shield for his good eye, and when he came next day, after adjusting the shield, I took him to the window and asked him what he could see out there. He replied, "Nothing." Next I took a manila card four by seven inches. Printed on it were the figures, 6A. I had not planned to use the printing on the card. I merely passed it back and forth so that the shadow passed over his eye. In swinging the card I began close to his face, and gradually increased the distance, requesting him to let me know when he no longer saw the shadow.

When I got about two feet away from his face, he said he could not see the shadow any more. When I held the card at four feet,

he said, "I can see you. You have on a dark dress, and it has light spots on it." I immediately asked him to look out of the window, and he saw the boys and girls moving about. He could also see houses and a tree.

The next day at one o'clock he came again, and we repeated the work of the day before. After a few minutes he said, "There are letters on that card." I held the card still, and asked him if he could tell me the letters. He said there was a 6 and an A, but he could not tell the smaller letter, although he could see it was there. I put the card down, and asked him to look at me, and tell me what he could see. I had a gold watch, suspended from my neck by a black ribbon. He said, "You have a ribbon round your neck" I closed one eye and left the other open, and he told me what I had done. While I was fixing his attention on my face, with my left hand I brought my watch out. He said, "I can see your watch." I said, "Be careful, Stephen, or I'll fool you. Isn't that a large yellow button?"

"No, it's a watch, for I see a ring, and a ribbon fastened to it," he answered.

Next he looked out of the window, and he could tell what the children were doing and how many windows there were in the houses. I told him about palming and the long swing, and asked him to do them morning and night, which he said he would do. I remember that he astonished me so with what he could do, that I thought he must be peeking with the other eye. I tried to prevent him from turning his head, but he would do it, so I got behind him and held his head. He read just the same as before.

I have seen very little of Stephen of late. When I last saw him he could read the whole test-card at eighteen feet, and he could read from a book held at the normal reading distance.

Stephen's progress at the start was so rapid, that it astonished me. After about one week's work with the shadow, I dropped that and confined the work to the test card and the book.

Had any one told me this story, I'm free to say that I would have been skeptical.

Suggestions to Patients

***By* EMILY C. LIERMAN**

+ WHILE sitting do not look up without raising your chin. Always turn your head in the direction that you look. Blink often.

+ Do not make an *effort* to see things more clearly. If you let your eyes alone things will clear up by themselves.

+ Do not look at anything longer than a fraction of a second without shifting.

+ While reading do not think about your eyes but let your mind and imagination rule.

+ When you are conscious of your eyes while looking at objects at any time, it causes discomfort and lessens your vision.

+ It is very important that you learn how to imagine stationary objects are moving without moving your head or moving your body. Stationary objects move when the eyes shift without moving the head/body, but moving the head and body with the eyes, in the direction the eyes are moving increases the ability to see the movement and moving the head, body with the eyes improves central fixation, eye movement, relaxation and movement of the neck, head, body, eye muscles.

+ Palming is a help to you, and I suggest that you palm for a few minutes many times during the day, at least ten times. At night just before retiring it is well to palm for half an hour or longer.

New Year Fairies

***By* GEORGE GUILD**

A CERTAIN man had much money. One day he gave forty million dollars to charity, and had a lot left. He invited me to spend an evening at his home. He asked me if I would like to learn how he made his money. I answered, "No."

"What would you like to talk about?" was his next question.

I replied, "Although you seem to be well advanced in years, your hair is not gray and your eyes seem good, because I notice that you are able to read without glasses. How have you been able to preserve your eyesight all those years?"

He smiled and answered, "I do not know unless it was due to the influence of the New Year Fairies." He stopped and waited for me to say something.

All I said was: "Tell me about it."

With his eyes partly closed, I can see him now, smoking his cigar slowly, and letting his mind drift away from me and his surroundings to a time long ago when he was a poor boy living on a farm. He told me that he had many brothers and sisters, all of them now dead. Christmas, one year, had been a very sorry affair. They had very little to eat, and their poverty was extreme.

New Year's Eve, as he sat by the open fire, a small boy of ten, he felt very hungry, very despondent, and very unhappy. He watched the flames of the burning wood, watched them grow larger, grow smaller, change their color, and, as he watched, a fairy appeared in the light. She had the most beautiful eyes that he had ever seen. They were so bright, clear, full of sympathy and love, that he could not look away from them. She seemed to read his mind, and spoke encouraging words to him, which made him feel better. Then another fairy, all dressed in blue, a very beautiful blue, waved her hands to him, threw him a kiss and started to dance. While she was dancing, other fairies came out of the dark and danced with her. It seemed to him that wherever there was a spot of light, there was a fairy, many fairies, all of them with the same sympathetic, loving, blue eyes of the first fairy.

The memory of these eyes has never been lost. He said that he could see them now just as clearly as he did in the long ago. The memory of these eyes brought with it a wonderful feeling of rest, relaxation, and comfort. It seemed to him that those fairies brought a blessing which had helped him to accomplish many things which other people believed were impossible.

After he went to bed in the dark it seemed that he could still see the burning fire, and all those fairies with their sympathetic and loving eyes. When he awoke next morning his attitude of mind was entirely different. He ran to each member of the family, his father, his mother, each sister and brother, threw his arms around them and wished them all a Happy New Year. He tried to dance

as he had seen the fairies dance, he tried to smile as he had seen them smile; he tried to be as sympathetic and as kind to everybody as the fairies had been to him. He was all eagerness to be busy. Formerly he had shirked what little work was expected from him, but now he had an uncontrollable desire get busy, to do things. He had no feeling of fatigue no matter how hard he worked, or how much he accomplished. His mother was amazed to have him fly around the kitchen, and to help her in as many ways as he possibly could. He brought in more wood for the stove than could be used in a week. He ran to the barn and started in cleaning house. It was the first time in his life that he felt a desire to do something to help the horses, the cows, and other animals. He got busy with a few tools and fixed up the chicken-coop, stopped all the cracks so that the cold air would not blow on the chickens, and all the time he was thinking of those eyes of the New Year Fairies, because the memory of their love did him so much good.

He felt a desire to go to school, and tramped through the deep snow two miles to get there. The teacher was surprised to see him and asked him what he desired.

"I want to go to school. I want to learn things. I want to be a big man. I want to make people happy."

The teacher smiled, give him a desk, some paper, a pencil, and a few pages of a primer, and told him to copy as much of it as he possibly could. He used up a great deal of paper, and before school was out he had done something very wonderful, because he had copied all the pages that had been given him.

He told me that his health was always good, and as far as his eyes were concerned, he never gave them a thought. He know that he could see well, but he was not conscious that he had eyes most of the time. When he was forty-five he had an attack of the grippe, from which he soon recovered, but when he tried to read the newspaper, he was very much alarmed to discover that his sight was very poor. He at once consulted an eye specialist, who told him that he needed glasses because all persons in middle life, past the age of forty, needed glasses. He had some business to attend to which occupied his time for a few days. During that time be tried to rest his eyes by not looking at the newspaper. After avoiding any use of his eyes for reading for four days, they felt quite comfortable. Later he picked up a newspaper, and was surprised to find that he could read it for a short time. When his eyes tired, he rested them, and he discovered that by reading the paper and alternately resting his eyes, his vision improved to the normal. At subsequent periods in his career he had similar attacks of being unable to read, which were always relieved by rest. He felt that as long as he could improve his sight by resting the eyes, it would be perfectly safe for him not to wear glasses.

"It may sound very queer to you," he said, "but I find that I can obtain perfect relief immediately when I remember the sympathy and love in the eyes of those New Year Fairies."

Report of the League Meeting

By* MISS MAY SECOR, *Secretary

A REGULAR meeting of the Better Eyesight League was held at 383 Madison Avenue, on the evening of December ninth. Miss Kathleen Hurty, president, presided.

Miss Hurty announced that the annual election of officers will be held at the January meeting. The nominating committee was appointed as follows: Mrs. Warring (chairman), Miss Agnes Herrington, and Miss Mabel Young.

Miss Hurty gave an exposition of the Bates Method. Miss Agnes Herrington, a teacher in Erasmus Hall High School of Brooklyn, told of the great benefit she had derived from the use of this method. Miss Herrington wore glasses for ten years; she has now discarded them, with the exception of occasional use to read very small figures. Dr. Bates advised those who experience difficulty in reading small print to relax by means of palming and swinging; this will relieve eyestrain, and the small print will become legible. Miss Herrington found the following most helpful: **sun treatment, blinking, and imagining a white cloud upon which is placed a black "o" having a period on either side.**



Imagine a cloud with a small black o upon it with a period on the left and right sides of the o.
Shift left and right on the o, one period to another and see, imagine the o swing in the opposite direction.

Mr. George Weiss reported several cases which are under treatment at Erasmus Hall High School. These cases are all showing marked improvement. One case has been cured of insomnia as a result of relief from eyestrain. Mr. Norman Bernat, a member of Miss Hurty's eye group at Erasmus Hall, reported that by means of the Bates Method he has secured normal vision. For seven years he had used artificial lenses—one set for general use, one for reading, and one for "the sun." Mr. Bernat demonstrated the long swing in an unusually pleasing and relaxed manner.

Dr. Bates reported a case in which the patient was unable to see things moving. The Doctor requested the patient to look at the upper left hand corner of the small square of the Snellen card, to sway, and to hold the corner stationary. The patient followed instructions, and a severe headache resulted; after this experience, however, she was able to see things moving. Dr. Bates explained that it is sometimes advisable to teach a patient how to use his eyes in the wrong way, in order to effect a cure. Another case had occasional attacks of complete **blindness**. **Dr. Bates taught this man how to consciously produce complete blindness; the lesson was a difficult one. The result, however, was complete relief from attacks of blindness. After his cure the man served over-seas; when he returned to New York his vision was still normal.**

Dr. Bates treated one case which had been diagnosed by neurologists as insanity. This man had double vision at times, and frequently saw imaginary figures dancing on the top of tall buildings; it sometimes appeared to him, also, that men approaching him took off their heads, and carried them under their arms. In this case a correction of the visual defects removed all apparitions, and the man was recognized as normal. Dr. Bates spoke also of a little girl who attained very high visual acuity by means of central fixation, seeing best a part of each letter. **The Doctor stated that floating specks are the result of imperfect imagination, and are a sign of strain.** At the close of Dr. Bates' discussion the meeting was adjourned.

Announcement

We are pleased to announce that Capt. C. S. Price,, of London, England, will visit Dr. Bates around the latter part of January. He is planning to discuss with Dr. Bates the best methods which are employed for the cure of imperfect sight without glasses. The spread of Dr. Bates' method in England is largely due to Capt. Price's enthusiasm and success in helping others. There are now two clinics, and a Better Eyesight League in England, all reporting favorable results. We are hopeful that Capt. Price will attend the February meeting of the League.

Questions and Answers

Q—What is the difference between the long and the short swing?
A—In the long swing, objects appear to move an inch or more. In the short swing, objects appear to move an inch or less.

Q—My hands become tired when I palm. Can I sit in a dark room, instead of palming? Can I cover my eyes with a dark cloth?
A—No. I have found this to be a strain.

Q—While palming is it necessary to close the eyes.
A—Yes.

Q—When I read and blink consciously, I lose my place.
A—This is caused by strain, which prevents one from remembering the location of letters.

Q—How long is it necessary to read the test card before obtaining benefit?
A—Some patients by palming, and resting their eyes, have obtained benefit in a few minutes.

CATARACT NUMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
February, 1925

The Baby Swing

YOUNG babies suffer very much from eyestrain. **The tension of the eye muscles is always associated with the tension of all the other muscles of the body**. Their restlessness can be explained by this tension. I was talking with an Italian mother in the clinic one day about restless children, and asked her why it was that her baby was always so quiet and comfortable when she came to the clinic, while many other babies at the same time were very restless and unhappy.

"Oh," she said, "I love my baby. I like to hold her in my arms and rock her until she smiles."

"Yes, I know," I said, "but that mother over there is rocking her baby in her arms, and the child is screaming its head off."

"Yes," exclaimed the Italian mother, "but see how she rocks it."

Then I noticed that the other mother threw the child from side to side in a horizontal direction with a rapid, jerky, irregular motion, and the more she jerked the child from side to side, the more restless did it become.

"Now, doctor," said the Italian mother, "you watch me."

I did watch her. Instead of throwing the child rapidly, irregularly, intermittently from side to side, she handled her baby as though it had much value in her eyes, and moved her not in straight lines from side to side, but continuously in slow, short, easy curves. The Italian mother picked up the other mother's child, and soon quieted it by the same swing.

I learned something that day.

Cataract

***By* W. H. BATES, M.D.**

CATARACT is a form of imperfect sight in which the lens of the eye becomes opaque. It usually begins after the age of fifty, and may progress in the course of a year or longer to complete blindness. In most cases perception of light can be demonstrated in all parts of the field. In many cases, cataract in one or both eyes is found at birth. There are also a smaller number of cataracts which appear after an injury to the eyes. Diabetes and other general diseases are believed to be a cause of cataract. As a rule cataract is progressive.

In 1895, a well-known ophthalmologist asked me, one of his assistants, to collect the histories of all cases of cataract which recovered without treatment. There were many such cases. It seemed to me that since recovery of cataract occurred without treatment, although the majority needed an operation for the removal of the lens before they were able to see; some form of treatment might help more of these cases. I sent some of my private patients to general practitioners who at that time by various methods did benefit these patients in quite a number of instances.

Not long afterwards I attended a meeting of the Ophthalmological Section of the American Medical Association, and listened to a paper on the treatment of cataract in which the writer declared that any doctor who claimed to cure cataract without an operation was a quack or something worse. I did not think he was right, and gave a talk on my experience, which produced something of a sensation.

More than forty years ago, when I was a student in a medical college, one of the professors gave a lecture on the eye. He had a number of nucleated eyeballs from the cow. He demonstrated that when the eyeball was squeezed with the aid of his fingers, an opacity or cataract of the lens at once appeared. I could see this more than twenty feet away. When the squeeze was relieved, the lens at once became apparently perfectly clear. I have repeated this experiment on the eyes of other animals without failure.

One day I was studying the eye of a patient with partial cataract. While the patient was talking of various things of no special consequence, I could see through several openings in the cataract, areas of a red reflex, which was evidence that the lens was not completely opaque. I asked the patient how much she could see, and while she told me the letters on the Snellen test card that she could read, the opacity of the lens was incomplete. She then made an unsuccessful effort to remember some of the smaller letters, when much to my surprise, the whole lens became opaque. I repeated the observation as follows:

I asked her: "Can you remember that you saw the big C?"

"Yes," she answered, and then at once the lens cleared in part, and I could see the red reflex through the open spaces.

Then I asked her: "Can you remember having seen any of the smaller letters on the bottom line?" I could see that she was making a considerable effort when the lens became completely opaque. I was so interested that I had a number of friends of mine

repeat the experiment, and they were just as much astonished as I was when they obtained the same result.
Strain in the mind = eye muscle tension = pressure on/in the eye, lens = cataract.
Relaxed mind, easy to remember a object clear = relaxed eye muscles = no pressure on eye, lens = cataract disappears, cured = vision clear.

So many patients are depressed, or become very unhappy, when they learn that they have cataract. The prospect of an operation, with its dangers and uncertainties, is too often a punishment. When an elderly patient with loss of vision is brought to me for treatment, the friends or relatives usually request me not to tell him that he may have cataract. For many years I followed this practice, gave the patient glasses, and deceived him as well as I knew how. I felt a great responsibility which I was always anxious to be rid of. I was ashamed of my cowardice. It was a great relief to have such patients consult some other physician. At the present time this has all been changed. I welcome cataract patients now, and rejoice in the fact that they have cataract because I am always able to improve the vision at the first visit, and ultimately cure them if they continue some months, or longer, under my supervision. Cataract is more readily cured than diseases of the optic nerve or retina. I believe that I am justified in telling the patients that the cause of the imperfect sight is due to cataract, because when they know what is wrong with them, they are more likely to continue to practice methods of treatment which are helpful.

The vision of every case of cataract always improves after palming, when the patient learns how to do it right. I have seen many serious cases obtain normal vision with the disappearance of the cataract, by practicing the palming and nothing else.

It was a shock to me to see a case of traumatic cataract recover with the aid of palming. **Cataract, occurring in patients with diabetes, has also disappeared without treatment or cure of the diabetes.**

Treatment which is a benefit to cataract has for its object relaxation of the eyes and mind.

The quickest cure of cataract is obtained by the memory or imagination of perfect sight. It can be demonstrated that when the patient remembers some letter as well with the eyes open as with the eyes closed, that the vision is improved, and when the memory is perfect with the eyes open, perfect vision is obtained at once and the cataract disappears. This startling fact has been ridiculed by people who did not test the matter properly. When the patient stares, concentrates, or makes an effort to see, the memory, imagination, the vision, always become worse. The patient and others can feel, with the tips of the fingers lightly touching the closed upper eyelid, that the eyeball becomes harder when imperfect sight is remembered or imagined. But when perfect sight is remembered or imagined, it can always be demonstrated that the eyeball becomes as soft as is the case in the normal eye. When the patient practices the swing successfully, or practices other methods which bring about relaxation of the muscles on the outside of the eyeball, it becomes soft, and the cataract is lessened.

After an operation for the removal of cataract, a thin membrane usually forms over the pupil of the eye, which impairs the vision. This membrane is called a secondary cataract. Sometimes another operation, a puncture through this membrane, is beneficial. In a recent case, a man, after the removal of the lens for congenital cataract, came to me for treatment. Without glasses his vision was 15/200; with convex 15.00 D. S., the vision was improved to 15/70+.

The patient hesitated about taking treatment at this time because he had heard that I always removed the glasses. He felt that on account of his work, he had better defer the treatment until such time as it was convenient to go without his glasses. I asked him if he would go without his glasses if I improved his vision so that he could see as well, or better, without them, as he was now able to see with them. He answered that he would do as I recommended. With the aid of palming, swinging, and perfect memory and imagination, the vision very promptly improved to 15/15.

Stories from the Clinic

No. 60. Two Cases of Cataract

***By* EMILY C. LIERMAN**

SO many times I have been asked, "Is it really possible to cure cataract by Dr. Bates' Method?" I can prove that it is. In the March, 1920, number of "Better Eyesight," I wrote about a case of cataract under treatment at the Harlem Hospital Clinic. This case was a woman seventy-three years old who was determined to be cured without an operation. In October, 1916, she had visited another dispensary where an operation was advised. The doctors there told her however that she must wait until the Cataract was ripe before the operation could be performed. Later she heard about Dr. Bates curing cataract without an operation, and tried out the method as well as she could all by herself. In March, 1919, she visited Dr. Bates in his office, and he helped her.

This woman made her living by mending clothes in an orphanage, so we were glad to treat her in the Clinic where she did not have to pay. Three days a week she came, no matter how bad the weather was.

On her first visit she read the forty line at four feet from the test card, then her vision blurred. She knew just what to do, and I did not have to tell her to palm. Just once she peeped at me through her forgers and said, "I'll fool the other doctors yet. My eyes won't have any cataract if I keep this up." She had a way of smiling out loud, and she still has. Her disposition has not changed a bit in all the time I have known her.

Recently she came to the Clinic to see me. In the room were two school nurses, and a young man who were there to observe the cases under treatment. I was not so sure that my dear old lady had retained her improved vision, because I had not seen her for a year or more. I placed the test-card eight feet from her eyes and she read every letter correctly up to the fifteen line without the aid of palming. At times she read 10/10 after resting her eyes with the aid of palming and blinking.

The test I made this day was the best yet, because she read a strange card which she had never seen before. Then I placed her in the sun and gave her the doctors fine print card, which she held six inches from her eyes. She looked at me in a funny way, and said, "Oh, I can read that easily." Then she proceeded to read the diamond type to the amazement of the others in the moot.

Some day I am afraid the little lady will get into trouble. Whenever she sees a child in the street wearing glasses, she gets very much excited.

Recently she stopped two women with a child on the street and found fault with them because the little girl, three years of age, was wearing glasses. "Why don't you take that child to my doctor; he can cure her without glasses!"

Those who know our dear old lady can very well understand her good intentions, but how about the mother and friend of this little girl? They must have thought at first that she was of unsound mind. The women treated her kindly and accepted the "Better Eyesight Magazine" which she offered them.

We had another case of cataract under treatment at the Clinic, a man sixty-three years old. He had to have someone to lead him when he fast came, which was less than a year ago. After his fourth visit to the Clinic he was able to travel by himself.

When Dr. Bates examined him with the retinoscope on the first day, he could see no red reflex in either eye. I gave him a test card which he held very dose to his eyes, and after he had palmed for a little while and imagined he saw the test card moving opposite to the movement of his body, he could make out the big C of the card at two inches from his eyes, but it looked very much blurred to him. Before he left the Clinic that day he became able to read several lines of the test card, and the letters cleared up which, of course, gave him a great deal of encouragement. What helped him so quickly was that he was quite sure we could improve his sight. He did exactly as he was told. Keeping up that steady swing of his body while standing, slow and easy, without any effort, stopped the staring, or prevented it. Palming and imagining his body was moving were a rest and relaxation to him also.

After he had been coming for a month or more, he became able to read all the letters of the test card, as he held the card very close to his eyes. Three months later he was able to read the large letters of the card two feet away, and the ten-line letters of the bottom line at three inches from his eyes. Always when he came, which was every Saturday morning, he had something encouraging to tell us about his eyes. The signs in the sub-way on his way from Brooklyn became more clear and distinct. He was able to dodge people in a crowd. At the present time, even people with normal vision have to be mighty careful to avoid injury both in the street and in the subway.

It is now about ten months since this patient first came for treatment, and on his last visit he read very fine print at three inches from his eyes, and saw the fifty-line letters more than a foot away. His vision improves by practicing with print much finer than diamond type, and his jolly disposition is also a great help.

It is a great relief to be able to say to a Clinic patient when he first comes to us: "You are welcome here for treatment, no matter where you live." At the Harlem Hospital Clinic, the authorities there turned away many poor souls who needed treatment of their eyes. Each district has a free hospital, and those who lived in another district were not admitted. While it was pitiful, it had to be so, because we could not take care of them all.

Here in our office also, we have to limit the number of patients treated in the Clinic, so we can only take care of patients who have no source of income, or who are sent to us by physicians.

Strain

***By* EMILY A. MEDER**

WE are often awed by the almost uncanny wisdom of the philosophers and teachers who lived centuries ago. After extensive experiments and research work, our scientists discovered certain properties in a drug, which proved invaluable during the War. It was later found out that this property had been used as an every-day remedy in Japan for centuries. **It is well known that India possesses the secret of cures for various diseases, which our scientists would be glad to know of.**

Dr. Bates has made the important discovery that all cases of defective sight are caused by strain, tension or rigidity of the eye and mind. There are a great many people who refuse to accept this fact, although their imperfect sight, and perhaps other troubles are due to this cause.

Read what one Chinese Sage wrote about strain many, many years ago:

"In love or in hate, rigidity is final; in art fatal. Elasticity means life in the plants and flowers and trees, and in the wings of a bird, as in the mind. When the sap goes from the branches, they become rigid, and the storms break them down. When the artist's mind closes against the new ideas that are the mind's strength, as the sap is the trees, the brain becomes rigid, and arid, and neither philosophy, poetry nor painting can be produced thereby.

"Rigidity and death are synonymous."

The eyes have perfect sight when they are relaxed. It is not difficult; when there is an absence of strain, the eyes do nothing. They don't squint, or stare or try to see.

When the eyes are relaxed, the body is relaxed, strain disappears, and the truth of Dr. Bates' discovery is proven.

Remember—Rigidity, strain and death are synonymous. Be relaxed!

Clinic Reports from London

We have heard from several of our English correspondents praising the work done by the "Better Eyesight League of Great Britain and Ireland." We are pleased to publish a few of Mr. Price's reports. Notice that all cases are accepted, including those with little perception of light, which have to be led into the office. A history of the progress of these severe cases proves the usefulness and need of this work.

A MAN BLIND IN ONE EYE FOR MANY YEARS

THIS is the case of a man who has endeared himself to all of us. He is a match seller in the gutter of one of our streets and partly because of his curly hair and partly because of his sunny smile (he is an Irishman) we have christened him Curly. There are occasions when his cheeriness is of great assistance to the other patients.

His vision when first tested was 10/60 with the right eye and nothing whatever with the left. He had no perception of light in the left and said that he had not had for many years, and was told at the hospital that it was quite gone and nothing could be done.

His vision has improved to 10/50 and the left eye is much better and has quite a good perception of light. His near sight has improved more than his distant.

(We are in hopes that Capt. Price can send us a further report of Curly's progress.)

BLIND FOR FIVE YEARS

(This case should encourage those who have only slight perception of light.)

A few weeks ago there was lead into the Clinic a man of 65 who told us he had been blind for five years and the doctors at the hospital had told him nothing more could be done for him, as his case was hopeless.

On testing his sight we found the right vision 3/80 and the left vision only just perception of light.

He was eager to know if we thought he could be helped and listened attentively while he was being told how to palm and how to strengthen his eyes by splashing them with cold water. He started right away palming and was left to amuse himself in this way, while other patients were attended to, and afterwards he said his eyes felt rested and much easier. He was asked what he was to do at home during the week to see if he had remembered the directions given to him, and then went home in a very hopeful frame of mind.

The following week he came along and looked rather more cheerful and was very excited to tell us that he thought he could see a little with the blind eye. Both eyes were tested, the right one was now 3/60, and with the blind eye he could see the big C, the 200 line when the Chart was held close.

Two weeks later we held the Clinic in another room and we were amazed to see him walk boldly in alone. He was looking much better and very proud of himself. He had been under the doctor's care for the last two or three months as he was generally run down, and this week he was delighted to tell us that he had caught his doctor napping. His doctor had greeted him one morning by saying how much better his eyes were looking, how much brighter and more alive. "Yes, because I am having treatment for them," said our friend. He told the doctor of the treatment, whose reply was that it was rubbish and could not possibly do any good. "Well, you said yourself how much better they were looking, and they must look very different for you to notice them and remark on them, and besides I can see more than I did."

He continues to be very much in earnest and is now able to see 3/30 with the right eye, and can read the 40 line quite easily close up to the other eye which previously had only perception of light.

A MAN WHO HAS WORN GLASSES FOR 60 YEARS

This man without his glasses was very helpless. He had no vision at all with the right eye, just perception of light, but very slight. The left eye was such that he could read with difficulty the 60 line at 6 inches. In three weeks the vision with both eyes was improved, so that at 6 inches he could read the 20 line comfortably and the 15 line with difficulty. The right eye is better but the improvement is not so marked as that of the left. It is a great joy to help this man, he is so grateful for the smallest thing that one does, and his childlike faith and obedience is something rarely seen. The reason he has made so much progress in so short a time is due to the fact that he cooperates willingly and with pleasure and is really interested in getting his sight.

One notices that on the whole people with slightly imperfect sight are not sufficiently interested in getting their sight normal to take much trouble. If it could be done for them they would not mind; but they do not like to bring it about themselves. The continuous relaxation practiced by those with imperfect sight is a joy to see and they are well paid for it.

The Elephant and the Fairies

***By* GEORGE GUILD**

IT is a fact that few of us realize that we have never seen a fairy wearing glasses. Why shouldn't they wear glasses? Little boys and girls wear glasses. Little boys and girls like fairies, yet it is unheard of for fairies to imitate what other people do, and wear those dreadful goggles which spoil the eyes and faces of beautiful young children. Many a fairy has whispered in the ears of children that glasses are bad. Many a fairy has whispered into the ears of a mother that glasses were an injury to the eyes, with the result that mothers who enjoy the society of their children are troubled about the glasses.

One evening after everybody had gone to bed, the father of a family sat in his chair dozing, after he had read the evening paper. Many fairies came and whispered in his ears that glasses were bad for his children. He tried to argue the matter with them.

"Why shouldn't they wear glasses? The doctor says it does them good. They cost a lot of money, and my children are all the time breaking them. But if it does them good, why shouldn't they wear them?"

The fairies remonstrated with him and told him that he could not see with his eyes, he could not see with his mind, and that he was just as blind as the five men were who tried to describe an elephant which they had never seen.

"Well, tell me all about it," said he.

So one of the fairies perched herself on his right shoulder, and told him the story which illustrated how wrong some people can be.

Once upon a time many centuries ago, an elephant came to a small village where no person had ever seen such a creature before. Five blind men were coaxed with some flattery to give their opinion of the elephant.

One grasped the tail and declared: "The elephant is very much like a snake." The roar of laughter from the spectators upset him very much.

The second blind man leaned against the side of the elephant and said: "The elephant is very much like a high wall." The applause of the mob was tremendous.

The third handled one of the elephant's legs. "Yes," he said, "The elephant is very much like a pillar." The applause which followed bothered him.

The fourth grasped one of the elephant's ears, and very solemnly asserted: "The elephant is similar to a fan." More applause and laughter greeted this opinion which also disturbed the blind man.

The fifth felt of the sharp pointed tusks, and said: "The elephant is very much like a spear." As an encore to the applause, he corrected himself and announced: "The elephant is like two spears."

The five blind men gathered together. The vigorous arguments of each blind man to prove that he was right and that all the others were wrong, amused the populace for some hours.

The world is full of blind people who have eyes and minds which do not see. The world is full of Good Fairies who teach us how to see with our eyes and minds.

The next morning the father told his wife all about his experience with the fairies, and when the children appeared for breakfast wearing their large rimmed spectacles, he saw how their eyes and faces were injured by them. His wife saw the same thing, and they both exclaimed in one breath: "Take off those horrid glasses, and never wear them again."

Then the little girl took off her glasses and dropped them in the waste-basket with a smile. The little boy dropped his on the floor and, with the heel of his heavy shoe, he smashed them into little bits, and laughed.

The father was astonished, and asked: "Why did you do that?"

The little boy laughed loudly, and cried: "Because I have got the best of the horrid things. They never did me any good. They hurt my eyes and kept me off the baseball team. I cannot tell you how glad I am to be rid of them."

The little girl also was smiling, and they soon were all smiling, and they have been smiling pretty much all the time ever since.

Report of the League Meeting

***By* DOROTHY MAITLAND**

THE annual business meeting of the Better Eyesight League was held Tuesday evening, January 13th, at 383 Madison Avenue. We noted with regret the absence of the secretary, Miss Secor, who was ill. Miss Hurty conducted the meeting.

The treasurer's yearly report was made and accepted.

For the benefit of the visitors, Miss Hurty briefly outlined the work of the League and the part each loyal member takes in it. This is to improve his own vision and help others to improve theirs. The work with children was emphasized as being the most essential point in the League's work. Those in charge of children were asked to cooperate with the League in order to reach those children whose defective vision can be corrected at the start.

The nominating committee submitted the following list of officers for the ensuing year. The acting secretary cast a unanimous vote in their favor. The new officers are:

Miss May Secor, President.
Mr. N. A. Weiss, Vice-President.
Miss Mabel Young, Secretary.
Mrs. Wm. R. Marsden, Treasurer.

In view of Miss Secor's absence, Miss Hurty continued as chairman for the evening.

Miss Hurty cited a case of a boy in her class last year who suffered with severe headaches. He received no special treatment but worked out suggestions with good results. He now claims Miss Hurty cured his eyes and relieved his headaches entirely.

Dr. Bates gave us an interesting talk on cataracts. **He explained that although all imperfect sight is due to strain, each defect is caused by a different kind of strain.** When one has cataracts the eyeballs become hard. Relaxation through swinging, a perfect memory or a perfect imagination softens the eyeball and the cataract disappears. Dr. Bates claims that nearly all cases of cataract are materially benefited at the first visit. Babies with cataracts have been cured when the mothers swayed them in their arms.

(Thumb/finger movement)

Have you learned to swing by means of your thumb? If not, try it now. Place your thumb and forefinger together and rub them lightly in a circular movement. When done correctly you will feel your whole body move and everything about you will seem to move. You know the value of this form of relaxation.

An instance was cited of a movie director who carried a large diamond in his vest pocket and unless he kept moving that diamond between his thumb and forefinger he could not direct his cast. The gentleman who related the case realized the significance of it as soon as the thumb movement was explained to him, and he was very glad to tell us about it.

Perfect sight is natural and a normal condition, and those who have bad vision sometimes instinctively do those things which help them and improve their sight.

The meetings are proving so helpful and officers so enthusiastic that we extend a warm invitation to all those who are interested in this work.



Thumb, Finger Movement

Place the top of the thumb on the top of the pointer finger and move the thumb on the finger in a small circular movement: Counter-clockwise, clockwise, counter-clockwise...
The finger is stationary.
Next: Move the thumb left and right, up and down, diagonally on the finger tip.
Practice with left and right hands.
(The finger can be moved on the thumb with the thumb stationary if preferred.)

This is a form of the swing, movement, you can see and feel oppositional movement as the thumb moves on/against the stationary finger. The finger and thumb appear to move opposite each other.
This activates relaxation, eye shifting, movement of the body, left and right brain hemisphere activation/integration, clear vision.

A famous successful movie director kept a large diamond in his pocket and kept moving the diamond between his thumb and forefinger when directing.

Helpful Hints from Correspondents

These are extracts from letters received from book readers and others. They might suggest new ways of improving your vision.

"I AM proud of my ability to eliminate headaches, fatigue and even nausea resulting from eyestrain. I formerly retired to my room when one of my severe headaches came on, and required the entire household to be absolutely quiet. Now, if my head or eyes pain, I go to my room, palm for a few minutes, swing the card, and feel rested. The headaches usually disappear when I am relaxed.

Another discovery! The headaches only come when I do something wrong. The last one was caused by late shopping, rushing to put the house in order, and cooking the whole dinner myself. When I slowly did the long swing (with the broom in one hand and a duster in the other), I grew calm enough to greet my guests pleasantly."

"I was shocked to discover that I was a starer. I knew that Dr. Bates advocated blinking to prevent the stare, and thought that I blinked and shifted constantly. Upon watching myself, however, I found that I only blinked when I remembered to do it consciously. I have made it a rule now to blink my eyes at the end of each line. This compulsory rule is becoming easier, and I believe that it will become a good habit real soon."

Questions and Answers

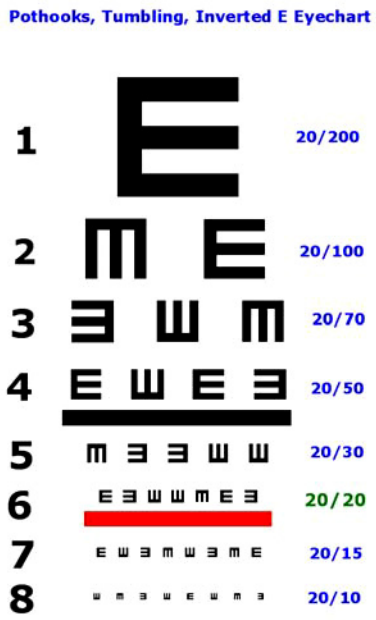
Q—What is most helpful when one is dreadfully nearsighted and finds it almost impossible to see without glasses?
A—Practice palming as frequently as possible every day. Keeping the eyes closed whenever convenient for five minutes ten times a day is also helpful.

Q—I notice that my squint eye does straighten after palming, but reverts when I stop. How can I tell when and how I strain?
A—Avoid staring after palming and blink all the time. You can demonstrate that staring is a strain by consciously doing it for a few seconds.

Q—If glasses are harmful, how do you account for the benefit the wearer receives; also relief from headaches?
A—(a) Eye glasses are harmful because the benefit received is not permanent. (b) The mental effect of glasses helps some people, but the headaches are not relieved permanently and the vision is usually made worse.

Q—Why is fine print beneficial?
A—Fine print is beneficial because it cannot be read by a strain or effort. The eyes must be relaxed.
Fine print activates perfect central fixation with shifting.

Q—How can I correct the vision of my three-year-old son, who won't palm and doesn't understand it? He is far-sighted.
A- Make a test card with black letters on white paper. The letters to be composed of E's pointing in various directions. These are to be graduated in size, from about 3½ inches to a quarter of an inch. Have the child read them from 10 to 20 feet away. Have him blink constantly while telling in which direction the E's are pointing.



BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

March, 1925

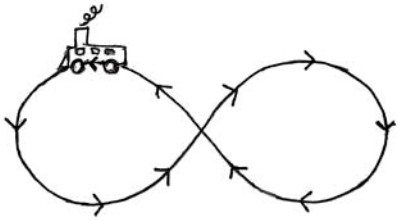
The Elliptical Swing

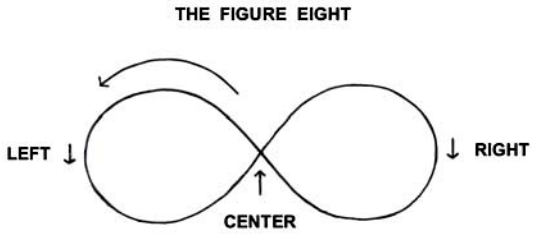
THE normal eye when it has normal sight is always able to imagine stationary objects to be moving from side to side about one quarter of an inch, slowly and without effort. This is called the swing. In order that the swing may be continuous, the movement of the head and eyes should be in the orbit of an ellipse, or in an elongated circular direction.

A patient, aged seventy-seven, with beginning cataract in both eyes had a vision of 3/200 when she looked to one side of the card. When she looked directly at the card or the letters, she complained that she could not see them so well, or at all. She was recommended to practice swaying the body from side to side. Every time she moved to the right or to the left, she stopped at the end of the movement and stared, and that prevented relaxation. With the help of the Elliptical Swing, she obtained at once very marked benefit. Her vision was improved almost immediately when she looked directly at the letters, and her vision became worse when she looked to one side of the card.

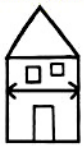
A young man, aged sixteen, was treated for progressive myopia for a year or longer. His vision improved for a time, then improvement stopped. Some months later his vision had not become permanently improved. Palming and swinging no longer helped him. I noticed that when he would move his head from side to side, he stopped at the end of the swing and stared. When he practiced the Elliptical Swing, his head and eyes moved continuously, and the staring was prevented. At once there was a decided improvement in his vision, and this improvement continued without any relapse.

Modern teachers use the infinity swing, figure eight.

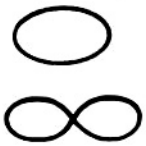




Shift left and right on the house and see it move 'swing' in the opposite direction. Move the head with the eyes, in the same direction.



Elliptical Swing



Modern Figure Eight, Infinity Swing is a improved version of the Elliptical Swing. Trace along the eight with the eyes: Move up the center and to the left first. Head moves with the eyes, same direction. Notice the neck moves, relaxes.

Limits of Vision

***By* W. H. BATES, M.D.**

THE text books on the eye which have been published during the past hundred years or more, state that normal vision is limited by the anatomical structure of the retina. They describe the size of the center of sight to be so small that it is not possible for the normal eye to see the line marked 20 on the Snellen test card at a greater distance than twenty or thirty feet.

It is well-known that persons can read smaller letters, or letters one-half that size, at the same distance. It can be demonstrated that the small letter O with a white center, which can be imagined to be whiter than the margin of the card, can be seen perfectly at any distance when one can imagine the white center perfectly white. Some patients become able to imagine such a letter perfectly at thirty feet, a vision of 30/10. Others can imagine the small letter perfectly at a distance of forty feet, 40/10, at fifty feet, 50/10. The perfect imagination of the letter O, or of other objects is always associated with perfect sight of other letters or objects not known.

FIELD. In many cases of imperfect sight not only is central vision lowered, but there is also a loss of the ability to see objects off to one side. Perfect imagination is a cure for an imperfect field. In some cases of imperfect sight not only may the whole field be limited in its extent, but also small areas of the field may be absent or modified. In some cases of disease of the optic nerve or of the center of sight, the patient's vision looking straight ahead may be imperfect or absent. Some cases of no perception of light in any part of the field have been observed in which the imagination of perfect sight has been followed by a prompt recovery. It is difficult to understand in some cases of destruction of the center of sight of the retina, with total or partial loss of vision, how the use of a perfect imagination has been followed by a permanent cure.

NIGHT BLINDNESS. Some persons with imperfect sight see better in a bright light than they do in a dim light, and some cases are so marked that they have been described as cases of night blindness. These cases are cured at first temporarily, later more continuously by the perfect imagination of the letter O or some other object as well in a dim light as in a bright light.

DAY BLINDNESS also occurs quite frequently. Some patients in a good light, with correcting glasses, may read only 20/100, but after the light is dimmed, the vision may become 20/10 without glasses. These cases are quite readily cured by the intelligent use of sun-gazing. When the patient becomes able to imagine letters in a bright light as well as in a dim light, the vision becomes normal.

COLOR BLINDNESS. All persons with imperfect sight have an imperfect perception of colors. They may see large letters blacker than small letters, or the white spaces in the neighborhood of large letters whiter than the white spaces of small letters. Some patients will describe the color of the large letter C of the 200 line as blood-red, or they may see the large or small letters a shade of blue or yellow, or purple, or any color. The perfect imagination of one letter or other object is a cure for these cases of color blindness. Even cases of color blindness associated with diseases of the retina or of the optic nerve are cured by the intelligent use of the imagination. Persons born with color blindness are also cured in the same way.

SIZE. The size of letters of the Snellen test card or of other objects depends entirely upon the imagination. If the imagination is perfect, one may imagine the size of known or unknown letters at the near point or at the distance correctly. If the imagination is imperfect, the size of letters or other objects will be imagined incorrectly. It is interesting to observe that artists who are familiar with the sizes of things which they draw, very seldom present a perfect drawing of one object. A portrait painted by one painter may look entirely different from a portrait of the same person by some other artist. Most artists fail to make an accurate drawing of various objects, because of the variation in their imaginations from day to day, or under different conditions of light. A drawing may be made of a plaster cast which may appear all right when fast completed, but may contain many faults when studied by the same artist at other times, in other places, or under a different light. The setting sun usually appears to be much larger than it was when overhead. This is an illusion or an imperfect imagination. Some scientists have demonstrated with the aid of a photographic camera, that the sun is always of the same size when viewed overhead as it is when viewed on the horizon.

TREATMENT. It can be demonstrated that we see not the image focused upon the retina, but our interpretation or our imagination of this image. Imagination, when used properly, is the most satisfactory, most accurate, most helpful method that we know to obtain

perfect sight. At can be demonstrated that if our imagination for something is as good at twenty feet, forty feet, sixty feet, or further, as it is at a nearer point where we see it perfectly, our vision is just as good as our imagination. It can be demonstrated that it is only possible to remember perfectly what has been seen perfectly. We can only imagine perfectly what we can remember perfectly. We can only see perfectly what we can imagine perfectly. These facts can be considered to be true because there are no exceptions. The difference between a theory and the truth is only a difference of fact. A theory is not destroyed by any exception, but one exception destroys the truth. The truth admits of no exception. The only reason we cannot see a star with the naked eye as well as with the telescope is our lack of imagination. To improve the imagination it is first necessary to improve the memory; to improve the memory it is first necessary to improve the sight; to improve the sight it is first necessary to improve the imagination.

HALOS. For example, persons with good sight appear to see the white spaces between the limes of fine print to be whiter than the margin of the page. It can be demonstrated that this is an illusion. We do not see illusions; we only imagine them. When the white spaces between the lines appear whiter than the margin of the page, we call these white spaces halos. Most of us believe we see them, and it is very difficult for many people to realize that the halos are not seen, but only imagined. The halos might be called the connecting link between imagination and sight. To see the halos is to improve the imagination, and the vision for the letters is also improved. One can improve the vision for reading not by looking at the letters, but by improving the imagination of the halos. To look at the letters very soon brings on a strain, with imperfect sight. To look at the white spaces and to improve their whiteness, is a benefit to the imagination and to the vision. One cannot read fine print at all unless the halos are imagined. By practice one becomes able to imagine or to see the halos more perfectly—the better the imagination, the better the sight.
Vision is also improved by shifting on the letters, moving the eyes along the print, blinking, relaxation, (no effort, no squinting) even if the print is unclear. Reading through the ~~center of the words,~~ sentences also improves the vision by activating central fixation.

Stories from the Clinic
No. 61: Two Blind Girls

***By* EMILY C. LIERMAN**

ROSALIE

ONE day a doctor asked me if I would help two blind girls that he knew. I said I would be glad to see them, and help them if I could. One was Eleanor, aged sixteen, and the other, Rosalie, aged seventeen.

Dr. Bates examined their eyes with the retinoscope, and this is what he found. Eleanor had myopia in the right eye and atrophy of the optic nerve in the left eye. This is very seldom or never cured. There was a good deal of inflammation inside of both eyes.

Rosalie had retinitis pigmentosa in both eyes, and could not count fingers in an ordinary light. This is also a very serious defect. In a very strong light she could at times count fingers if held close to her eyes. Rosalie would cure anyone of the blues because she carried a smile that was continuous. She had black curly hair and olive akin. I held a conversation with her for a few minutes purposely in order to get acquainted, and also to watch her eyes while she was talking. The first thing that I noticed was that she stared and kept both eyes open all the while she was talking. I did not see her blink at all. She had a habit of talking rapidly, and I noticed that she moved her eyes from side to aide about at the same rate that she spoke. This is called nystagmus. I held the Pot Hooks card with the letter E of different sizes, pointing in various directions, close to her eyes, and she said I was holding something white before her.

I asked, "Do you see anything else on the card?"

"No," she answered.

Then I placed the palms of her hands over her closed eyelids and told her that this was palming. I told her that it was necessary to remember agreeable things, and she said she could easily remember her music. I could well believe that, because she already had a good reputation as a pianist. She had won the district bronze medal, the highest reward she could obtain in her school. After she had palmed awhile, ten minutes, I held the test card close to her eyes and asked her what she saw. She said the white card was covered with black spots. Quickly I told her to palm again for a short time. After about five minutes I told her to look at the card again, and this time she recognized the large E of the 200 line. We all rejoiced, because the rapid movement of her eyes from side to side had stopped temporarily.



Palming improves clarity of vision.

Then I placed the card on my desk about a foot away from her, and told her to palm again. When she opened her eyes later she saw the 100 line letters.

The next time she came I placed her two feet away from the card. After palming a short time she read the 70 line letters. She palmed again, and this time her vision improved to 2/50.

The chaperon for the two girls did not realize that it was possible for Rosalie to read the alphabet or to read figures. She taught Rosalie at my suggestion. Her vision improved after six visits to 1/40 for the Pot Hooks, the letter and figure cards. The nystagmus had disappeared permanently. I am sorry that she was unable to visit me until she was cured.

ELEANOR

Eleanor's vision with each eye was 3/100. Her vision was improved by palming and by the long swing. She could make out figures much easier than letters, so I placed the figure test card at five feet from her eyes. While she was moving her body from left to right, she was told to glance at the figure I was pointing at. She was told not to look at the figure longer than a second, otherwise she would be tempted to stare, and her vision would be lowered. She practiced this for a few minutes and her vision with both eyes improved to 5/50. Her left eye, which had atrophy, was greatly relieved by the sun treatment.

Every time she came for treatment, which was once a week usually, her vision improved for another line of the test card. Changing cards helped to improve her vision also. After the regular C card was used, we tried the Pot Hooks card. Eleanor never had anything to say, but did just as she was told. When her vision improved and she became able to read small letters and figures, she would smile and become very much excited. In one week's time her vision improved to 6/20 with both eyes. Then I gave her small type, called diamond type, and asked her to hold it six inches- from her eyes. She could see black spots on the little card, she said, but nothing more. I gave her the sun treatment for a few seconds, and right away she became able to read the fine print.

Later we used a black card with white letters, which Eleanor liked very much. I placed it ten feet away from her and I noticed that she turned her head over to one side in order to read the letters. The distance of only one foot caused her to strain while trying to read the strange card. I directed her to swing and blink as she flashed the white letters I was pointing at. In less than a half hour she read the letters one line after another with her head perfectly straight. She was given the sun treatment about six times in one hour, and was encouraged to read the card after each treatment, and before she left me her vision had improved to 6/20.

I did not see her again for a few weeks, and I feared that she would not get along so well by herself. When I saw her again she surprised me by reading all the different cards she had practiced with and she was able to keep her head perfectly straight. Her vision had improved to 6/10. Eleanor plays the violin and sings. Always when I guided her in reading the card with her head straight, I reminded her of her violin and how well she could play something that she knew. This always helped to improve her vision.

Eleanor and Rosalie left the city for a time, and I did not see them again.



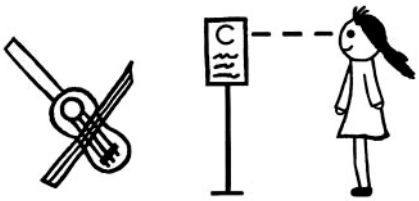
Long Swing
Swing and turn left and right, blink, glance at a letter on the chart.



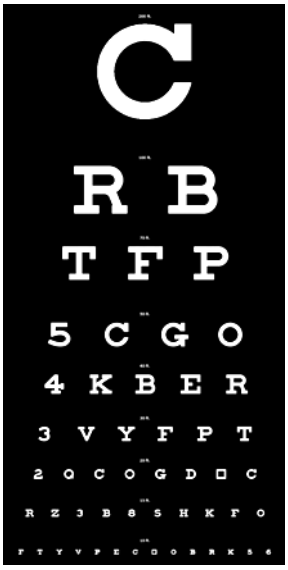
Read small Diamond type at 6 inches.



Sunning, Face the sun, eyes closed. Move the head side to side, up and down.



Thinking of favorite hobby (playing the violin) relaxes the mind, eyes, improves the memory, imagination and clarity of vision when reading the eyechart.



Black Eyechart with white letters.



Sun Treatment
Pull the upper eyelid up, look down, pupil away from sun, let the sun shine directly on the upper white area of the eye. Then, release the upper lid, look up, head back and pull the lower lid down and let the sun shine on the lower white area of eye.

The Sun as a Cure for Imperfect Sight

***By* EMILY A. MEDER**

The article reprinted below gives us the opportunity to dwell in a little more detail on the benefits of the sun for all cases of defective vision. Although this subject was discussed in the January issue, too much stress cannot be laid on it:

SIGHT RESTORED BY SOLAR ECLIPSE

Lodi, N. J, January 27.—As the result of looking directly at the eclipse of the sun last Saturday, Louis Pretola, 54 years old, professes to have regained his sight after having been unable to see without glasses for seven years due to cataracts.

Pretola had undergone four unsuccessful operations for removal of the cataracts.

After he had gazed at the sun without smoked glasses he suffered severe pains, but within a few hours his sight began to return to normal and he discarded the strong glasses he had worn for seven years.—Cincinnati "Inquirer."

Note by Clark Night; Eye Doctors have stated for years that looking at a solar eclipse without eye protection can cause eye/vision impairment. I do not advise looking at a eclipse, even though in this case it helped the persons vision.

I HAD an experience last week, which served to bring home more forcibly, the great healing, alleviating power of the sun.

I was to spend a few days at the ocean-side, and arrived in the midst of a terrific storm. The sky was black, the rain came down in great sheets, and the waves beat ceaselessly against the rocks under my window. It was a little frightening, watching this, but soon the rhythm of the gathering, rising, and receding of the huge billows seemed to form a natural swing. I could relax by moving forward and backward, almost imperceptibly, with the rise and fall of the waves.

The next day was beautiful, with the ocean smooth and peaceful, and the sun shining gloriously on everything. I left the hotel for a stroll along the boardwalk, but upon emerging from the dim light into the blazing sun, I was blinded. I tried to open my eyes but found them straining to close, and it seemed as though a great flashlight was being focused on my eye-balls. The sudden strain brought on a severe headache. Perhaps it was the glare of the sun on the water, or it may have been the intensified brightness after a dark and gloomy day that caused the sudden blindness.

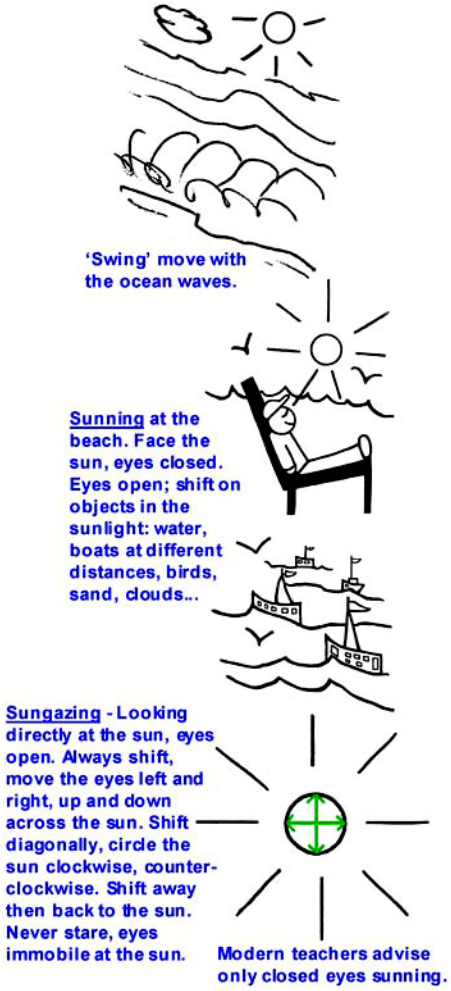
There was a summer house about fifty yards off, overlooking the ocean. I made for that, and sat down, facing the water, and with the sun beating down on my closed lids. After about fifteen minutes of this sunbath, I was able to open my eyes with comfort, and look across the water. The glare was gone, but I found it difficult to look directly at the sun. I just lazily shifted my glance from one object to another. A flock of sea-gulls amused me for about an hour. In my interest in them, I forgot about the sun's effect on my eyes, and caught myself glancing straight up, watching the flight of a particularly energetic pair of birds. There were so many of them, they were all so busy and active, that my eyes were not still for one moment.

I palmed again for about ten minutes, and when I removed my hands, I saw a fleet of four sailing ships away off in the distance. I could barely discern the outline, but this was more remarkable, because I did not see them when I first sat down, and they were much nearer then.

Before I left, I could look directly at the sun for about five seconds, but had to keep it swinging. Another unusual feature was that the sun, instead of being a blazing red, as it first appeared, changed to a silver or white color. This was more relaxing and soothing. Dr. Bates informed me that **the sun always looks white to those with perfect sight**.

That first attack was the only one I had during my stay. I enjoyed the sun and glanced up at it whenever I thought to do so, without discomfort. Pain and tension immediately disappeared.

With the spring on the way, there will be more opportunity to give your eyes a sun treatment. Try it.



Report of the League Meeting

By* MABEL A. YOUNG, *Secretary

THE regular meeting of the Better Eyesight League was held at 383 Madison Avenue, Tuesday evening, February 10th. Miss Secor our new president, presided, and welcomed the new officers of the League.

It was moved and seconded that the time of the meetings be changed from the second Tuesday to the first Tuesday, the change to take effect in April. The motion was carried.

The speaker of the evening was Captain C. S. Price, of London. He said that there is a Better Eyesight League of many members in England, but that they do not hold regular meetings, as is done here. Each member is doing definite work. Having no direct contact with Dr. Bates, they have gained their knowledge of his methods from an intensive study of the book. It is interesting to note that the different workers more or less isolated, gained similar results by different methods.

The members of the English League have tried to avoid anything that would cheapen the work. They try to hold it above any idea of empiricism or quackery, and take their work where they find it near at hand. They fast cured their relatives and neighbors. They worked for results, got them, and the news has spread.

Captain Price spoke more particularly of his own work, and that of his colleague, Miss K. Beswick. He said that back of all eye troubles are mental factors. He has given much thought to the psychological side of this work. People need, first of all, to be made to

realize the value of sight. Relaxation is a prime necessity, and the ways of securing it are numerous. No two patients respond to treatment in the same way. The teacher must approach them on their own ground. He would not use the same method with an artist as with a mathematician. The body must also be considered as a whole, and the eye as a part of the body. The very poor people commonly live under conditions which make relaxation impossible, and many of them visit the clinic and ask to be allowed to merely sit there and rest. A tired person must rest before he can relax.

Thousands of poor patients are treated in the free clinic each year, some of them having been discharged from the hospitals as incurable. Myopia is rare among them, and cataract and blindness are common. The work was first carried on in institutions, but **as its unorthodox character became known, Capt. Price and Miss Beswick were debarred from working there**. The patients followed them however, and visited them in their free time at the office.

Eye not used 18 years – restored, vision improving

Captain Price described several cases. One man had his eye removed by an operation. The other had not been used for eighteen years, and had atrophied. After six weeks practice, the patient was able to open the lids an eighth of an inch. The eye when seen was a horrid looking mass—inflamed and sunken. It is now fully developed, has perception of light, and he can distinguish colors.

A lady who had been blind eight and a half years from glaucoma, and who had been discharged from the hospitals as incurable, now plays cards without glasses and takes her friends to see the shops.

Captain Price's talk was followed by a discussion, when he answered the members' questions. Dr. Darling, Dr. Achorn, and Mr. Husted spoke, the latter telling of his wonderful success with this method in the schools. Mrs. Lierman described several interesting recent cases from her clinic.

The members of the League were concerned to learn that Dr. Bates is seriously ill in the hospital, due to an operation on his arm. Before the meeting adjourned, Mrs. Marsden proposed that the League send flowers to him. It was voted to do so.

Suggestions to Patients

***By* EMILY C. LIERMAN**

THERE are many reasons why some patients do not respond readily to treatment. A few of these are listed below.

1. If the vision of the patient is improved under the care of the doctor and he neglects to practice when he leaves the office, what he is told to do at home, the treatment has been of no benefit, whatever. The improved vision was only temporary. Faithful practice improves the sight to normal.

2. If the patient conscientiously practices the methods as advised by the doctor, his vision always improves. This applies to patients with errors of refraction, as well as organic diseases.

3. For squint cases we find that the long swing is beneficial to adults and to children.

4. When a patient suffers with cataract, palming is usually the best method of treatment, and should be practiced many times every day.

5. All patients with imperfect sight unconsciously stare and should be reminded by those who are near to them to blink often. To stare is to strain. Strain is the cause of imperfect sight.

Announcement

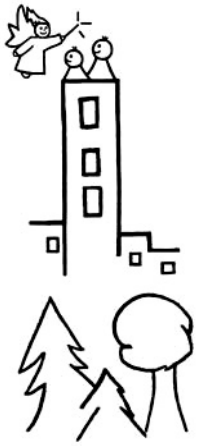
Beginning with April, 1925, the BETTER EYESIGHT LEAGUE will hold its regular monthly meeting on the first instead of the second Tuesday.

The March meeting will be held on the second Tuesday at 8 o'clock, as usual. This falls on the tenth. The League meets in the Central Fixation office, 383 Madison Ave., and the many ways of improving the sight are discussed.

Everybody welcome!

The Two Princes

***By* GEORGE GUILD**



A YOUNG prince and his brother were confined in a tall, stone tower far away from their home. The jailer had received orders to feed them very little, and if they died he would receive a big reward. Under these circumstances the two princes did not have an enjoyable prospect. Both of them were famous throughout the kingdom because they had seen fairies. Furthermore they had taught other young children how to see fairies. They spent a great deal of their time in the top of the tower looking for the fairies in the distant woods and in the green fields close by. This improved their sight and the improvement in their vision was followed by an improvement in their ability to remember, imagine, and to plan things to help other people as well as themselves. If you look for the fairies, sooner or later you will see them. The desire to see the fairies is a great benefit to the eyesight. They wrote many letters to their friends asking to be rescued. The fairies visited the young princes frequently, and advised them to treat the jailer very kindly and to notice the result. It was not long before the jailer, under the influence of the kind treatment recommended by the fairies, fell in love with the two boys, and treated them better than most fathers treat their children.

One day, as they were looking out of the window high up in the walls of the tower, they saw coming towards them an army of children. It seemed that all the musicians in the country were with them. The dancing and the laughter were very considerable. When the children reached the tower, without the permission of the jailer, many of them rushed in and overflowed the place. Those who couldn't get in, stayed outside and made an awful lot of noise. Suddenly from the woods an army of fairies appeared, all dancing and singing and happy as they could be. The children welcomed them, clapped their hands and invited them to dance on the green. While the fairies were dancing and the children were trying to imitate them, the princes came down from the tower and danced with them. The jailer was so taken up by the unexpected

attentions of the children that he forgot all about his prisoners.

One of the fairies said, "Let us play 'Follow my leader'." She started off to run, and all the others behind her, but there were so many that they lost the leader and found themselves just going back toward London.

About this time the jailer appeared, and in a loud voice called out that he had something to say. So they placed him on top of a pillar where he could be seen by everybody. "My friends," he said, "I am only a poor jailer. Some wicked men in London came to me and offered me money to murder the two princes, because after they were killed their cousin would ascend the throne. But the fairies treated me so nicely and the princes treated me so nicely that instead of being their enemy, I am now their friend. Follow me to the house of those wicked men, and we will put them in a jail from which there is no escape."

All the men and women and the fairies and the children followed him to the house where the wicked people lived, and they were all dragged out and thrown into jail and placed under the care of the jailer. Then the princes and the fairies and all the people rushed up to the palace of the king and queen, and drove away the wicked soldiers who were holding them prisoners. The two princes were restored to their parents and there was great rejoicing. The king and queen felt very much indebted to the fairies because it was through their activity that things had all turned out so well. The two princes improved their sight very much by looking for the fairies; and the eyesight of the children in the kingdom was improved because they had to imitate the princes and be in the fashion.

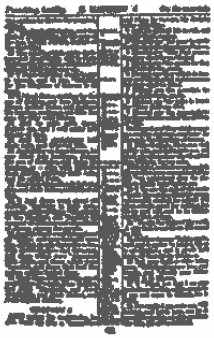
Read Fine Print

ALL of our imperfect sight is just the result of our using our eyes wrong, and permitting bad habits to grow on us. Staring is only a bad habit, but it causes a great deal of trouble. When it is stopped and the eyes are rested by palming and blinking, the sight is immediately benefited.

Bad habit number two: The reading of large type in preference to finer print. It requires more of an effort to see a large letter than a small one, strange as it may seem. When you look at the big C on the Snellen Test Card, you don't see it all at once. You have to look at one part best, the hook on the upper right hand corner or the curve on the left side. You cannot look at the hook, the space on the right and the curve on the left side all at once. Some people think they see it at the same time, but they do not. Their eyes shift from one point to another, unconsciously.

Fine print is a benefit because it cannot be read while the eyes are under a strain. They have to be relaxed. For instance, in reading the chapter printed below, you cannot accomplish anything by staring at the letters, or screwing your face into a knot. Do not look at the letters but at the white spaces between them, and imagine them whiter than the margin. Blink and shift constantly to avoid the stare. If your eyes feel strained, stop and palm. You will notice that where it all looked blurred before, a word will appear clear and distinct. By constant practice more words clear up, until the entire chapter can be read easily.

S. MATTHEW 4
BEATITUDES





Shift dot to dot (part to part) on the C. See one small part of the C darkest black and clearest at a time in the center of the visual field. The center of the visual field moves with the eyes as the eyes shift part to part on the C. Shift point to point on the top right hook in the blue circle.

Questions and Answers

Q—Explain what you mean when you say "imperfect sight, imperfect memory."
A—If you see an object imperfectly, blurred or gray instead of black, you cannot remember it perfectly. You will remember it as you see it.

Q—My eyes feel fine after I palm and let my mind drift on various black objects. The period is more difficult though.
A—Perfect mental pictures of ordinary objects means a perfect mental picture of a period. To try to see is an effort or strain, and produces defective sight. Shift point to point on the period. See it move 'The Swing'

Q—By blinking do you mean shutting and opening the eyes quickly, or is done slowly, like a wink?
A—Blinking is done quickly, and not slowly like a wink. Watch some one with perfect sight do this unconsciously, and follow his example.

Q—How can one overcome the stare if it is unconscious?
A—Blink consciously, whenever possible, especially when reading. Never look at an object for more than a few seconds at a time. Shift your gaze.

Q—I have noticed when I palm that my eyeballs hurt from the pressure. When I loosen this tension the light filters in.
A—Palming is done correctly with the fingers closed and laid gently over each eye, using the palms like a cup. If this is done properly there is no pressure and the light is shut out.
Allow the hands to relax, no pressure on face/eyes, no muscle tension in hands, head, shoulders, neck, body. It is ok if a little light shines through the hands.

Small, Fine and Microscopic print – Read in the Sunlight Daily

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Blink, Relax, Shift.

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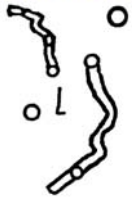
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

April, 1925

Floating Specks (Muscae Volitantes)

Floating Specks.



WHEN a patient stares or strains to see by looking at a light-colored surface he may see, or imagine he sees, floating black specks, strings of black thread or small light-colored globules resembling tears. The floating specks may be apparently a quarter of an inch or more in size and they may be of any shape.

The ability to see or imagine floating specks may occur in children or in adults of any age. Some children have been known to lie on their backs on the ground, look up at light colored clouds and amuse themselves for hours by watching what appeared to be floating specks.

Many nervous people have been made very unhappy, consciously or unconsciously imagining that they see these floating specks.

The cause of floating specks is an imperfect memory of perfect sight. Persons with normal vision who have never been conscious of floating specks can be taught how to imagine them by straining—to imagine letters, colors or other objects imperfectly.

Conversely, patients who are conscious of floating specks are unable to imagine them and perfect sight at the same time.

In the treatment of floating specks it is important to convince the patients thoroughly that they are only imagined and not seen. It helps very much to impress on the patient's mind that to see these floating specks requires a sufficient strain to lose a perfect imagination of all objects seen, remembered or imagined at all times and in all places.



Girl lying in the grass on a hill looking at the blue sky, white clouds and seeing floaters, imaging they are angels or outer space aliens, secret friends with magic powers that protect her.

When the mind and eyes are relaxed, the mind/brain shuts off the appearance of floating specks, floaters.
Shifting, saccadic shifts and other natural eye movements, central fixation removes floaters.
Good diet, healthy food, natural food source chelation type diet/food and **fasting** cleans out the arteries, capillaries, lymph system…all organs removing fat deposits, toxic metals... A cleansing diet helps remove floaters. Apples, apple cider vinegar with honey (organic).
Improved circulation to/in the eyes and strengthening the capillaries eliminates floaters.
Orange, grapefruit peels with the white part and skin keeps arteries, veins, capillaries strong.
Avoid processed sugars, fructose, aspartame, hydrogenated and other artery clogging fats.
Floaters often are seen when the vision is unclear, eyestrain and/or the mind is stressed, strained, outer eye muscles tense placing pressure on/in the eye.
Most floaters are said to be caused by debris floating in the eyes vitreous humor remaining from development of the eye before birth.
These are harmless. Many people of any age, children and adults, experience floaters.
Hormone fluctuations in men and women can cause temporary floaters. Withdrawal from caffeine and other addictive substances, use of prescription and non-prescription drugs. Sinus congestion, pressure on the eyes.
Eyeglasses cause floaters and impair eye health. Cornea surgery causes floaters.

See Floating Specks - Better Eyesight Magazine – October, 1919. Dr. Bates tries to get a patient that sees floating specks to realize there is nothing wrong with his eyes and to stop worrying!

Always be safe and check with your eye doctor. Usually the eye doctor finds the eyes in good health.

Floaters move, especially when the eyes move; when the person tries to look directly at them, they move away from the center of the visual field. This is good; the central field stays clear. When the eyes shift relaxed, easy, faster, perfectly natural, automatic, and the person stops thinking about and looking for the floaters, the floaters disappear.
Dirt, dust on the cornea can cause a different type of floaters and usually obstructs the vision. Eye makeup, poor air quality, dry air, cornea injury, contact lenses and solutions can cause this. Contacts and solutions can cause cornea injury, infection, scars.

On certain days when the weather, atmosphere is just right, when looking into the sky, the eye can see what looks like tiny fast moving energy particles, like moving electricity, lights in the air. Scientists state this is true energy in the atmosphere. Spiritual teachers state it is one type of many other energies that exists in space.

When light contacts the eyes at certain levels of dimness, brightness, angles, certain types of light, or looking through certain types of glass: the blood corpuscles flowing in the capillaries in the retina can be seen. These are not the usual floaters.

Some people see tiny dots of blue, purple, white, any color light flash for a split second. This usually indicates eyestrain, neck tension from looking down straining the eyes a long time, the need to rest the eyes and use the eyes properly, good posture, vision habits, shift, blink. Low potassium, dehydration, poor diet, too much caffeine, soda can cause this.

Eye injury, disease, detached retina and other abnormal eye conditions can cause floaters.

Seeing many flashes, sparks, flickering lights, large dark spots, soot, dust raining down can indicate detached retina. Contact a eye Doctor immediately. Dr. Bates has successfully treated detached retina.
Flashing, moving, shimmering lights, sparks can also indicate migraine headache, sinus headache, pressure.

Note.—Floating specks, October, 1919, "Better Eyesight"
Muscae volitantes (floating specks), pages 176 and 236, "Perfect Sight Without Glasses."

Quick Cures

***By* W. H. BATES, M.D.**

QUICK cures are desirable. At the same time let me hasten to state that we must use the word "cure" with great care. It means a great deal more than most physicians realize. A patient's definition of a cure is more complete, more thorough, and more lasting than he realized or remembered at his first visit.

To promise any patient a cure is unwise from a scientific standpoint. In my work I take particular pains to make the patient understand that I do not expect or guarantee a cure in any case. The most I say to them is "Yes, I have cured people much worse than you, but that is no guarantee that I can give you the slightest benefit."

This seems to eliminate a certain amount of subconscious antagonism on the part of the patient, who may consciously say that he desires to be cured, but deep down in his heart feels unconsciously, "I don't believe you can do it with my help, and I am quite sure you can't do it if I oppose you."

Like the Irishman who said "he was willing to be convinced, but he would like to see the man who could do it."

Quick cures have their disadvantages. A patient feels that since his benefit came easily, now, with his good sight, he can go off at any time he likes and have a spree, in which he stares and strains and uses his eyes to his heart's content without any danger of a relapse. He forgets that all persons with normal vision can acquire imperfect sight at any time. The attending physician must be on his guard when referring to those patients who have been cured quickly, and not give the impression that it is an easy thing to do, because too often those patients who know about quick cure cases expect to be cured themselves in the same way as quickly and as permanently. If they are not, they are disappointed, and they have a way of expressing that disappointment which hurts. Personally I am very much upset every time a patient surprises me with a quick cure, because of the favorable criticism which may follow and which is seldom desired by the attending physician. If we could only practice quick cures in favorable cases and not have to struggle with the obstinate ones, things would get along perhaps better.



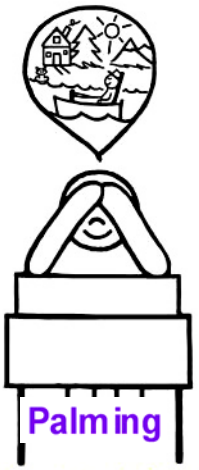
Happy thoughts, mental pictures when palming.

It is well to bear in mind that most quick cures happen when least expected and we do not always know what particular thing accomplished it.

One question is often asked: "What kind of cases are most quickly cured?" I do not believe that we have sufficient facts to answer this question at all intelligently, because mild cases of imperfect sight may require long periods of time—years—before recovery, or a permanent recovery, occurs. I have a number of patients whose amount of imperfect sight is very small, indeed, and yet after some years of more or less continuous treatment they are still not permanently relieved. In other cases a large amount of near-sightedness or far-sightedness without any special reason, practicing the same method of treatment, would obtain a permanent cure at one visit. I wish I knew why.

Quite a number of patients with imperfect sight for the distance, and also unable to read the newspaper at a near point, have been permanently cured after a half hour or more of palming. Other cases have practiced palming apparently just as faithfully without much if any relief after many months. It would be perhaps a good thing to know why palming was so very beneficial in some cases while in others the benefit was imperfect.

One patient 60 years of age with imperfect sight from **cataract**, whose vision was not improved at all by glasses, obtained normal vision without glasses at the first visit. The cataract and all the other troubles disappeared almost immediately after palming. It was interesting to learn that this patient had worn quite strong glasses for nearly fifty years. During this time even with his glasses he suffered pain, fatigue and other discomforts. He told me that all he wanted or that he would be satisfied with, was the cure of the cataract, so that possibly, with glasses, he could do his work. The very thought of it made his face brighten, but when after palming he obtained not only a cure of his imperfect sight but of every other symptom he could remember, he certainly was grateful and he showed it in his face.



Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear.

Man 106 years Old Cures Cataract With Palming

Another patient said he was 106 years old. His vision for distance was poor and he was unable to read fine print with or without glasses. He had **cataract** in both eyes, so opaque that no red reflex could be seen in any part of the pupil with an ophthalmoscope. He was placed in a dark room and told to close his eyes and keep them closed. At the end of a half hour his vision was improved to 10/10 and he read diamond type at six inches without glasses. He was told to repeat this treatment frequently during the day in order to avoid a relapse. He came back at the end of a week with his vision still further improved. As he went out of the office without an attendant to guide him he stopped and spoke the only words I ever heard him say: "Doctor, you did me good." I wish I knew what I did or did not do. It would be a great satisfaction to me to find out how the patient by closing his eyes for a half hour improved his sight so much and so quickly. A large number of other patients have been told the same thing; the same words were used as were spoken to him, but the results were seldom repeated.

It is well to emphasize that under the most favorable conditions quick cures are exceedingly rare. They generally occur when least expected, but when they do occur the definition of the word "cure" includes a great many more benefits than the patients expect.

One of the quickest cures I ever had was in the case of a very ignorant man who was suffering from sympathetic ophthalmia. At school, he told me, he could never understand fractions, and yet I found that he had the most wonderful imagination in my experience. Although he could not tell the big "C" at ten feet, when I brought it up close to him he said that he could imagine it and could imagine it perfectly. Knowing that it was a big "C," he was able to imagine it perfectly at ten feet, and when I told him that the first letter on the line below was an "R," he became able almost immediately to imagine it so perfectly that he could imagine he saw a letter "B" on the same line, and a letter "T," the

first letter on the line below. He kept insisting that he did not see any of these letters. He only imagined them.

When I pointed to the first letter on the bottom line he said it all looked black. When I told him that the first letter was an "F," at once he said he could imagine it perfectly, and much to my surprise after the perfect imagination of that letter "F," he became able to imagine in turn the other letters on the bottom line which he did not know. He kept insisting that he did not see these letters—that he only imagined them. But always when he imagined perfectly one letter on the Snellen test card, the whole card became clearer and perfectly distinct and he could see or distinguish neighboring letters which he did not know. His imagination improved his sight to normal. To walk around the room without running into the furniture and to see surrounding objects, all he had to do was to imagine one letter of the alphabet perfectly.

Many of my patients have been teachers in the various universities, have the highest intelligence and are authorities in their fields, yet whose imagination of mental pictures was very poor.

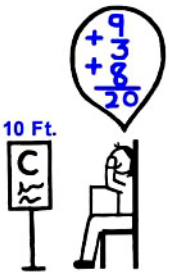
Stories from the Clinic
No. 61: Quick Cures

***By* EMILY C. LIERMAN**

PATIENTS who are cured quickly of imperfect sight are those who become able to improve their memory and their imagination quickly and without effort. A little girl named Madeline, aged ten years, came with her mother, who was very anxious to have her child cured without glasses. The mother had been notified by Madeline's school teacher that her little girl could not read correctly what was written on the blackboard from her seat, which was about ten feet away. She was one of the daintiest little girls I have ever seen. I can imagine her as one of the white fairies written about in our little magazine, which I believe a great many children enjoy. I feel sure that there are many mothers among our subscribers and that they realize the relaxation and rest which is given to the child-mind as the mother reads about the good fairies just before the sandman comes.

This is how Madeline was cured in one visit. She was placed ten feet from the test card and she read all the letters correctly down to the twenty line, 10/20, but the letters were not clear and black to her. She was told to palm for ten minutes or so. Then she read the card again, and this time the letters appeared clear and black. The mother was told to notice how she stared when trying to see one of the smaller letters of the fifteen line. I told Madeline she must blink her eyes all the time to prevent staring, which always lowered the vision. As she glanced at the letters each time she moved to the left and then to the right, not forgetting to blink her eyes, her vision improved to 10/10. She was placed in another room, fifteen feet from another card, which she had not seen, and without a stop she read all the letters of the card. Now, I wanted to find out if I could improve her vision further with the aid of her memory. I told her to close her eyes and palm and remember something she had seen without effort or strain. She answered: "I cannot think of anything just now, and the more I try the less am I able to do as you ask me." I asked her then to tell me what lesson she liked best at school. "Oh! I just love arithmetic," she said. I asked her if she would add up some figures for me while she was palming and she answered, "Yes." I started with easy figures at first, like nine, three and eight. She added as quickly as I announced the figures. Then I made the lesson more difficult, but she did not once make a mistake. All this time she was smiling and enjoying the whole thing. We kept this up for about fifteen minutes, and then while her eyes were still closed, I moved the test card as far away as I could place it, which was eighteen feet. Madeline was told to remove her hands from her eyes and stand and swing as she did before. She read every letter on the card correctly. Her vision had improved to 18/10 by the aid of her memory for figures.

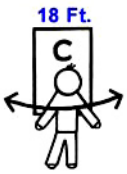
Madeline was cured quickly, because she was able to remember figures perfectly. Her mental pictures of them were perfect. Her mind was relaxed, and by the aid of the swing and remembering to blink often, as the normal eye does, she had no more eyestrain.



Palm and improve the clarity of vision with the memory of something seen clear without effort, strain: The girl remembers, imagines a favorite thing at school-Arithmetic. She easily sees, remembers, imagines perfectly and adds numbers in her mind. The mind, body, eyes relax. Memory, imagination of clear mental pictures is perfect. Vision is clear.



Blink often, relaxed, easy.
Blinking prevents staring, strain, effort to see and unclear vision.
Blinking causes the eyes to shift automatically.
Blinking coats the eyes with healthy tears and improves the eyes production of tears. A coating of tears on the eye, cornea improves the clarity of vision and protects the eyes, keeps them moist.



After palming the girl stands 18 feet from the the test card, 'swings' moves the body left and right and blinks while glancing at (a quick easy shift upon) letters on the test card and sees them clear.

A little boy, aged seven years, was brought to me not long ago. His nurse, who was extremely fond of him, did not want glasses put on the little fellow. He told me very emphatically that he just would not wear them. No one would dare put them on him, he said.

His little forehead was a mass of wrinkles as he tried to read even the largest letters of the test card at ten feet. I asked the nurse to sit where she could watch him at the start and then see the change that I was sure would come to his face after he was taught to read without effort or strain. With each eye separately he read 10/50. As he tried to read further he wriggled and twisted his little body around in the big arm-chair where I had placed him.

"Now," I said, "little man, just close your eyes and place your hands over them and shut out all the light. Sit still, if you like." "Oh," said he, "I like sitting still if I keep my eyes covered, but I don't like doing it too long." I said: "All right, keep them covered for a little while and I will read you a fairy story that tells something about the elephant, too."

That was all that was necessary. My patient sat perfectly still as I read the whole fairy tale. The nurse remarked that for a long while he had not been able to sit still for more than five minutes at one time.

After the fairy story was read, I told the little chap to stand, feet apart, with eyes still closed, and I guided him in moving his body from right to left until he became able to do it gently by himself. Then he was told to open his eyes and keep moving or swinging his body to the right and then to the left. He was directed to blink his eyes while doing this. He exclaimed, with great surprise: "My, the card and letters seem to be moving opposite." I said, "That's right, my boy; now follow my finger as I point to the letters." He did, and to our surprise he read the whole card without a mistake, 10/10. The wrinkles in his forehead were gone. I told the nurse to help him many times every day with the test card just as I did. She promised also to bring him back to me if he had any relapse. So far I have not heard from her. I do believe my little boy was cured in one visit.



Swing and turn left. The eyechart moves right.



Swing and turn right. The eyechart moves left.

Long Swing in front of the Eyechart.
Start by facing the chart. Swing and turn the body left and right. The body, head/face, eyes move together, at the same time, in the same direction.
See the eyechart appear to move opposite the movement of the body, head, eyes. Oppositional Movement.
Do the sway (Rock) in front of the chart and see a smaller movement.

Hungry Fairies

***By* GEORGE M. GUILD**

ONCE upon a time a young man, a reporter, found himself in a Southern city without a cent of money. He desired to take passage on a steamboat for New York. As the time came for the boat to sail, and not having met anyone he knew, he finally plucked up sufficient courage to talk to the Captain about it. The Captain listened in sympathetic interest, being one of those jovial, happy kind of people who are often interested in somebody else besides themselves, interrupted the reporter and asked him: "What paper do you write for in New York? Do you suppose that you could write a story about our line of steamers which would be a good advertisement for our boats?"

The reporter being very anxious to get back in some way to his home town answered the Captain as best he could. The Captain then took out a ticket from his pocket, handed it to the reporter and told him that if he would promise to write a good advertisement of his boat which would encourage an increased number of people to travel by his line that he would be satisfied.

The reporter took the ticket and in his gratitude promised whatever the Captain desired. The reporter had the ticket which insured his passage home, but he did not know what he could do for food as he had no money to purchase it. The steamer left the dock and headed for New York. Lunch time came and, in order not to make himself conspicuous, he sought an unusual part of the boat where there were no people who might ask embarrassing questions.

He sat down on a steamer chair, closed his eyes and tried to forget that he had a stomach and that he was hungry. As he sat there resting, a fairy came dancing along the deck, came close up to him, patted him on the back and invited him to get up and dance with her. As there was no one around he accepted the fairy's invitation, and so they danced forward and back, sideways and round and round. And as they danced other fairies appeared and danced with him. He enjoyed the dance very much and was sorry when some of the passengers appeared and the fairies vanished.



Tiny Fairies doing the Long Swing, Sway. Fairies show a tiny movement, like the tiny Saccadic shifts of the eyes which bring very clear vision.

After a while he began to feel hungry again, and at the same time he remembered how the fairies, when they danced side to side and other directions, swung their bodies as they danced. Being small fairies the swing was very short, and when he remembered the swing of the fairies he became able to remember the swing just as short. As he swung or imagined he was swinging the hunger left him and be smiled and was pleased. Some of the passengers asked him how he enjoyed his lunch. I am sorry to say that he lied about it and told them that be wasn't feeling very well and thought he would omit his lunch.

They imagined that he was more or less seasick, smiled and went away and left him. The afternoon passed and supper time arrived and again he sought an unoccupied part of the boat. Again he found a steamer chair and occupied it as previously, and while there the fairies again appeared and persuaded him to dance with them as he had done before.

The more he danced the better he felt, and as the dance went on and he practiced the swinging, side to side and other directions, he quite forgot his hunger, and when he did that the fairies smiled and encouraged him to keep on with the swing.

The next morning at breakfast time his hunger had become worse than it was the day before. Again the fairies appeared and told him that they were very hungry, that they were very anxious to be carried by the steamer to their home in New York. From there they expected to go to some of the parks and obtain some food—being fairies they did not need very much food. What they wanted was quality more than quantity. The reporter told them that, for him, he was willing to pass up the quality of the food provided he obtained sufficient quantity.

They all laughed at this and began to dance more rapidly than ever before, and in order to forget his hunger the reporter danced with them just as fast as he could.

And so the days passed for him quite rapidly. At times he found it difficult to explain why he missed so many of his meals. The help of the fairies made it possible for him to forget his hunger at all times provided he remembered or imagined the swing of the hungry fairies.

In due time the steamer reached New York. When the gang plank connected the steamer with the dock, our reporter started to

leave the vessel with the other passengers. When he came to the man who takes the tickets he handed out his ticket and started to walk away. But the ticket man stopped him and looked at the ticket in a puzzled way. He said to the reporter: "How is this? Your ticket gives you three meals a day on the boat and you haven't had a single meal punched. What's the matter, Wasn't the food good enough for you?"

The reporter answered: "Yes, but you see I am under a diet and did not have to take my meals regularly. You'll find it all right," and then ran down the gangplank and disappeared in the crowd with a feeling of something which he could not describe.

The memory of the hungry fairies, however, was a pleasant memory. He walked along practicing the swing until he met a friend who saw to it that he got a good square meal. The reporter told his friend the story of the fairies and how they had helped him to endure the hunger and made his trip a pleasant one with their sympathy, kindness and the swing.

His friend laughed so long and so heartily that the reporter was quite annoyed. It amused his friend very much to hear that he carefully avoided the dining room, and was ravenously hungry for a whole week—with a paid meal ticket in his pocket!

Concentration and Relaxation

***By* LAWRENCE M. STANTON, M.D.**

I KNOW of no writer who has so clarified the murky philosophy of concentration and relaxation as has Dr. Bates, and yet the final word has not been said, as he himself would undoubtedly avow.

Therefore, but with humblest intention, I offer a few thoughts upon the subject which is of the utmost importance to those who are striving for better eyesight.

Concentration - Attention

To my patients I have forbidden the practice of concentration, saying that the very word suggests strain, or else I bid them modify the dictionary's definition. I have reasoned that if by concentration you mean, as Dr. Bates says, doing or seeing one thing better than anything else, you may speak of concentration; but if by concentration you mean, as the dictionary says, doing one thing continuously to the exclusion of all other things, then you must abandon the practice as an impossibility.

Concentration, however, cannot psychologically be ignored, and recent psychology, I believe, has given us a new interpretation which is worthy of our consideration.

Attention underlies concentration, as that word is commonly used, and Ribot's statement of attention is very enlightening. Ribot says "that the state of attention which seems continuous is in reality intermittent; the object of attention is merely a center, the point to which attention returns again and again, to wander from it as often on ever-widening circles. All parts of the object, and then the reflections inspired by these various parts hold our interest by turns. Even when the attention is fixed on the most trifling material object, it works in just the same fashion." This is entirely in accord with Dr. Bates' statement; it is central fixation.

There are, however, two aspects of concentration to be considered—voluntary and involuntary. Voluntary concentration is an effort and, as Dr. Bates has so clearly shown, cannot be maintained without fatigue. The highest grades of attention, to which this brief consideration is confined, are involuntary, and involuntary concentration can be defined as "a psychological equivalent of attention minus effort." In ordinary attention—that is, in voluntary concentration—our thought holds the object in focus, whereas in involuntary attention (which we shall consider synonymous with involuntary concentration) the object holds our thought without our volition, perhaps even against our will. "Spontaneous attention is rooted at the very center of our being," and things that hold the attention captive, as in fascination, fixed contemplation, the Hindu's meditation and revery are instances of involuntary concentration, and involuntary concentration is as effortless as the rising sun—it just happens. Then, there are those cases of miraculous quick cures of imperfect sight by one or another of Dr. Bates' methods, where it was enough for the patient to see the better course in order to be able to follow it, the idea and its realization occurring simultaneously, without effort, without volition even. Contrast this with the attitude "No, I see the better course and approve it, but I follow the worse." Involuntary concentration is displayed in the case of the insect, related by Fabre and quoted by Dr. Bates, which in captivity hung downward for ten months, its whole life's span, and in this position performed all its functions, even to mating and laying of eggs, apparently without the least fatigue.

Still another instance is that of **Napoleon**, who could work for eighteen hours at a stretch on one piece of work without the least fatigue. Napoleon speaks of his various affairs arranged in his head "as in a wardrobe." He says: "When I wish to put any matter out of my mind, I close its drawer and open the drawer belonging to another. The contents of the drawers never get mixed and they never worry me or weary me. Do I want to sleep? I close all the drawers, and then I am asleep."

The question, then, may be asked wherein does involuntary concentration differ from relaxation. If involuntary concentration and relaxation are not always one and the same thing, they often are psychological alternatives and not the opponents we think them.

To regard all phases of relaxation as purely passive is as erroneous as it is to say that concentration of the kind under consideration is associated with effort. Relaxation of the passive kind usually ends in sleep or sleepiness, as experienced by many patients after palming. Relaxation combined with action, on the other hand, may also be absolutely free from effort and strain. (Dynamic Relaxation)

In any case it is the matter of effort and strain that concerns us most, rather than a question of concentration or relaxation. Victor Hugo speaks of "the calm and intense fixation of the eyes," and surely nowhere is intensity so impressive as in calmness. To be calm is not to be oblivious, and to be intense need not be to strain.

Another thought about relaxation is this: Obstacles to relaxation may prove sources of relaxation. An instance of which, is found in the noise that is keeping us awake when wishing to go to sleep. If we sufficiently relax, if we accept the disturbance and sleep in spite of it, not only is the obstacle overcome, but because overcome it in turn becomes rather pleasantly associated with going to sleep. When again we desire to sleep, we find the noise soothing rather than annoying, and really a source of relaxation instead of an obstacle to it. (A child deeply relaxed, drifting in and out of sleep, safe amongst the trees inside the edge of a field in a dugout up on a small hill, buried in a deep leaf pile, the sound of trains passing by along the river, crickets chirping, brothers, sisters playing in the distance, fire crackling in a old fashioned outdoor fireplace, smell of hamburgers.) The following quotation from Jean Kenyon MacKenzie's "Minor Memories" well illustrates how obstacles may become ministering angels. She writes of the stillness of the African forest:

"I remember that stillness. Many a time when I am in the subway I remember the ineffable stillness of the forest. I wonder to find myself where I am—so savagely circumstanced—so pressed upon by alien bodies, so smitten by noise. Traveling like this, in white man's fashion, you are certainly safe from the snakes, and the leopards, and the cannibal tribes of that other world where you

traveled in other fashions. Now that you are shut up so safely in the guts of Manhattan, your friends feel at ease about you—surely the sun shall not smite you by day nor the moon by night. And yet, perversely, in this perfection of safety you are intimidated. *Suddenly passive after* your desperate adventures with traffic, you feel the hidden things of memory rise and flood your heart; you dream. You remember other times of day than the manufactured night of the subway and other ways of travel. *And suddenly, in the indestructible silence that is the core of that incessant clamor,* you hear a bugle calling in a forest-clearing that is half way around the world."* Certainly a remarkable experience—what relaxation, what imagination!

Involuntary concentration without effort is equivalent to relaxation in action. If you can achieve such equilibrium; if you can perform your mental functions without strain as Fabre's little insect performed its physical; if you can, whatever your particular captivity, hang by your feet head downward without effort, then "be my friend and teach me to be thine."

Note: Some of the quotations in this article and some of its material are from "The Power Within Us," Charles Baudouin.
* Italics mine.

Announcements

THE WORK IN ENGLAND

Capt. C. S. Price, of London, England, has been the guest of Dr. Bates for several weeks. Dr. Bates wishes to announce that he finds Captain Price thoroughly capable of curing imperfect sight by his methods.

League Announcement

THE next meeting of the Better Eyesight League will be held at 383 Madison Avenue, on the evening of Tuesday, April 7th, at eight o'clock. The meeting will be of unusual interest to teachers and parents—in fact, to all who are interested in maintaining a high degree of visual acuity among children and adults. The speaker of the evening will be Percival S. Sprinz, D.D.S., who is the attending oral surgeon of the Hospital for Joint Diseases and chief of the Dental and Oral Surgical Department in the dispensary connected with the hospital. Dr. Sprinz will discuss "Eye Disturbances Due to Focal Infection in Teeth and Gums."

The members of the League will welcome information about this important subject, especially when presented by a League member. Dr. Sprinz discarded his glasses a year and a half ago; he is now able to read the photographic diamond type of the small Bible.

A cordial invitation to attend this meeting is hereby extended to friends of League members.

Vivisection Contra-Indicated

***By* W. H. BATES, M.D.**

MANY facts in physiological optics have been demonstrated by me, by experiments upon animals, all of which were dead. It is not possible to operate on live animals or on live fish, under anesthesia, and obtain reliable or constant results. The consciousness of the animal must first be destroyed by death. After an animal or a fish has been killed, the contractility of the muscles continues at the ordinary temperature for several hours. The results cannot be demonstrated at all accurately or constantly when the heart is beating and respiration is continuing.

Questions and Answers

Q—Are floating specks serious? Sometimes they just flood my eyes like clouds of dust and greatly frighten me.
A—Floating specks are not serious. They are always imagined and never seen.

Q—(a) My eyes are swollen and disfigured in the morning. (b) Although I have eight and nine hours' sleep, it does not rest me.
A—(a) The swelling of your eyes or eyelids in the morning is due to eyestrain when you are asleep. Read chapter in my book on this subject.
(b) You may be restless and sleep very poorly and strain your eyes terribly, although apparently you may be asleep for a long time.

Q—I have improved my sight by palming, but when I read for any length of time the pain returns.
A—When you read and your eyes pain you, it means that you are straining your eyes. More frequent palming may help you more continuously.

Q—Explain which "swing" is beneficial, and whether one moves the whole head or only the eyes.
A—All swings when done properly are beneficial. When done improperly they are not beneficial. It is necessary for some people to move their head in order to move their eyes and obtain a perfect swing.

Q—Is there a possibility of palming wrong? I can obtain some benefit, but later I feel strained.
A—Palming may be done properly or it may be done wrong. Read the chapter on palming in my book.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

May, 1925

Fundamentals

1. Glasses discarded permanently.

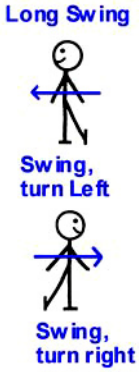
2. Favorable conditions: Light may be bright or dim. The distance of the print from the eyes, where seen best, also varies with people.

3. Central Fixation is seeing best where you are looking.

4. Shifting: With normal sight the eyes are moving all the time. This should be practiced continuously and consciously.

5. Swinging: When the eyes move slowly or rapidly from side to side, stationary objects appear to move in the opposite direction.

6. Long Swing: Stand with the feet about one foot apart, turn the body to the right—at the same time lifting the heel of the left foot. Do not move the head or eyes* or pay any attention to the apparent movement of stationary objects. Now place the left heel on the floor, turn the body to the left, raising the heel of the right foot. Alternate. This exercise can be practiced just before retiring at night fifty times or more. When done properly, it is a great rest and relieves pain, fatigue, and other symptoms of imperfect sight.
*The head and eyes do move, with the body, at the same time, in the same direction. The above sentence means to avoid moving the head, eyes in the opposite or any other direction. Keep them moving in the same direction with the body.



7. Stationary Objects Moving: By moving the head and eyes a short distance from side to side, one can imagine stationary objects to be moving. Since the normal eye is moving all the time, one should imagine all stationary objects to be moving. Never imagine that you see a stationary object stationary.

8. Palming: The closed eyes may be covered with the palm of one or both hands. The patient should rest the eyes and think of something else that is pleasant.

9. Blinking: The normal eye blinks, or closes and opens very frequently. If one does not blink, the vision always becomes worse.

Reading fine print daily or two-three times a week, improving the memory and imagination; remembering, imagining objects clear, switching, shifting, central fixation on objects at close and far distances, good posture, exercise, healthy diet, positive thoughts, emotions.



Palming
The man enjoys flying. He imagines flying and sees the outside scenery and interior of the plane clear in his mind. This relaxes his mind, body and eyes, improves memory of mental and visual pictures of objects and clarity of vision.

Mental Pictures

***By* W. H. BATES, M.D.**

THE human mind is busy as long as we are awake. We remember many things and are consciously or unconsciously shifting from one thing to another. Those things that we remember, we imagine we see. If we imagine we see a letter perfectly, continuously, it is all done easily without effort or strain. If a letter or other object is remembered or imagined imperfectly, it is not remembered continuously, it soon disappears and something else takes its place. When the memory is perfect, it can be demonstrated that no effort is made, and things remembered are imagined as mental pictures easily and continuously.

Mental pictures are very important. For example, if a patient can remember and imagine he sees a letter or other object perfectly, or as well with the eyes open as with the eyes closed, or can remember when looking at the distance a small letter as well as it can be seen at the near point, the patient has a normal eye with normal sight. All cases of near-sightedness, far-sightedness, astigmatism, presbyopia disappear momentarily more continuously, or permanently, when mental pictures are imagined more or less perfectly. It can be demonstrated that when the normal eye with normal vision imagines a mental picture of a letter perfectly, the eye remains normal with normal vision, but if the same patient remembers a small letter or other object imperfectly or imagines he sees it imperfectly, the vision becomes imperfect, a change takes place in the normal shape of the eyeball and the eye becomes imperfect—too long, too short, or of an irregular shape.



Eyes closed, remember imperfect sight, a object unclear, blurry while lightly touching the upper eyelid to feel the hardness of the eyeball. Hardness, tension, pain occurs, increases when unclear vision is remembered, imagined.

The memory of imperfect sight increases the hardness of the eyeball, which can be felt with most cases with the tips of the fingers touching the outside of the upper eyelids. In cases of glaucoma, in which the eyeball is already too hard, the memory of imperfect sight will increase the tension and lower the vision. In these cases, also, the memory of imperfect sight increases pain and produces other disagreeable symptoms.
Memory of perfect sight, clear objects = the eyeball is no longer hard, the eye is in normal round shape = glaucoma is removed, vision is clear.

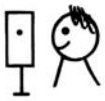
Negative after images: If a patient regards a white Snellen test card with black letters, closes his eyes and has a mental picture of a black card with white letters, it is called **a negative after image**. In such cases the symptoms may be modified or corrected by alternately looking at the Snellen test card for part of a minute, then closing the eyes and flashing one of the large letters for a moment, a second, or part of a second. By alternating in this way it is possible to prevent the appearance of negative after images.

To obtain perfect mental pictures requires perfect relaxation. If the patient can see at the near point a small letter o with a white center whiter than it really is, or whiter than the rest of the white card, it is usually possible to close the eyes and remember or imagine a perfect mental picture of the letter. A small percentage of my patients can remember or imagine one letter or one object as well with their eyes closed as they can see it. The perfect memory of the small letter o can be imagined at five feet, ten feet, twenty feet, or further, by practice as well as it can be seen at the near point.



Shift on a small letter o and imagine it dark black, clear with a bright pure white center. Then repeat with the eyes closed. Shift on and remember, imagine the o clear... Open the eyes and repeat.

In one case a child nine years old was brought to me for treatment. The patient had worn very strong glasses for near-sightedness since she was three years old. When first seen she was wearing concave 14 D. S., which improved her vision from 5/200 to 20/100. At school even with her glasses she could not read the blackboard. She was a child with an unusual memory. She could look at one letter of the ten-line of the Snellen test card, see it perfectly when held very close to her eyelashes, close her eyes and remember it as well as she could see it. With her eyes open she could remember perfectly, at first at two feet, then by practice at five feet, and finally at twenty feet. Then she said that she could imagine or saw, or imagined she saw, not only the letter that she had memorized, but also other letters with which she was not familiar.

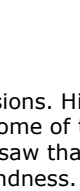


Shift on and remember, imagine a small black period, dark black and clear with the eyes open, then in the imagination with the eyes closed, then with eyes open again. Practice until the mind can remember, imagine the period perfect, equally well with the eyes open and when closed. See the period move, swing when shifting on it. Then, practice this while looking at, shifting on any objects. Imagining the period relaxes the mind, eyes, improves memory, imagination and activates eye movement, shifting.





In a second case mental pictures produced a cure in a reasonable time, about a week. The patient was a man, aged thirty-five, who was wearing concave 16 D. S. combined with a cylinder of 2 diopters in each eye, which improved his vision to one-sixth of the normal. After three months of continuous treatment with the aid of palming, swinging, and other methods, he obtained a permanent benefit. His mental pictures were poor for letters and other objects. By practice he became able to remember a small black period just as black with his eyes open as he could with his eyes closed, or as well as he could see it a few inches from his eyes. He was recommended to remember the period perfectly all day long, or at night when he was awake. In the beginning he was very much discouraged, because when he noticed any improvement in his vision he soon lost his mental picture of the period and his vision failed. To prevent the loss of the memory of the period, **he was directed to dodge or look away quickly at some other object whenever he was conscious that the memory of the black period was a benefit**. This was difficult at first, but by practice he became able to **dodge or look at some other object, when his vision was improved, and in this way retained his mental picture of the period.** He was very faithful and devoted practically all of his time to his mental picture of the period. In about a week when he walked into the office he said: "Doctor, I am cured."



I tested him at twenty feet, and he told me that he could look at the 200-line letter at the top of the card for a moment without losing the perfect memory of the black period. He also informed me that he could look at the ten-line letters and dodge them just as well without losing his period. Then I said to him: "Can you see anything of the bottom line?"

He answered: "I cannot prevent myself from seeing all the letters of the bottom line."

I tested him with different cards that he had never seen before and found that he had normal vision.

Illusions

Some years ago a physician was treated for imperfect sight. He suffered very much from illusions. His mental pictures were very imperfect. When walking along the street he would imagine little devils dancing on the tops of some of the houses. Many of the people and other objects were multiplied. Instead of seeing one person walking toward him, he saw that same person multiplied twice, three times, six times, or more. At irregular intervals he would have an attack of total blindness. He had been to see many eye doctors and many nerve doctors. Some of them told him that he was threatened with insanity, which filled him with fear. It was difficult for me to encourage him. After examining his eyes very thoroughly and testing his field, color perception, the reaction of his eye muscles, I told him that it was possible for him to be cured. He answered me and said that he was too old, fifty years.

I answered: "Children twelve years old have been cured."

He replied: "That is too bad. I have lost my chance of recovery."

I returned to the conversation by reminding him that people eighty years old had been cured quickly.

"Too bad," he said; "I will have to wait thirty years before I am eighty and that is a long time to wait."

For nine months he visited me almost daily and devoted an hour or more to all sorts of questions. He tried, as he said, to prove that I was wrong because I claimed that all the other doctors who had treated him must have been wrong, as they failed to help him. At the end of nine months his sight had become normal and he had lost most of his imperfect mental pictures. To obtain a mental picture of a period, I had him imagine a black football with about one-quarter of it painted white. This he threw into the ocean when the tide was going out, and while the football was floating out to sea he watched it very closely until it became a mere speck of black with one part white. Then by closing his eyes for a few seconds he obtained a mental picture of the period. When he remembered a period perfectly, his mental pictures of other things also became perfect, because he found it was impossible to remember one thing perfectly and something else imperfectly at the same time.

However, he still had his attacks of temporary blindness, with complete loss of vision. Finally I got up my courage sufficiently to tell him what I believed he should do next. I argued the matter with him, and told him that the memory of perfect sight could only be accomplished easily, and although he was thoroughly convinced of this fact, it did not prevent him from straining and making an effort which was strong enough to make him blind. So one day I said to him: "Doctor, there must be something wrong with your

memory of perfect sight, because you still have your attacks of total blindness from strain. Practicing on perfect mental pictures is easy. You need a better understanding of relaxation. I suggest that you now practice consciously making your sight worse by effort. This will be more difficult for you than the memory of perfect sight, but it has this advantage, it makes more clear to you what relaxation means. If you can strain hard enough to consciously cause these attacks of blindness, you will find out much better than I can tell you how to avoid them unconsciously."

I shall always remember his look of astonishment when he said: "Good God, Doctor, you have spent many months trying to improve my sight, and now you want to make it worse; it seems too absurd, silly."

I answered him: "Why should you care how silly it is as long as you get results? After all, it is not theories which help you, but results." It took me about a week to coax him to practice making his sight worse consciously. It was a disagreeable piece of business. He did not like it, but much to my surprise when through, the practice appealed to him, until finally **he became able to consciously produce an attack of blindness** which was complete, or without any perception of light. I tried doing it myself, and although I succeeded, I felt as though all my nerves were torn to pieces.

Military story

When the war broke out he was one of the first physicians to enlist. After the war was over I was honored by his visiting me within an hour after he landed in New York. He told me that all through the war, with the terrible strain of things, he expected that under such adverse conditions he would have a relapse. He told me that he was very grateful for what I had done for his eyes, but had no words to express his gratitude for what I had done for his peace of mind. I was pleased to have him tell me that he had no more attacks of blindness or of other symptoms caused by the memory of imperfect mental pictures. It was interesting to hear him describe how he was able to remember mental pictures perfectly throughout all the excitement and horrors of the war. He was at the front in the midst of things and was not at all worried or unhappy.

Stories from the Clinic

No. 63: MENTAL PICTURES

***By* EMILY C. LIERMAN**

SO many patients tell me when they first start treatment, that they have no mental pictures. They cannot seem to remember or visualize anything while palming. If the mind is under a strain, no amount of palming will improve the vision temporarily or permanently.

A little girl, not quite three years old, came to the clinic with her mother. The mother told us that after the child had had an attack of measles, her left eye turned in. When I held the card up close, the little girl was able to tell me which way all the E's of the Pot hooks card were pointing. The squint was not so decided either. But when I held the card five feet away from her eyes, the left eye turned in almost completely, that is to say, one could hardly see the iris. I placed her little hands over her closed eyes and told her to think of her best dollie and tell me how it was dressed. I didn't expect her to tell me very much because of her age, but the little tot surprised me. She lisped in her baby talk that her best doll had a pretty pink dress, and that her shoes were black and had straps on just like her own shoes. Her mother held her as she stood on top of a table, for she was very tiny, and when she looked at the test card five feet away, her left eye remained straight temporarily, while she read 5/30 without a mistake. Her mental picture of the doll was perfect. Describing the shoes and dress helped.

At one time I had four boys under treatment at the same time. They were between the ages of nine and twelve, and all were near-sighted. They stood in a row and while palming I talked about baseball. I described the ball, and they described to me just how the ball field was arranged. After I had tested each one in turn and improved their vision, they were encouraged to palm more. Their mental pictures were—first and second base, a home run, seventh inning, etc. The four boys obtained normal sight in less than two hours that day. Two of them had 10/50 before treatment and improved to 10/10. The other two had 10/40 and 10/30 before treatment and improved to 15/10.

A young mother came to be treated for **headaches**. Ever since she could remember, she had suffered severe pain in the back of her head and eyes. Glasses were put on her when she was a small child, but they did not relieve her pain. One of her neighbors where she lived, told her how Dr. Bates had relieved her of eyestrain, so she came with a ray of hope. Palming did not give her any relief at first, and always when she came she had an attack of hysteria. When I was able to quiet her, I asked her about her children. She had two girls and a little baby boy. While we were talking she was palming. I noticed the corners of her mouth were drooped, and as she talked she had no control of her tears. Poor little mother. I had a strong desire to place my arms about her. When I discovered that her baby boy was much loved in her family, I questioned her about him.

I said: "Tell me the color of baby's eyes. I love little boys. Describe him to me."

A smile was noticeable as she answered: "His eyes are brown and his hair is blond; and you ought to see the two dimples he has when he smiles. I must not forget to tell you that he has two teeth, and when he smiles you just have to smile with him." I watched her as she explained all of this. There were no drooping corners to her mouth, but a smile was there all the time. Before I had time to tell her to remove her hands from her eyes, she did so herself. With a great sigh of relief she looked at me and said: "I have no pain just now. I feel so good I want to laugh and sing." A mental picture of her baby boy, remembering and explaining all about him was a relaxation, a benefit to her. She came more than six months to the clinic for treatment before she obtained normal vision permanently. She had a high degree of myopia when she first came, and her vision was 10/200 with both eyes.

During the first few weeks of treatment her pain would return, but each time it was less severe. When she became able by herself to obtain mental pictures, her pain would disappear and her vision would improve. At times when her mental pictures were imperfect her vision was lowered, and this always caused an attack of hysteria. Later her vision steadily improved, her pain disappeared and toward the end of six months she obtained normal sight, 10/10.

During the six months of her treatment she had to be encouraged very often by her husband or sister, to palm every day. The swing of her body from side to side, while blinking and remembering something pleasant, always helped her pain. To take care of her children and do her household duties was quite enough for any woman, but she made time to practice and she was well repaid.

Military

After the World War was over, many of our boys on their return from France came to us for treatment of their eyes. I treated one of them who was gassed. His mind was very clear and he told me some interesting things that happened over there. I noticed, however, when he related something unpleasant or horrifying, that he stared and the sclera or white parts of both his eyes became bloodshot. His vision was normal both for the distance and the near point when he did not stare or become excited. He said the only thing that kept him from going insane while he was at the front, was that his little son, who was born after he arrived in France, was waiting for his return. He saw his pal shot to pieces almost by his side. His mental pictures were not pleasant ones, but when a photograph of his wife and baby arrived, he carried that picture with him all the time.

I showed him how to palm and told him how necessary it was to think only of pleasant things while palming. He told me many things about his little boy, and how proud he was of him. I kept him busy talking while he palmed for a half hour, and then I asked him to remove his hands from his eyes. His eyes were no longer bloodshot. The sclera was as white and clear as my own eyes. I told him to return for more treatment, deciding to use the sun-glass if necessary, the next time he came. He said if his mental pictures did not help in his home treatment, he would surely return. I never saw him again.

Announcements

PERFECT SIGHT

If you learn the fundamental principles of perfect sight and will consciously keep them in mind your defective vision will disappear. The following discoveries were made by Dr. Bates and his method is based on them. With it he has cured so-called incurable cases:

1. Many blind people are curable.
2. All errors of refraction are functional, therefore curable.
3. All defective vision is due to strain in some form.
4. Strain is relieved by relaxation.

You can demonstrate to your own satisfaction that strain lowers the vision. When you stare, you strain. Look fixedly at one object for five seconds or longer. What happens? The object blurs and finally disappears. Also, your eyes are made uncomfortable by this experiment. When you rest your eyes for a few moments the vision is improved and the discomfort relieved.

Have some one with perfect sight demonstrate the fundamental principles contained in Dr. Bates' book, "Perfect Sight Without Glasses." If the suggestions and instructions are carried out, and glasses discarded, it is possible to improve the vision without personally consulting a physician.

"Perfect Sight Without Glasses" will be sent C. O. D. on five days' approval. Price, $5.00.

Central Fixation Publishing Company
383 Madison Avenue, New York City

THOS. D. BROOKS, INC., N. Y.

Readers of "Better Eyesight" will be pleased to hear that Dr. Bates has returned to the office and has resumed his practice. His arm continues to improve and we trust that in a short time he will be permitted to remove the plaster cast. His physician is satisfied with his progress and believes the operation was very successful.

Dr. Bates has requested us to thank our subscribers for their kindness and good wishes during his illness.

PAPER TEST CARDS DISCONTINUED

Due to the fact that the cardboard Snellen test cards have proved three-fold more practical and durable than the paper cards, the sale of these latter has been discontinued. While the paper cards were a little less expensive, they were too fragile to stand the great handling that our test cards usually receive. We believe that the fifty cent cardboard cards will prove more satisfactory and economical in the end.

USE THE QUESTION AND ANSWER COLUMN

It is not necessary to be a League Member or a patient of Dr. Bates to write to us for information or assistance. If any part of Dr. Bates' Method is not clear, we will be pleased to answer your inquiries through the Question and Answer column. If a personal answer is desired, kindly enclose a two cent stamp.

May Fairies

***By* GEORGE M. GUILD**

THE merry month of May is expected to be just as full of joy and happiness to the children and grown-ups this year as it has been in other years. The children start the month with a big May Day celebration.

With so much fun going on we know that the fairies are there to keep everybody smiling. The good children in their hearts know they see the fairies and enjoy them, while the bad children do not see or even hear them. Someone has said that the fairies can turn into all kinds of flowers and in this way escape observation. But you can detect them because if you watch them closely, you can see them blink their eyes. Fairies always have perfect sight and to keep it they have to blink or close their eyes frequently in order to avoid the stare. You see, there are some people who have perfect eyes and, strange to say, their eyes are not conspicuous, and they do not know that they have eyes. Although their eyes are all the time moving, the movement is so short that it is not noticeable. It is a habit which they have, of which they are not conscious, but people who have poor sight are all the time staring and straining in order to see. It is not true that it requires an effort to see. On the contrary, it does require a great deal of hard work, much effort, much strain, in order to fail to see. One nice thing about the fairies is that you never see them staring at you or straining their eyes. No one ever saw a fairy wearing glasses.



Fairies have perfect eyesight. They shift, move their eyes and blink, looking at objects that interest them.

Many people ask the question, "Do fairies really exist?" A great many people believe that there are fairies, even although they themselves may not have seen any. An eminent scientific man told me that at one time he took some photographs of a flower bed covered with many flowers. He showed these photographs to some children, and right away some of them exclaimed: "Oh! See the fairies!" Neither he nor any of his friends could see any fairies among the flowers.

A man once told me that when he was a child he could remember seeing fairies, many fairies, all dancing together on the grass in the woods; but as he grew older his ability to see the fairies became less. He said that when his wife was cured of imperfect sight, she became able to see the fairies when before her cure she had never been able to see a fairy. From what is known of fairies, it seems that they can, if they wish it, become visible to anyone whom they desire to see them.

Children who have seen fairies have told me that when they saw a fairy and smiled, their sight became unusually good; but if they were disappointed in any way, the fairies at once disappeared. So when you want to see a fairy, be sure to smile. Think of all sorts of pleasant things and thoroughly believe that fairies exist. Children who doubt the existence of fairies never see them.

For some reason or other, the month of May is the best month in the year to see fairies. Most of them have rested all winter long and when the sun comes out and the flowers begin to bloom, the fairies wake up and start to have a good time. I believe that most children like to have a good time, too, just as the fairies do. When a child learns the games that the fairies play, learns to dance like the fairies dance, learns to laugh and sing like the fairies do, that child is very, fortunate, indeed. Those children who have seen fairies have told me how they dance around in a ring until they are tired, and then they go and sit on a toadstool and rest. To dance like the fairies dance is a cure for headaches. It is wonderful how long fairies can dance without getting tired. They must do it very easily and without an effort. Fairies have wonderful voices for singing, and you can hear them a very long distance away. They have wonderful eyes for seeing, and can recognize their friends from afar. They have wonderful hearts for loving which explains why they are so popular with children.

Dancing, Singing improves movement, balance, coordination, eye movement, relaxation, aligns the bones of the skull, neck vertebrae, improves circulation in the neck, head, eyes, ears and improves the clarity of vision.
Remembering, imagining the story, characters, objects, emotions you are singing about improves the memory, imagination, relaxation and clarity of vision.
Singing, dancing improves energy flow in the body.

Glasses Retard Progress

***By* E. T. FISHER, M.S.M.D.**

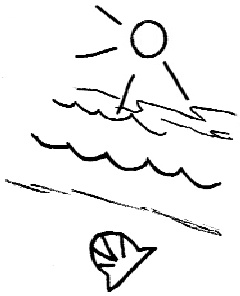
THIS patient, a man aged 53, had worn glasses thirteen years for astigmatism. Four years ago his vision became decidedly worse and had been steadily decreasing. Though his glasses had been changed repeatedly by competent ophthalmologists, his vision for distance was not improved to any appreciable degree.

His vision with glasses was 10/70 and the letters were gray and blurred. The diamond type appeared very indistinct, but he was able to read a few words in a very bright light.

Without glasses his vision was 10/200 with both eyes and with each eye separately. The diamond type seemed to be a solid gray blur. The smallest letters that he could read were those of the 30 line and he could distinguish them only when the card was held one foot from his eyes.

First I explained about blinking. I had not seen him blink once since he entered the office. As a child he was taught never to blink while conversing with anyone because it was very impolite, so he had always prevented, as much as possible, any movement of the eyelids. In this way he had acquired the habit of staring. Blinking seemed to require a great effort, but by closing his eyes for a few minutes at a time and then by gradually shortening this period he was soon able to blink easily.

His imagination and memory were very poor, but he could remember the ocean perfectly. When a child he had spent many summers at the seashore and had often sat for hours watching the waves. So I suggested that while palming he imagine himself sitting on a shore watching the waves as he had done in his childhood.



Palm and remember something perfect, that is easy, pleasant to remember. Sitting at the beach, watching the waves, sky, sand, seashells. Shift on clear objects in the mind.

After palming 30 minutes in this way I asked him to glance at the test card and then close his eyes immediately. He saw the R in 10/100 but it disappeared before he could close his eyes.

I then held the card where he was able to see the O in the 50 line, but he could not remember it. I suggested that he imagine the O floating out into the ocean, becoming gradually smaller and smaller. After looking at the O again, he closed his eyes and imagined that it was floating away. Then he looked at the test card which was ten feet away and read both letters in the 100 line and they appeared much blacker.

The diamond type now appeared as white and black lines instead of the solid gray.

Four days later I saw him again. His vision had not improved. Before I had an opportunity to question him he said: "I know why I have not improved more. It is because I have worn my glasses about an hour a day. Each time after wearing them my sight is just as bad as it was the first time I took them off four days ago."

I had very carefully explained about not wearing his glasses, but he thought I had attributed undue importance to this phase, therefore he had not mentioned that it was absolutely necessary for him to wear them about an hour a day. As the glasses affected his vision so unfavorably and caused the loss of all that he had previously gained, it seemed doubtful that he would ever improve to any great extent as long as he continued to wear them. On days when he did not use glasses, as Sundays and holidays, his improvement was more marked and then, after wearing them, he did not lose quite all he had previously gained; but in this way his progress was exceedingly slow.

+ He practiced about three hours a day, with the diamond type, palming and sitting in the sun with his eyelids closed. In practicing with the diamond type he derived the most benefit from sitting in the sun and slowly moving the card from side to side, glancing at it casually from time to time and closing his eyes frequently.

+ In this way he first became able to see the white spaces between the lines very white, then the spaces between the words and finally, in flashes, he could distinguish words.

His progress was, without doubt, greatly retarded by his use of glasses, but now, after ten months, he is able to read the diamond type in the sun, and 10/30 on the test card. He is seeing objects at a distance that he had not seen for four years even with his glasses.

Report of the League Meeting

By* MABEL A. YOUNG, *Secretary

THE April meeting of the Better Eyesight League was held at 383 Madison Avenue, Tuesday evening, April 7th. The President, Miss May Secor, presided. Miss Secor welcomed new members and visitors to the League. She stated that as the body must be regarded as a whole of which the eye is a part, it is planned to have speakers from the outside tell of conditions in other parts of the body which may link up with trouble in the eyes.

Dr. Percival Sprinz was the speaker of the evening. Dr. Sprinz is attending oral surgeon in the Hospital for Joint Diseases, and head of the oral clinic. He is a believer in the Bates Method and a recent member of the League. Dr. Sprinz's talk was very interesting and threw light on many phases of oral infection.

LEAGUE ANNOUNCEMENT

The meetings of the Better Eyesight League are held at 383 Madison Avenue, on the first Tuesday of each month, at eight o'clock in the evening.

The next meeting will be held on Tuesday, May 5th. At that time a practical demonstration of the Bates Method will be given by the officers of the League. One object of the League is to disseminate the knowledge of the scientific cure and prevention of imperfect sight, without the use of glasses. The president therefore requests that each member invite to this meeting at least one person who suffers from eyestrain.

Questions and Answers

Q—Dr. Bates says that in reading fine print one should look between the lines. Is this not contrary to the principles of Central Fixation? To see the print best, should one not look directly at it?
A—One can look between the lines and shift to the black letters with Central Fixation.
Modern teachers say to look directly at the print, read through the center of the words or just let the eyes shift about on the letters, words as the eyes move along the sentence. Blink! Breathe abdominally, relax, look to the distance occasionally.
When vision is very blurry: looking at, imagining the white spaces between the sentences and the thin white line under the sentence perfect, bright, glowing white with the eyes open, closed, open improves the memory, imagination, relaxation and then the blackness, clarity of the letters. Then, the person looks directly at the letters to read.
Do not look at the white spaces when reading. Use central fixation - Look directly at the words.

Q—If type can be seen more distinctly with the eyes partly closed, is it advisable to read that way? (Squinting)
A—No, it is not advisable to read that way because it is a strain, and alters the shape of the eyeball.

Q—Should children read microscopic print?
A—Yes, the more the better. Reading microscopic print is a benefit to the eyes of both children and adults.

Q—Can the eyes be harmed by using the burning glass or sun treatment?
ANSWER—No, the eyes cannot be harmed by using the burning glass or by sun treatment.
(If done properly. See other articles:

+Burning glass
+Sunglass
+Convex glass +Magnifying glass +Sun treatment +Sun-gazing +Sunning

Q—I have attained normal vision, but after reading for a while, my eyes feel strained. Would you still consider I had normal sight?
ANSWER—If your eyes feel strained you are not reading with normal vision.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

June, 1925

Perfect sight

If you learn the fundamental principles of perfect sight and will consciously keep them in mind your defective vision will disappear. The following discoveries were made by Dr. Bates and his method is based on them. With it he has cured so-called incurable cases;

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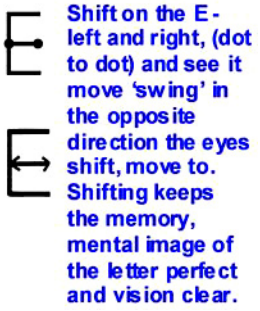
You can demonstrate to your own satisfaction that strain lowers the vision.
When you stare, you strain. Look fixedly at one object for five seconds or longer. What happens? The object blurs and finally disappears. Also, your eyes are made uncomfortable by this experiment. When you rest your eyes for a few moments the vision is improved and the discomfort relieved.

Have someone with perfect sight demonstrate the fundamental principles contained in Dr. Bates' book, "Perfect Sight Without Glasses." (Original book is; The Cure Of Imperfect Sight By Treatment Without Glasses) If the suggestions and instructions are carried out, and glasses discarded, it is possible to improve the vision without personally consulting a physician.

"Perfect Sight Without Glasses" will be sent C.O.D. on five days' approval. $Price, $5.00.
Central Fixation Publishing Company
383 Madison Avenue, New York City

Alternate



It has always been demonstrated that the continuous memory, imagination, or vision of one thing for any length of time is impossible. To see one letter of the Snellen test card continuously, it is necessary to shift from one part of the letter to another. By alternately moving the eyes from one side of the letter to the other, it is possible to imagine the letter to be moving in the opposite direction to the movement of the eyes. This movement of the letter is called a swing. When it is slow, easy, short, about one-quarter of an inch or less, maximum vision is obtained which continues as long as the swing continues.

As long as we are awake, we are thinking, remembering, or imagining mental pictures, and are comfortable. To go around blind requires a distinct effort which is a strain on all the nerves and is always uncomfortable. The normal mind alternates its attention from one mental picture to another, which is a relaxation or rest. The memory, or imagination, is best when one thing is imagined better than all other things, Central Fixation, but constant shifting is necessary to maintain Central Fixation.

One of the best methods to improve the vision is to regard a letter of the Snellen test card with the eyes open, then close the eyes and remember or imagine the letter better for about ten seconds, open the eyes and regard the letter while testing the imagination of the letter for a moment. **By alternately regarding the letter with eyes open and closed, the imagination of the letter improves in flashes. By continuing to alternate the flashes improve and last longer until the vision becomes continuously improved.**
Always shift part to part on the letter when the eyes are open and in the imagination when the eyes are closed.

OLD AGE SIGHT

By W. H. Bates, M.D.

When most people with normal eyes arrive at the age of forty and upwards, they usually have difficulty in reading books or newspapers, although their sight for distance may be normal. At the age of fifty or upwards, such persons become less able to read at the near point or find it impossible to read even headlines of a newspaper clearly or distinctly. This condition has been called old-age sight, although it could be defined more accurately as the imperfect sight of middle age. The medical term for this form of imperfect sight is presbyopia. While imperfect sight occurs quite commonly in middle age, it does occur in individuals under thirty years of age and more rarely in children. There are people, however, who even at the age of **eighty or ninety are able to read just as well as when they were younger.**

The cause of presbyopia is said to be due to the hardening of the crystalline lens of the eye to such an extent that the focus of the eye cannot be brought to a near point on account of the inability of the hard lens to change its shape. Almost every eye specialist believes this theory. In my book "Perfect Sight Without Glasses" I have described the evidence which proves that the theory is wrong.

At one time I was unable to read without glasses. After I found that the lens was not a factor in accommodation, I realized that presbyopia might be cured in some cases. Then, having cured my own eyes, I felt that the old theory of the cause of presbyopia was wrong. Since that time so many patients who were unable to read without glasses have recovered that I feel most, if not all, can be cured. In my experience I have never met with a case of presbyopia which could not be temporarily benefited.

In the treatment of presbyopia most persons experience a decidedly uncomfortable feeling in their eyes when they look at fine print so close that they fail to read it. The more they try to see, the worse it becomes and the more uncomfortable do their eyes feel.

Presbyopia Treatments

+By closing their eyes and resting them, their vision becomes better immediately after the eyes are opened, but only for a short time.

+It can be demonstrated that by staring at one letter or a part of one letter, while trying to see it perfectly, the vision always becomes worse.

+If the patient alternately closes the eyes and opens them, blinking, the vision may be improved.

+One can look at the white spaces between the lines and imagine them whiter than they really are, whiter than the margin of the card. When this is accomplished, the black letters become blacker and may be read without any effort, easily, continuously, without fatigue.

+Moving the head one-quarter of an inch or less from side to side, while looking at the white spaces, is also a benefit in many cases.

+In others, holding the head still and moving the page of fine print from side to side a short distance, may improve the

ability to read when the movement of the head may fail. Keep the head, neck relaxed and allow some movement with the eyes.

+Many people can read the newspaper when they hold it two feet from their eyes, although they are not able to read it at twelve inches or nearer. In such cases reading the large letters at two feet and improving the vision at this distance by alternately resting the eyes, enables the patient to gradually shorten the distance from the eyes until it can be read at twelve inches, later at six inches or nearer.

Some years ago a woman, **eighty-seven years old was treated for presbyopia**. The eyestrain was so great that she had been unable to obtain glasses which were satisfactory. There was a history of attacks of **hemorrhage in various parts of the retina, including the region of the center of sight or the macula**. At this time, however, the hemorrhages had all disappeared, and the retina was normal.

She was very much worried about her eyes and had a lot to say. Never in my life have I heard anyone talk so rapidly and say so much in so short a time. She repeated herself over and over again, and the constant idea that she tried to emphasize was that she was blind and that no one could give her any relief. It was difficult for me to persuade her to listen to me at first. I had to wait until she stopped for breath and then I handed her some diamond type, which I asked her to read. She very promptly told me that it was impossible, that the print was too small, and that when she tried to read it she suffered from pain, headache, and discomfort.

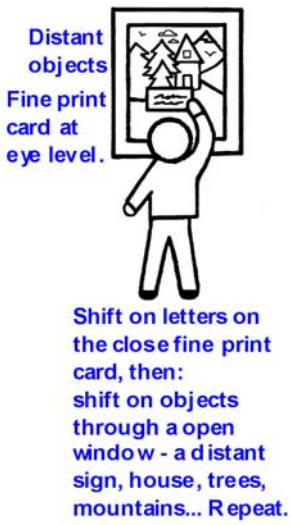
When my second chance came to speak, I asked her to imagine the white spaces between the lines to be perfectly white. She at once told me that that would not help her, that she could put all the white between the lines that I desired and that she was confident it would not be of any use, although she claimed to have a wonderful imagination. It seemed as though I heard two voices at the same time. One was constantly repeating that it was impossible to read such fine print, while the other voice was reading it at the same time. The audience which had collected around her, relatives, friends and servants, were thrilled, and it seemed everybody was trying to say something, to offer suggestions, and to give advice. Before we could stop her, this elderly woman read the whole card as rapidly as any one could have read it who had normal vision. When she had finished reading, and while she was wondering how she came to do it, I asked her for an explanation. She answered:

"When you asked me to imagine the white spaces between the lines to be perfectly white, I at once recalled white paint. With the help of my imagination I painted these white spaces with this white paint, and when I did that I was able to read."

While it is sometimes very difficult to cure presbyopia, it is, fortunately, very easy to prevent it. Oliver Wendell Holmes told us how to do it in "The Autocrat of the Breakfast Table," and it is astonishing, not only that no attention whatever was paid to his advice, but that we are continually warned against the very course which was found so beneficial in the case he records:

"There is now living in New York State," he says, "an **old gentleman** who, perceiving his sight to fail, immediately took to exercising it on the **finest print**, and in this way fairly bullied Nature out of her foolish habit of taking liberties at the age of forty-five or thereabouts. And now this old gentleman performs the most extraordinary feats with his pen, showing that his eyes must be a pair of microscopes. I should be afraid to say how much he writes in the compass of a half-dime, whether the Psalms of the Gospels, or the Psalms and the Gospels, I won't be positive."

Persons whose sight is beginning to fail at the near-point, or who are approaching the presbyopic age, should imitate the example of this remarkable old gentleman. Get a specimen of diamond type, and read it every day in an artificial light, bringing it closer and closer to the eye till it can be read at six inches or less. Or get a specimen of type reduced by photography until it is much smaller than diamond type, and do the same. You will thus escape, not only the necessity of wearing glasses for reading and near work, but all of those eye troubles which now so often darken the later years of life.



STORIES FROM THE CLINIC

No. 64: by Emily C. Lierman

ALBERT

Since we have had our private clinic here at the office, the charity patients come mostly from physicians. Others are sent by ministers of all churches.

Albert, aged sixteen, was sent to us by a dentist's assistant who told me of his pitiable condition. His first visit was on December 6, 1924. Albert's sister, who is devoted to him, was present, being anxious to know if we could help him. When he appeared he was wearing a black patch over his left eye because the light troubled him and he suffered intense pain. With the test card the vision of his right eye was normal, or 10/10, but the **left eye had only light perception**. This is a copy of his prescription for glasses, which he had worn for some time:

R, 0.50 D C 90
L, 2.00 D C 90

Dr. Bates examined him with the ophthalmoscope and found Keratitis, or inflammation of the front of the eyeball of the left eye. The right eye was normal. While the examination was going on, Albert's sister was weeping. She tried very hard to conceal her tears but in vain. They had been to other doctors and were told that Albert would always have to wear glasses to save the right eye; nothing more could be done for the left eye. The last oculist they consulted said the **left eye had cataract** and as there was no sight, there was no use to operate. What a shock it was to his family!

I placed Albert in the sun and focused the sunglass on his closed eyelid. Then I raised the upper lid and quickly focused the **strong light of the sun on the white part of the eye as he looked down**. Immediately he called out to his sister: "I see the light. I can see a sort of web inside of my eye when the light is focused on it." This made me very happy indeed. I knew then that Albert could be benefited. His sister was overcome. While the tears flowed down her cheeks she said: "If you can only save that eye, there is nothing in the world I would not do for him. Mother and I will take care of him. He need never work again. I can earn enough money for both of us and he can spend all his time taking care of his eye. He must not go blind." The girl was hysterical, of course, but she meant every word she said. She loved her brother. At her age other girls are usually planning a future for themselves, but she was willing to sacrifice herself, so that her brother would not go blind. That is love, indeed.

When we started treatment, Albert became enthusiastic and palmed his eyes for more than a half-hour. He was told to think of **pleasant things while palming**. Being a perfectly normal boy, he could easily think of such sports as baseball and other outdoor games. He liked to think of the movies and could imagine scenes from the picture called "The Covered Wagon."

One could hear a pin drop when Albert first **looked at the test card with his left eye**, still keeping the right one covered. The test card was placed ten feet from his eyes and, while **swinging his body from side to side**, he **flashed the large C** on the top of the card. I was careful not to have him strain to see more, so he was told to sit comfortably and palm again.

He was with me over two hours that day and I improved his left eye to 10/100 by alternately **palming** and **swinging**, and also **blinking**. When we first removed the black patch, the sclera or white part of his **left eye was bloodshot**. It looked very much as though blood was ready to pour from it at any moment. There was also a considerable **watering of the eye** when it was first exposed to the light. The **sun treatment instantly stopped this**.

Before Albert left us on the first day, Dr. Bates asked me if I had the time to treat him every day. Doctor said his trouble was so serious that unless we could see him very often he was not so sure that Albert would be cured. I was glad to give the time and I have been repaid. Our dear boy is almost cured. Don't let anyone tell me that prayer does not help. I prayed earnestly every night for Albert and I know that without God's help I could not have accomplished what I did. Albert believes that, too, for he helped me in that way.





Palm and remember, imagine something easy, pleasant: The boy enjoys remembering a movie; The covered wagon. Sees objects in the mind, clear, in color, motion/action.



Palm, then read the chart, then palm, read the chart... Palming keeps the eyes, mind relaxed, no effort, no strain to see = vision is clear.





Albert looking at the eyechart with the left eye. Right eye is covered with a eyepatch.
Swing the body side to side and 'flash', shift quickly, on the letters on the eyechart, see the letters clear in flashes. Avoid staring, effort to see. Relax, swing and glance easily at the letters. Practice with both eyes, then one eye at a time, then both eyes together again.

Every day that we had sunshine he improved a little with the test card. On January 17th, 1925, all the redness of the sclera had entirely disappeared. Then his visits were less frequent. I told him to come once a week instead of daily. But Albert practiced at home every day for hours at a time. The condition of his eye steadily improved and by the end of February, 1925, the vision of the left eye was almost normal.

I am proud of Albert for another reason. He would not allow his sister to support him. He asked me if shoveling snow would make his eye worse again. I said no, as shoveling snow would be practicing the swing, and the exercise would be a benefit.

Then he said, "Please pray for snow. I want to work." Again our prayers were answered. That very night we had a big snow storm, and when Albert came the next day, he told me:

"I stood in line with my shovel and stretched myself as much as possible to look big. I got a job all right, and I will earn $5.00 per day while the snow lasts." We had one snow-storm after another and Albert had much to do.

I believe Albert's case was most remarkable because he did not at any time suffer a relapse. I believe, also, that the sun was the main factor in the relief of his trouble. I cannot understand why so many eye specialists shield the eyes of a patient from the sun. Bandaging them not only frightens the patient, but makes him very uncomfortable. It is true, that when some patients first learn

that they are to be treated with a sun-glass, they don't like to try it. But just as soon as the light is first thrown on the closed eyelids, they relax and smile and ask for more. The sun is our greatest blessing, I think.

The Sand Man

By George M. Guild

The little boy sat on the lap of his mother in a rocking chair. His name was Freddie. He had had a long day and was very, very tired. His mother rocked him back and forth, petted him with her cool hands and quieted him with her frequent kisses. He kept telling her: "Oh, mother, my eyes hurt, my head hurts, my arms hurt, my feet hurt, I am all hurt, and I am all tired out".

While she rocked him back and forth, a little old man came into the room with a bag of sand over his shoulder, the sand man. Freddie did not see him coming and Freddie's mother did not see him coming, but when he threw a little sand into their eyes they both became very sleepy.

Freddie sat up and looked around, stretched his arms, and his big tortoise-shell glasses fell from his eyes on to the floor. Freddie jumped down to get his glasses, and then he saw the sand man pick them up from the floor and hold them behind his back where Freddie could not get them. Freddie was very indignant and scolded the sand man for taking his glasses, but the little old man smiled and said: "Do they help you to see?" Freddie answered; "No, my eyes feel all right until I put them on in the morning, and then things are blurred, and my eyes begin to pain; but the doctor said that if I did not wear them all the time, I would most surely go blind."

The sand man said to him: "would you like to go with me and talk it over with the fairies? They don't like to see little boys or babies wearing glasses."

So the little boy took the hand of the sand man and they ran, skipping and jumping around, out of the room, into the hall, down the stairs, out the front door, through the front gate, and then into the woods. There the moon was shining very brightly through the trees and lighted up a space where thousands of fairies were dancing, laughing, and joking and having a good time. Freddie was so glad to see the fairies because in his heart he knew there were fairies, but all his uncles and aunts and cousins and grown people generally laughed at him and made fun of him for believing in fairies. When the fairies saw him coming, they all ran to him and climbed up on his shoulders and the top of his head, sat on his ears, tickled him under the chin, and made him laugh and he had a good time from the very start.

The fairies had some difficulty in teaching him how to dance their way, but they finally got him to go through movements of various kinds. The one he liked best of all was to **turn his head, eyes, and his whole body as far to the right and to the left as he possibly could without trying to see the things in front of him, which move in the opposite direction**. (The Long Swing.) He never heard fairies sing, but he heard them now and he liked the sound of their voices. He tried to sing with them, but he did so poorly and his voice was so harsh that he could not keep on singing. But the fairies encouraged him, and told him how to hold his lips and his tongue, and how to breathe, and very soon he was singing just as loud and just as musically as the rest of them. This was very strange, indeed, because he sang songs that he had never heard before, that is, consciously. Of course, when he was asleep, he would dream, perhaps, of the fairies singing, but when he woke up in the morning the dreams of the fairies, like all other dreams, were usually soon forgotten.

What surprised him most of all was the fact that his eyes did not bother him. He was no longer sleepy, no longer tired; every nerve in his body was just as happy as he was. There was no pain, only a feeling of delicious joyousness that no words could describe. Not only were his eyes comfortable, free from pain and fatigue, but he was able to see the fairies, the trees, the flowers, the birds, and the toadstools where the fairies sat to rest. It seemed to him that he could see through the trees, that he could see through the ground down into the other side of the earth where China was. He felt as though he could see the Chinese fairies almost as well as he could see the fairies that surrounded him. His eyes never kept still, they were moving in all directions, and the more they moved the better they felt. When his eyes moved in one direction, it seemed as though his hands and feet moved in the other direction, but one could not catch the other. The movement of his eyes was all the time missing the movement of his toes. They seemed like two railroad trains on parallel tracks, which pass each other going in the opposite direction at full speed. (When moving the eyes, head together, same direction, while the body is kept stationary; the body appears to move in the opposite direction that the eyes, head move to.)

He noticed that the fairies were moving in the same direction that his body was moving; the sand man, the trees, the grass, everything was moving with his body, opposite to the movement of his eyes. It seemed a very queer thing to him. The queerest thing about it was that for the first time in his life he felt his eyes were rested, although they were moving, and that for the first time in his life, also, his body, his nerves were at rest although they were, as he thought or imagined, constantly moving.

The next morning when his mother came to awaken him, she found him looking over toward the trees and smiling. Every once in a while he would laugh out loud, as loud as he could scream. His mother was worried and she said to him: "What is the trouble; why are you up so early? Why are you laughing, and why do you look over toward the trees?" Then he told her what had happened to him on the previous night when the sand man took him over to see the fairies. She smiled indulgently, as mothers will, but the next question she asked him was the most important one of all: "Where are your glasses?" Freddie looked up into the face of his mother, who leaned over and kissed him. He threw his arms around her and pressed his cheek against hers and said: "Mother, please forgive me. The sand man took them. The fairies told me how to see perfectly without glasses, so that I would have no pain and would never get tired. I want to get up early in the morning every morning and go over into the woods and play; play where the fairies played, where the fairies cured me of my poor sight."

Report of the League Meeting

The regular monthly meeting of the Better Eyesight league was held at 383 Madison Avenue on the evening of May 5th. It was noted with regret that Miss Mabel A. young, secretary, was absent on account of illness.

The meeting was well attended and a number of new followers of the Bates Method were gained. Among these are many connected with the public schools. Great progress in the work of the League was noted.

The next meeting of the League will be held at 383 Madison Avenue on June 2nd. Subsequent meetings of the League will be held at a different address, which will be announced later.

This issue of Better Eyesight completes our 1924-1925 volume. Subscribers who wish to have their copies bound will receive the benefit of the reduced price by mailing them to us immediately. These will go to press along with our own copies. The approximate cost will be $1.00.

An Unfair Test

Editor's Note - Recently a high school girl wrote me of her experience with a lady school doctor who tested her sight. This may interest the parents of school children.

Dear Doctor:

I thought you might be interested in hearing about my "run in" to use a vulgar phrase, with the school physician. She is abominably prejudiced to put it mildly. She seemed extremely annoyed because you advertised with the aid of your book, "Perfect Sight Without Glasses," and your magazine "Better Eyesight," and said something about the fact that she would be put out of the medical profession if she did so. When I told Daddy, he asked if I had said that she probably deserved to be. I failed to think of that in time, but I did tell her that was your only method of giving away your discoveries when nearly all the doctors united to boycott you. That was right, wasn't it? We would have had a very pleasant squabble then but we were interrupted and I had to have my eyes tested. This will either amuse or disgust you, according to your mood. It irritated me at first, and then I saw the funny side and disturbed the entire library by my unseemly chuckles. She, the doctor, is quite six feet tall, and very masculine in appearance. Firmly grasping me by the wrist, she lifted me bodily from the chair and dragged me to the end of the room. I couldn't rebel, for she is most unconscionably strong. She shoved me up against the wall, held my neck tightly, pointed miles away it seemed, and said "Read that card." Honestly, I couldn't see anything, I was so frightened. She helped matters by smacking a large card against one eye. At length I read three lines, and the doctor didn't wait for any more, but said, "Write it down minus three" whatever that means. Then I read with the right eye, and I went through five lines without a halt or mistake. As I paused for breath, for I had seen it all in one flash, she said "Minus one." I protested I had not finished, and re-read the lines with my left eye, up to the seventh line, but she did not change the report - probably a lapse of memory, I suppose. Thus ended our historic encounter. Today, though, I had a pleasant surprise. For the first time I saw a picture perfectly. It is one which hangs on the opposite wall, and quite suddenly it sprang toward me more clearly than anything I had ever seen before. Now I know what perfect sight is, and I'll get it again, I am sure.

Announcements

We are publishing the following names to aid those who cannot consult Dr. Bates personally, but who wish to follow his method correctly. These pupils have taken his course of treatment and are qualified to help others. They are constantly in touch with Dr. Bates' work and learn immediately of his latest discoveries.

CALIFORNIA
Dr. E. Sisson, 1611 Castro Street, Oakland

COLORADO
Dr. H. F. Fisher, Barth Bldg., Denver
Dr. M. W. MacManus, 434 Empire Bldg., Denver

FLORIDA
Dr. N. S. Berry, 1902 Morgan Bldg., Tampa.
Dr. E. M. Jones, 476 First Avenue, N. St. Petersburg

GEORGIA
Mrs. R. S. Bottenfield, D. O., 102 East 9th Street, Atlanta.

ILLINOIS
Dr. E. T. Fisher, 29 East Madison Street, Chicago
Miss Elisabeth D. Hansen, 308 N. Prospect Avenue, Park Ridge

MASSACHUSETTS
Mrs. F. S. Low, Danvers

MINNESOTA
Miss R. Mitchell, 508 First Avenue, St. Cloud
Mrs. W. W. Morse, 1635 West 26th Street, Minneapolis

MISSOURI
Dr. H. J. Geis, Kirksville

NEW JERSEY
Dr. M. E. Gore, 51 Main Street, Orange
Dr. G. W. Reade, 517 Main Street, East Orange
Miss Mildred Shepard, 50 Main Street, East Orange
Dr. J. M. Wattera, 2 Lombardy Street, Newark
Mrs. A. L. Reed, East Orange (away for summer)
J. L. MacKinnon, D.C., 260 Fair Street, Kingston

NEW YORK CITY
Dr. C. E. Achorn, 6 West 51st Street
Miss May Secor, 521 West 122nd Street
Dr. R. Arnau, 238 West 106th Street
Dr. L. Stanton, 49 West 57th Street
Miss Anna Woessner, 220 West 42nd Street, Room 1205. Tuesday and Thursday, 5 to 7.

BROOKLYN
Miss K. Hurty, 177 Woodruff Avenue

OREGON
Dr. Clara Ingham, 306 Alisky Bldg., Portland

PENNSYLVANIA
Dr. X. G. Couch, 304 Empire Bldg., Philadelphia

VERMONT
Mrs. L. J. Hathaway, Middlebury

Announcement

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Suggestions to Patients

By Emily C. Lierman

1 - Palm in the morning while in bed.

2 - Take sun treatment for twenty minutes or longer every day.

3 - Mentally or physically, keep up that pendulum-like motion. (Long Swing and Sway)

4 - After sitting in the sun, hold the small card and flash the white spaces.

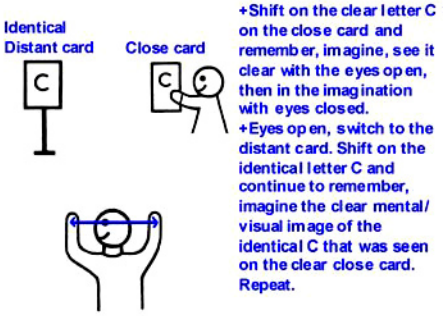
5 - What you do not see immediately, do not worry about.

6 - While practicing with the Seven Truths of Normal sight, always move the card slowly from side to side as you hold it six or eight inches from your eyes.

7 - To induce sleep when suffering from headache or nervous strain, close your eyes, remember the small F or T of the ten line of the test card and imagine it is moving slightly, about one-quarter of an inch, either up and down or to the left and right. (Shift point to point (small part to small part) on the letter in the mind.)

8 - There is a right way and a wrong way to blink the eyes while practicing. Children like to hold up their two hands about ten or twelve inches apart, looking first at one hand and then at the other. In this way one blinks when looking at the right hand and again when looking at the left hand. The head should turn in the same direction with the eyes.

9 - Nearsighted patients sometimes get along faster in the cure of their eyes by using two similar test cards at the same time while practicing. One card is held in the hand while the other is five or ten feet away. The patient looks at a letter up close and imagines he sees the same letter on the distant card. Then the patient closes his eyes and imagines that letter perfectly. Having seen it perfectly up close, he becomes able by practice to see it just as well on the distant card.



A case Report

(Report of a man, 63 years old, who has worn glasses for a great many years. He improved his own vision merely by following directions. Others can do the same.)

I will be **63 years old** in July and have not worn lenses since reading "Perfect Sight Without Glasses"; it will be two years the latter part of next July.

I have had monocular vision all my life, congenital convergent squint of left eye producing what has always been called "partial blindness from disuse." I could always see parts of everything but nothing distinctly; enough to get around if I closed my good eye, but could never see to read any printed matter with it.

At first I could not see the big "C" at any distance with the left eye. Now I can see its whole outline at about six inches and all of the letters on line ten at three or four feet.

In scanning even fine print I can now discern lines and spaces and almost distinguish the letters by holding it close up.

I should add that I have not been at all diligent nor faithful in using Dr. Bates' methods and am surprised at the results obtained by me in spite of that fact. With more devotion I am sure I will get better results.

One patient, a woman of 25 or 30, had worn **glasses seventeen years**. She was **myopic** with **astigmatism**, seeing about half the distance with the left eye as with the right. She had frequent **headaches**, could not go to the "movies" without great distress. She spent $300 or more on glasses, had no comfort with them, and could not see well with or without them.

She was induced to buy Dr. Bates' book last March. She laid aside her glasses and began to work according to the method, wholly by herself, with most satisfactory results.

Very gratefully yours,
Fred W. Morris, D.O.,
Ridgewood, N. J.

QUESTIONS AND ANSWERS

Shifting, Swings, Oppositional Movement Described

Q- When I look at an object and blink, it appears to jump with each blink. Would this be considered the short swing?
A- Yes. You unconsciously look from one side to the other of the object when blinking.

Q – Please explain the difference between the long and short swing.
A – The short swing is about the length of a letter. The long swing is the movement of a letter an inch, a foot, or more.

Q- What are the benefits of each?
A- The long swing relieves eye discomforts and helps one to obtain the short swing. The short swing improves the vision.

Q- Seeing stationary objects moving appears to me to be merely self-hypnotism. I can't do it.
A- When riding in a train the stationary telephone poles *appear* to move in the opposite direction.
Of course this is an illusion, but it is a benefit to the eyes to imagine all stationary objects moving.

Q- I heard your lecture at the Psychology Club and immediately discarded my glasses. Now I cannot see at all and am worse off.
A- You can be cured by practicing relaxation methods when you discard your glasses. You cannot be cured when you use your glasses for emergencies.

Q-You stress palming in your instructions. If I obtain poor results with this exercise should I continue?
A- No. Do that which is most helpful.

Catalogue of Other Publications

BETTER EYESIGHT MAGAZINE

Back numbers may be obtained here which contain articles on the cause and cure of the following defects: Myopia, Squint, Glaucoma, Cataract, Pain, Blindness, Presbyopia and Retinitis Pigmentosa.
These articles include instructions for treatment.

Bound Volumes

Each volume contains one year's issue of twelve magazines.
Price, $3.50.

Burning Glass

If you notice a strain on your eyes, after emerging from a building into the sunlight, you need the Burning Glass. If the light feels uncomfortable, or if you cannot look up at the sun, the burning glass will help you. Instructions are issued on request.
If you need it, send for it today. Price $5.00.

Fine Print for Relaxation

The Bible has been reduced from $4.00 to $2.50. Read what Dr. Bates says about fine and microscopic type, then get a Bible. This unique book measures only one by one and a half inches, and contains the Old and New Testament.

The Booklet

of fine print contains three chapters from the small Bible, together with "The Seven Truths of Normal Sight" as discovered by Dr. Bates. Instructions are also printed in the front of the book. Price 25c

Test Cards

These prove invaluable in practicing Dr. Bates' method. Instructions issued. Can be used to test the eyes, follow progress, and improve sight.
50c.—75c.

PERFECT SIGHT

If you learn the fundamental principles of perfect sight and will consciously keep them in mind your defective vision will disappear. The following discoveries were made by Dr. Bates and his method is based on them. With it he has cured so-called incurable cases:

1. Many blind people are curable.
2. All errors of refraction are functional, therefore curable.
3. All defective vision is due to strain in some form.
4. Strain is relieved by relaxation.

You can demonstrate to your own satisfaction that strain lowers the vision. When you stare, you strain. Look fixedly at one object for five seconds or longer. What happens? The object blurs and finally disappears. Also, your eyes are made uncomfortable by this experiment. When you rest your eyes for a few moments the vision is improved and the discomfort relieved.

Have some one with perfect sight demonstrate the fundamental principles contained in Dr. Bates' book, "Perfect Sight Without Glasses." If the suggestions and instructions are carried out, and glasses discarded, it is possible to improve the vision without personally consulting a physician.

"Perfect Sight Without Glasses" will be sent C. O. D. on five days' approval. Price, $5.00.

Central Fixation Publishing Company
383 Madison Avenue, New York City

THOS. D. BROOKS, ENG., N. Y.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

July, 1925

SWAYING



It is a great help in the improving of vision to have the patient demonstrate that staring at one part of a letter at ten feet or further is a difficult thing to do for any length of time without lowering the vision and producing pain, discomfort, or fatigue. With the eyes closed it is impossible to concentrate on the memory or the imagination of a small part of one letter continuously without a temporary or more complete loss of the memory or the imagination.

When an effort is made to think of one part of a letter continuously with the eyes closed, the letter is imagined to be stationary. When the imagination shifts to the right of the letter a short distance and then to the left alternately, every time the attention is directed to the right, **>** the letter is always to the left, **<** and when the attention is directed to the left **<** of the letter, the letter is always to the right **>**. By alternating, the patient becomes able to imagine the letter is moving from side to side, and as long as the movement is maintained the patient is able to remember or imagine the letter. It can be demonstrated that to remember a letter or other object to be stationary always interferes with the perfect memory of the letter. One cannot remember, imagine, or see an object continuously unless it is moving. The movement must be slow, short, and easy.

When patients stare habitually, the eyes become more or less fixed, and are moved with great difficulty. When the patient stands and sways the whole body from side to side, it becomes easier to move the eyes in the same direction as the body moves. No matter how long the staring has been practiced, the sway at once lessens it.

ASTIGMATISM

By W. H. Bates, M.D.

The word has frightened a great many people. When a patient has astigmatism, it means that the shape of the eyeball is changed from the normal sphere to one that is lopsided. One may be near-sighted and have in addition a certain amount of astigmatism. The same is true in the far-sighted eye, which may have at the same time a certain amount of astigmatism. In most cases the front part of the eyeball, the cornea, is the part affected.

In making the diagnosis of astigmatism, the so-called astigmatic chart has been highly recommended. It has been used for more than fifty years and is still popular. The chart consists of vertical, horizontal, and oblique lines. When a patient has astigmatism, the lines running in one direction appear more distinct than the lines running in other directions. I do not consider the astigmatic chart a very good or reliable test, because many patients with no astigmatism have imagined the lines in one direction to be much plainer than the lines at right angles to them. Also, in many cases of astigmatism, all the lines may be seen with equal clearness. Another objection to the test is that when some patients with normal eyes and with no astigmatism, regard the astigmatic chart, a high degree of temporary astigmatism has been produced, which was demonstrated by other tests - retinoscope, ophthalmometer.

The instrument for the diagnosis of corneal astigmatism is called the ophthalmometer. When the normal eye was examined with its aid, the curvature of the cornea has been found to be normal in all directions. When the eye was under a strain, the curvature changed, sometimes being more convex in one meridian than in all the others, or one meridian might be flatter than the other meridians. The axis of the astigmatism produced by a strain has been observed to vary, increase or diminish, while the instrument was being used.

When the patient **remembered perfect sight, no astigmatism was manifest and the curvature of the cornea remained normal.** When a letter or other object was remembered by the patient, one part best-**central fixation, no astigmatism was produced**. When astigmatism was present, the amount was lessened or it disappeared altogether when central fixation was remembered or imagined. It can be demonstrated that no astigmatism of the cornea can be observed with the aid of the ophthalmometer when the patient is able to remember or imagine letters or other objects by central fixation.

It is also a truth that **when things are remembered or imagined to be moving with a slow, short, regular, continuous, easy swing, no astigmatism is present** when the cornea is examined with the ophthalmometer. The demonstration cannot be made by an observer who does not understand what is meant by the ocular swing.

Rapid blinking also **lessens or corrects corneal astigmatism** temporarily or more continuously when done properly. When done under a strain, astigmatism may be produced or increased. The ophthalmometer demonstrated the facts.

Sun-gazing, when practiced in such a way as to improve the vision, also is followed by an immediate benefit to the astigmatism, as observed by the ophthalmometer.

It has been noted that after the eyes are closed **(palming)** for some minutes or longer, and rested, when they are first opened, an immediate improvement in the astigmatism is manifest.

Any form of treatment which was a benefit to the vision of the patient was also a benefit to the astigmatism, as demonstrated by the ophthalmometer.

The textbooks on the eye have for many years published that most, if not all, cases of astigmatism occur at birth, or that they are congenital. It was supposed to be a permanent condition, but further study of astigmatism has shown that it may be acquired at any age. School children have been observed to acquire astigmatism at the age of eight, ten, fifteen years, or older. When the eyes were examined periodically, the astigmatism in many cases had changed. It is capable of increasing or of decreasing. It is an interesting fact that some cases do recover without treatment. This suggests the possibility of successful treatment.

In the normal eye astigmatism can be produced by a strain to see either at the distance or at the near point. At first it is temporary, but later may become more permanent. **Astigmatism can always be corrected by relaxation or rest**. When the imperfect sight of astigmatism can be corrected by glasses, it is called regular astigmatism, but when the vision cannot be

improved to the normal in this way, it is called irregular astigmatism.

Many scientific articles have been written on irregular astigmatism which are offered as evidence that it is incurable. The men who wrote these articles did not cure irregular astigmatism and, therefore, being authorities in the medical profession, they stated that nobody else could cure it; and, furthermore, anyone who claimed to be able to cure this form of astigmatism must be a charlatan, and should be expelled from the medical profession.

Irregular astigmatism is produced by eyestrain and relieved or cured by relaxation or rest. Most cases of **ulceration of the front part of the eyeball, the cornea, produce a scar** which is more or less opaque. Irregular astigmatism is also caused by ulceration of the cornea.

Patients who cannot stand the light, **photophobia**, suffer very much from eyestrain. These cases acquire astigmatism which is usually corrected by encouraging the patients to become accustomed to the **strong light of the sun**. Ulceration of the front part of the eye occurs quite frequently in young children who live in the tenement houses where the light is poor. Astigmatism is found after the ulcerations have healed. Irregular astigmatism has usually been cured by the sun treatment with the aid of the swing, central fixation, and the memory of perfect sight.

Advanced cases of **conical cornea** have **irregular astigmatism**, which heretofore has not been relieved by various kinds of operations, glasses, or any other form of treatment. In this disease the front part of the eyeball becomes much thinner and an opening may form with great harm to the eye. In one of my early cases conical cornea occurred in both eyes with one very much worse than the other. It reminded me that when the eyeball is elongated in nearsightedness or myopia, the bulging appears at the back part of the eyeball, which has been called Posterior Staphyloma. These cases have recovered after a long period of treatment. A temporary cure has been demonstrated with the aid of the ophthalmoscope by the memory of perfect sight. The same is true of conical cornea, which also disappears temporarily with the aid of the memory of perfect sight. These cases become worse by the memory of imperfect sight. Staring always increases the bulging and makes the vision worse.

Conical cornea with its irregular astigmatism, occurs not only in adults but, like near-sightedness, is found also in young children. For such cases the swing has been a great benefit. The mother or nurse can stand facing the child, take both hands and sway from side to side for several minutes or longer. Teaching the child to dance is also a great help. Playing games requiring movement, like running, prevents the stare or strain in most cases. It is well to remember, however, that when the child is moving more or less rapidly from one place to another, the stare is always possible. Encourage the child to look from one place to another. The old-fashioned game of "Puss in the Corner" is a great benefit to the eyes. In this game the child is constantly shifting his eyes from one place to another.

The child should enjoy the games, especially when adults join in the game. Often times a young patient will become quite boisterous and scream with excitement and pleasure. He may be as noisy as he likes. He may play, laugh, and scream and become very much excited with great benefit to the astigmatism. It is well to exclude all children who carry around with them a grouch, or who make the patient uncomfortable by teasing him.

In my office there have been times when a child made so much noise that my other patients were interested, and too often, perhaps, disturbed. Between the mother, the child, and myself, we have had quite a riot with a great deal of noise and loud laughter on the part of the child, but always the astigmatism improved. Anything that helps the child is justifiable. Don't forget that children, as a rule, enjoy themselves more when they are allowed to make a noise than when they are expected to stay quite. The kindergarten methods of teaching should be practiced. The Montessori system is also a great help in relieving irregular astigmatism from any cause, as well as conical cornea.

One of my worst cases of **irregular astigmatism** occurred in a woman, seventy-five years of age, who gave a history of ulcerations of the cornea, for a long period of years. After each attack, opacity of the cornea appeared, and with repeated attacks the opacities increased until the patient was unable to count fingers. She was recommended to sit in the sun with her eyes closed, holding her head in such a way that the sun shone directly on her closed eyelids. Most of the time while she was awake, she practiced the long and the short swing alternately. After a number of months her vision improved so that she became able to thread a needle and do some sewing. She became able to read fine print without the aid of glasses. Her vision for the Snellen test card was also materially improved.

STORIES FROM THE CLINIC

No. 65: Cataract

By Emily C. Lierman

Mother Jones

A friend of mine who knows me very well, perhaps better than I do myself, asked me if I ever got tired of clinic work, do I ever tire of treating obstinate cases – those who take a long time to cure. No, indeed, I do not. The harder a case is to benefit, the better I like it. I never tire of my patients, but I get tired myself. We appreciate rest all the more when precious work like ours makes us tired.

Mothers of the clinic, that is, most of them, are restful to me. I love to treat them. To see tenderness, the loving expression come to their faces, always brings a perfect mental picture of the Madonna to my mind. When Mother Jones comes, she gives me that picture.

Her first visit was on November 1st, 1924. She brought with her a note written by her pastor. Dr. Bates had cured many of his friends, so he was sure we could do something for Mother Jones. Her age was sixty-seven and she was troubled with cataract in both eyes. Her vision became defective about four years ago. Dr. Bates' examination with the ophthalmoscope showed a red reflex in the right eye, but none in the left.

After Dr. Bates had left the room, Mother Jones began to talk. I believe as long as I live I shall always remember the sound of her voice. When I compared her with the Madonna, I was not trying to give the impression that Mother Jones is beautiful of face or form. She is of the ordinary motherly type. But the impression one receives while looking at her, listening to her tender voice, suggests something holy. She did not know of anyone who had been benefited by the Bates method, but her pastor had sent her, that was enough. She is very poor, but her son and family are taking care of her. When I told her that the only way for her to be cured was to practice faithfully every day, and to do exactly as she was told, she promised to do her part. When I tested her sight

with the test card, she read 10/70 with both eyes together. Her vision with the right eye was 10/70, but she could not see the card at all with the left eye at ten feet.

She was instructed to palm and to think of something pleasant, something easy to remember. I left her by herself for about ten minutes, and when I returned she had not stirred, and her eyes were still covered with the palms of her hands. I told her to keep her right eye covered, but to open her left eye and tell me what she could see. I held the test card five inches from her left eye, and at that distance she saw the 200 line letter C. She sighed with relief when she discovered that her left eye was not really blind, but was made so by strain and tension. In this short time the benefit she received from palming proved to her that her cataract was caused by strain.

I placed her in the sun, and while her eyes were closed, I used the sun-glass on her eyelids. I could see her relax, and she smiled as she felt the warmth of the sun's rays. I led her back to her chair and told her to open her eyes and read the test card. Her vision had improved to 10/30, reading with both eyes. She was instructed to practice ten minutes many times every day, alternately palming, blinking, and flashing letters on the test card.

Mother Jones came once a week without missing a treatment, and each time her vision improved with but two exceptions, when it remained the same as on the previous visit. On her second visit she read 10/30 after palming, and on the third treatment 10/20.

This dear mother appreciated the sunshine more than any cataract case I ever had. On dark and rainy days, she was always despondent and nervous, but the sound of her voice never changed. Once when she failed to appear for treatment, I feared she was ill, and I worried about her. I had noticed that her clothes were none too warm during the cold days, and thought perhaps that was the reason for her absence.

While I was thinking about my bank account, a letter came from a private patient who is also one of my adopted mothers. She comes from Ohio, where I have many friends. Her gratitude for the great benefit she has received from Dr. Bates prompted her to send a sum of money to be used in making my clinic family happy. Mother Jones and another poor mother with a big family, and dear old Pop, who lives in a home for the Blind, shared in the loving thoughts of my mother from the West.

Mother Jones soon returned to thank me for the gift and to explain why she had been absent. Her son had become a daddy, and both the mother and baby were doing fine. After my joy had been expressed over this great event, I produced a strange test card which she had not seen before, and placed it ten feet from her eyes. Some of our readers may doubt it, but I do believe that the little stranger from heaven had something to do with the improvement in the vision of her grandmother. She read 10/20 with her left eye.

Soon after, I was called upon to take charge of our private practice because of the illness of our dear Dr. Bates. Captain Price of London, England, who is practicing the Bates system successfully in his country, was in our office at the time and offered to help me and my wonderful assistant of the clinic, Miss Mildred Shepard. I placed Mother Jones in his care. His record showed on February 7, 1925, right vision of the white C card - 10/20, left vision - 10/20. At her second treatment by Captain Price, her right vision was 10/15, left vision 10/15, reading white letters on black card.

Some ophthalmologists would certainly appreciate this, if they would only study and practice the Bates system. What further proof is necessary to convince those of pessimistic minds, that our method of curing people without glasses is a purely scientific one?

Mother Jones is still under treatment, but it will not be long before she will enjoy normal sight. She tells everyone who will listen to her, about how much better she sees and how much better she feels, since she knows how to relax and relieve her eyestrain.

PALMING

(Miss Elisabeth Hansen of Chicago, a teacher in the sixth grade, has done wonderful things for her pupils. She has taught them palming, which has relieved their nervousness, improved their memory and imagination, and their sight. The testimony of these children is so interesting, that we feel some of it should be published. The children not only benefited themselves, but they also benefited other children, their parents and their friends. – W.H.B.)



Palming is the greatest discovery I have read about. It has made me so happy. At first I could not see a thing. I spent money trying to cure my eyes, but nothing could help me. I heard of a great doctor teaching imagination and memory. So I wished for that doctor to teach me how it was to be done. My teacher knew of him and inside of a month palming four times a day, my imagination was getting better and my memory brought back the day when I was younger and I remembered the time l played with my eyes. But when I am old enough I shall travel to all parts of the world to show people how to use and take care of their eyes.

Joseph De Fiore.

I think palming is the best thing in the world, because it makes your eyesight good. I'm sure that if I keep palming all the time my brains and nerve will get better. The first time I never liked to do it, but then I got used to it and now I do it every day and every second I get. One day while I was going home I met my girlfriend. We were talking about our eyesight and I told her that my teacher teaches all the room every day. I told her that I would teach her how to do it, if she wanted to. So she took my offer and she said to me, "Come on Margaret, let's go to my house, I went and she said, "Teach me how". I taught her how to swing and palm. Her name was Marie. She thanked me very much. The next day she brought other girls I knew and I taught them the same thing.

Margaret Micalett.

Palming has done a great deal for me. I can read the smallest letters on the chart. I do much better imagination than I used to do. I have learned better English and can read better, etc. I have taught my two sisters how to palm. One of them used to get terrible headaches. And since she started to palm she is getting rid of them. I have also taught them to swing and to read the chart. Now they are doing better.

Adeline Valentine.

One day a boy friend of mine dropped a half-dollar. He was looking for it, but could not find it. Of course he had had trouble with his eyes for over a year. I walked out of my yard and asked him what he was looking for and he told me about the half-dollar. I looked on the sidewalk and found it the minute I laid my eyes on the walk. He asked me how I came to have such strong eyesight, and I told him that our teacher taught a lesson to keep eyes in good condition. He asked me to come to his house. I told him that by palming, his eyes would be better. He asked me how many times a day. I told him six times or more. Then I heard my mother

calling me. I went home. Inside of a week the boy took off his glasses, threw them in a box and told his mother he would never put them on again.

John Marshall.

Many years ago I had poor memory. I was persuaded by all nurses to wear glasses. One day my father bought me glasses. I tried in vain not to wear them, but I had to. Finally I got poorer memory and became sick. I told my father the glasses made me sick. The very minute my father broke them. My teacher taught me how to palm and swing. Soon my memory got to be good. I could see as good as any child in the room. This proves palming and swinging is good for memory and imagination.

Edward Yonan.

THE DREAM KING
By *George* M. Guild

Georgie was eight years old. He had never seen the Dream King. His mother had promised to tell him all he wanted to know if for one day he did not lose his temper or cry when told to wear his large, heavy spectacles that hurt his nose and made his eyes pain.

One day he succeeded. While his mother sat in her rocking-chair she had a hard time to keep awake. Georgie spoke to her several times, but she did not hear him. While he sat there fretting, he was surprised to see a nice young man, about his own height, walk into the room, take him by the hand, and lead him away. He told him that he was taking him to see the Dream King.

Georgie jumped up and down with pleasure and laughed all the way. Pretty soon they came to Shadowland, where everything was more or less in the shadow, because the only light that Georgie could see was the light of the moon. Every once in a while the person who was conducting him would disappear and someone else would take his place. Sometimes it was a woman, and finally it was a little, old man. He told Georgie that he was the sand-man, who went around throwing sand into little boys' eyes to make them go to sleep. But he did not throw sand into Georgie's eyes. Instead, he kept him awake telling him such queer things that Georgie quite enjoyed his companionship.

Georgie was sorry to see him go when a blue fairy took his place. She led him to a large open space in a forest, where the grass was cut thin, and on which hundreds and thousands of fairies were having a good time. They were playing a very curious game. They had placed an elderly man on a throne and they crowned him with flowers. He held in his hand a short stick which they told Georgie was the wand of the Dream King. When he waved the wand, touched you, and you wished for something, your wish was granted, first in a dream and then later in reality. Immediately Georgie wished that his eyes would not hurt him any more, and that he could see perfectly without glasses.

The Dream King touched him with his wand and at once Georgie began to sway his body from side to side. His glasses fell from his face, and he found that he could see better without them than he had ever seen with them. It seemed to him as though everything were moving in the opposite direction. The trees, the fairies, and even the Dream King, were all moving in time with his movement. He remembered the faces of the boys that he had played with; he remembered his mother's face-his mother's face which was so tender, kind, and loving.

He became very much interested in what the Dream King was doing. People from various places were bringing all sorts of queer creatures to the Dream King. One fairy brought him a little duck, a few days old, which was about the ugliest duck that Georgie had ever seen. The Dream King touched it with his wand, and at once it became a beautiful swan. He saw caterpillars, ugly, sticky things. The Dream King touched them in turn with his wand, and they became beautiful moths or butterflies which flew away to where flowers were blooming. He saw children who were cripples and were unable to walk without crutches, but after the Dream King touched them with his wand, they threw away their crutches and left his presence laughing, singing, and dancing. It was astonishing to see all the animals, people and bugs who were relieved of all kinds of imperfections and obtain perfect health.

There was a beautiful fairy standing near Georgie. He spoke to her and asked her why she looked so sad. She told him that she had no soul and could never obtain one unless some mortal fell in love with her. Right away Georgie fell in love with her because she was so beautiful and nice. She threw her arms around his neck and kissed him, and thanked him for what he had done because now she had a soul and could be like real people.

Georgie was so pleased that he quickly took her to his mother. When he entered the room where he had left her, he found her still sleeping. He climbed up into her lap, threw his arms around her neck and kissed her. She woke and said: "Oh, Georgie, I had such a curious dream. For a long time I have been worried about you, because you had to wear glasses, but in my dream I imagined that the Dream King had cured you. Now that I am awake, I feel that your eyes are troubling you and that you will still have to wear awful glasses."

Georgie laughed and said: "Oh, no. I never will have to wear my glasses again, because the Dream King has cured me. Although it was only a dream, I believe it will come true when you have the fairies to help you." His mother said to him, "But you have no fairy to help you."

"Oh, yes I have," he answered, and introduced his fairy to her.

The mother looked so bewildered that he was quite sure she did not see the fairy. "Never mind, mother, I know that you do not see my fairy. I dreamed that I found her, and she is so sweet and lovable that I shall always dream, imagine, or believe that I have her. She has promised to help me keep up the swing, and to remember or imagine perfect sight all the time. I love her very much, I will always love her, and I know that I will never strain, stare, or hurt my eyes again."

Announcements

Correction

Dr. J. L. MacKinnon, a student of Dr. Bates, is using his method successfully in Kingston, New York. The June issue of "Better Eyesight" removed him from Kingston, New Jersey, in error.

Suggestions to Patients

By Emily C. Lierman

THE USE OF THE SNELLEN TEST CARD

1 – Every home should have a test card.

2 – It is best to place the card permanently on the wall in a good light.

3 – Each member of the family or household should read the card every day.

4 – It takes only a minute to test the sight with the card. If you spend five minutes in the morning practicing with the card, it will be a great help during the day.

5 – Place yourself ten feet from the card and read as far as you can without effort or strain. Over each line of letters are small figures indicating the distance. Over the big C at the top is the figure 200. The big C, therefore, should be read at a distance of 200 feet.

6 – If you can only see to the fifth line, notice that the last letter on that line is a R. Now close your eyes, cover them with the palms of the hands and remember the R. If you will remember that the left side is straight, the right side partly curved and the bottom open, you will get a good mental picture of the R with your eyes closed. This mental picture will help you to see the letter directly underneath the R, which is a T.

7 – Shifting is good to stop the stare. If you stare at the letter T, you will notice that all the letters on that line begin to blur. It is beneficial to close your eyes quickly after you see the T, open them, and shift to the first figure on that line, which is a 3. Then close your eyes and remember the 3. You will become able to read all the letters on that line by closing your eyes for each letter.

8 – Keep a record of each test in order to note your progress from day to day.

DARK GLASSES

Many people when they go from a dark room out into the bright sunlight are dazzled, and feel uncomfortable. If they put on dark glasses for a time, the eyes are more comfortable, and they are tempted to wear such glasses most of the time.

It is a common practice that when a patient goes to an eye doctor, and complains of the discomfort of the strong light of the sun, the doctor will recommend dark glasses, which are usually comfortable in the beginning. Later on, however, the eyes become accustomed to wearing dark glasses, and will feel uncomfortable when the light is good. They are practically in the same condition as they were when they first put them on.

Miners, who work underground who seldom see the daylight at all, always have diseased eyes. There are some diseases which cannot be cured without exposing the eyes to the light of the sun. No matter how strong it may be, while it may prove temporarily uncomfortable, the sun has never produced a permanent injury.

Many people purchase dark glasses along with their other vacation necessities, because they are afraid that the reflection of the sun on the water will harm their eyes. Others have found that by becoming accustomed to the strong light of the sun, their vision was materially improved, but by wearing glasses to protect their eyes, their vision always failed. The proper thing to do is to become used to the sun at all times and in all places. **The eyes need sunlight**. If they do not get it they become weak.

One of the best treatments is to focus the strong light of the sun on the white part of the eye with the aid of a burning glass (sunglass), which is kept moving from side to side to prevent the discomfort of the heat, while the patient is looking far down. In many cases treatment has accomplished in a few minutes a complete cure of sensitiveness to light.

QUESTIONS AND ANSWERS

Q- I have understood that if glasses are not worn, the sight becomes worse.
A - After wearing glasses and then removing them, the vision is always worse than if they had never been worn.

Q- When people remove their glasses, I notice their eyes look dull and expressionless.
A- It is due to the fact that wearing glasses has increased the stare.

Q- It is said that defective vision is due to a change in the shape of the eyeball. Does a cure by the Bates Method affect the shape of the eyeball?
A- When a person is cured by the Bates Method the eyes become normal and the expression is one of relaxation or rest without any strain. When the eyes are cured, the eyeball becomes normal in shape and is neither too long nor too short.

Q – Is it better for a myopic person to suffer inconvenience by not seeing at a distance without glasses, than to have them for special occasions?
A – When a myopic person desires to be cured without glasses, it is absolutely necessary to discard glasses permanently, and never to wear them even for emergencies.
(Some Modern Natural Vision Improvement teachers allow the patient to wear reduced, weaker eyeglass lenses if necessary for driving and other activities requiring safety. Even reduced lenses block vision improvement but not as much as strong lenses.)

SCHOOL NMBER

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

August, 1925

FEAR

Near-sighted people have frequently been told that it is necessary for them to wear glasses constantly, to prevent their eyes from becoming worse. They are afraid that this statement may be true, and one cannot blame them for hesitating to leave their glasses off permanently.

One of my patients stated that she suffered very much from headaches. They were so severe that they made her ill, and confined her to her bed at least once a week. While wearing her glasses, she still was in pain, but was afraid, if she left them off, the headaches would become worse. By discarding her glasses, practicing **palming, swinging,** and the **memory of perfect sight,** her eyes and head improved immediately. When she resumed her glasses again, she at once became uncomfortable, and the pain returned. She decided to leave them off permanently, and her headaches disappeared.

Some years ago an optician consulted me about his **headaches**. When I examined his glasses, I found that they were plane window glass. He said that when he wore them his headaches were better, but his wife confided to me that this was not true. He was troubled more when he wore them. He was suffering from fear.

I saw him again a year later and learned that he had permanently discarded his glasses, at my suggestion, during all that time, and was free of headaches.

It has been a habit with me, when patients who suffer from fear of the consequences that might happen if they did not wear their glasses, to have them demonstrate the facts. When the truth is known, fear is abolished. It is very easy in most cases to teach patients some of the causes of headaches.

SCHOOL CHILDREN

By Dr. W. H. Bates, M.D.

The August number of "Better Eyesight" each year is devoted to the problem of the Imperfect Sight of School Children. Every year we have evidence that when most children enter school, their vision is normal. After a few years, most of them acquire imperfect sight. The average is about eighty percent (80%). Of these nearly all have acquired farsightedness and astigmatism. At the age of ten or twelve near-sightedness appears, and far-sighted children become less. It is a truth that should be emphasized, that nearly all of the cases of imperfect sight in school children are acquired after they enter school.

For more than a hundred years, eye doctors have believed that far-sightedness is congenital, or is present at birth. They did not believe that it could be acquired. A plausible explanation suggests that young children are more accustomed to using their eyes for distant vision without effort, and for this reason their distant vision is good. However, when they enter school and begin to study from books, they begin to strain at the near point. I have repeatedly published that a strain to see at the near point always produces far-sightedness, or hypermetropia. It is not many years before the distant vision becomes imperfect from the strain. Then, when the child makes an effort to see at the distance in order to correct its imperfect distant vision, near-sightedness, or myopia, is produced.

It is difficult to explain why some children strain to see at the near point or at the distance, when others do not strain at all. I have had children consciously strain and lower their vision either at the distance or at the near point, or, in other words, demonstrate that the strain does not improve their sight. They were unable to tell me why they did it. However, some children profited by their experience and told me that the reason they did not strain was because it lowered their vision. In most cases where the children became conscious that the strain lowered their vision, they told me that the reason they kept on straining was because they did not know what else to do. There are a number of teachers who have suggested to their pupils that, since strain causes imperfect sight, why not try resting the eyes, which many of them did with benefit.

However, there is a cause of eyestrain in school children which has not been sufficiently emphasized. Children and adults imitate others, consciously or unconsciously. For example, when one person yawns, many others, consciously or unconsciously, yawn also. If in a company of people a feeling of pleasure prevails, each newcomer consciously or unconsciously assumes the same state of mind; but when an objectionable person, who is disagreeable, enters the room, a general feeling of discomfort among those present is felt.

Mothers, fathers, or other relatives affect the minds and the nerves of their children or of other people's children. If one or both parents are wearing glasses for the relief of eyestrain, the children who associate with them a good deal, acquire eyestrain and their vision becomes imperfect. In one case I remember where the mother was suffering from eyestrain, accompanied by a high degree of near-sightedness in one eye. She was exceedingly nervous. Her vision was so much improved by treatment that she was encouraged to bring her daughter, who was wearing glasses for near-sightedness. The child was only ten years old, with a history of imperfect sight, which came on gradually and required strong glasses for its relief. With each eye separately or with both eyes, the vision was 10/200. I had her palm for about fifteen minutes. Immediately her vision improved to 10/10, or normal vision. Then I went out of the room and asked the mother to test the little girl's sight while I was gone. When I returned, the child's vision had relapsed to 10/200. I talked to the mother very strongly about the facts, and told her that near-sightedness was contagious. I impressed upon her mind as strongly as I knew how, that the child would recover by reading the Snellen test card, provided the mother was not in the same room. The child was not to wear her glasses again.

Some weeks later the mother reported that her daughter had obtained normal vision. She was tested daily by a relative with normal sight who did not wear glasses. One day the mother visited me at my office and was very much depressed. She said that her daughter had had a relapse. I asked her:

"Who tested her eyes?"

She answered, "I did."

I recommended her never to speak to her daughter about her eyes, and that all the testing should be done by somebody else. This happened five years ago, and I believe the child still has normal eyes and normal sight without glasses.

I have examined the eyes of a great many school children during the past thirty years. In all classes where the teachers had imperfect sight, or wore glasses, or suffered from eyestrain, a much larger percentage of near-sightedness was found than in those classes where the vision of the teachers was normal, or no eyestrain was present. This fact suggests that teachers should learn how to have normal sight without glasses.

Some of the teachers who were familiar with my methods of curing imperfect sight without glasses, taught the children how to **palm** and rest their eyes frequently during the day. The children were also taught how to **avoid the stare by swaying their bodies, their heads and eyes from side to side, alternately closing their eyes, remembering some letter perfectly, and then flashing the Snellen test card**. The teachers also taught the children the value of **blinking the eyes frequently**.

One teacher helped her pupils very much by having them write compositions on Palming, Swinging, and other methods for improving the sight. Many children were very much impressed by the value of relaxation, and encouraged other children, their parents, friends or neighbors to benefit their eyes in the same way.

Most teachers found that the treatment of imperfect sight improved not only the vision, but also increased the mental efficiency of their charges. It was very remarkable how the children's scholarship improved. Many of them with imperfect sight suffered from headaches and loss of memory. The relaxation exercises were of the greatest benefit in these cases. Some were found whose nerves were so sensitive that, although their scholarship was good, they failed to pass their examinations. In such cases a perfect memory or imagination of a letter or some other object was a complete relief, and their examinations became satisfactory. It was also interesting to learn that ill-behaved or mischievous pupils improved in their general conduct.

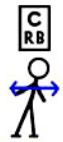
Many children suffer so much from headaches and other troubles when attending school, that they acquire a great dislike for their studies and prefer to leave school at an early age and go to work.

I have always had a great deal of sympathy for teachers. They certainly have a great deal to do. So many children are mischievous, and seem to take a cruel pride in making the work of their teachers more difficult. In this connection, I wish to call attention to the wonderful work of Ms. Hansen of Chicago, Ill., who has solved the problem, and has published an article in this number, telling how she did it.



Palm and remember, imagine a letter clear and shift on it.
Shift on any pleasant object in the mind and remember, imagine it clear.

Sway side to side in front of the eyechart, shift on a letter, remember it perfectly eyes open, then closed, still swaying.
Open the eyes again and flash the letter - shift on it for a fraction of a second, see it clear, then close the eyes. Repeat.
Swaying, flashing, shifting and closing the eyes prevents staring, strain, blur.



Sway
Move the body left and right and shift on a letter on the eyechart. Blink.



Natural Eyesight Improvement, clear eyesight improves the memory, imagination, relaxation, left and right brain hemisphere function, integration, all functions of the brain, personality. Children's school grades improve.

This article was written for the purpose of encouraging teachers to practice relaxation methods, which always improve the vision and prevent children from acquiring imperfect sight. If the teachers should, in the presence of their pupils, practice reading the Snellen test card and other relaxation exercises, no doctor and no member of the Board of Education could object.

STORIES FROM THE CLINIC

No. 66: School children

By Emily C. Lierman



During the last year many school children have been benefited and cured of their imperfect sight at our clinic. Some had been wearing glasses, but a larger number had not worn them. The latter were cured quickly and in a few cases needed only one treatment. The records show that all those who were wearing glasses, obtained better vision without them. There were no exceptions. For the benefit of those who are interested in eye clinic work, I shall tell about a number of high school boys, all from the same school, who came for treatment.

A director of a Boys' Physical Training Department in one of our largest high schools in New York City heard of our clinic. About nine-tenths of the boys under his care were wearing glasses. Others struggled along without them, even though they had imperfect sight. The boys were between the ages of 13 and 17 years.

Late in the fall of 1924 one of them, by the name of Arthur, came with a note from the physical director. We accepted him gladly and he began treatment under the supervision of Miss Mildred Shepard, my assistant. His vision on the first day was 20/100 with each eye. It was noticed that his eyes were partly closed as he looked at the test card. When placed in a bright light, he had difficulty in keeping them open, and his forehead was a mass of wrinkles. Anyone observing him for the first time would have thought that Arthur never smiled. I thought so myself, as he appeared week after week, during the winter months and through the spring. Recently I treated him and helped him to read 10/10 on a strange card. I also received a shock. He smiled. By closing his eyes to rest them, and flashing each letter, he read 10/15 without a mistake. I wanted to stop his treatment then, because there were about twenty others waiting. Arthur begged, however, for one more chance. We gave him the sun treatment and then he returned to the test card and read 10/10. It was at that time I found that Arthur could really smile. **Palming, blinking and swinging, with sun treatment, cured him.**

The next case was William, whose vision was 10/200 with each eye. I do believe that William practiced faithfully at home and in other places, but he is just one of many cases of myopia who are slow in obtaining a cure. He is not discouraged, and knows that he will eventually have normal vision if he keeps on. His sight improved to 10/40, or one-fourth of the normal, in six months. The physical director wrote to me again, asking if he might send more of his boys who were anxious to get rid of their glasses. We have not the room nor the time to take care of even a small percentage of those who are crying out for help. I read the letter to Dr.

Bates. He did not answer right away, but just looked at me. Then he said: "Now, you know how much I love school children, and you also know how much I disapprove of glasses." I said: "All right, that settles it." My answer was: "Send them along. There's no limit to the number."

Twenty or more came in response to my letter, and all of them were nice boys. How glad I was that I wrote what I did. After they had received their first treatment, and I had spent more than three hours with them, Dr. Bates appeared at my room to ask if I were tired. His voice sounded most sympathetic. But I was perfectly relaxed, and not a bit tired. As I instructed the boys to palm and swing, I practiced with them. As their vision improved, so did my nerves become more relaxed. I was happy, but not tired. Treating the boys was not easy, but every one of them did as they were told, which made the task lighter.

Samuel had worn glasses about two years. He had a great deal of pain in his eyes and his sight was getting worse. The optician who had fitted him said he would have to wear them the rest of his life. His vision without glasses was 10/200 with his right eye and 10/100 with the left. **He stared continuously**, which, I believe, was the main cause of his pain. The first thing I did was to teach him how to **blink**. This relieved his pain. **Palming** and the **swing** improved his vision in both eyes to 10/50 on his first visit. Every time he was treated, his vision improved for the test card. At times he did not do so well, and he would apologize.

When I became better acquainted with Samuel he said: "You see. Mother is not forced to do it, but she peddles things, and helps my father to earn more money. In this way Mother will see that I can go to college." I told him that he should be very proud of such a wonderful mother. I look up to her with great respect and honor, because of her courage and sacrifice. Heaven bless such mothers! Samuel had to have four months' treatment before he could read with normal vision, but he was determined, and won out.

Abraham had symptoms of **St. Vitus' dance**, with a great amount of pain in both eyes. His vision was: right 10/15 and left 10/10. He had no organic disease of his eyes but the ophthalmoscope showed eyestrain. After three treatments the symptoms of St. Vitus' dance had entirely disappeared and he had no more pain. His vision also became normal, 10/10.

Morris hated glasses and wore them but a short time. He had normal vision in his right eye, but only perception of light in the left. I held the test card up close to his left eye, and told him to cover the right one. By **alternately blinking** and **flashing the white of the card,** he became able to see the letters as black spots. He was instructed to **practice with the test card every day**, **seeing the letters move opposite to the movement of his body**. While doing this he was to keep his right eye covered. After his third treatment he read the bottom line of the test card at three feet, or 3/10, with the left eye. He had been told by many doctors that nothing could be done for the left eye, because it was incurably blind. Dr. Bates examined him with the ophthalmoscope and said the trouble was called **amblyopia exanopsia, or blindness from effort**. Dr, Bates stated that such cases are usually pronounced incurable. Morris believes that with constant practice, there is no reason why he should not obtain normal vision in his left eye.

Benjamin had never worn glasses. For a long time the constant pain in his eyes made it difficult for him to study. The ophthalmoscope revealed only eyestrain. Right vision, 10/10: left vision, 10/20. After palming a short while and with the aid of the swing, the vision in his left eye improved to the normal 10/10. He had four treatments altogether. On his last visit I helped him to read 20/10 right eye and 20/20 left. He was instructed to practice with very fine print daily, and this, I believe, had most to do with relieving his pain permanently. He was more than grateful for the relief he obtained. He had a little brother, named Joseph, who was wearing glasses. Timidly he asked me would I help him, too. "Surely," I said. "Bring him along next time."

Joseph had been wearing glasses for three years, but his sight was not poor without them. Without glasses his vision was 10/15 with each eye. **Blinking while he was swaying improved his vision to the normal in five minutes' time**. He promised not to put his glasses on again, and came to me for four more treatments. These were really unnecessary because his sight stayed normal, 10/10. If our method had been in general use in the schools, this boy and others would not have been forced to wear glasses.

Hyman wore glasses four years for **progressive myopia**. His vision with his right eye was 10/100 and 10/70 with the left. After his first treatment he was able to read 10/50 with each eye. Constant daily practice, by **palming** and **improving his memory**, brought his vision to the normal, 10/10. This boy required only five treatments.

Charles wore glasses about four years, although he had no organic trouble, just eyestrain. His vision was 10/30 with each eye. He was told to close his eyes, and while palming to remember a small square printed on the test card. He was directed not to remember all parts at once, but to **remember or imagine one part best at a time**. His vision then improved to the normal, or 10/10. **Sun treatment** was also given him. Charles was cured in one visit.

Harry had worn glasses one year. His vision was 10/30 with the right eye and 10/70 with the left. Regular daily practice and the sun treatment improved his vision to 10/10 in three visits. Vows he will never wear glasses again.

Tobie was a fine, lovable chap a trifle younger than the rest. He was not so sure that he liked to see his name in print. I had mentioned the fact to all my wonderful boys, that I was going to write about their cases. He did not object very strongly when he realized that it would be a help to others. His vision was 10/50 with the right eye and 10/70 with the left. Palming and sun treatment improved his sight to normal, after three treatments. The rest of the boys were cured mostly with one treatment. It was only a matter of teaching them how to use their eyes right.

MUSICAL APPRECIATION

By Elisabeth Hansen

Another year has passed, and Dr. Bates' system of relaxation for the eyes, mind and nerves has again been most successfully tried out. Every Monday morning the new Victrola record is used as a lesson for open discussion. The composer and artist is the very best, as we wish to instill in the children's minds an appreciation of the beauty, rhythm and style of the music. It is played all through the week, four times daily for five-minute periods.

Memory and Imagination Activity with Music

Before starting the record we devote two minutes to one of the various relaxation exercises, either the **long swing, swaying from side to side, the elliptical or variable swing**. Next comes the record, and the children, **while-palming, are to interpret it**. This is done sometimes by story, sometimes, as in an orchestral or string quartet number, they choose one instrument, and follow that through to the end. It is fine to ask them what feelings are aroused, such as gayety, calm, sorrow, noisy street scenes or

bravery. They love to do this. Then again the music is only an accompaniment for **imaginative stories**.

A conservatory in the park was visited by the whole room one day, and they **remembered** not only the gorgeous color displays, but the temperatures, and what grew best in those places. After their palming lesson, I asked them to write their **memory pictures**, and it made an excellent composition. What they wrote after palming, on how their pet dogs met them, and played with them made interesting stories.

Imagining the clouds as hills of snow, a sled, two boys or girls, usually in bright-colored sweaters and caps, made much fun. They enjoyed counting the little black "o" - remembering their favorite flower blossoms, but, best of all, to watch the fairies dance and play in the woods. (George Guild's Fairy Stories must be read to them every month. It would not do to miss that.)

What you have just read will give you an idea how we vary the palming period. When the music is finished, the children come back very happy, and once or twice a day they read silently the smallest letters of the **Snellen test card** seen from their seats, **both eyes and each eye separately**. The card serves two purposes: To keep them from becoming myopic, and also to teach them to print Roman type letters.

It is interesting to see how well and orderly they express themselves in their written composition work, their oral expression, and in the drawing lesson. It is pleasant to see them first look at the flower study or model, close their eyes, and paint as though it were the finest thing in the world to do.

From an educational standpoint, Dr. Bates' system is far-reaching, and can't be bettered in the training of memory and imagination. In silent reading, geography and history, where imagination plays such an important part, it works wonders.

THE MAGIC FROG

By George M. Guild

Once upon a time, a long, long time ago, there lived a young frog who was very fond of travel and adventure. He became tired of sitting in one mud hole, where the only friends he had were other frogs. All the time he was on the move, trying to dodge the ducks and geese who were after him to serve as part of their dinner. He kept moving from one small pond to another, until he came to where there was no pond, where there was no mud, and no ducks or geese to dodge. The trees were high and grew closely together, so that the light of the sun was largely cut off. Much to his surprise, he found an open space all covered with nice, short, soft grass. When the sun went down, the place filled up with fairies. He was very grateful to them, because they did not try to steal his legs, for, as you know, some people are very fond of frogs' legs. When cooked in a hot pan with cracker dust and butter, they are delicious.

The fairies were surprised to see the frog and crowded around him to see him better. He was just as anxious to see them, and so he hopped on the top of the highest toad-stool he could find, and from this elevation he could see thousands and thousands of fairies, all dancing, laughing, and having a good time. The sight of so many fairies in all their bright colors dazzled him so that he was compelled to continually blink his eyes to avoid the glare.

The Fairy Queen was pleased with him, touched him with her magic wand, and transformed him into a Fairy Prince. He wore magnificent clothes, but looked queer with his long legs, short arms, and large, bulging black eyes. She gave him a magic white horse to ride. He soon mounted him with a high jump and gave a loud croak. The horse sprang forward and they were off. The fairies cheered and waved their hands. The Prince waved his hat, and they were soon out of sight of the fairies.

In a short time they came to a small house. The Prince got off his steed, tied him to a tree, walked up to the front door, and knocked. No answer. He knocked again and again, without success. Then he opened the door and walked in. Lying on a couch, fast asleep, was a young girl with her eyes covered with bandages. She was suffering great pain in her eyes. Much of the time she cried and screamed in her agony. The Prince was sorry for her and spoke to her kindly and gently. He told her that he was a Fairy Prince who had come to help her. This made her laugh and clap her hands for joy.

"Oh, I must see you," she said. "I have always wanted to see a Fairy Prince."

With her permission he removed the bandages with great care. He noted that the eyelids were enormously swollen, the eyeballs very red, and the pupils covered with thick white scars. She was quite blind. When she found that she could not see her Fairy Prince, she took his hand, pressed it against her sore, blind eyes, and began to weep softly.

She said, "You can cure me. Please do it." Then he lifted her in his arms, mounted his beautiful fleet, white horse, and galloped away from the dark woods out into the open fields where the sun shone at its brightest. She complained that the sun hurt her eyes, and pressed her face against his breast to protect her eyes from the glare of the sun. He advised her to hold her face up so that the strong light of the sun could shine on her closed eyelids. At first this was painful, but very soon the strong light felt more and more comfortable, and then the miracle happened. **The swollen lids became smaller, the redness of the eyeballs disappeared**, and still more **wonderful, the white cloud over her pupils melted away and she could see**. Her joy was unbounded.

"Oh, how handsome you are!" she said. "But why do you blink your eyes so much, just like a frog?"

"That may be," he answered. "I have been told that a long while ago one of my grandfathers was a frog."

"I don't care if you were a frog, "she replied. "If you let me love you, when I grow up I will marry you."

They then rode on until they came to the woods where the fairies were. The Prince took the hand of the little girl and walked up to the Queen of the Fairies. He told her what he had done and that the little girl and he would like to get married after she had grown up.

Someone shouted: "The frog, he would a-wooing go." At once the Fairy Prince disappeared, and all that they could see of him was a frog, sitting on a toadstool, croaking as loud as he knew how.

The Fairy Queen was so indignant that I am quite sure the flames which started from her eyes would have burned up the speaker. She rushed over to the frog, touched him with her wand, and he again became a Fairy Prince. The Queen called out in a loud voice:

"You shall always be a Fairy Prince, and no one can ever change you back to a frog. When your little sweetheart has grown, be sure to bring her back to the fairies on your beautiful white horse."

The little girl ran to the Fairy Prince and threw her arms about his neck; she swayed from side to side, and when she swayed to the right the trees, the world, and all the fairies moved to the left. When she swayed to the left, everything moved to the right, but it made her eyes feel better, and she kept swaying from side to side for a long time.

The Prince and the little girl were very happy together, and in due time they were married and lived happily ever afterwards.

SIX YEARS OF THE BATES METHOD

By M. F. Husted Supt. of Schools,

North Bergen, N. J.

It is very gratifying to learn that Mr. Husted obtained such wonderful results in the prevention of myopia in school children. He has been very enthusiastic about this method during the past six years, and has tested it with great care in a way that is eminently scientific. I believe the evidence he offers to be absolutely true. My experience during the last twenty years substantiates all that Mr. Husted has written – W.H.B.



Early in October, 1919, the North Bergen school nurse, Miss Marion McNamara, tested the sight of all our pupils. A new education was begun, a campaign for "Better Eyesight." In June 1920, a second test was made in order to measure the extent of progress and shows marvelous, practical, and successful results. This new effort in eye-mind education, to prevent and remove strain, adds to the already high educational efficiency of our schools by lessening retardation. *Not only does eye-mind education place no additional burden upon the teachers, but by improving the eyesight, health, disposition and mentality of their pupils, it surely lightens their labors and furnishes an additional means of preventing retardation.*

During the year 1923-24, every class in North Bergen schools, Grades II-VIII, became a conservation of vision class. Each classroom was visited by the Superintendent, and the values of good eyesight were dwelt upon. Pupils with normal sight volunteered to aid those with defective vision. They have engaged in this work with a helpful enthusiasm, and teachers have renewed interest. As this work is a physical training for the education of the eye-mind, teachers were instructed to use some time assigned to Physical Training or Hygiene to guide the below-normal vision pupils to sufficient proper eye practice for curative effects, and those with normal sight to sufficient practice for the prevention of eye defects.

Our records for 1924 show a startling condition of below normal vision among public school students. It also shows the miraculous results of eye-mind education in relieving strain. Of 128 pupils having glasses, 18 were found with normal vision and 111 had vision below 20/20. It is also shown that out of 4,026 pupils without glasses, 1,133 had below normal vision. The total below normal vision was 1,244 out Of 4,155 Pupils.

The final results of our 1924 tests are remarkable for the improvement made, and show the wisdom of this special 1924 procedure and the great value of this wonderful discovery. Of 118 below normal pupils wearing glasses, 89 have improved, and out of 1,072 non-wearing glasses pupils with below normal vision, 693 have improved. Out of a total of 1,190 pupils with below 20/20 vision, 782 have improved. Of those that have improved, 342 have even attained normal vision.

Great care has been taken to make these reports accurate. The tests were all made by two nurses, assisted by the classroom teachers, and the reports were all made under nurse supervision.

Our 1925 records prove the wonderful effects of eye-mind education in relieving strain. Seventy percent of those wearing glasses improved; 87% of those not wearing glasses improved, and 56% of the entire number benefited attained normal vision.

Conclusions

Because of the prevalence of pupils with defective vision, because of its great simplicity, and because retardation in schools furnished one of the teachers' greatest problems, eye-education is one of the great wonders of this age, and may become a boon of hope to the pupil, a boon of efficiency to the teacher, and a boon of mercy to humanity.

BATES METHOD POPULAR WITH TEACHERS

Throughout the past year a group of teachers in one of the city high schools has been much interested in studying the Bates Method. One afternoon each week, from three to four, we have a "Bates class." The number attending has varied, sometimes being as many as fourteen. I feel that the total result has been eminently satisfactory. A great deal of enthusiasm has been aroused and many people helped.

Different individuals have, of course, presented different problems. One woman was beginning to feel that her near vision was blurring. She had never worn glasses. It seemed a very short time-perhaps not more than a month-before her eyes improved so that **she could read diamond type**. At present she is able to see the **microscopic print** in the little Bible.

A man who had worn glasses many years discarded them last December, and says now he has "forgotten how they feel."

Another teacher who took off her glasses two years ago, comes to the class once in a while for a little practice with us when her eyes feel tired.

A certain teacher with three diopters of hyperopia and presbyopia has made great strides. She has a vivid imagination and never-flagging enthusiasm. We both feel that her eyes will be normal some day in the near future.

The teachers who come to the class often look very weary. They always say they feel more rested at the end of the lesson.

Our procedure is the usual one of **palming, swinging, sunning** and working with **the Snellen test card** and **fine print.**

Some of the teachers who understand the method come to help teach the others. A student in the school whom I have trained always assists at the classes, and that makes the handling of the large group much easier.

I am intending to have a similar class next year, and I am sure we are going to accomplish even more.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

SEPTEMBER, 1925

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A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Copyright, 1921, by the Central Fixation Publishing Company

Editor, W. H. BATES, M. D.

Publisher, CENTRAL FIXATION PUBLISHING COMPANY

Vol. X. SEPTEMBER, 1925 No. 3

Perfect Sight article repeated here; see June, 1925

OPTIMISM

Optimism is a great help in obtaining a cure of imperfect sight. About ten years ago a patient was treated for **cataract,** complicated with **glaucoma**. After two weeks of daily treatment, the vision improved very much and the patient became able to travel about the streets without a companion to guide her. Her vision at this time had improved from perception of light to 10/200. After **palming, swinging**, and the **memory of perfect sight**, her vision was still further improved. She was very much encouraged and returned home full of enthusiasm to carry out the treatment to the very best of her ability.

Soon afterwards things did not go well at home. The patient became very much depressed and stopped her daily practice. Her daughter was very enthusiastic, and realized that her mother had been very materially improved and that further treatment would bring about a complete cure. She talked to her mother for half an hour or more and encouraged her to continue with her practice. The patient responded favorably, got busy, and was able to bring back much of the sight which had been lost. She made further improvement every day.

At times the mother was very pessimistic. She was continually complaining that she knew very well that she would never get her sight back. Then the daughter would start in with her optimism.

One bright, sunshiny morning the mother got up, took a card with diamond type printed on one side, and was greatly surprised to read it without any trouble. In three months her distant vision was normal.

IRITIS

By W. H. Bates, M.D.

The colored part of the eye, which is visible by ordinary inspection, is called the iris. When the eyes are blue, the iris is the blue part of the eye. When this is inflamed it causes much suffering and, as a rule, the vision is lowered. Many general diseases cause iritis—rheumatism and syphilis are the most common. There are other causes, injuries and sympathetic ophthalmia.

When a foreign body becomes located inside of the eyeball of a healthy eye, more or less inflammation follows, with complete blindness in many cases. Unfortunately, the trouble does not always stop with the loss of vision in one eye. The irritation of the foreign body in one eye may have an effect upon the other. Iritis may then develop and lead to serious consequences. It is said to be sympathetic, meaning that the healthy eye sympathizes with the diseased or blind eye and also becomes diseased. Sympathetic iritis is very treacherous. Cases have been described which became blind from sympathetic ophthalmia within twenty-four hours. The only treatment that is at all efficacious is the removal of the eye containing the foreign body. Sometimes the operation is delayed too long, and after the healthy eye has become inflamed. In such cases removal of the eye with the foreign body may not be beneficial.

Some years ago a lady wrote to me in regard to her brother. She said that at the age of sixteen a bullet from an air gun had entered the inside of the left eye. He was taken at once to the hospital, where he received proper treatment. The surgeon in charge recommended that the eyeball be removed at once. The family refused to have this done so soon and put off the operation as long as they could. But things kept getting worse and worse, and the good eye became affected. The family at once consented to the removal of the eye, but it seemed to be too late. Although he was kept in the hospital a considerable time afterwards, receiving the best of treatment, the vision of the good eye declined more or less rapidly until there was very little left.

At the age of thirty-two he visited me at my office. The vision of the right eye was the ability to count fingers at about three feet. He was unable to see any of the letters of the Snellen test card at any distance. With the ophthalmoscope the eyes showed evidence of previous inflammation, but the interior of the eye was so cloudy that I was unable to see the optic nerve with the retinoscope. I think most men who have seen these cases would agree with me, that things were not very promising. The man’s sister told me, however, that they had not given up hope and visited every eye doctor who had been recommended. She said that no one was able to help him. The doctors very positively stated that it was impossible for the eye ever to get any better, and it would most likely become even worse.

As a matter of routine, I tried palming and swinging, but without the slightest benefit. When I asked the patient if he had a good imagination, he replied that he thought he had.

Memory and Imagination

With that I took the Snellen test card and held it at less than a foot from his eyes. I told him that at the top of the card was the letter "C" about three inches in diameter.

"Now," I said, "you don't see that letter 'C,' but if you have any kind of an imagination at all, you can imagine the 'C.' Can you not?"

"Oh, yes, Doctor," he replied, I can imagine a sort of a big 'C,' but it is all blurred."

"Well," I said, "remember a letter 'C' that you have seen years ago, that was perfectly black, and had a white center which was perfectly white. You can remember having seen such a letter, can't you?"

"Oh, yes, I can," said the patient. "I not only can remember a perfect 'C,' but with my eyes closed I can imagine I see it."

"Well now, if you open your eyes, can you imagine you see it perfectly? If not, close your eyes and remember, or imagine it, as well as you can."

He practiced this imagination of a perfect "C" with his eyes closed and with his eyes open, alternately, for quite a while. After an hour had passed he said to me:

"Doctor, I don't see a perfect letter 'C' but I believe that now I can imagine I see it when I look at it with my eyes open."



Look at the C on the eyechart. Remember, imagine and shift on the C in the mind with the eyes open, closed, open. Remember, imagine the C dark black, clear with a bright, perfect, pure white center. Open the eyes. The C on the eyechart will appear and be seen clear. Shift on the C. Then practice on smaller letters and at different distances.

When the "C" was placed more than a foot away, he became able to imagine it just as well as he had up close. With a little more practice he became able to imagine he saw a perfect "C" on a white card at ten feet. Then I asked him:

"Can you see any letters at all below the big 'C'?"

He said: "Yes, I see two smaller spots below it."

Then I told him that the first spot was a letter "R," and that I didn't believe he saw it.

He said: "No, Doctor, I don't see it, but I think I can imagine it."

"Can you imagine it perfectly?"

In a short time he answered, "Yes."

"What is the first letter that comes after the 'R'?"

"I don't see it," he answered, "but I imagine it is a letter 'B'." This was quite correct. In a few days his vision improved to 15/10, or more than normal vision.

He demonstrated that when he imagined perfectly a letter that he knew, his sight was improved until he could see other letters that he did not know. I recalled the ophthalmoscopic examination I had made and that the **whole interior of the eye was filled with opacities which obscured the retina**, and which must have prevented him from having good sight.

The question came up in my mind: In what way did the imagination help his vision? With the ophthalmoscope **I saw the opacities in his eye become less when he imagined a letter perfectly; but, when he imagined a letter imperfectly the opacities reappeared.**

A second patient had **chronic iritis** for several years. At times the pain was so great that a number of operations had been performed, without benefit. The vision of the left eye was normal, while the vision of the right eye was only perception of light. He had **opacities on the front part of the eye, the cornea**, which lowered his vision. The pupil was filled with inflammatory material which obscured the interior of the eye. **On some occasions the eyeball of the right eye would be of stony hardness, while at other times the eyeball would be as soft as mush.** The eyeball was very hard when I first saw him. With the aid of palming, swinging and sun treatment the discomfort became less.

After the failure of the orthodox treatment for chronic iritis, it is of interest to report the great benefit which followed the "Imagination Cure." Like the other patient described above, the imagination of the known letters with his blind eye helped him to see letters that he did not know and the iritis was very much improved.

STORIES FROM THE CLINIC

No. 67; Iritis

By Emily C. Lierman

Iritis is usually very painful, and causes a patient to feel much depressed. A matron of a Working Girls' Home telephoned me to ask if it were possible to treat a young girl under her care. This girl, Florence, was not the usual type one finds at the clinic. We made an exception in her case and admitted her, because she was an orphan. Both her eyes were bloodshot, and she continually tried to shield them from the light. Even ordinary light hurt her. The trouble began in her right eye, and shortly afterwards the left eye became inflamed. This was about a month before I saw her. She was treated by a number of competent eye doctors, who said she had iritis. They gave her drops to put into her eyes, but the pain still continued. Later, one of these doctors advised her to have her teeth and tonsils examined, but instead of doing this, she came to me.

Dr. Bates examined her eyes with the opthalmoscope. Then he asked me to examine them also, and tell him what I saw. When I looked into the pupil of the right eye, I could see the whole area covered with small black spots. It looked very much like the top of a pepper box. Her left eye was also affected, but not so much as the right.

Her pain was so intense that I did not test her vision with the test card immediately. She was told to **palm and remember something pleasant. While palming, she described to me how her room was arranged. She remembered the figured pattern of the draperies on her windows, chairs and bed. She removed her hands and opened her eyes before I told her to, but the pain had disappeared**, and she wanted me to know it.

I placed her in the sun, being sure her eyes were closed. **The strong light was focused on her closed eyelids for a moment only.** She drew away from the light quickly, which is the usual thing for patients to do when they have never had the sun treatment before. I encouraged her to let me try again. She closed her eyes as she was told and I led her into the sunlight once more. She liked it.

Florence was advised to blink often and to palm her eyes early every morning, and during the day when possible. Six days later I

saw her again. The ophthalmoscope showed a decided improvement in the pupil of her right eye. There were only a few small spots on one side of it. The left pupil was entirely clear. Florence said she had been working unusually hard, and also late at night, feared that the vision of her right eye would not be so good. She read 10/15 with the right eye on a strange card, but the letters were not clear. After she had rested her eyes by **palming** and practicing the **sway**, the letters cleared up, and she read 10/10. Her left eye had normal vision. Then I gave her the sun treatment again.

The third time I saw her, which was also her last visit, both eyes had normal sight, and her pain had disappeared entirely.

Later we had another case of iritis, a woman much older than Florence. She was almost insane with pain in both her eyes. I could not do anything with her for an hour or more because of her extreme nervousness. I placed the palm of my right hand over her closed eyes, as she leaned her head against me. Fortunately, she had her little girl, Betty, with her. While I palmed the poor mother's eyes, I held a conversation with Betty, solely for the benefit of her mother.

Betty was telling me how her mother suffered all day long, and at night she had walked the floor because she could not sleep with the pain. Mother love is one of the greatest things in the world. I could feel the mother relax as I held her close. Then she began to talk of Betty's good qualities, and what a help she was. I placed the mother in the sun, still keeping her eyes covered with the palm of my hand. Then I held my sun-glass in position, so that the strong light of the sun would focus directly on her closed eyelids when I removed my hand. Knowing that the strong sunlight had been painful to her during her illness, I did not tell her what I was about to do. I planned to use the sun-glass very quickly, and not give her a chance to strain. I did it successfully, although I feared I would not. Some patients strain so in their agony that it is difficult to use the sun-glass the first time. After the first treatment this patient enjoyed it.

The vision in both eyes was 10/40, but none of the letters were clear. After the use of the sun-glass I encouraged her to palm, while Betty and I started another conversation. The subject was all about her baby brother. Betty would exaggerate once in a while about some of the things brother did. Her mother would correct her, and explain things differently. This was just what I wanted. Anything but the memory of her discomfort would be a help. She was temporarily relieved of her pain when she left the clinic.

Betty was invited to come with her mother at her next treatment. An eye specialist was visiting us at this time, and, after his examination with the ophthalmoscope, he pronounced it a bad case of iritis. He was quite positive that she could not be cured in less than six weeks. My patient came every day for one week, and at the end of the second week she was entirely well. During the time that her pain was being relieved her vision also improved. **The only methods I used** were **sun treatment, palming**, and **perfect memory.**

I did not realize how great a help Betty was during her mother's treatment, but after her mother was cured I found out. When patients suffer intensely I seem to feel it. I unconsciously lower my voice, and speak as softly as I can. I believe that we all respond to kindness, and this we need most of all when we are ill. Betty repeated to her mother at home a great deal of what she had heard me say at the clinic. She tried to use the same tone of voice, and smoothed her mother's throbbing forehead. She even did this during the long nights when sleep was an impossibility. Truly, Betty was my assistant in the cure of her mother's eyes.

THE CONGO TREE

By George M. Guild

["The Congo Tree" was written for the benefit of the children. It will help them to obtain relaxation when someone with perfect sight reads it aloud slowly, while the children listen with their eyes closed or when palming. The tree receives its name from a river in Africa, which is a very important river, indeed. It is a magic tree very much appreciated by fairies. The flowers that grow on it are very beautiful and their fragrance is so sweet and delicate that not only do the fairies enjoy it, but also everybody else. Children with imperfect sight and sore eyes, and those who suffer from headaches, are cured at once of all their troubles when they carry away some of the flowers from the Congo tree. The leaves are of great value, too. If a child holds one of these leaves to his ear, the leaf will talk to him in a language that he can understand. It will tell the child how to be happy and enjoy perfect sight without glasses.]

And now the merry jingle
Of fairies dancing single;
Watch them come and watch them go,
Bowing high and bowing low,
Always smiling, singing, glad,
With their laughing, never sad.
Happy, happy, they will be
When they see the Congo tree.
They will climb up to the top,
Swinging, swaying, never stop,
As they move, the earth goes round
With the sky, and with the ground.
Ev'ry leaf upon this tree
Knows a lot of how to see.
This Wonder Tree has a heart
Full of love in ev'ry part.
A tall, heavy tree, all right,
Its top seems out of sight.
The Congo tree is hailing,
To all whose sight is failing,
"Let me help you to a cure,
Come quickly, while it is sure."
Georgie Fairbanks came to see
All about the Congo tree;

It might cure his eyes so sore
Of their pain forevermore.
Without glasses he might play
Ev'ry night as well as day.
The fairies can, they so kind,
Cure his eyes, a long time blind.
The fairies came, took his hand,
Led him forth, a smiling band.

The Congo tree was weeping,
Awake, and yet 'twas sleeping
While Georgie had a queer dream,
Things were not as they might seem.
Blind he was, and yet could see.
Strange, how could that wonder be?
When his eyes were closed tight
All things were as black as night.
He could count up to seven,
Add four, which makes eleven.
The Congo tree sways much more,
A hundred thousand, add four.
The tears it shed made it dry-
Many quarts from each eye.
Wake up, Georgie, do your best,
Shift and swing after your rest.
No more glasses, no more pain,
The Congo tree once again
Is ready to help your eyes.
Hurry, for fast the time flies.
Now it did not shed a tear,
Neither did it have a fear.
Ev'ry leaf and branch could see
All the fairies in their glee.
The Congo tree was talking,
Each special branch knew something,
Its roots on truth were founded,
And they were deeply grounded.
Georgie woke from his dream
And saw things as they might seem.
The fairies told him to read
Fast or slow with some speed;
Also he should often blink,
And as fast as he could think.
Remember what he saw best,
Always taking a good rest.
The fairies came and sat down
Cross-legged on the warm ground,
And then they began to sing
"we have a Queen, but no king."
The only man who was there
Was a youth with curly hair.
While his eyes were on the Queen
A fairy crept close unseen,
Cut away one of his curls,
Decked it with some fine pearls,
Then threw it all in the air,
"A trophy to the most fair."
What a scramble, what a fight
Before 'twas won and held tight!
By a fairy, meek and mild,
But full of fun as a child.
She looked round for her knight,
But he had gone from their sight.
Only Georgie saw him go
With the Queen, and not so slow.
He saw him with the Queen fly
Very fast, toward the sky.
Georgie's eyes were now all right,
Seeing fine by day or night.

A HANDY POCKET-SIZE TEST CARD

This small test card measures 3 ½ by 6 ¼ inches. It is a combination of helpful instructions, fine print, and test card. On one side is printed the Snellen Test Card reduced in size. The other is devoted to the fundamentals of treatment, printed in graduated type.

The important, helpful feature of this card is that it can be conveniently carried in a purse or coat pocket. One side of the card improves the near or reading vision, while the other improves the vision for the distance.

Price 10c.

THE EFFECTIVENESS OF RELAXATION

By **May Secor**

Special Teacher of Speech Improvement, New York City Public Schools

STAMMERING, stuttering, lisping, and other speech defects may be considered erroneous speech habits which may be corrected by inculcating new, correct habits of speech. This presents a psychological problem. There is, however, another aspect to the work of speech correction - a physiological aspect. Many cases of speech defect are difficult to correct, because of the physical condition of the pupils. It is considered an important duty of the speech improvement teacher, therefore, to check up physical conditions and to advise parents to have corrected such defects as eyestrain, unhygienic dental conditions, malnutrition, and excessive fatigue.*

(I believe, however, that it is not the province of any teacher, principal, or nurse to advise, urge, or insist upon parents having children operated. Those in charge of children may, with propriety, advise parents to consult physicians regarding their children. In many cases, however, physicians differ among themselves as to the advisability of operating. I believe that the decision should be made by the physicians and parents.)

Many stammerers suffer from eye-strain. For years I urged the patients of such children to consult oculists - any oculists of good standing. They did so, and many cases returned with glasses; however, many of these children who used glasses continued to suffer from eyestrain. Upon returning to the oculist they were usually instructed to continue wearing their glasses until they "became accustomed to them." In many cases eyestrain continued, and the correction of stammering was still impeded. I was deeply concerned about the apparent impossibility of eliminating eye-strain.

Finally a friend placed in my hand Dr. Bates' book entitled "Perfect Sight Without Glasses." At that time I was wearing bi-focals, and had used artificial lenses for many years.

I read Dr. Bates' book and decided to apply the method to the correction of my own visual defects.

On March 15, 1923, I removed my bifocals. I followed the Bates Method carefully, hopefully, and persistently and have never used glasses since. My near vision and distant vision are excellent and I enjoy great "eye comfort." I have come into contact with many other men and women who have attained normal vision without glasses by means of the Bates method, after having suffered along with eye-glasses and eyestrain for years.

Convinced of the efficacy of the Bates Method, I became a pupil of Dr. Bates and learned the **secret of relaxation**. I learned how to **relax more completely**, and how to help others relax. I began to realize the value of relaxation in education. I made relaxation the keynote of my work in speech correction, and there resulted a harmony that was most helpful to my pupils. It created a pleasant, healthful atmosphere, which enabled pupils to acquire more readily the desired, correct habits of speech.

To the stammerer, especially, **palming, swaying, swinging, sun-treatment**, and **reading the Snellen card** are Godsends.

In April 1925, I began work with the speech defect cases in two new schools. Among these cases were a number who wore glasses, and several of these children were **cross-eyed**. (The term "squint" is frequently misinterpreted.) To induce relaxation and thereby facilitate the formation of new, correct habits of speech I included in my program **palming, swaying with music, swinging,** the **use of memory and imagination**, and **sun treatment**. Early in June 1925, it became apparent that several pupils, who formerly were very noticeably cross-eyed, showed either no defect or a decidedly less acute condition. To verify my observations I photographed these children. I also requested several teachers, and a physician to observe them; they did so, and their findings coincided with mine. The following children were among those who entered my speech improvement groups early in April 1925:

+Case A - Boy, age 14; myopia and strabismus (crossed-eye, called also "squint"); used glasses several years; speech defects, stammering and lisping; known in school as a discipline case. June, 1925 - marked improvement in speech and strabismus entirely corrected.

+Case B - Boy, age 11; myopia and strabismus; used glasses two years; speech defects, stammering, defective phonation, and aphonia. June, 1925 - marked improvement in speech; strabismus much less acute, and entirely relieved at times, when glasses are not used.

+Case C - Boy, age 7; myopia and strabismus; never used glasses; speech defect, lisping. June, 1925 - speech improved; strabismus relieved - occasional relapse when under strain.

+Case D - Girl, age 8; strabismus (but normal vision); wears glasses, constant use; speech defect, lisping. June, 1925 - lisping corrected; when glasses are removed, strabismus is very evident and child sees "two ladies instead of one;" after removing glasses and relaxing a few minutes, strabismus and double vision disappear; subsequent use of glasses causes return of these two defects, which again disappear after the child removes the glasses and relaxes.

In these cases the relief of visual defects was merely a by-product of educational work, conducted on a basis of relaxation. Would it not be well for us to conduct all educational work in this way, and thus help to relieve eyestrain throughout our schools?

Let us consider the problem of the child having visual defects. What method has been used to help him? He has been urged to wear glasses, and if his eye distress or headaches persisted, he has been urged to continue wearing the glasses until he "becomes accustomed to them." Has this method been successful? Reports of the various sight conservation associations indicate that it has not been successful. What new method may we use to eliminate visual defects among school children? I suggest the Bates Method for Relaxation. Let teachers remove their glasses, and palm, sway, and swing. Let physicians and principals urge pupils to remove their glasses and practice these helpful exercises. Let us, as educators, be broad-minded and alert. When one method fails let us try another.

Relaxation occurs in many forms. See: Dynamic Relaxation – Book; The Art of Seeing by Aldous Huxley. Perfect relaxation can be deep as in the alpha, theta and delta brain wave states, hypnosis, meditation or dynamic: the mind, body, eyes can still be relaxed

while more active, energetic. Example: when running a race; the runner is in a perfect state of relaxation, coordination. Mind, body positive, energetic, active but relaxed – no tension, strain. Walking in a relaxed strolling manner. (See Al Pacino walking in the park with his girlfriend in 'The Godfather' movie. Notice how his feet move outward, relaxed, strolling, perfect balance, coordination, character in his walk.)
Working on a science project, mind moving from thought to thought, no tension is dynamic relaxation.
See Better Eyesight Magazine April 1925 – Concentration and Relaxation.

THE STORY OF JOHN

By Mary M. *Campbell*

Most of the books written by eye-doctors state that holding the book close is very bad for the eyes. It is also advised that children should read in a good light without leaning over. It has been a very strong belief that when the child leans over to read, the blood gravitates to the eyes and produces imperfect sight. Bending the head/neck down for a long time causes stiff neck muscles which place tension on the nerves, blood vessels in the neck, lowering circulation of blood, oxygen, and nerve signals through the neck to the head, brain, ears, eyes. Dizziness, lowered vision can occur.

When my son, John, was less than four years of age we believed that his vision was poor and took him to an oculist for treatment. He at once prescribed very strong glasses, and told us that unless we compelled the child to wear them constantly he would most certainly become blind. With this calamity hanging over us all the time, we went to a great deal of trouble to carry out the doctor's orders.

When John was six years old we placed him in the kindergarten. He was quite contented there and enjoyed all the different exercises. The teacher had a long talk with us about his eyes, and told us that she thought that he had perfect eyes and did not need glasses. We consulted another oculist, who found that his vision for distance was unusually good and that all of the glasses tried made his sight worse. We asked him if there was any danger of the boy going blind if he did not wear glasses. The Doctor smiled and said: "There is nothing the matter with the boy's eyes; he doesn't need glasses."



Boy reading Comic Books by moonlight. Children have improved their vision by reading comic books. Comics are fun, interesting, entertaining, relaxing, improves the memory, imagination of clear mental pictures, gets the eyes moving, shifting.

Then the Doctor tested his ability to read fine print - diamond type. He read it at about three or four inches from his eyes without any trouble. Then he was asked how far off he could read it, and to our surprise he read the fine print almost as well at arm's length as he could up close. The Doctor said that it was very evident that he did not need any glasses for reading. We said, "But, **when John reads a storybook, he always holds it very close to his eyes,** and many people have told us that he did it because he was inclined to be near-sighted, and if we permitted him to do this, he would most certainly lose his ability to see at the distance and would have to wear glasses the rest of his life. When he becomes interested in a storybook he keeps on reading after the light fails. We have seen him **reading after dark, just by the light of the moon."**

The Doctor told us that it was all right for him to read by moonlight as long as he enjoyed it. He said it could not do John any harm. Since reading Dr. Bates' book I have found that he recommends that **young children be encouraged to hold the book as close to their eyes as they desire and to read as much as possible for as long as the child is interested. Near use of the eyes, even when under a strain, always lessens near-sightedness and never causes it.** As long as the child can read without discomfort at the near point, that child should be encouraged to continue reading in this way.
Read without strain at all distances for clear vision at all distances.

One day John came home from school and complained that he had a headache. At once all our old fears returned and we made an appointment with the eye-doctor to see him the next day. The next morning John's headache disappeared, but we took him to the doctor just the same.

The Doctor asked him: "Did you have the headache in school?"
John answered: "No sir."
"When did you get the headache?"
"About an hour after I left school," he answered.
"What were you doing at that time?"
John replied: "I wasn't doing anything."
Then his sister, who was present, spoke up: "I saw you with a lot of other boys eating green apples."

John blushed and admitted the facts. The Doctor told us that what we should do was to consult our family physician if anything went wrong with John before taking him to an eye-specialist. It seemed a queer thing for an eye-specialist to say, but we followed his advice, and whenever anything went wrong with John the old family physician relieved him without glasses.

QUESTIONS AND ANSWERS

Q - a - Does the improvement of the sight by the Bates Method increase the rapidity of reading?
b - Is slow reading conducive to strain?
A - a - The better the letters are seen, the more rapidly they can be read.
b - Yes.

Q - Do weather conditions affect the sight?
A - They often do. When the eyes are normal the weather does not disturb the sight as much as when the sight is defective.

Q - Is cataract curable after an operation?
A - After a cataract operation, the crystalline lens of the eye is removed. A large amount of hypermetropia is manifest. Strong

glasses are usually required to improve the vision. These cases have obtained normal sight for distance and for reading by my method without glasses.

Q - How long is it necessary to follow your method before a cure is effected in a case of astigmatism?
A - These cases require a variable length of time. Some are cured in a few weeks, while others may require many months.

Q - My sight is good, but my vision blurs and the eyes pain. Will glasses relieve this condition?
A - I would not expect glasses to give you any relief.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

OCTOBER, 1925

READ FINE PRINT

Many nearsighted patients can read fine print or diamond type at less than ten inches from their eyes easily, perfectly and quickly, by alternately regarding the Snellen test card at different distances, from three feet up to fifteen feet or further. The vision may be improved, at first temporarily, and later, by repetition, a permanent gain usually follows.

It is a valuable fact to know, that when fine print is read perfectly, the near-sightedness or myopia disappears during this period. It can only be maintained at first for a fraction of a second, and later more continuously.

Nearsighted patients and others, with the help of the fine print can usually demonstrate that staring at a small letter always lowers the vision, and that the same fact is true when regarding distant letters or objects.

With the help of the fine print, the nearsighted patient can also demonstrate that one can remember perfectly only what has been seen perfectly; that one imagines perfectly only what is remembered perfectly, and that perfect sight is only a perfect imagination.

A great many people are very suspicious of the imagination, and feel or believe that things imagined are never true. The more ignorant the patient, the less respect do they have for their imagination, or the imagination of other people. It comes to them as a great shock, with a feeling of discomfort, to discover that the **perfect imagination of a known letter improves the sight for unknown letters of the Snellen test card, and for other objects.**

It is a fact, that one can read fine print perfectly, with perfect relaxation, with great relief to eyestrain, pain, fatigue and discomfort, not only of the eyes, but of all other nerves of the body.

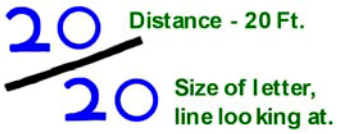
SOME TRUTHS

By W. H. Bates, *M.D.*

Normal sight can always be demonstrated in the normal eye but only under favorable conditions.

It has been generally believed that the normal eye has normal sight continuously. This is an error. The normal eye does not have normal sight all the time. It has always been demonstrated that distance, illumination, size or form of the letters or other objects, and other conditions, affect the vision of the normal eye, or that conditions favorable to some normal eyes are not favorable to all. It is normal for the clarity of vision to fluctuate: Clear, less clear, back to clear. Avoid eyeglasses and the vision will always return to 20/20 and clearer.

DISTANCE



Most normal eyes have normal sight when reading the twenty foot line of a test card at twenty feet. Of these, a smaller number do not have normal sight at thirty feet or further. Some others do not see so well at a nearer distance, fifteen, ten, or five feet. Still others may have normal vision when tested at different distances from twenty feet to five feet, and have imperfect sight at more than twenty feet or nearer than five feet. One patient at times could see the moons of the planet Jupiter with normal sight when the eyes were normal; but at twenty feet the vision was imperfect, and remained imperfect for nearer points, until tested at six inches, when the vision and the eyes were again normal. Vision can be clear, unclear at a variety of different distances.

It is a truth that the distance of the test card when read with normal vision, varied daily, and in some cases within wide limits. These facts suggest that eyes with imperfect sight are improved more satisfactorily when treatment is employed with the test card placed at a distance where the results are best. In myopia, or nearsightedness, with the vision normal at one foot or nearer, improvement in the vision at a greater distance occurs by alternately reading the card at a near point, and a few inches further off.

It is a truth that when the eye is normal when regarding a letter or some other object at two feet or further, it may remain or continue normal for part of a minute, and when regarding a letter or other object at a greater distance, it may remain normal for a fraction of a second. By repetition the flashes of improved vision occur more frequently and last longer.

ILLUMINATION

The illumination is important. As a general rule, vision is normal in the normal eye when the light is good. This rule has many exceptions. It is a truth that some normal eyes may have normal sight only in a dim light. One patient suffered from the annoyance of ordinary daylight to an extreme degree. At twenty feet only some of the larger letters were read without glasses. After the light was lessened by screens, the vision improved to the normal. After sun treatment the patient obtained normal vision in a strong light, as well as in dim light.

ENVIRONMENT

The environment may be favorable or unfavorable. Teachers in the public schools with normal eyes, normal sight without glasses, had more pupils with normal eyes than those teachers with imperfect sight, or who were wearing glasses. Teachers have cured their pupils by treatment without glasses while curing their own eyes at the same time. Many people are great imitators. In schools where the pupils are ambitious to obtain normal sight without glasses, those with imperfect sight are influenced to do likewise: read the **Snellen test card**, practice the **swing** and **rest their eyes frequently by closing them or by palming**.

School children with imperfect sight have been treated and cured. **The cured children often helped or cured the imperfect sight of other members of their family, their neighbors, and their friends.** The facts have been published from time to time in this magazine and elsewhere.

A child aged five had a well marked turning of one eye inward toward the nose. The condition was noticed soon after birth. The mother said that the child was very nervous, and when playing with other children who were also nervous, her eyes were worse; but, when she enjoyed the play, she was not nervous and her eyes were straight. The mother, the child and I played "Puss in the Corner" and made it a very noisy affair. The child screamed with laughter and even the mother smiled. The eyes became straight and remained straight as long as the patient was comfortable. But when the environment of this patient became annoying in any way, the eyes turned. The mother was advised to teach the patient many games which amused or interested her. The object of the treatment was to encourage relaxation.

The cause of death among many **aviators** has been believed to be due to attacks of blindness from eyestrain. Flying through dark clouds, in storms of wind, rain or snow, the environment may quite readily cause imperfect sight from eyestrain. But even with the weather conditions favorable, aviators have testified that attacks of blindness may occur without the victim knowing the cause.

This subject has been more fully discussed in the **N. Y. Medical Journal of September 8, 1917.**

From Better Eyesight Magazine – June, 1925:
If you learn the fundamental principles of perfect sight and will consciously keep them in mind your defective vision will disappear. The following discoveries were made by Dr. Bates and his method is based on them. With it he has cured so-called incurable cases;

1-Many blind people are curable.
2-All errors of refraction are functional, therefore curable.
3-All defective vision is due to strain in some form.
4-Strain is relieved by relaxation.

You can demonstrate to your own satisfaction that strain lowers the vision.
When you stare, you strain. Look fixedly at one object for five seconds or longer. What happens? The object blurs and finally disappears. Also, your eyes are made uncomfortable by this experiment. When you rest your eyes for a few moments the vision is improved and the discomfort relieved.

Have someone with perfect sight demonstrate the fundamental principles contained in Dr. Bates' book, "Perfect Sight Without Glasses." (Original book is; The Cure Of Imperfect Sight By Treatment Without Glasses) If the suggestions and instructions are carried out, and glasses discarded, it is possible to improve the vision without personally consulting a physician.

"Perfect Sight Without Glasses" will be sent C.O.D. on five days' approval. $Price, $5.00.
Central Fixation Publishing Company
383 Madison Avenue, New York City

Dr. Bates Medical Article is placed here;

THE IMPERFECT SIGHT OF THE NORMAL EYE

New York Medical Journal,
Sept. 8, 1917, Page 440-442

BY WILLIAM H. BATES, M.D.

It is generally believed that the normal eye has perfect sight all the time. It has been compared to a perfect machine which is always in good working order. We have been taught that the normal eye is always normal and that the sight is always perfect, no matter what the object regarded may be, whether new, strange, or familiar, whether the light is good or imperfect, or whether the surroundings are pleasant or disagreeable. Even under conditions of nerve strain and bodily disease, the normal eye is expected to have perfect sight always.

A scientific study of the facts has convinced me that this impression so generally believed and taken for granted is far from the truth. After thirty years special study of the refraction of the eye under different conditions I am convinced that the normal eye has imperfect sight most of the time. It is unusual to find persons who can maintain perfect sight continuously longer than a few minutes under the most favorable conditions. Of 20,000 school children studied by me, more than one half had normal eyes with perfect sight. Not one of them had perfect sight in each eye every day. The sight of many of them might be good in the morning and imperfect in the afternoon, while many with imperfect sight in the morning would have frequently perfect sight in the afternoon. Many children with normal eyes would read one Snellen test card with perfect sight, a second and different one with imperfect sight. Many children could read some letters of the alphabet with perfect sight but were unable to distinguish other letters of the same size under similar conditions. The amount or the degree of the imperfect sight varied within wide limits from one third of the normal to one tenth or less. The duration of the imperfect sight of the normal eye was also variable. Under some conditions in the classroom the imperfect sight might continue for only a few minutes or less. Under other conditions, however, a small number of pupils, sometimes all the pupils with normal eyes would have sufficient loss of sight to prevent them from seeing writing on the blackboard for days, weeks, or longer.

Adults with normal eyes do not have perfect sight all the time and what has been said of the normal eyes of school children is also true of them. Age is no exception. Persons over seventy years of age with normal eyes have had attacks of loss of sight variable in degree and duration. The retinoscope always indicated an error of refraction when the sight of the normal eye was imperfect. A man eighty years old with normal eyes and perfect sight had periods of imperfect sight which would last from a few minutes to several hours or longer. Retinoscopy always indicated myopia, sometimes 4D or more. Many adults with normal eyes, as well as children have attacks of color blindness. One patient with normal eyes with perfect sight and perfect color perception in the daytime has always been color blind at night. He had no perception of colors after sunset. It is true that all persons with normal eyes are always less able to distinguish colors correctly during the time that their sight was imperfect. Accidents on railroads, collisions, and other accidents at sea, trolley car accidents, automobiles with their high daily death list, occur usually because the normal eyes of the responsible persons for a time had imperfect sight. Accidents occur when nervous children or adults cross the street. They become confused, blinded, and are struck by automobiles, trolley cars, are injured because, although they had normal eyes, their sight was lost.

CAUSE

There is but one cause of functional imperfect sight, a strain or effort to see. The normal eye with good sight is at rest, but, with imperfect sight, the retinoscope always indicates an error of refraction sufficient to account for the defect in the vision. The strain may be an unconscious strain or it may produce results on the eyes, pain, discomfort, fatigue, of which the individual may be conscious. Quite often the strain may be a conscious effort without the production of discomfort. In all cases of strain it can be demonstrated that the eyes do not see best the point fixed but some other point to one side—the eyes do not see best where they are looking. If one letter or one word of a line is regarded, other letters or words on the same or other lines will be seen as well or better when the eyes are straining or making an effort to see.

The normal eye can be made to strain consciously by making an effort to see a letter or word better than the one regarded. The vision is always lowered for the letter or word regarded and an error of refraction is always produced. Unfamiliar objects cause eye strain and are never seen perfectly. School children with normal eyes who can read with normal sight small letters one quarter of an inch high at ten feet always have trouble in reading strange writing on the blackboard although the letters may be two inches high. Myopia, temporary or permanent, is always produced. Strange maps always produce imperfect sight in the normal eye because they cause a strain or effort to see.

When the eyes are used for near work the normal eye is seldom properly focused. The retinoscope has always demonstrated that when an effort or strain is made to see more clearly at twelve inches, twenty inches, or less than twelve inches, the eyes are always focused at a greater distance with the production of astigmatism, usually temporary, but which has been observed to become permanent. Of course with the eyes not properly focused the vision is defective. School children and adults learning to read, write, draw, sew, or to do mechanical work suffer from defective vision although they have normal eyes. This matter is of such practical importance that the attention of teachers should be called to the facts. Many children lose interest in their school work, become truants, incorrigibles, and chronic sufferers from headaches and other neuroses who might have been relieved by proper treatment. I have described the relief obtained by school children when the teachers understood the problem (1)

Light has a very important effect on the vision of the normal eye. An unexpected strong light always produced defective vision. The vision of all persons is imperfect when the eyes are first exposed to the strong light of the sun or to strong artificial light. Rapid or sudden changes in the intensity of the light always produce defective vision, not always sufficiently great to be manifest to the individual but which can always be demonstrated by careful tests of the vision and by use of the retinoscope. The defective vision produced by strong light may be temporary but it has been observed to continue in many cases for a number of weeks or months. It is never a permanent disability. Persistence in regarding a strong light after a time becomes a benefit. Some persons have become able to look directly at the strong light of the sun without any loss of vision whatever. When the light is dim or at night, the vision of the normal eye is usually good; but, when an effort is made to see, the vision becomes imperfect and the retinoscope indicates always an error of refraction.

Noise is a frequent cause of defective vision of the normal eye. All persons see imperfectly when they hear an unexpected loud sound. Familiar noises do not lower the vision usually, but unfamiliar, new, or strange noises always do with the production of a temporary error of refraction. Country children from quiet schools, after moving to a noisy city, may suffer from the effects of defective vision for long periods of time, weeks, months. In the classroom they do not do well in their work because their sight is impaired. It is a gross injustice for teachers and others to criticize, scold, punish, or humiliate them.

Moving pictures usually produce defective vision which is always temporary. Some of my patients have complained that they always suffered with pain and had poor sight whenever they regarded the screen with its flickering light. I believe that some years ago when photography was less perfect than it is now the pictures produced a great deal of eye strain, much greater then than at the present time. I always advised my patients under treatment for the cure of defective vision without glasses, to go to the movies frequently, practice central fixation (2), and become accustomed to the flickering light. They soon became able to stand the strain without loss or impairment of their vision. Other lights and reflections from smooth surges became less annoying and it seemed true that after the movies were unable to produce a relapse other lights were unable to lower the vision after they were relieved of errors of refraction, myopia, hypermetropia, and astigmatism by treatment.

TREATMENT

Eye training with the aid of a Snellen test card at ten feet or farther is very successful in correcting and in preventing the imperfect sight of the normal eye. One may use a distant calendar, a sign with small letters, or one small letter for daily practice. The normal eye is readily trained to read the Snellen test card with normal vision or to see other letters or figures or one known small letter at a distance of ten feet or farther. The vision always improves and becomes better than that of the average normal eye. The practice of reading known or familiar letters once daily or more frequently with normal sight by the normal eye is a decided benefit and lessens the tendency to strain when regarding unfamiliar letters or objects.

RESULTS

On my recommendation more than 20,000 school children have practiced eye training daily with the aid of the Snellen test card. The results were of great practical importance. The vision of the normal eye was always improved when the teachers used the method properly. Because the sight was always improved, myopia was always prevented. This is the first published method for the prevention of myopia which was successful. Many children wearing glasses to benefit imperfect sight, pain, and fatigue of the eyes, and headaches were relieved so completely that they became able to discard their glasses and obtained more perfect sight and a greater relief to their eye pain and headaches. The eye training demonstrated by the good results obtained that many thousands of children in the schools are wearing glasses that they do not need because their eyes are normal.

Artists, bookkeepers, lawyers, physicians, writers, mechanics, and others found their efficiency increased many times with the aid of eye training. Many recruits for the army and navy were found to have imperfect sight and were rejected, although their eyes were normal. Eye training improved their sight. Later they read the Snellen card with perfect sight and were accepted.

CONCLUSIONS

1. All persons with normal eyes and perfect sight do not have normal eyes and perfect sight continuously.
2. The cause is always an effort or strain to see.
3. Treatment by eye training is successful when distant, small, familiar letters, are read a few moments at least every day.
4. The good results obtained justify the use of the method in all schools, the army, the navy, the merchant marine, on all railroads, in short by everybody who desires or needs continuous perfect sight.

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40 EAST FORTY-FIRST STREET
See other article - July, 1927, Better Eyesight Magazine

STRAIN DURING SLEEP

It is a natural question to ask: "Does sleep secure relaxation of the eyes? How many hours should one sleep to prevent imperfect sight in normal eyes?"

It was a great shock to me to find that patients with normal eyes were under a much greater strain when asleep than when they were awake. I do not know why. It is a truth that when the eyes are normal, there is no strain and they are at rest. Anything that is *done* is always wrong, and lowers the vision, because normal eyes only remain normal when the vision is normal. During sleep one is not conscious of the strain of imperfect sight. But the first thing in the morning the symptoms of eyestrain are very prominent, with headache, pain, and fatigue of the eyes. Many people complain that they have not had enough sleep, although some of them sleep from eight to twelve hours. With all the evidence at hand, I feel that sleep, instead of being a rest to eyestrain, is too often a cause.

A matter of great importance is the prevention of eyestrain during sleep. Some patients are materially benefited by practicing the **long swing for five or ten minutes just before retiring**. Others enjoy an increased relief from eyestrain by **palming in bed until they fall asleep.**

EYE-SHADES

(No Sunglasses, Tinted Lenses, UV Blocking Lenses...)

When the eyes are hypersensitive to light, one usually obtains immediate relief from the discomfort by the use of an eye-shade. This relief, however, is temporary, and very soon glasses are prescribed which seldom are a permanent benefit. The conditions are not favorable for normal vision when using eye-shades.

The normal eye is not made uncomfortable in a good light. An eye-shade makes the eyes more sensitive to light and causes eyestrain. Patients who have used eye-shades habitually, are very difficult to cure. Sun treatment, when used properly, is often followed by quick relief. The patient sits in the sun facing the strong light with the eyelids closed. The head should be moved slowly from side to side. At first there may be slight discomfort which usually disappears in a few minutes. Continue for half an hour or longer. Now turn the back to the sun and open the eyes. There should be relief at once. By repetition the benefit becomes greater and more permanent. Do not be in a hurry to look in the neighborhood of the sun. The strong glare may cause a temporary loss of vision, and other discomforts which may continue for some hours or days before recovery. There is no danger of a permanent loss of vision by looking more or less directly at the sun.
(Modern teachers advise closed eye sunning only due to depletion of the earths ozone layer. Others state it is ok to look near the sun at the bright sky. The head is moved continually left and right to avoid concentration of the sun on any one area of the skin, eyes/sunburn.)

THE BLACK BANDAGE

Many people desire to sleep late in the morning without being wakened by the sun. Before retiring they cover the eyes with a black bandage, which is worn until late in the morning. Patients who have used it for some weeks or months acquire a great sensitiveness to ordinary light, lose their good vision for distant letters or other objects, and become unable to read even large print without severe pain, headaches and fatigue. The cure of these cases is exceedingly difficult.
Eyeglasses, sunglasses, eyeshades impair melatonin hormone production and the sleep cycle.

SUMMARY

It has been demonstrated that the normal eye has normal sight only under favorable conditions, and the conditions favorable to some are not necessarily favorable to all.

Stories From The Clinic
No. 68: How Others Help

By Emily C. Lierman

Many reports have been received from those students of Dr. Bates who are conducting clinics. It is encouraging to know that this work is spreading so fast. Clinics are being formed not only in America, but in Europe as well, and our representatives deserve the highest praise for their faithful work. A number of patients have taken a course from Dr. Bates, or myself, so they could teach others how to obtain normal vision. Mothers find it a great help to study the Bates Method. Some of them bring one of their children for treatment, and when they see the child obtain normal sight, they become eager to learn how to cure other members of their family. In this way the work has spread. If we could have a Bates Clinic in every town and city, people would be very much benefited.

There are many patients out West, who are treating the poor without any compensation whatever. They may not have regular clinics, but it is clinic work just the same. We have over fifty patients in Cleveland, Ohio, and some of them are helping the poor there. A teacher in one of the public schools has cured many of her little charges who had defective sight. In her reports to Dr. Bates, she mentioned several cases of defective minds that she had benefited by palming, blinking and swinging. After a number of her pupils were relieved of mind strain, they were placed in regular classes.

This teacher had to be careful not to offend the authorities or to mention that she was using any system or method. She had the pupils practice for a few minutes every day in her classroom. She can appreciate eye education and common sense, because she is a cured patient.

A few grateful patients, well-known women of Cleveland, go about from place to place, helping unfortunate people who have imperfect sight. While I was visiting at the home of Mrs. H. D. Messick, I discovered that she was conducting regular clinic sessions in her home every week. Although she is a busy woman, she gives part of her time to treating patients who cannot come to Dr. Bates. She has done remarkably well with many difficult cases, some of which I would like to report:

A little girl, nine years old, had **convergent squint** of her left eye. Very little of the iris was visible when I first met her. I was surprised when I saw her again, about six months later. The left eye was almost as straight as the right, and her vision had improved to 10/10 at times, with Mrs. Messick's help.

A woman, with **atrophy of the optic nerve of the right eye**, and **myopia** in the left, was first examined by me, December, 1924. Her face was lined with pain, and she seemed to have no desire to smile. The right eye was nearly blind, and she could not see letters of the test card at any distance with that eye. Her vision was about 10/50 with the left eye.

She was directed to palm for about five minutes or longer, and then stand and swing her body from side to side, with a slow, easy sway. The vision of her left eye improved to 10/30, and she flashed the large C of the test card with her right eye. She was advised not to wear her glasses again, and to practice regularly every day. Mrs. Messick's efforts in helping this woman were certainly not in vain.

The last report I received was most encouraging, and ought to be so to any patient afflicted as this woman was. The vision of her right eye is now 8/40, and the left eye is, I believe, normal. However, she reads quite a little (lot) with comfort, and does not complain of pain any more. Her facial expression has changed for the better, and she is very grateful for what has been accomplished.

Another case that I started about the same time, was that of a fifteen-year-old boy, who was wearing glasses for **myopia**. His **left eye was almost blind**, and the vision of the right was 10/30. I taught him to palm and swing, and in less than half an hour his vision became normal, or 10/10 in the right eye. When he covered his right eye, the vision of his left began to improve for the large letters of the card, although they were not clear or distinct. I told him that if he wished to be cured, he would have to practice faithfully every day, as he was directed. He promised to do his part. I just gave him a start, but it was Mrs. Messick who cured him. I visited him some months later, and found his vision normal when he read the test card with each eye separately. He sees as well with the left eye as he does with the right. He displayed some marvelous drawings of ships, which were done after he was cured. The letter I recently received from him is printed below:

August 26, 1925.

My dear Mrs. Lierman:

I am so grateful to you and Mrs. Messick for having helped me to follow Dr. Bates' method, that I am writing to tell of my experience with my eyes.

About December, 1924, we were examined by the school doctor. He told me my left eye was nearly blind.

Mother immediately took me to a well-known oculist in Cleveland, and after several visits to his office, he prescribed glasses for me, to be worn always. A week had passed when I met you at Mrs. Messick's. You told me to discard my glasses and practice palming and swinging, which I gladly did.

Some of the teachers knowing I had worn glasses and seeing that I didn't after I had met you, tried to persuade me to wear them; but I wouldn't, when I noticed how my eyesight was improving.

After seeing Mrs. Messick once a week, and practicing regularly at home five minutes in the morning and five in the evening, my left eye gradually improved to normal.

With deep gratitude for being spared the great annoyance of wearing glasses, I am

Yours sincerely,
Mac.

THE MOVIE MIND

By Jane June

Editor's Note. - The remarkable results obtained by palming are due to the relaxation produced. If a patient will allow his mind to relax, his eyes will be rested and his vision improved. There are many pleasant ways to palm and each patient has his own favorite method. Jane June's idea is very effective.

When I want to see a picture,
I never need to go
Into a picture-show of any kind.
I've a button in my brain.
I can press it without pain
And release my movie mind.

Anything I've read or seen
Flashes quickly on the screen;
Be it near or far away-
This is what I've seen today:

Out upon the Naples Bay,
White sails softly dip and sway.
The sun is shining clear,
And those ships seem very near,
Although so far away.

Just outside the window-pane,
Which is bright with drops of rain,
There's a robin hopping fast,
For his dinner-time is past;
His head is cock-a-pie
Because he thinks he hears a worm
Crawling underneath the grass.

The brown dog, Nether, is after the cat,
Running hard, though he is fat.
The cat, as mad as mad can be,
Is making for the nearest tree.
When she gets up into that,
Nether, out of breath and feeling flat,
Will have to sit down there below,
Bark offensively-and go.

Oh! there goes a crocodile,
Swimming down the yellow Nile;
Just above him, on a vine,
Feeling very safe and fine,
Swings a monkey-one of nine.
Crocodile says, "Come lower, please."
Monkey says, "I prefer trees,"
And begins to upward climb.

Just you try and you will find
Great fun with your movie mind.

Using, improving the memory and imagination improves function of the brain with the eyes, mental, visual pictures and clarity of vision. Practice this method with palming.

Better Eyesight League Notice

The President of the better Eyesight League has requested us to publish the address of their new meeting place. This is:
Carnegie Hall, Room 810, Entrance on 7th Avenue, corner 56th street.
The October meeting will be held on the first Tuesday, the 6th, at 8 P.M.

THE BLIND MAN

Little Girls Cure Homeless Man of Blindness

Editor's Note. - This letter from a school teacher was just received, and seemed so worthwhile that we decided to make room for it in this issue. It substantiates Ms. Lierman's reports that those who know the method can improve the sight of others. We regret that we did not have time to obtain the permission of the writer to publish this article, and are therefore withholding her name.

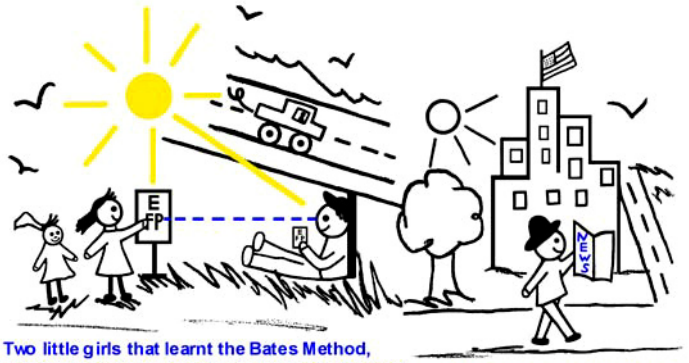
Dear Dr. Bates:

I cannot resist telling you what my little Edith Collins, aged twelve years, has done for a blind man that she picked up on the street.

His eyes were very much sunken. She taught him to palm and sun-gaze. She and a little girl friend visited him in his hovel once or twice a week. Much of the time he was so ill that he kept to his bed, but had this so placed that the sun shone on his eyes. Little by little his eyes came forward. He palmed faithfully and swung a chart that was given to him. A visiting nurse was telling him it was all "bunk" one day, as Edith entered. She spoke to the nurse and informed her it was not bunk, and that if she (the nurse) would come back in two or three months she would find out for herself.

Well, up to July the reports were that he was gradually looking better, and his eyes seemed fuller. When school opened, Edith came into my room and said, "He sees!"

I had forgotten about the man, and for a minute I wondered what she meant. She told me that she had met this man on the street a week or two ago - he was very happy - sees to get around, can read headlines in the papers, and can pick out the smaller words in spots. He has promised her that he will not stop exercising till he obtains perfect sight. He also told Edith that if he had not met her, he would still be a blind man begging for food. Now he intends to find work in some other city.



Two little girls that learnt the Bates Method, obtained clear eyesight teach the Bates Method to a blind homeless man they found living outside under a bridge.
They cure the blindness, his eyesight and health are restored.
Treatment: Sunning, sunlight, palming, shifting and switching on letters on identical close and distant eyecharts, swinging, central fixation...
Children are often the best Natural Vision Improvement teachers.

His blindness cured, he now reads the newspaper, walks the city on his own, looks for a job and continues to practice the Bates Method.

Isn't this a **wonderful thing for a little girl to do**? Of course, if it were not for Edith, the man would still have been blind. Children do not discriminate as to whether a man is a beggar, a worker or worthy. To them there are no differences. They scatter the good into every nook and cranny, and what is more, if it had not been for the revolutionary discovery of this very, very natural way to see and think, I would not have been able to have carried it on to the children, who so unquestionably take to the truth when presented to them.

I have been so excited about this that I had to write you at once!

Soon To Be Published

We wish to announce that Mrs. Lierman's book- **STORIES FROM THE CLINIC** - is now at press, and we hope to receive it some time in December. No definite date could be set heretofore, as Mrs. Lierman's work with Dr. Bates prevented her from devoting much time to writing. As assistant to Dr. Bates, Mrs. Lierman is exceptionally well qualified to place this method before the public. Stories From The Clinic are included in Better Eyesight Magazines. Some of the stories are a bit different in Mrs. Liermans book. This book is included in the book; Do It Yourself – Natural Eyesight Improvement – Original and Modern Bates Method. Book/Website www.cleareyesight.info

THE BAT

By *George* M. Guild

When the city boarders occupied all the rooms and beds of the farm house, little Jimmie was sent to the barn to sleep in the hay. At first the change from the house to the barn was a benefit, but in a few days swarms of mosquitoes invaded the place, and tortured Jimmie. Then The Bat appeared. He was such a homely bat, and has such dreadful habits that he annoyed Jimmie very much. The second night he came, again, very much increased in size, with the same wicked little eyes, and apparently full of plans to annoy Jimmie further. Jimmie grabbed a pitchfork, and rushed at The Bat to kill him, not just dead, but very much dead, more dead than any bat had ever been. Before Jimmie reached him, The Bat said, "Have a mosquito?" Jimmie stopped, amazed, and lowered his pitchfork. While he watched, The Bat leaned forward, and dropped a mess of big fat mosquitoes into Jimmie's hands. When Jimmie threw them down in disgust, The Bat looked surprised, because he could not understand how anyone could throw away such a delicacy. He explained to Jimmie that they had a wonderful flavor of sweet flowers and wild honey, and that he was the special Mosquito Catcher to the Fairy Queen. He supplied all the festivals with the choicest mosquitoes.

Jimmie was tired, lay down on his bed of straw, and was immediately fast asleep. He was so grateful to The Bat for clearing the barn of these little pests. Suddenly, he remembered that he had not seen his little crippled playmate for three days, and he became worried. The more he thought of her, the more restless he became. He cried out "Where is my little crippled blind girl? I want to see her. I want the fairies to help her, because she has such beautiful eyes. She is good and kind, but she is crippled, and her beautiful eyes cannot see. Take me to her Mr. Bat, quick, right away."

The Bat picked little Jimmie up, and flew with him, far away, over mountains, rivers, and woods, and stopped in front of a tiny little cottage, on the shore of a big gloomy lake.

How did The Bat do it? Easy enough. The Fairy Queen touched him with her wand, and he became large and strong enough to carry Jimmie.

Jimmie hopped off The Bat's back, and looked through the window of the cottage. He saw nothing but a little bare room. Soon a little old witch woman, with a sharp pointed hat, and a broom under her arm, walked towards the front door, which The Bat was holding tight shut. The Fairy Queen softly alighted on Jimmie's shoulder, and told him many things. "First," she said, "do not ask questions. The witch is trying to steal the little blind girl, and as long as you do not speak, we can manage her. She is really afraid of The Bat, who threatened to fatten his new mosquitoes on her flesh. I do not want any of the mosquitoes filled with the witch's poison blood at all."

Jimmie listened to all the Fairy Queen told him. Soon the Witch became suspicious, and rushed out, straddled her broom, and went sailing toward the sky. Jimmie could not keep still, and called after the old woman as loud as he could: "Goodbye, you old witch!" She heard this, turned back in a rage, and flew straight for Jimmie's face. But The Bat was not idle. He placed himself between Jimmie and the old witch, grabbed her by the neck, threw her to the ground, and swept her with her own broom right towards the lake. When she realized where she was going, she knew she was doomed. She fought back, but The Bat was too strong for her, and in spite of all her efforts she could not stop him. How she did scream, curse and swear. Then she began to cry and beg for mercy, but The Bat kept right on until he swept her into the lake. She slowly sank and finally disappeared. The Bat threw her broom into the water, where it floated on the surface for a few minutes. Suddenly a long, skinny arm, with sharp claws for hands, shot out of the water, grabbed the broom, pulled it beneath the water, and that was the end of the witch.

A company of fairies on the shore of the lake were singing:

"And there she will stay
Ten years and a day-
Good Riddance!"

They all now returned to the cottage to look after the crippled blind girl. She was so glad to hear Jimmie's voice, and thanked them all for saving her from the witch.

The Bat, who was now larger than Jimmie twice over, and strong as a horse, was not satisfied with himself. After much coaxing, the Fairy Queen finally found out that The Bat believed he was too homely and wished to be beautiful. While Jimmie was busy with the crippled blind girl, treating her as advised by the Fairy Queen to cure her, The Bat and the Fairy Queen disappeared. Jimmie did help the little girl and they were playing in the woods, having a most glorious time, for she was not now a crippled blind girl, but one who was cured by the fairies, by The Bat, and by the love of Jimmie. Suddenly the little girl cried out:

"See the beautiful butterfly! It is the biggest that ever was, and on its back is the Fairy Queen!" She clapped her hands with glee and ran to the butterfly. The only way the Fairy Queen could make The Bat beautiful was to turn him into a large butterfly. How proud he was of his beautiful colorings and his soft, silky wings. The admiration of the little girl rewarded him for all his goodness.

It is very difficult to get a boy awake and out of bed sometimes. The hired girl had been working over Jimmy to waken him, but all she could get him to say was:

"Just a few more mosquitoes browned in the pan."

ATTENTION!

The month of October has been set aside as a special "Better Eyesight Month." Complimentary copies of reprints, Better Eyesight Magazines, and other information will be sent on request. Subscribers and patients will be notified of additional reductions, during this month only, on our literature and publications.

All issues of BETTER EYESIGHT containing articles on Myopia (near sight) are out of stock. We are opening the BETTER EYESIGHT MONTH with reduced prices on reprints dealing with this common eye trouble. Three other popular reprints have been included in this list:

THE FOLLOWING PRICES PREVAIL ONLY DURING MONTH OF OCTOBER:

1—CAUSE OF MYOPIA

Bates—Reprinted from the N. Y. Medical Journal. 15c.

Ten-page pamphlet containing illustrations, demonstrating that Myopia is curable without glasses.

2—THE PREVENTION OF MYOPIA IN SCHOOL CHILDREN

Bates—N. Y. Medical Journal. 15c.

Children lower their vision when they are nervous, when they stare, squint or strain. These symptoms may develop into serious defects as the child grows older, if they are not corrected. Defective vision can be prevented or cured by following a few simple rules. These are explained in this reprint.

An important feature, also, is a synopsis of the proper use of the test card, and its benefits in the classroom and at home.

3—A STUDY OF THE IMAGINATION

Bates—Allied Medical Journal. 20c.

We particularly call this article to the attention of those of our readers who have disregarded the importance of this phase of Dr. Bates' method. We find that many people think the imagination is another form of auto-suggestion. This is not so. When correctly applied to Dr. Bates' method, especially in palming, the imagination produces greater relaxation.

This is the best paper Dr. Bates has written on the subject, and we strongly recommend it. The following defects are also discussed: Polyopia (double-vision), Nystagmus (moving eyeball), Photophobia (light sensitiveness) and Retinitis Pigmentosa.

4—NEW WAYS TO NORMAL SIGHT

By C. S. Price, M.B.E., F.R.G.S.

Reprinted from the "Herald of the Star." 20c.

Written by a student of Dr. Bates who has a thorough knowledge of the subject. It was written for the layman, from a layman's point of view, with a knowledge of the scientific values of the method. Some of the titles included are: STRAIN AND RELAXATION—PAIN—MEMORY—FINE PRINT PRESBYOPIA (old age sight), and a chapter on the danger and inconvenience of GLASSES.

5—THROW AWAY YOUR GLASSES

Bates—Hearst's International Magazine. 25c.

At the special request of the editor, Mr. Norman Hapgood, Dr. Bates wrote a detailed explanation of his method. He kept in mind the fact that the article would be read by the general public, many of whom had never heard of his method.

This booklet contains fifteen pages, five of which are entirely devoted to treatment.

THROW AWAY YOUR GLASSES is especially adapted to beginners, those who wish further information on this method, or those practicing at home.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

NOVEMBER, 1925

MOVING

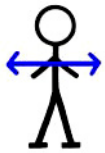
The world moves. Let it move. People are moving all day long. It is normal, right, proper that they should move. Just try to keep your head, or one finger, one toe, stationary, or keep your eyes open continuously. If you try to stare at a small letter or a part of it without blinking, note what happens. Most people who have tried it discover that the mind wanders, the vision becomes less, pain and fatigue are produced.

Stand facing a window and note the relative position of a curtain cord to the background. Take a long step to the right. Observe that the background has become different. Now take a long step to the left. The background has changed again. Avoid regarding the curtain cord. While moving from side to side, it is possible to imagine the cord moving in the opposite direction. By practice one becomes able to imagine stationary objects not seen to be moving as continuously, as easily, as objects in the field of vision.

Seeing objects at different distances move opposite each other improves relaxation, eye movement and the clarity of vision. It also helps people with very unclear vision distinguish one object from another object, improves the ability to look at and shift part to part on one object at a time. This improves shifting with central fixation which further improves the clarity of vision.

The speed of the movement of close and distant objects changes if the eyes look at close or distant objects when moving left and right. Normally when practicing moving left and right the eyes do not look at any objects - just let the eyes move along, pass by over objects in the visual field.





Hang a ruler or curtain cord in front of a open window with a view of distant objects. Rock left and right in front of the window. Body, head, eyes move together, at the same time, in the same direction. See the cord appear to move opposite the movement of the body, head, eyes while distant objects appear to move with the body, head, eyes in the same direction. The cord and distant objects move against each other in opposite directions.

Universal Swing: When one becomes able to imagine all objects seen, remembered, or imagined, to be moving with a slow short, easy swing, this is called the Universal Swing. It is a very desirable thing to have, because when it is imagined with the eyes closed or open, one cannot simultaneously imagine pain, fatigue, or imperfect sight.

The universal swing can be obtained without one being conspicuous. With the hand covered, **move the thumb from side to side about one-quarter of an inch, and move the eyes with the thumb**. Stationary objects can be imagined to be moving.

When walking rapidly forward, the floor or the sidewalk appears to move backward. It is well to be conscious of this imagined movement.

Never imagine stationary objects to be stationary. To do this, is a strain, a strain which lowers the vision.



Move the thumb side to side 1/4 inch or, do the thumb on finger tip movement as described in previous chapters. Move the eyes with the thumb. Imagine stationary objects moving, 'the swing' when the eyes shift.

CENTRAL FIXATION

By W. H. Bates, M.D.

Central Fixation: *The letter or part of the letter regarded is always seen best.*

With normal vision, a letter or an object cannot be seen clearly or perfectly unless one sees a part of the letter or object best, or better than all other parts.

Central fixation is passive. We do not see by any effort. Things are seen, one part best. Furthermore, it is a condition of relaxation of the eye or mind obtained without any effort.

The normal eye with normal sight is always at rest. Nothing is done. No effort is made. **Many cases of imperfect sight have been cured when no efforts were made to see.** One cannot relax by working hard, straining, nor obtain rest of the eyes or mind by the help of a strain. When the eyes are normal, they are at rest. When they are imperfect, they are always under a strain.

Shift point to point (dot to dot) on the E seeing one small part (dot) clearest at a time in the center of the visual field. The central field moves with the eyes as the eyes shift dot to dot.



Stare at the point on the upper right notch of the C. Do not shift the eyes, eyes immobile, do not blink. Strain, tension, blur occurs. Now shift on the C part to part and experience relaxation and clear vision.



Remember and see the pillow clear with central fixation and shifting: Look at and see one corner of the pillow best at a time. Shift from corner to corner (dot to dot) seeing one corner at a time best, clearest in the center of the visual field. Shift part to part on any area of the pillow. The pillow is seen clear.



+**Central fixation should not be confused with concentration, which is defined by the dictionary to mean an effort to keep the eyes or mind continuously on one point only, and to ignore all other points.**

Try it. Look directly, for example, at the point of the notch on the upper right corner of the large letter C on the Snellen test card. Keep the eyes open without blinking. In a few seconds, or part of a minute, the mind begins to tire from the monotony. An effort is made to hold the concentration. The effort increases with discomfort or Pain. The vision becomes less, the white of the notch looks gray, the black appears less black, less clear and less distinct. The notch regarded is not seen as well as other parts of the large letter not regarded, and Central Fixation is lost. Not only does the notch appear less clear, but by continuing the effort the large letter C, as well as all the letters on the card, are seen less and less perfectly. The white of the whole card is also modified and becomes less white. Other objects in the neighborhood of the Snellen card soon begin to blur and are seen imperfectly. The stare or strain has very much the same effect as if the sun were covered with a cloud or as if the light in the room, or the general illumination, were lessened. When central fixation is practiced, all the objects in the room, including the Snellen card, look brighter, clearer, just as though the light had increased.

Experience the cause of unclear vision; staring, not blinking, not shifting, eccentric fixation, trying hard, using effort to see clear. Learn to avoid this. Learn to use the eyes correct; relaxation, no effort, shifting, blinking, central fixation and the vision is clear.

+Concentration is trying to see one thing only. It always fails.
+Central fixation is seeing one thing best, and all other objects not so well.
Central fixation is combined with shifting; the eyes, center of the visual field, shifts, moves continually from point to point; part to part, object to object.

When the vision, memory, or imagination are imperfect, concentration can always be demonstrated.
When the vision, memory, or imagination are perfect, Central Fixation can always be demonstrated.

Central fixation is an illusion. All parts of small letters as well as large ones are printed with the same amount of blackness. We do not see illusions. They are only imagined. When we see best one part of a letter, or other object regarded, we think we see it best, or more accurately, we imagine it best. One can imagine anything desired, and much more easily than to make an effort to see it. This fact should be demonstrated repeatedly, and consciously, until it becomes an unconscious habit.

With the **eyes closed the imagination of Central Fixation may be much better than with the eyes open. By alternating the imagination of Central Fixation with the eyes open and closed, both may improve.**

Many persons have no mental pictures with their eyes closed. For example: A patient consulted me about his eyes. He was asked to look at a white pillow. "Can you see it?" he was asked.
"Yes," he answered.
"Now, close your eyes. Can you remember it?"
"No," he replied; "I remember a black pillow."
"With your eyes open, can you see one corner of the pillow best, and the other corners not regarded worse?"

He was able to demonstrate this fact, and that he could in turn see, or imagine, each corner regarded best and the other corners worse. With his eyes closed he was able to remember one corner at a time best, and when he remembers the pillow by Central Fixation, he obtained a mental picture of a white pillow almost as well as he could see it with his eyes open.

He was then asked to remember two corners simultaneously, both perfectly clear. At once he lost his mental picture of the pillow. He demonstrated with other objects as well that he could only remember or imagine mental pictures of them by Central fixation.

Another patient had suffered for many years with almost constant pain and fatigue. With his eyes open his vision was 20/20. He read diamond type as close as six inches, and as far off as twenty inches. He could imagine the white part of large or small letters whiter than the rest of the Snellen test card, but only with his eyes open when regarding the letters. With his eyes closed he could not remember mental pictures of any objects.

He was asked: "Which is whiter, the white center of a large letter of the Snellen card or the white snow on the top of a mountain?" He answered, "The white snow on the top of a mountain."

"Can you shift from one mountain top to another, remembering each one best and the others not so well, or worse?"

This also he was able to do. But when he tried to imagine two or more snow-capped mountains simultaneously, he at once was conscious of an effort and lost his imagination of his mental pictures of the snow.

The memory of the snow-capped mountains by Central Fixation helped him to imagine Central Fixation with his eyes open as well as closed.

A girl, age eight, had imperfect sight not corrected by glasses. The right eye turned in continuously. The vision of this eye was 3/200 with glasses. The left vision was one-half of the normal. She was taught Central Fixation and became able, in a few days, to imagine one part best of the larger letters. The vision of both eyes improved very much. She demonstrated the value of Central Fixation, and that she could not distinguish clearly even the large letters with each eye unless she imagined one part best. By repeated demonstrations this young patient **acquired speed in the practice of Central Fixation**. She became able to read a newspaper more than five feet from her eyes by artificial light. Fine print, or diamond type, was read rapidly, easily, at one inch from each eye.

She enjoyed the practice of conscious Central Fixation. It was to me very wonderful to observe her imagine very small letters by Central Fixation and read them at ten feet or further.

The squint disappeared permanently.



A girl, aged twelve, was treated for progressive myopia. The vision of each eye was 3/200. With concave 16D.S. the sight of each eye was improved to 20/70. The patient was very nervous. Her memory was poor, and she was behind in her schoolwork. Treatment with the aid of **Palming** and **Central Fixation** improved her vision slowly. After about six months there came a sudden change for the better. In one day, **her vision improved from 10/200 to 10/10 plus**. The next day she read the bottom line of each of three strange cards at twenty feet. It was remarkable, also, because she read all the letters as rapidly as she could pronounce them. The mother was worried because her **daughter had suddenly acquired a habit of running down stairs three steps at a time**. She had never stumbled or fallen once. The mother also reported that the patient had acquired much pleasure in coasting and was the most daring of all the children. Her scholarship had improved. The teacher said the patient would read a page of history in a few seconds, and recite it with a **perfect memory** after a few days, a month, or longer. Her memory for other subjects was equally as good.

Immediately after she read the strange cards with normal vision, I asked her: "What helped you?"

"Starch," she answered.

Then she explained that she had become able to imagine a small piece of white starch perfectly white by Central Fixation. **When her imagination was perfect her myopia disappeared,** her eyes were normal, which made it possible to obtain normal vision. The retinoscope used at the same time demonstrated that her myopia disappeared when she had a perfect imagination of Central Fixation.

Patients whose sight is very imperfect usually require a much longer time to acquire Central Fixation than do some others. One should not be discouraged when, after some weeks or many months, their vision remains imperfect. Too many are disappointed because they fail to obtain Central Fixation after long periods of time, practicing without the help of a competent teacher. One very determined patient devoted many hours daily for over a year without any apparel benefit whatever. She told me that she knew she was curable and was resolved to keep at it the rest of her life if necessary. I wrote her a few suggestions. She followed my advice

and was cured in a week.

STORIES FROM THE CLINIC

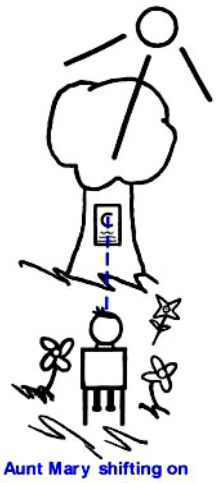
No. 69: Aunt Mary

By Emily C. Lierman

For a year I have been treating a woman, **aged sixty-eight**, who has **cataract in both eyes**. In the beginning I saw her about once a week, then later I treated her less frequently because I had so little time. She lives with her sister and family in the country, and everyone who knows her calls her Aunt Mary. She has all the reason in the world to be depressed or unhappy, because with the exception of just a few years, she has been a cripple all of her life. Yet Aunt Mary greets you with a smile and makes you understand that she is happy.

A few years ago her sight began to trouble her, and she was examined by an eye specialist. He said that cataract was beginning to form in each eye and that nothing could be done until they became ripe, when she was to be taken to the hospital for an operation. Then I was consulted by her family and asked to call at her home and examine her eyes. With the retinoscope, I saw a clear, red reflex in the right eye, but none in the left. It was evident that her trouble was caused by strain, and her condition was becoming worse because she worried about the outcome.

We placed her in a comfortable chair in the garden where the sun was shining and fastened a white test card on the trunk of a tree. As she looked at the card, she began to squint, because the bright light bothered her. Teaching her to blink often, helped her to look at the card with less discomfort. She could read 10/200 with the right eye and 1/200 with the left, which means that at ten feet the only letter she could see with the right eye was the large letter C on the top of the card, and with the left eye she could not see it further than one foot. With some difficulty, Aunt Mary was able to raise one of her arms, so that she could cover her eyes with her palm. She had a good imagination, so while her eyes were covered, we talked about various kinds of flowers she had seen. We also talked of white clouds and a blue sky. As I mentioned one object after another, her mind did not dwell on one thing very long. I spent about an hour with her the first day, and her vision in that time improved to 10/40 with the right eye and 10/200 with the left, **improving her imagination of things she had seen, with eyes closed as well as with them open,** was the only method I used that day.



Aunt Mary shifting on letters on the Eyechart in her garden, in the sunlight. Palming and remembering, imagining the flowers in her garden, clouds in the sky... relaxes her mind, eyes and improves her vision.

There was quite an improvement in her eyes when I saw her again. The vision of her right eye improved to 10/30 and 10/70 in the left. It was impossible for her to stand and swing, so I placed myself before her in an arm chair and moved my body and head to the right and then to the left with a slow movement, and asked her to do the same. While we were doing this, I could not understand why she did not see or imagine things about her moving opposite to the direction in which her head and eyes were moving. Then I noticed that she was staring while trying to follow my directions, even though she was blinking. It did not take her very long to learn how to shift her eyes and after that she made steady progress.

Dr. Bates became interested in Aunt Mary's case and offered to call with me the next time I treated her. He examined her eyes with his ophthalmoscope and said there was not enough opacity of either lens to lower the vision. She was very much encouraged when Dr. Bates told her that her cataract had improved. He also remarked about her cheery disposition, and how her faithfulness in keeping up her daily treatment would help greatly in the cure of her eyes.

There is an enclosed porch where she practices on rainy days or when it becomes too cold to sit in the garden. Her loving family do all they possibly can to make her comfortable, so there is every chance that she will be cured of her eye trouble.

Aunt Mary did not like to practice with the white C card, because the white background bothered her and made her strain. She likes to practice with the white letter card on a black background, so we use the black card mostly during treatment. In her sunny room hangs a picture which is beautifully colored, but she could not see it clearly. She explained that it seemed to be in a mist always. I gave her fine print to practice with, and she has become able to read it in a fairly good light at six inches from her eyes.

Her confidence in me makes me all the more anxious to cure her. In the last few months she has realized the fact that no operation for the removal of cataract will ever be necessary if she continues to practice. She surprised me one day by reading 10/20 with both eyes, and after sun treatment she read 10/15. Surely, at this time, if her cataracts were as bad as they were in the beginning, when I first saw her, her vision would not have improved, neither would she have responded to the sun treatment. Recently I examined her again with the retinoscope, and I saw a red reflex in the left eye, as well as in the right.

A neighbor, who is twenty years younger than Aunt Mary, and has presbyopia or old-age sight, was surprised to find out that Aunt Mary had better sight than she had. The fact that her vision was better than a woman so much younger made her anxious to practice more. The last time I visited Aunt Mary she read the bottom line of the test card at ten feet, or 10/10 with her right eye, and 10/20 with the left. She reads the fine print now at all times, and also the newspaper and her Bible without any trouble. When she strains to see at the distance, things seem to blur before her eyes, but when she palms and sways her body, as she sits in her chair, the mist clears away and she sees better.

When I first became acquainted with her, I noticed how difficult it was for her to move about with her crutches. To get up from her chair was an effort. Not so long ago, I offered to help her change her position, but she managed very nicely herself and got up with the aid of her crutches without any effort at all. I believe the constant practice of the body swing has not only improved the condition of her eyes, but also her general condition as well.

SONNY

By George M. Guild

Sonny was a boy, very much of a boy, a manly boy, large for his age and strong with the strength of youth. He was twelve years old. He loved his mother very much and did all that he could to help her. Sonny enjoyed entertaining other boys and was popular with grown ups as well. His father was very proud of him and frequently talked about his boy to the people he knew. He rather overdid it, and his friends would usually tire of hearing so much about Sonny at home, Sonny at play, Sonny at school, Sonny all the time and every day. His mother was just as proud of her boy and could talk hour after hour about him, if one were polite enough to listen.

There was another member of the family, a sweet young girl, who was sick in bed and who suffered constant pain. She was unable to sit up, and of course unable to walk. Her name was May, and she was eight years old. Recently her sight had become poor, and she was nearly blind. Sonny spent more time with her than one would expect. He invited other boys and girls to visit his sister. He read storybooks to her, all about knights, ladies, kings, queens and the fairies. She liked the fairy stories best of all and wanted very much to see the fairies and talk to them. Sonny was just as anxious as she was to meet the fairies.

One day he went into the flower garden to cry in a place where no one could see him and be annoyed with his tears. May did not seem so well. No one had ever helped her pain, and today she said that her sight was so poor that when she looked at Sonny his face appeared so far away that she could not see it at all. He tried to say something to make her feel better, but his throat had a big lump in it which prevented him from talking. After he had cried for some minutes he felt a little better. One of the flowers seemed more beautiful than any of the others, and while he was looking at this flower it nodded to him and turned into a beautiful fairy. She had bright blue eyes that were full of fun and play. They were kind eyes, too, but mostly they seemed to be laughing all the time. Sonny had never seen eyes which appeared to know so much, to know all there was to know, and to know many things which others did not know, never could know, or would know. Her eyes were indeed full of wisdom.

The fairy danced a few steps, whirled around on her toes, stood still for a moment, bowed low to Sonny, threw him a kiss, and asked a question: "How do you like me?"

"I love you with all my heart," said Sonny.

"Why were you crying?" asked the fairy.

"I was crying because my sister is sick and becoming blind. No one has helped her. No one can help her."

"Would you like the fairies to help you?"

"I certainly would," he answered.

Thereupon the fairy blew a gold whistle. In a few minutes the fairies began to arrive. At first slowly, by twos and threes, and then in larger numbers more rapidly. They soon filled the garden. They found places on the lawn, the trees and the outside of the house. They were not silent fairies by any means. It seemed as though all were talking, laughing and singing. Furthermore, they were not still for a moment. Their heads and eyes were always moving in time with their dancing feet. Those people who have seen fairies dancing have said that it is all very wonderful, beautiful and delightful.

Sonny was in a great hurry to have his sister and the fairies meet. He learned that the first fairy he met was the Queen and beloved very much by all the other fairies. As soon as the fairy Queen met May, she directed the child's mother to lift her from the bed, holding her very gently. **Then the mother was told to sway her sick child from side to side, slowly at first, and then more vigorously, but always easily and gently. When done properly, it cured dizziness and many other things.**

The fairy Queen insisted that the patient should not *see* things moving when her head and eyes were moving, but that she should *make believe* or *imagine* that she saw **stationary objects to be moving in the direction opposite to the movement of her head and eyes.**

May was a good pupil. When her mother swayed her whole body from side to side, she soon became able to imagine the room, the bed and other stationary objects to be moving. The movement did her good. She smiled up to her mother and said: "Mother, dear, the pain in my back is all gone, and I can now see very much better."

The mother kept on swaying the patient from side to side, while May imagined that all the objects she was not regarding were apparently moving from side to side all the time. When the mother tired after half an hour or longer, Sonny took his sister in his arms and continued the swaying. They alternated and continued the swaying for several hours. All this time the fairies were dancing and singing where May could see them. She enjoyed it all and tried to sing the song of the fairies as well as she could, keeping time with their singing.

The Fairy Queen now directed the child to sit up in bed and at first sway herself with the help of her mother and Sonny and gradually do it all without their help. She soon became able to do it alone. Her strength increased rapidly, while her sight also became much better.

The Fairy Queen then advised that she stand on the floor with the help of her mother and Sonny. Her strength continued to improve until, much to the delight of all, she became able to sway herself without any help. Sonny was so happy with her wonderful improvement that he laughed and shouted for joy, while all his mother could do was to smile as the tears flowed from her eyes.

When Sonny's father came home he watched the proceedings approvingly. He did not believe in fairies, consequently he did not see them dancing nor hear them singing. He stood in a corner of the room blowing his nose frequently, although he had no cold. His daughter soon saw him and, without stopping her swaying, threw him a kiss and called out to him:

"Oh, father, my pain is all gone; I can stand on my feet; I can walk. I can see you perfectly; the fairies have cured me. I am perfectly happy. Aren't you glad?"

But he could not speak. He felt so weak that he had to sit down on the edge of the bed. His wife took his hand. She could not speak, either. She just smiled, while her tears continued to flow.

Sonny had lost all control of himself. He shouted; he alternately laughed and cried. He danced around the room. He hugged his father, his mother, the neighbors who came to see the wonderful cure by the fairies. They had to take him to another room, where he flung himself down on a bed, buried his face in a pillow and sobbed as though his heart would break, because he was so happy. The next morning his sister walked into his room and wakened him with a kiss. She smiled and said: "Good morning, Sonny."

THE LIGHT TREATMENT

Sunlight and Sunglass

By M. A. Crane

People who live in the dark and seldom or never see the sun, like miners, for example, always have something wrong with their eyes.

In the tenement houses where the light is poor many children acquire a dislike for the sunlight. They will bury their faces in a pillow and shut out all light. Too many of them are brought to a Clinic with **ulcers on the front part of the eyeball**. Treatment with antiseptic eyedrops and other measures generally fail to cure. Sending them out of doors in the bright sunlight has been followed by complete relief.

One patient, a man with serious disease of his eyes, had spent much time in a hospital where his eyes were protected from the light by the use of bandages. After some months, his eyes had not improved, and he left the hospital wearing very dark glasses for protection from the light. His eyes became more and more sensitive, although the dark glasses were changed frequently to those that were darker, until he finally wore the darkest glasses that he could obtain. Still there was no relief from the sun. Later, the dark glasses were discarded permanently. The sensitiveness to the light became less after he exposed his closed eyelids to the sun for half an hour or longer, moving his head at the same time slowly from side to side.

After the eyes have improved, it may be possible for the patient to look down while some one else gently lifts the upper eyelid toward the brow, exposing some of the white part of the eye above the pupil. At first it may be well to shade the eyes from the sun until the patient acquires sufficient control to look down easily, continuously and without strain. **With the eyes looking far down, one focuses the direct rays of the sun on the exposed white part of the eye, with a strong convex glass, moving the glass continuously to avoid the heat of the condensed sunlight. One needs to caution the patient to avoid looking directly at the sun while the light is being focused on the eye. The results obtained from this method have usually been very gratifying. When the eyes are inflamed from disease of the eyelids, the cornea, the iris, the retina, the optic nerve, from glaucoma and other inflammations, the use of the burning glass (sunglass) has been followed immediately by a lessening of the congestion and a decided improvement in vision.**

Many people ask the question: "How long does it take to obtain a sufficient benefit to be noticeable?" When the sun treatment is employed, the improvement in the sight may be demonstrated in a very short time.

The sun treatment improves the vision of all patients who are wearing glasses for the relief of pain, fatigue, and imperfect sight, no matter what kind of glasses are worn or how strong they may be.

The direct sunlight focused on the white part of the eye is a benefit in many cases of blindness with **hardening of the eyeball (glaucoma),** or **softening of the eyeball (cyclitis)**, also in cases of **cataract,** and of **opacities in other parts of the eye.** It was interesting to observe the improvement in a large number of patients **blind from scar tissue on the front part of the eye, the cornea**. They were benefited so much that their sight became normal.

Babies and Sunlight

It is good practice to expose the eyes of babies to the direct sunlight not only when they are awake but also when asleep.

The sunlight treatment has never injured the eye nor lowered the vision permanently in a single patient, even when used improperly.

Patients with **cataract** seem to improve more decidedly from the light treatment than from some other kinds of treatment. Congenital cataract or cataract present from birth, is benefited and often cured in the same way. Cataract produced by an injury to the eye has improved and occasionally been cured by the effect of light on the eye. So often has the light treatment benefited many kinds of cataract that the use of the light is strongly recommended in all cases.

The beneficial effect of light is largely, if not entirely, due to its mental effect. One evidence, that this is true, is the fact that the benefit is so quick that there is not enough time for the eyeball to be improved sufficiently to account for the good result. It has been stated by some authorities on the value of sunlight in the treatment of disease, that it should be used out of doors to obtain the best results, and that after it has passed through glass it has lost much of its healing properties. This may be true in the treatment of tuberculosis, or other diseases, but apparently not when used for the benefit of imperfect sight.

Modern Natural Vision Improvement teachers state that all glass; plain, tinted, … including eyeglasses block out part of the suns full light spectrum causing unbalanced light to enter the eyes, and lower eye, brain, body health, function and clarity of vision. The use of the Sunglass is temporary – it gets the cells, light receptors… in the retina, lens… 'awakened', back to full life, normal health, function. The Sunglass treatment is then discontinued and is replaced by daily exposure to plain, full spectrum sunlight not passing through glass.



Twinkling Stars can be caused by: fluctuating visual clarity, staring, dim light causing the eyes central field to stop functioning so the eye must look slightly away from the star to see it with the eyes less clear peripheral field, debris on the cornea, eye floaters, objects floating in space across the star.

Strong sunlight in the tropics is as much, if not a greater relief, as it is in colder countries. Patients who do not wear a hat, or otherwise shield their eyes from the brightness of strong sunlight, have testified that their eyes became much stronger and their vision decidedly improved by the exposure. However, one should first of all accustom the eyes gradually to the light to prevent discomfort.

A hat prevents sunburn, wrinkles, freckles on the face.

The question has often been asked, "Is electric light beneficial?" Electric light is beneficial, but not to the same degree as sunlight. Many people have accustomed their eyes to all kinds of electric light and have improved their vision very materially by using the electric light as intelligently as the sunlight.

The sun is the whitest object there is. Many patients complain that it is not white but red, gray, blue, brown, or some other color. It has been described as black when regarded by patients whose eyes were very sensitive to the light, patients whose vision was very imperfect, or who suffered very much from eyestrain.

Looking at the sun is quite frequently followed by seeing red, blue, yellow, and other colors for some minutes, hours, days, weeks, or months. These colors always disappear in time. Palming, swinging, the memory of perfect sight, hasten their disappearance.

The **twinkling stars** owe their peculiar appearance to **good vision alternating with imperfect sight** caused by eyestrain. The planets look bright with a steady light and do not usually twinkle. One can often imagine them to be twinkling with the help of a conscious strain alternating with a frequent rest. Blinking with a strain will quite often produce twinkling of the planets. By practice one can become sufficiently expert to produce twinkling of the moon.

Announcement
Stories From The Clinic
By Emily C. Lierman

This valuable book is now in press and we expect it to be ready in a few weeks.

CENTRAL FIXATION PUBLISHIING Co.

QUESTIONS AND ANSWERS

Q- Why is it that many people feel the need of glasses for near work when they reach middle age?
A- When trying to read they strain, which makes the sight imperfect. This may occur before the age of forty or after sixty.

Q- How can I prevent the sun from hurting my eyes?
A- By becoming accustomed to it. See page 15 of this issue of "Better Eyesight." - Sun treatment

Q- When should one blink and under what circumstances should stationary objects be imagined as moving, and for what purpose?
A- One should blink to improve the sight. Stationary objects should be imagined as moving to avoid the stare which always impairs the sight and causes pain and fatigue. Stationary objects appear to move when the eyes move, shift.

Q- When can one determine whether the desired results have been attained in palming?
A- The desired results in palming are obtained when black is seen.
(Modern teachers' state; Desired results are obtained when relaxation of mind, eyes, body is attained. They state that seeing black is not mandatory. It is often easier to just imagine any pleasant thoughts, objects, let the mind drift.)

Q- Will you please tell me if results are obtained at all ages or whether there is a limit? If there is, after what age are results unsatisfactory?
A- Results are obtained satisfactorily at all ages without an exception.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

DECEMBER, 1925

DIZZINESS

Dizziness is caused by eyestrain. Some people when standing on the roof of a house looking down, strain their eyes and become dizzy. Usually the dizziness is produced unconsciously. It can be produced consciously, however, by staring or straining to see some distant or near object.

Some persons when riding in an elevator are always dizzy and may suffer from attacks of imperfect sight with headache, nausea, and other nervous discomforts. An old lady, age sixty, told me that riding in an elevator always made her dizzy, and produced headaches with pain in her eyes and head. I tested her vision and found it to be normal both for distance and for reading without glasses. To obtain some facts, I rode in an elevator with her from the top to the bottom of the building and back again. I watched her eyes closely and found that she was staring at the floors which appeared to be moving opposite to the movement of the elevator. I asked her the question: "Why do you stare at the floors which appear to be moving by?"

She answered; "I do not like to see them move, and I am trying to correct the illusion by making an effort to keep them stationary. The harder I try, the worse I feel."

I suggested to her that she look at one part of the elevator and looking at the floors. Her discomfort was at once relieved, and she was soon cured.

In all cases of dizziness, the stare or strain is always evident. When the stare or strain is relieved or prevented, dizziness does not occur.

With advancing years attacks of dizziness and blindness occur more frequently than in younger individuals. All attacks of dizziness with blindness are quite readily cured by practicing the imagination of the swing, the memory of perfect sight, or by palming.

SHIFTING

By W. H. Bates, M.D.

Shifting: The point regarded changes rapidly and continuously.

A man with imperfect sight, who had obtained normal vision by my method of treatment without glasses, called about five years later and announced that the cure had proved permanent. His vision was normal when each eye was tested at twenty feet with Snellen test cards which he had not seen before.

He was asked, "What cured you?"

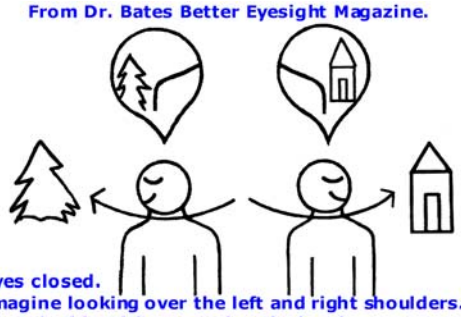
"Shifting." he answered.

All persons with imperfect sight make an effort to stare with their eyes immovable. The eyes have not the ability to keep stationary. To look intently at a point continuously is impossible, the eyes will move, the eyelids will blink, and the effort is accompanied by an imperfect vision of the point regarded. In many cases the effort to concentrate on a point often causes headache, pain in the eyes and fatigue.

All persons with normal eyes and normal sight do not concentrate or try to see by any effort. Their eyes are at rest, and, when the eyes are at rest, they are constantly moving. When the eyes move, one is able to imagine all stationary objects in turn to be moving in the direction opposite to the movement of the head and eyes. It is impossible to imagine with equal clearness a number of objects to be moving at the same time, and an effort to do so is a strain which impairs the vision, the memory, or the imagination. To try to do the impossible is a strain, which always lowers the mental efficiency. This fact should be emphasized.

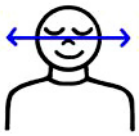
Many patients have difficulty in imagining stationary objects to be moving opposite to the movements of the eyes or head. When riding in a fast moving train, and one regards the telegraph poles or other objects which are seen,—the near objects may appear to be moving opposite to the direction in which the train is moving, while more distant objects may appear to move in the same direction as the train.

From Dr. Bates Better Eyesight Magazine.



Eyes closed.
Imagine looking over the left and right shoulders.
First do this without moving the head.
Then, imagine looking left and right and move the head with the eyes. Move relaxed, easy - look left, then right, left, right... no hurry.
Notice the eyes move under the closed eyelids when imagining looking left and right.
The brain, memory, imagination, left and right hemispheres... control eye movement.
This activity relaxes the eyes, eye muscles, brain, head, neck, activates easy eye movement/shifting and activates, integrates the left and right brain hemispheres.

The above facts may also be imagined when traveling in an automobile. The driver of the car and others occupying a front seat may imagine the road to be moving toward the moving car. When pain, fatigue or other symptoms are present it always means that the individual is consciously or unconsciously trying to imagine stationary objects are not moving. The effort is a strain.



Eyes closed. Imagine looking over the left and right shoulders. Lightly touch the upper eyelids and feel the eyes move left and right when imagining looking left and right. The brain functions with the eyes.

Walking and Eye Movement, Oppositional Movement

When walking about a room, the head and eyes move in the same direction as the body moves, and the carpet and the furniture appear to move in the opposite direction. However, it can be demonstrated that when the head and eyes are moving forward they are also moving from side to side. Every time the right foot is placed forward the eyes move to the right, while stationary objects appear to move in the opposite direction,—to the left; when the left foot steps forward the whole body, including the eyes moves to the left, while stationary objects appear to move in the opposite direction,—to the right.

Patients with normal vision are able to imagine this movement more readily than those with imperfect sight. The head and eyes also move upwards and downwards as the foot is lifted and lowered. When you raise your foot to take a step, the eyes go up, and everything else that is stationary appears to go down. When you lower your foot or head, the eyes go down, and stationary objects appear to go up.

Shifting

Shifting when practiced with the best results is usually unconscious. Very few people with normal sight, which may be continuous for many years, ever notice that they are constantly shifting correctly. One may shift in a wrong way, strain the eyes, and fail to improve the vision. What is the right way? **The right way to shift is to move the eyes from one point to another slowly, regularly, continuously, restfully, or easily without effort or without trying to see.** The normal eye with normal sight has the habit of always moving or shifting, usually an unconscious habit. **When, by practice, the eye with imperfect sight acquires the conscious habit of shifting, the habit may become unconscious.** When the shifting is done properly, the memory, imagination, mental efficiency, and vision are improved until they become normal.

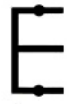


Eyes closed. Imagine shifting left and right on the letter E. See it appear to move side to side opposite the movement of the eyes. Feel the eyes produce smaller movements.

It often happens that when one consciously or intentionally shifts in the wrong way, a better knowledge of the right way to shift may be obtained. When the eyes are moved to the right, stationary objects should appear to move to the left; and, when the vision is good, all objects not regarded are seen less distinctly than those regarded. When the vision is imperfect, objects not observed may be seen better, or an effort is made to see them better than those directly observed. In fact, it is always true that in all cases of imperfect sight the eyes do not see best where they are looking, and central fixation is lost. To shift properly requires relaxation or rest. To shift improperly and lower the vision requires an effort. When one stares at a point, without blinking or shifting; fatigue, distress, or pain is felt. To continue to stare without shifting is hard work. To see imperfectly is difficult; and, when one regards letters which are blurred or not distinguishable either at the distance,—ten feet or further, or at a near point,—six inches or less, the strain on the eyes can be felt. Imperfect sight or a failure to see requires much trouble and hard work. This fact should be demonstrated repeatedly by the patient until thoroughly convinced that rest of the eyes, mind or body can only be obtained by shifting easily, continuously and without effort.



Look at, shift on, see one letter clearest at a time in the center of the visual field. Practice with the eyes open and in the imagination with the eyes closed.



Blink - the eyes shift automatically up and down when blinking. Blink and shift in any direction.

What is true of sight is also true of the memory and imagination. With the eyes closed, one can imagine that he is looking over the right shoulder for a moment and then shift the imaginary gaze over the left shoulder. By lightly touching the closed eyelids with the tips of the fingers he can feel the eyeballs moving from side to side

when the shifting is done right. It can be done wrong when one, by an effort, imagines the eyeballs stationary under all conditions.

With the eyes closed, one can imagine alternately looking from one side of a letter to the other. When the imagination of the shifting is done right, the letter remembered is imagined to be moving from side to side. Two letters close together may be imagined or remembered clearly, provided one is imagined better than the other, or when the attention is shifted to each alternately without effort or strain.

Blinking

Blinking is necessary to maintain normal vision in the normal eye. When blinking is prevented, the eyes become tired and the vision very soon becomes worse. Some persons, without knowing it, will blink five times in one second as demonstrated by the camera. When regarding a large letter of a Snellen test card at twenty feet or one foot, while blinking consciously, the letter appears to move up while the eyelids close slowly, and to move downwards as the eyelids are slowly opened. **This apparent movement is caused by shifting the eyes up and down while blinking.** (Blinking causes the eyes to shift automatically.) Many patients are unable to shift their eyes a short distance with benefit. When blinking, they may fail to obtain relaxation, because they too often blink with an effort. It is possible for most patients to demonstrate that the shifting of the eyes up and down improves the vision, when blinking is done easily, without effort. Blinking is very important. It is not the brief periods of rest obtained from closing the eyes which helps the sight so much as the shifting or movements of the eyes. It should be repeatedly demonstrated that the eyes are only at rest when they are shifting.



STORIES FROM THE CLINIC

No. 70 - Christmas at the Clinic

By Emily C. Lierman

We had a lively time at the clinic last Christmas. Many poor souls were made happy at that time, because of the generous contributions received throughout the year for the clinic fund.

I still keep up the old custom of telling a Christmas story to my younger patients. Every time they come for treatment, I tell them to palm their eyes, and then I try to improve their memory and imagination, which always improves their sight. It is necessary to remind a child of pleasant things, and what is more wonderful to the child mind than a Christmas tree laden with toys and candies? While I am treating boys and girls at the age of twelve or older, I talk about ice skating or sleigh rides, hills of snow, the pure whiteness of the drifts, or I tell them to imagine they are making snow balls. This helps to improve their vision for the test card and relieves tension or pain. Young men and women who work in shops usually find it a benefit to imagine that objects about them are moving all day. I tell them to blink slowly, but constantly, and shift their eyes while blinking. This stops the stare which causes so much body fatigue. If I have had a hard day, treating the most difficult cases, I find it a great help to palm and remember some of my childhood days. I think back to the night before Christmas. Mothers will find it a great help in improving their own sight if they make a daily habit of spending ten or fifteen minutes with their children, palming and resting. Children can easily form mental pictures while palming, especially remembering the Christmas decorations in store windows, the funny mechanical toys, and animals that move about when they are wound up. Recalling or imagining such things, while their eyes are closed, helps to relieve the mind of school studies, which sometimes cause strain. Adults, especially mothers, listen to me while I am describing such things to the children in the clinic. When it comes time to treat the older patients, I find it quite easy to have them remember how surprised their children were on Christmas morning, when the tree and toys were discovered.

It was necessary to find out the ages of the children so that we could purchase suitable and useful gifts for them. There were sewing baskets for the older girls, and handkerchiefs, three in a box, for mothers and fathers. For the little girls, we had the dearest dollies, which we purchased at a reasonable price. Little boys received games and toys of all sorts, and enough money was given to a mother to buy a pair of baby shoes for her youngest.

One mother, who came quite regularly for several months before Christmas, was made very happy the day of our festival. She was invited to bring all of her children. There were seven and not one boy among them.

Dear old Pop from the Blind Men's Home of Brooklyn, was too feeble to be with us, but we remembered him just the same. Good smoking tobacco and some wearing apparel were sent to him and he was overjoyed.

While we were distributing the gifts, I suddenly remembered about the little rich boy who enjoyed a poor boy's gift the year before. There were a few toys left, and no more boys to receive them. The last little girl had received her doll and departed. There was one doll left behind. She was perched among the lower branches and looked rather lonesome. There was no one to claim her. I was rearranging the lights on the tree while all was quiet. When I turned away from the tree, I saw a little rich girl from the West, admiring the lonesome dollie. Dr. Bates also appeared on the scene, and when he nodded his head toward the little girl and then the doll, I understood what he meant. Both arms of the little girl reached out for a poor girl's gift. She held that dollie as though it were the only one in the world. I have learned so much about private and clinic patients, and I am glad to find that all boys and girls feel the same whether they are rich or poor.

Many thanks to my friends who make our clinic family happy at Christmas time.

THE CHRISTMAS FAIRIES

By George M. Guild

The night before Christmas is the time when most little children are happy, wondering how many of the toys they have hoped for will be found under the Christmas tree on Christmas morning. If it were not for the good fairies, Santa Claus would not know what each little child most desires. The fairies are always with the children, although they are not always seen. They know what the children are thinking, and what they are wishing for. The fairies are eager to help Santa Claus whenever he needs them, particularly on Christmas Eve when he is so busy.

In the country, where the snow does not melt quickly, Santa still travels in his sleigh driven by the reindeers. The jingle bells seem to say, "Good Cheer! Good Cheer!" and arouse merry thoughts in the hearts of all. It is different in the cities, where the snow is taken away as soon as it falls. Santa Claus has to use either his automobile or his aeroplane. (Unless he is able to land his sleigh on the roof and go down a chimney.)

In a crowded part of the city, where many poor people lived, the boys and girls were sad and lonely at Christmas time. One little girl, whose name was Mary, had no mother nor father, no sisters nor brothers. She had a great deal of trouble with her eyes and could scarcely see. While the other children in the neighborhood were looking in at the shop windows, wishing for the wonderful toys, little Mary went to sleep on her cot, hopeful that Santa Claus would not forget her. While she slept, the fairies and Santa Claus were very busy. The Queen of the Fairies gathered all the other fairies together. Some were sent to the woods for the largest Christmas tree that they could find. Others were sent to Toyland to bring back stacks and stacks of toys so that all the children could receive what they desired. All night long the Christmas fairies went back and forth from Toyland to the playground, where the large tree was placed for all to see it. They decorated the tree with strings of popcorn, long golden and silver ropes, and beautiful ornaments. The toys were arranged on all the branches and beneath the tree, too. The Fairy Queen touched the Christmas tree with her wand and many colored lights blazed forth. Just then Santa Claus arrived in his aeroplane and was very pleased with the work of the fairies. Soon after that the fairies climbed in the aeroplane with Santa Claus and sailed off to take care of other children.

When daylight came, the children looked out of their windows to see if the snow had fallen in the night. There in the center of the playground stood the beautiful tree. They ran outdoors, calling to their playmates as they went along. Soon an enormous crowd was gathered about the Christmas tree. They were all very excited and made a mad scramble for the toys, and they soon carried off all the presents they wanted. It took Mary longer than the others to reach the tree, because she could not see so well and had to walk slowly and carefully. Then, too, the crowd of children was so large and their eagerness so great that they did not think of little Mary, and she was pushed here and there. Finally, when the children had gone, Mary approached the tree, but she could not see any toys. She sat down and was about to cry when she heard the tinkling of bells and suddenly caught a glimpse of shining lights. She came very close to the tree, and there was one lone toy left among the branches. Mary reached for it and grasped it in her hands. She tried hard to see what it was, but all that she could see were two blinking lights, and each time they blinked they became a more beautiful color. As she continued to look at them, unknowingly she began to blink, too, and all at once she saw a little red and gold jester with cap and bells, and the ugliest face that she had ever seen. That was why all the other children had left it there. But she soon forgot his ugly face when she looked at his eyes again. As they blinked they changed from gold to blue, from blue to yellow, and from yellow to green, and again to a bright scarlet. They danced and twinkled all the while. Then the jester himself began to sway from side to side. This made Mary feel like swaying, and she began to move in time with the movements of the jester. All the while the bells on his cap jingled sprightly tunes for them, making Mary very jolly and gay. Then the jester began to hop up and down, and dance all about, turning 'round and round'. Mary began to dance, too. They danced here and they danced there, and they danced everywhere. They were circling around the tree when suddenly Mary stood still, surprised. She could see! Everything had become very bright. The jester nodded wisely. He knew it had not happened just then; it had been going on ever since she blinked and swayed and danced with him, but Mary had been too happy to realize the wonderful thing that had happened to her. She looked all about,—the whole playground seemed to sparkle. The Christmas tree had become very green, and she could see even the little needles on the boughs. Mary could not understand all this. The jester chuckled to himself. He knew it was the most natural thing in the world. Fairies just live to help people, and they think nothing of the things that everyone call miracles.

"Why! I believe it is you who have helped me," Mary suddenly said to the jester. "I do believe you are a fairy!"

The jester nodded, bowed, twirled around gaily and then blinked at Mary.

"I know," exclaimed Mary, "it is the wonderful things you do with your eyes that have helped me."

The jester nodded twice this time and bowed low. Mary hugged him tightly and ran to tell the other children about the Fairy Jester. What she did not know was that he was the Prince of the Jesters in disguise and went about curing people just as he had cured Mary.

AN OPTOMETRIST'S EXPERIENCE

By Dr Paul Hotson

Editor's Note - Dr. Hotson is among the first optometrists to practice the cure of imperfect sight without glasses. This does not mean that he has given up prescribing glasses, but it means that he can now offer his customers a choice of treatment with or without glasses.

For many years people have been taught to believe that there is no relief from eye troubles, except through glasses, and it is hard to make them believe anything else.

Sixteen years ago, I started practicing Optometry, and still hold a license. Fourteen years of that time I swallowed and digested the old theory of refraction, although it is full of contradictions which could be demonstrated to the average optometrist in a few minutes.

According to the old theory, near-sight is incurable, but when you improve the vision of a near-sighted child until it can read two or three lines down on the test card, or even obtain normal vision in one treatment, the old theory falls to pieces. These facts have never been brought to the attention of optometrists in general.

Eyestrain can be cured so easily in the average child by Dr. Bates' method that it should be against the law to fit children with glasses. I predict that within twenty-five years there will not be a child wearing glasses in either the United States or Canada.

A CASE OF CHRONIC HEADACHE

Girl, 16 years old, Right eye 10/10, Left eye 10/10 (with one mistake). Had **headache constantly for over a year**, medicine did not relieve, and at times she was not able to sleep at night on account of the pain. **Right eye had turned slightly in and patient saw double**. Headache was completely relieved during first treatment by palming and the memory of a dahlia, which was her favorite flower. She came to my office twice a week and was cured in ten days. The treatment consisted of **palming, swinging, blinking** and the **memory of a small letter o**. Her vision Improved to 22/10 and both eyes became straight.

CURED IN ONE TREATMENT

Child ten years old. Vision 10/30. After palming ten minutes, swinging improved the vision to 10/10 in each eye during the first treatment.

FAR-SIGHT AND ASTIGMATISM

Girl thirteen years old. Had worn strong specially ground lenses for three years on account of **headache**. She was instructed to palm fifteen minutes, five times a day, swing small letters on the test card and read her school books by looking at the spaces between the lines. When she came for the third treatment, which was seven days after I first saw her, the headache had disappeared. She is now able to study as long as she likes without the least inconvenience.
(When reading the print; the eyes look directly at the print. Looking at the white spaces is done before reading the print.)

GLASSES HELPED THIS BOY

Boy 14 years old. Without glasses he read 12/10 with only three mistakes, and at ten feet he could read all of them with each eye separately. In two weeks his vision improved to 15/10. Headaches disappeared and he had no more trouble with his eyes. Palming fifteen minutes four times a day, and swinging the small letters cured him.

He had worn near-sighted lenses for four years to relieve headaches. While this boy was not near-sighted, he contrived to enjoy great comfort from the lenses. So much so that when he forgot them, he would go back a mile in order to have the glasses for his school work.

AN OCULIST'S EXPERIENCE

By E. F. Darling, M.D.

Editor's Note - This contribution from an **oculist of twenty years' experience in one of the largest Eye Hospitals in the United States** is of unusual interest. He is to be congratulated on his perseverance in going without glasses so long before his sight for reading had sufficiently improved to do his work properly. He has not told of the opposition and loss of many of his old friends because he did not prescribe glasses for his patients.

I have been practicing medicine as an ophthalmologist for the last twenty years. During a period of eighteen years prior to 1923, I spent a large part of my time putting glasses on my helpless patients.

However, for the last two years I have been trying to make amends by removing their glasses as rapidly as possible.

The first time I heard of Dr. Bates' work was from an article in one of the medical journals about fifteen years ago. The article made some impression on me, because it was entirely at variance with our accepted views as to the cause and cure of defective vision. In the clinic I attended, at one of the largest eye hospitals, most of the men seemed to know nothing about Dr. Bates. Some thought he was a quack, while others said he was insane.

About three years ago I received notice of the publication of his book, "Perfect Sight Without Glasses," and at that time I decided to purchase the book and see what it was all about. The thing slipped my mind for another year or so, when one of my old patients came into my office without her glasses on and said she had been working with Dr. Bates. Her vision was much improved, and she wanted to know if I could continue the same kind of treatment with her. I was obliged to confess that I knew nothing about his methods, but I believe I at least volunteered the information that he ought to be in jail.

The next day I went over to the Central Fixation Publishing Company and bought the book. When I reached home, I started reading it and didn't stop until I had finished the whole thing. Here was a plain statement of facts accomplished, and I at once decided to test the matter with my own eyes.

I was wearing convex 2.25 D. S. for distance and convex 4.25 for reading. My distance vision had deteriorated in the eighteen years I had worn glasses, from better than normal to about one-third normal. My near vision had gone back so much that I was wearing the glass which theoretically should suit a person sixty or seventy years old. With the glasses off I could see only the largest headlines on the newspapers. While wearing the glasses, I had occasional headaches and eye aches, and my near vision was at times very defective, so that I had difficulty in doing fine work of any kind.

The first day I went around without glasses everything seemed blurred, but I felt somehow that I had gotten rid of some particularly galling chains. It was pleasant to feel the air blowing against my eyes, and I walked around the whole afternoon trying to get used to the new condition.

In carrying out the suggestions in Dr. Bates' book, I had a great deal of trouble for the first week or so, especially with the mental images. This was simply due to my extreme eyestrain. In spite of this my vision steadily improved by palming, so that at the end of three weeks I could read the 10/15 line instead of the 20/70 line. I had only an occasional eye ache when I had forgotten to use my eyes properly.

In improving my near vision, I had to make several visits to Dr. Bates, and he overcame most of my difficulties at once. I used many of the methods he advocates in this near work, but it was about three months before I could read fine print. It seemed an extremely long, long time to give up reading, but knowing now the advantages after an experience of two years without glasses I would be willing to go without reading for a much longer period. Many people of the same age get results in a much shorter time than I did. I feel more and more strongly that a person will not have full control of his mental faculties until he gets rid of his glasses. Whether it takes two weeks or two years, the result will pay for the deprivation.

At present I usually read an hour or so in the daytime and three or four hours at night with no eyestrain whatever. Previously I used to walk along with my eyes fixed on the pavement because of the discomfort in taking note of passing people or objects; now it is a great pleasure to examine things minutely. In my work I can go nine hours with about the same fatigue as I felt before in three or four hours. In other words, Dr. Bates' work his changed me from an old man of forty-eight to a young man of fifty. I now enjoy the practice of medicine for the first time since finishing my hospital internship, as I am absolutely certain that if patients will carry out my directions their whole condition will be improved.

In no case can the time required to obtain normal vision be definitely stated. People of the same age and wearing the same strength glasses vary in time required as much as they differ in color of their hair or size of their appetites. Some get quick results, others drag along indefinitely before they get where they should be.

These slow cases require lots of encouragement, and it sometimes takes all their own and the doctor's perseverance to keep them going.

SOME INTERESTING CASES

By Mildred Shepard

Editor's Note - Ms. Shepard has done much good work in the cure of imperfect sight by treatment without glasses. She came to me as a patient about five years ago and was treated for hypermetropia or far- sightedness accompanied by astigmatism. She had suffered with pain and fatigue whenever she used her eyes. After her sight became normal, Miss Shepard began to treat her friends. She became so interested in curing them of imperfect sight that she decided to take my course.

Ten days ago a lady came to me after having **worn glasses for twenty years**. She is now forty-five. Her vision with both eyes was 14/70, and with the left eye she read two letters of 14/50.

Her mental pictures were good, and after palming a while she became able by the use of her memory to read 14/20.

When she came for her second lesson, she could read 14/50 easily, and improved to 10/15. She understands the general principles and wants to work by herself for a couple of weeks. I hope that she will have 14/10 when she comes again.

Another near-sighted young lady of twenty-four, a school teacher, read 14/40 and some letters of 14/30 the first day of her treatment. The same day she improved to 14/20. One week later she read 14/15.

Two of my pupils have gone back to their oculists for examinations, the results of which were rather interesting. In one case the man wanted to get a pair of glasses, which he could use when he sat in the top balcony of the Opera House. When the oculist examined his eyes and compared it with the previous examination, he found so much improvement that he refused to prescribe glasses for him. His vision had improved from 10/30 minus with the right eye and 10/40 with the left to 12.5/10 with both.

In the other case the examination showed 1½ diopters of myopia instead of 3¾ which had been present before. **This man had a pair of still <u>weaker</u> glasses made up**, to wear while working under trying and unusual conditions. He hopes soon to discard the glasses altogether. His vision improved from 20/70 to 10/10.

Last spring a young girl of twenty-two came to me. She had worn glasses for nine years. Her vision was 20/200 with both eyes. With the right eye it was not so good. She had six lessons in ten days and became able to read 10/10 on the black card. Six months later she returned. Her vision was still 10/10. She was so enthusiastic that she brought her mother and a friend, both of whom had lessons. She wants to go into the work after she improves her sight still more.

Another girl of fourteen whose vision was 7.5/100 last February can now read 8/10 on the black card, and when she once masters central fixation I know she will get back to normal vision.

Another has improved from 6/200 to 5/30. She still has a long way to go, but she is faithful, and we both are hopeful.

I might go on indefinitely giving other cases, some similar and some quite different.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JANUARY, 1926

The Period



Imagine a period. Shift point to point on the period, shift away from it and back quickly, see it move as the eyes shift. Practice with the eyes open, closed, open.

THE perfect memory or imagination of a period is a cure for imperfect sight. Only the color needs to be remembered. The size is immaterial, but a small period is remembered with more relaxation than a large one. It is true, however, that with perfect sight, one has the ability to remember all things perfectly.

One cannot remember a period perfectly by any kind of an effort. It usually happens that one may remember a period for a time, and then lose it by an effort. To remember a period stationary, is impossible. One has to shift more or less frequently in order to remember one period perfectly all the time, or one has to imagine the period to be moving, or one has to remember the period by central fixation,—one part best. By shifting, is meant to look away from the period and then back, but to do it so quickly that it is possible to remember the period continuously, although you are not looking at it all the time,—this with the eyes closed. Every time you blink, you shift your eyes. You can blink so rapidly that it is not noticeable. When you close your eyes and remember a period, you cannot remember it unless you are, with your eyes closed, going through the process as though you were blinking, looking away from it and back again, but so quickly that it seems as though you were looking at the period continuously. You cannot remember the whole of the period at once. No matter how small the period is, you cannot see or remember it perfectly, all parts equally well at the same time. You cannot remember the period perfectly by any kind of an effort. When the memory of the period is perfect, the mental and physical efficiency is increased. A perfect memory of the period does not necessarily mean that one should think only of the period.

Shift on the period from part to part, small point to small point: left and right, top and bottom, diagonally and in any direction.

Swinging

***By* W. H. BATES, M.D.**

Swinging: When the eyes move slowly or rapidly from side to side, stationary objects appear to move in the direction opposite to the movement of the head and eyes.

PEOPLE with normal vision are not always conscious of the swing. When called to their attention, however, they can always demonstrate it, and are always able to imagine all stationary objects to be moving. In imperfect sight, the swing is modified or absent. This is a truth which has been demonstrated over a long period of years by a great many people, and no exceptions have been found.

The normal or perfect swing is slow, short, easy and continuous. When the swing is normal, it is always true that not only is the vision normal or perfect, but also the memory, the imagination, or the mental efficiency correspond. When the memory is imperfect, the imagination, the mental efficiency, and the sight are also imperfect.

All cases of imperfect sight from myopia, or near-sightedness, become normal when the swing becomes normal. The same is true in cataract, glaucoma, diseases of the optic nerve and retina. For example, a woman, aged sixty-three, was treated for imperfect sight from cataract. Her vision was 10/200, and was not improved by glasses. For twenty years she had not been able to read a newspaper with or without glasses. In three visits, with the help of the normal swing, her vision improved to 10/10 minus, with flashes of normal vision, and she read diamond type at twelve inches rapidly without glasses. Other similar cases have been relieved as promptly.

It is important to understand how the swing can be imagined. Some people with mild cases of imperfect sight can imagine a letter or other object to be moving when they see or remember it perfectly. There are many others who fail. Severe pain, fatigue, or worry often prevent the demonstration of the swing. Blinking and palming are helpful in demonstrating the swing. The distance of the object regarded is important. The patient should be placed at a distance at which he can best demonstrate the swing. The distance varies with the patient.

It is unfortunate that many patients consider the swing complicated or impossible. However, they can usually demonstrate that a stare or strain lowers the vision. When holding a test card at a convenient distance from the eyes, patients may be convinced that the test card is seen better when moving. They may not profit by their experience, but continue to stare or strain, which always lowers the vision.

One patient was unable to imagine any kind of a swing. He was suffering from pain, mental depression, and imperfect sight for the distance. Reading the newspaper, even with glasses, was impossible. Since nothing he tried gave him any relief, I suggested that he stop trying to see and make no effort to imagine stationary objects to be moving. He practiced this while sitting in my waiting room. He paid no attention to the apparent movement of stationary objects, nor did he look at any object more than a fraction of a second. His vision after that improved from 20/50 to 20/10. He became able to imagine the movement of objects and demonstrated that all his pain and mental depression were caused by a stare or an effort to see all things stationary, when he regarded, remembered or imagined them. He was comfortable when he imagined objects moving or swinging, but very uncomfortable when he made an effort or imagined them to be stationary.



Shift left and right on the E and see it move in the opposite direction the eyes move to.
Shift top and bottom, diagonally and in any direction.

Recently, I tested the sight of a girl about ten years old. She read the Snellen card at ten feet with normal vision. She was asked: "Do you see any of the small letters moving from side to side?"

"Yes," she answered, "they are all moving."

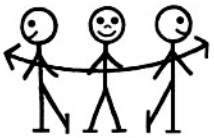
"Now can you imagine one of the small letters stationary?" At once she quickly looked away and frowned.

"Why did you look away?" her father asked her.

She replied: "Because it gave me a pain in my eyes and head, and the letters became blurred. Don't ask me to do it again."

The experience of this child is the same as that of everyone, young or old, with perfect or imperfect sight. When the sight is normal and continuously good, to try to stop the swing of a letter or other object necessitates a strain,—an effort which always lowers the vision and produces discomfort or pain in one or both eyes.

It has been repeatedly demonstrated that a letter or other object cannot be remembered or even imagined perfectly and continuously, unless one can imagine it to be moving or swinging. Not only does the sight become imperfect, but also the memory, imagination, judgment, and other mental processes are temporarily lost. These facts should be known to teachers, because they greatly affect the sight, the mental efficiency, and the scholarship of their pupils.



Swing and turn left and right.
Swing, turn left-the heel of the right foot moves up.
Swing and turn right - heel of left foot moves up. 50-100 times.

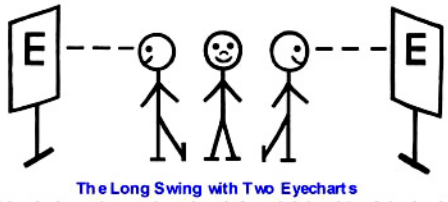
The Long Swing

Long Swing relaxes the mind, body, eyes, activates eye shifting, clear vision. Do the Rock, (sway) a shorter swing for increased vision improvement. See oppositional movement.

When the memory, imagination and vision are normal, the eyes, the brain and the entire nervous system are at rest. The reverse is also true, for when the muscles and nerves of the body are not at rest, the sight, memory and imagination are imperfect, and the mental efficiency is lessened or lost.

It is impossible to imagine pain, or any symptom of disease and the normal swing at the same time. Children with whooping cough have been immediately relieved by the relaxation obtained from the swing. Many patients suffering from severe attacks of bronchitis have been promptly relieved in the same way. Angina pectoris, pneumonia, trifacial neuralgia, and other serious diseases have also been relieved after relaxation or rest was obtained with the aid of the swing.

The swing is generally beneficial. Some patients obtain more relaxation from one type of swing than from another. The long swing, however, is most helpful in a great many cases.



The Long Swing with Two Eyecharts
Identical eyecharts placed on left and right side of the body.
Swing and turn left and right and 'Flash' glance at, shift on a letter on the eyechart for a 'fraction of a second'-
Swing, turn left and 'flash' a letter on the left chart: Blink and shift quickly, easy on the letter. Do not stop swinging.
Swing and turn right and flash a letter on the right chart.
Keep swinging left and right, glancing at the letters. Relax, no effort to see - vision be comes clear.

LONG SWING: Stand with the feet about one foot apart. Turn the body to the right, at the same time lifting the heel of the left foot. The head and eyes move with the movement of the body. Do not pay any attention to the apparent movement of stationary objects. Now place the left heel on the floor, turn the body to the left, raising the heel of the right foot. Alternate. Pain and fatigue are

relieved promptly while practicing this swing. When done correctly, relief is felt in a short time. The long swing, when done before retiring, lessens eyestrain during sleep.

VARIABLE SWING: Hold the forefinger of one hand six inches from the right eye and about the same distance to the right. Look straight ahead and move the head a short distance from side to side. The finger appears to move in the direction opposite to the movement of the head and eyes.



Variable Swing with finger to side of face. Move the head left and right and see the finger move opposite.

DRIFTING SWING: The patient does not think of nor regard anything longer than a fraction of a second. It is helpful in doing this for the patient to imagine himself floating down a river. He may be able to imagine the drifting movement of the boat in which he is floating, better with the eyes closed than with them open. In this case, alternate the imagination with the eyes open and with them closed. The imagination may be improved in this way.

SHORT SWING: When the sight is normal, one can demonstrate the short swing. When it is imperfect, one can demonstrate only the longer swing. When a patient with imperfect sight regards the Snellen test card at ten or fifteen feet, he may be able to imagine one of the letters on the card to be swinging a quarter of an inch or less. The imagination of a shorter swing always improves the sight. Some patients can imagine the short swing better with their eyes closed than with them open. Alternate the imagination of the swing of the letter with the eyes closed and with them open. By repetition, the vision of the letter with the eyes open will improve (at first in flashes, later more continuously), if the memory of the short swing is perfect with the eyes closed.

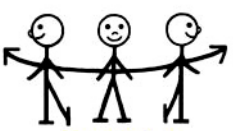


Variable Swing with finger in front, center of face, between the eyes, eye level.

UNIVERSAL SWING: When the eyes are at rest, they are always moving. When the body is at rest, it can always be imagined, one part in turn, to be moving or swinging. The chair, on which the patient is sitting, is swinging. The floor, on which the chair rests, is also swinging. The walls of the room also swing when the floor swings. When one part of the building swings, one can imagine the whole building to be swinging. The ground, on which the building stands, is also swinging. When the ground swings, other buildings connected with it swing. One can imagine the whole city to be swinging, this continent and all other continents on the earth can be imagined swinging. In short, one can imagine not only that the whole world is moving, but also the universe, including the sun, the moon and stars. The practice of the universal swing is of the greatest benefit, for in this way one can obtain the maximum amount of relaxation.

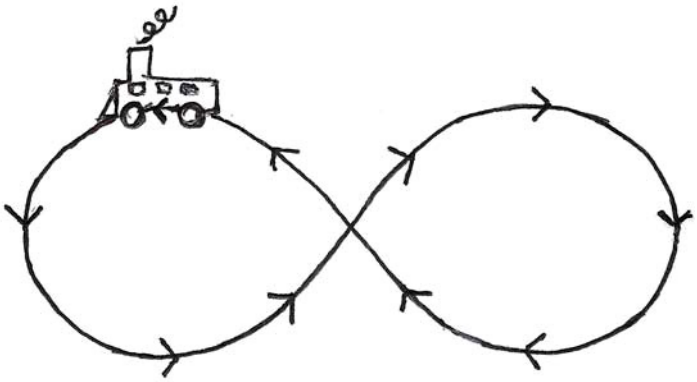
All objects appear to move, 'swing' in the opposite direction the eyes shift to.

The Figure Eight shown below is a new, improved version of a few different swings combined into one. Trace up the center and to the left first for correct left and right brain hemisphere activation, integration.



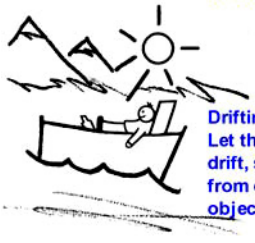
Long Swing

Swing the body left and right. Head/face, eyes, body move together, at the same time, in the same direction.
See oppositional movement; objects in the visual field appear to move 'swing by' in the opposite direction.
Do not stop to look at the objects. Keep swinging, relax and let them move.





Variable Swing with the finger in front of the face.
Move the head left and right and see the finger move in the opposite direction.



Drifting Swing.
Let the mind, eyes drift, shift freely from one thought, object to another.
Relax.



Shift left and right, top and bottom on a small letter and see it move 'swing' in the opposite direction.
Practice with the eyes open, closed, open.

Stories from the Clinic

No. 71: PARTIAL PARALYSIS OF THE THIRD NERVE

***By* EMILY C. LIERMAN**

GEORGE, aged five years, was sent to me by a physician, who diagnosed his case as paralysis of the third nerve of the right eye. A number of eye specialists said that he could not be cured. One gave him internal treatment for about six months and used electricity on the eye without much permanent benefit. When a nerve is paralyzed, its function is lost. In other words, the nerve is not able to bring about a contraction of the parts supplied by the nerve. To explain further, that branch of the third nerve distributed to the muscle which raises the lid had lost its function. In general, it has been believed for many years that a paralyzed nerve is relaxed. After many years of observation and experimental work, it was demonstrated that a paralyzed nerve was under a great tension. Treatment which relieved the tension and brought about a sufficient relaxation was a cure for the paralysis.

In Dr. Bates' book is an illustration of a patient with paralysis of the seventh nerve. One of the functions of the seventh nerve is to close the eyelid. When it is paralyzed, the eye remains open. Not only does the eye remain in this way, but the lips are separated. The patient is not able to close the lips sufficiently to whistle. By palming and swinging, relaxation is obtained,—the patient becomes able at once to close the eyelid, and to close the lips sufficiently to whistle. These cases of paralysis do not need electrical nor other stimulation. They are cured by rest. I believe that electricity is a valuable remedy, but it has lost much of its prestige by being employed in cases where it was not needed.

Georgie's mother has unusual intelligence, and she came to us confident we could relieve or cure Georgie's eyes. This is the history of his case as she described it: When he was born his right eye was wide open, and the child was unable to close the eye. About three months later the eyelid closed, and the child was unable to open his eye. Several eye specialists in Brooklyn told the mother that the eye could not be cured.

From the very beginning, Georgie was a source of pleasure to me. He seldom spoke above a whisper and preferred to go through each treatment without speaking at all, if possible. At such times he was given the card with the letter E pointing in different directions. When I asked him which way the E's were pointing, as I pointed to each one with my pencil he would say left, right, up, down. But if he were not in the mood, he would raise his hand and indicate the direction in which the E was pointing. In the beginning, this card was the only one used in his treatment, because he did not know all the letters of the alphabet. After he was admitted to the kindergarten school, he asked for the alphabet card, and also a figure card, which children favor a great deal for testing their sight. When Georgie's first test was made, he was unable to open his right eye. The left eye was normal, or 10/10.

I taught him to palm, and while he sat quietly, I began to talk to his mother. The conversation was solely for his benefit, so I talked about him. Like all mothers of her type, she praised her little boy and informed me of all the wonderful qualities of his mind, and that he was most obedient. I saw him smile, and for a moment he peeped a little through his fingers. After he had rested his eyes for ten minutes, I told him to keep his left eye covered, and look at the card with his right eye. His mother sat facing him, with her eyes wide open with astonishment, as she saw the eyelid open just a trifle. He was able to keep his right eye open long enough to read 10/70, then the eyelid dropped again. His mother obtained a number of different Snellen test cards and used them at home for the daily treatment of the paralyzed eye.

I treated Georgie again, one week later, and I immediately had him practice the palming. So many patients have failed to palm successfully, because they stare even with their eyes closed. Georgie palmed successfully because, at my suggestion, he remembered the things that were pleasant and easy to recall. If I could not think quickly enough of a story to tell him, I would show him something in my room which pleased him. Then he would palm and describe it to me. At one time I showed him a box of bonbons, which were attractively arranged, and promised him some if he would sit and palm for a long time. His mother and I were amused, because he was unusually quiet when he remembered the candy. After he had palmed awhile, I suddenly asked him what he was thinking about. He opened his eyes long enough to say the word "candy" and then closed them again. The vision of his right eye improved from 10/70 to 10/50 that day, and the eyelid was more open than before. The left eye improved to 12/10.

At every visit his vision was improved, while the paralysis diminished with the increased relaxation of his eye. I noticed that occasionally he would forget to blink, and then he would stare and strain, which lowered his vision and increased the paralysis. His eyelid has opened more, and his vision has improved since he became the owner of a little puppy. Whenever he played with the little dog, his mother noticed that both eyes would blink. This is evidence that things seen in motion are seen best. The vision of his right eye was improved to more than 10/10, while that of his left eye to 18/10, which is very unusual in a child six years of age. He had been under my treatment for about a year.

The Blinking Knight

***By* GEORGE M. GUILD**



The Blinking Knight

INSIDE a dark, dingy, little shop, a group of children bent over their work. Outside, New Year's revelry echoed along the streets, but the day held no joy nor merriment for these little workers. It was just like every other day. It meant sitting from early morning until late at night stringing countless numbers of little beads together, to make ornaments. They stooped over their tasks until their sight grew dim, and colored spots danced before their eyes. They could not stop their work nor rest for even a moment, but the angry proprietor prodded them on.

Today, fear and dread settled in the hearts of the poor children. Had they not been told that their work was very bad and that they would be dismissed? They knew it was, because they could not see to match the beads in the dull light of the shop. Perhaps glasses would help them, but where was the money to come from?

As evening approached, the light grew dimmer and dimmer. It seemed to the children that they could no longer go on, when from a dusty comer they heard a voice say, "Good evening, children." As they looked, they saw a light shining. The light grew stronger and stronger, and seemed to fill the room. The little workers almost shouted aloud with joy. Suddenly a little man with a flaming sword jumped out to the center of the room. On his head he wore a soft velvet hat with a very large brim; a cluster of huge diamonds shone on the front, while smaller ones covered the hat band. His coat had a long tail, which swayed with every movement he made. The many glittering

buttons were immense diamonds. His yellow vest, which contained a great many more pockets than any vest the children had ever seen, was decorated with diamonds, rubies, emeralds, and sapphires. His violet trousers reached only to his knees, and they, too, were covered with jewels. He wore long stockings of fiery red, and his low patent leather shoes were trimmed with large silver buckles. The belt of the scabbard for his sword sparkled with jewels.

When the children gazed on this knight, they became very quiet and curious to know who he was. His eyes were sympathetic as he smiled good-naturedly on them. When he spoke, his voice was like music to their ears and made them all feel comfortable and at peace with the world. "Children," he said, "the fairies have sent me to help you to be happy. I love each and every one of you and want to cure your eyes, so that you will be able to have perfect sight all the time. You will be able to see even in the dimmest light without glasses. All of you are working too hard. Make believe that you can see fairies, that you can talk with them, dance with them, and be like them. When I was a boy, I wanted to be a fairy, but when I grew up, the king made me a knight and sent me out into the world to slay as many bad people as I could. I was very skillful at doing this.

"One day, while riding through a wood, I saw some blue flowers. They were so beautiful and fragrant that I said aloud, 'Oh, you lovely blue flowers, how I wish you were all fairies,' and then, much to my surprise, every flower turned into a blue fairy. They climbed upon my steed and urged him to canter as fast as he could. Very soon we came to a field of beautiful yellow flowers. While I looked at them, entranced, myriads of little yellow fairies danced gaily from the petals and mingled and danced together, leading us on, until we reached a meadow of violets nodding in the breeze. They were even more beautiful than the others. I wished that they too were fairies. All at once the violets turned to violet fairies and they frolicked with the other fairies."

The knight ceased to speak for a moment and then suddenly held up a bouquet of blue, yellow and violet flowers. The children saw him leap to the middle of a large table in center of the room. There he began to dance, and as he danced he blinked his eyes and waved the flowers around his head, crying out to the children, "Make believe that these flowers are fairies. Remember the colors perfectly. Blink your eyes as you see me blinking, and never forget what you will see now." Immediately the flowers all turned to fairies of the same color.


Fairy

At once they all began to dance around the blinking knight, laughing, shouting, and enjoying themselves. The knight touched each child in the shop with his wonderful sword, and each child as soon as she was touched, turned into a fairy. Some blue, some yellow, and some violet, and all blinking as frequently as the blinking knight.

"Now that you are all fairies," he said, "you must think, remember, imagine, and believe all things which are good. Tomorrow morning, you will all waken and believe that all this was a dream. I want to tell you that I was born a thousand years ago. I speak with the wisdom of the ages when I say to you, that if you will only remember me and make believe that you are fairies, you will always be happy and good the rest of your lives."

How Estelle Helped

***By* BEATRICE SMITH**

THERE are many cases of imperfect sight, many cases of pain and fatigue, which can be cured by other patients who have obtained normal sight without glasses by practicing relaxation methods.

About three years ago, a young man, aged seventeen, suffered very much from pain in his right eye. The pain increased quite rapidly and finally became so severe that in order to get any relief, he was compelled to take morphine. As time passed, the dose of morphine was increased and increased with unusual rapidity. The outlook seemed dismal. The eye specialists in some of the large cities prescribed glasses for him, but without benefit. One day while walking along the street, he met a lady whose daughter had been cured by the treatment of imperfect sight without glasses, discovered and practiced by a physician living in New York City. The lady recommended him to practice palming, swinging and some other methods described in a book called Perfect Sight Without Glasses. The palming gave instant relief. By palming for fifteen minutes every night and morning, the pain was relieved or prevented. This treatment was continued for some months, usually about three times daily for fifteen minutes each time. As the days went by without a return of the agonizing pain, he practiced palming less frequently, until after three months, not having had an attack of the pain, he stopped the palming and forgot all about his right eye.

The patient lived in one of the large cities of the West. It was interesting to learn of the great number of people who followed the treatment of this case of pain and kept in mind all the particulars. When the boy began to lessen the number of treatments by palming, some of his friends were very much concerned for fear that he was stopping the treatment too soon. When he remained free from pain for some time, they were relieved, but still more or less apprehensive. I believe the boy felt deep down in his heart that if that pain ever came back, he would know how to handle it.

The patient, who recommended the boy to palm, had a daughter about ten years old, who had been to New York, taken the treatment and been cured of imperfect sight without glasses. This little girl kept after the young man in the early days of his treatment and insisted that he practice all those methods, which were beneficial, repeatedly and continuously. I believe it was the efforts of the little girl, which did more than anything else to benefit the patient. True, he was willing to palm and did palm, but there were days when he would forget and she kept after him until he was cured.

I believe that she had more to do with the cure of the boy's pain than did the supervision of other people.

A Student's Experience

***By* MARGARET ROBINSON**

AUTHOR'S NOTE—Dr. Bates has asked me to send some report in regard to my teaching of his methods in Bloomington, Illinois. Converts to the truth of Dr. Bates' explanation of eye troubles are persuaded that glasses, for the average person, are unnecessary, also, that the vision is lowered as a result of their use. It is appalling to find how many people are actually struggling with glasses, which, they have been told, would relieve their strain and save their vision. If, in my very limited experience, I have found so many of this type, there must be a great number of such unfortunates in every community. The three following cases illustrate what I mean:

MISS I., age thirty, had worn glasses since she was ten years old. In the past two years, since a goiter operation, she said she had visited the oculist at least once a week. He had changed her glasses four or five times during this period, had stopped all reading, and was putting medication in her eyes to relieve a distress, which she said was almost constant. He seemed uncertain what to do next, as her vision was steadily growing worse. With her glasses she read 10/30 with both eyes and 10/200 with the right eye alone. After taking off her glasses and palming for a short time she read better than 10/20 with both eyes, and almost 10/70 with the right eye. The near vision of the right eye was also impaired. On the first day, she could not read ordinary type with this eye alone. In two weeks she lost all sense of strain and read 10/10 with both eyes and began to read 10/50 with the right eye. She read diamond type readily with both eyes together and slowly with the right eye alone, at six inches. She reported that she was able, without fatigue, to read two hours or more at a time, day or evening. She looked and acted ten years younger.

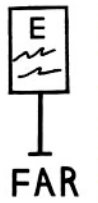
Miss J., age forty-two, was very much frightened about her eyes, and very loath to give up the large glasses behind which her eyes looked so tired and drawn. She had been forced to give up her position at an embroidery counter because of the failure of her vision. In eight months she had had three different pairs of glasses, and said that the oculist told her frankly that he was much puzzled as to how to relieve her very serious strain. Four lessons, with her intelligent co-operation, and less than a month's time, relieved the situation. Her eyes were comfortable and she was able to see satisfactorily for reading and sewing, as well as at a distance. The look of relief on her face was very gratifying.

Mrs. W., age forty-nine, had suffered with very severe eye difficulties for twenty years. She had been forced to give up her piano work, could do practically no reading, and said, in fact, that many of the interests of her life had been dropped because of her eyes. Bright lights, and use of her eyes for close work, produced a sharp pain in her head which she had learned to greatly dread. Said for about a year she was allowed to use "very strong" glasses ten minutes at a time. Of late she had used them longer than that, but it made her eyes very tired to do so. There were dark rings under her eyes and she was very nervous. Without her glasses she was able to read 10/15, also large clear type at reading distance but better at arm's length. She did this, however, with fear and trembling, often stopping to close her eyes. In two weeks, she was reading 10/10 readily without fear, also getting flashes of clear vision when practicing with the diamond type card held at six or eight inches from eyes. She was comfortable, had lost all dread of bright lights, did not get the pain in her head any more, and was losing the dark rings under her eyes. She stopped taking lessons at this point, but continued to improve, according to reports which reached me several months later.

In each of these cases, glasses were not only useless, but actual torture. In each case the individual had given up what she wanted to do because of her eyes. In each case a couple of weeks without glasses, combined with learning how to relieve the eye strain, made life, as each wanted to live it, possible. It seems incredible that the 'value of such facts is not more quickly and more generally accepted.

Questions and Answers

Q—I can read with no trouble but cannot distinguish things at a distance, especially the features of people. What would you suggest?
A—You are near-sighted. The imagination cure is the quickest and most satisfactory cure of myopia. Use two Snellen test cards, one held at one foot or nearer, or at a distance where you can see it best; the other placed at five feet or further. Look at the first letter of one of the lines of the near card and with the eyes closed remember it for half a minute or longer. Then look at the same letter on the distant card at five feet or further and imagine that letter for not longer than a second. Then look at the near letter again for part of a minute, close your eyes and remember it, and then glance at the same letter on the distant card for not longer than a second, and imagine it as well as you can. Alternate. When you become able to see the bottom line on the distant card, place it a few inches further off and repeat.
Practice with both eyes together, one eye at a time, then both together again.



Imagination cure for near-sightedness.
Two identical Eyecharts placed at close (clear) and far (unclear) distances.
+Eyes open - Shift on a letter on the close clear chart.
+Eyes closed - Remember, imagine the letter clear, shift on it in the mind 30 seconds or longer. (10-15 seconds is ok.)
+Eyes open - look at, shift on the same letter on the unclear distant chart, for a second or less and remember, imagine it clear.
+Look at the letter on the clear close chart again 10-15-30 seconds or longer., then close the eyes and remember it.
+Then look at the letter on the distant card again, second or less and remember, imagine it clear.
+Repeat.
+Practice on smaller letters and at farther distances.

Q—What method is most helpful in myopia?
A—Palming, swinging, and the use of the memory or imagination (described above), are most helpful.



Sunning-
Face the sun, eyes closed, move the head side to side.
Saccadic Sunning-
Sit under a tree with partial shade, sunlight shining through the branches, wind blowing the branches causing moving light and shadow to flicker on the closed eyes. Activates eye, eye muscle relaxation, tiny shifts, eye movements, very clear vision.

Q—Can you tell me what to do for inflammation of the white of the eye? Do you think sun gazing would help?
A—The light treatment is beneficial. Sit in the sun with the eyes closed and let the sun shine directly upon the closed eyelids. Move the head a short distance from side to side. Practice this for half an hour or longer three times daily when possible.

Q—Will you kindly tell me what I can do in order to read as well with the eyelids fully open as I can when they are slightly parted?

A—Improve your vision with the aid of the imagination cure as described above in answer to question 1. When your vision improves, your eyelids will be more open.

Q—Is there any exercise or any particular, method of relaxation that will help double vision?
A—Closing the eyes and resting them is a cure for double vision. Blinking frequently, just as the nor-mal eye does, is also beneficial.

Q—Please explain the elliptical swing.

A—In the elliptical swing, the head and eyes are moved continuously in the orbit of an ellipse or a circle. The continuous movement of the head and eyes prevents the stare or strain, since staring requires that one try to keep the eyes from moving.

Elliptical swing

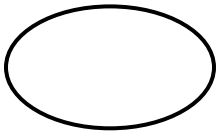
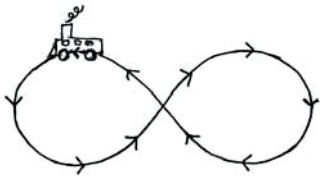


Figure Eight



The Figure Eight, Infinity Swing
is a modern variation of the Elliptical Swing.

Q—How many times a day should the sun treatment be given?
A—The sun treatment should be given for half an hour or longer three times a day, or more often, when possible. The more sun treatment, the better, as it rests and strengthens the eyes.

Q—What treatment helps most people?
A—Palming is generally most helpful.

Q—Is it possible for some people to be cured by the help they may obtain from your book "Perfect Sight Without Glasses"?
A—Yes. By practicing the methods recommended in my book, many readers have improved their vision without my supervision. It helps to have someone with perfect sight supervise your treatment.

Q—Is myopia hereditary?
A—No. It is, however, contagious in many cases. When parents are cured of myopia, their children may recover without treatment.

Q—How long does it take to cure an average case of myopia?
A—Some patients are cured more quickly than others. The length of time is uncertain, as patients differ in their response to treatment.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

FEBRUARY, 1926

Demonstrate

1. That an effort to see always lowers the vision. Look at the Snellen test card at a distance of twenty feet. It may be possible for you to see the large letters and read them without any apparent effort, while the smaller letters produce a strain which you can feel. If you consciously increase the effort to see the smaller letters, your vision becomes more imperfect. It is not easy for you to realize that effort is always present when the vision is lowered. Knowing the cause of your imperfect sight is a great help in selecting the remedy.

2. That a stare always lowers the vision. It is a truth that the normal eye blinks very frequently. In order to have normal sight, the eyes must blink. One can demonstrate that, when the patient looks at one letter at the distance with normal sight, or looks at one letter at a near point where it is seen clearly, keeping the eyes continuously open without blinking for a minute or longer, always lowers the vision for the distance or for the near point. This should convince the patient that blinking is absolutely necessary in order to obtain good vision.

3. That palming, when done correctly, improves the vision. When the closed eyes are covered with one or both hands, and all light is excluded, the patient should see nothing at all, or a perfect black. This is a rest to the eyes and always improves the sight at least temporarily. Palming can be done wrong. When it is practiced incorrectly, the field imagined by the patient contains streaks of red, white, blue, or other colors. The eyes are under a strain, and the vision is not materially improved by the wrong method of palming. It can be demonstrated that palming for half an hour or longer is a greater benefit than palming for only a few minutes.

Memory

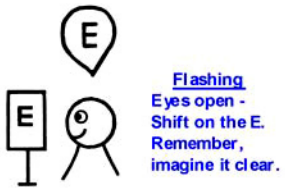
***By* W. H. BATES, M.D.**

When the sight is normal, the memory is perfect. The color and background of the letters or other objects seen, are remembered perfectly, instantaneously, and continuously.

ONE of the quickest cures of imperfect sight has been gained through the use of the memory. When the memory is perfect, the eyes at once become normal with normal vision. A perfect memory changes the elongated eyeball of myopia into the shorter length of the normal eye. No matter how high a degree of myopia one may have, when he has a perfect memory of some one thing, he is no longer myopic, but has normal eyes with normal vision.

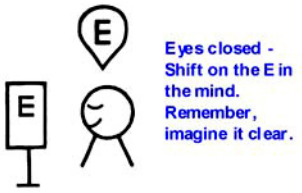
An imperfect memory or an imperfect imagination may produce organic changes in the eyeball. The organic changes, which are present in many diseases of the eye, have been relieved with the aid of a perfect memory. In some cases the vision has been reduced to perception of light from scars on the front part of the eyeball. Perfect memory brings about the absorption of such opacities. A perfect memory has cured these obstinate cases.

Conical cornea is a very serious disease. Neither operation nor the use of drugs relieves or cures it. A perfect memory gives instant relief, the curvature of the cornea becomes normal, and the patient obtains normal vision.



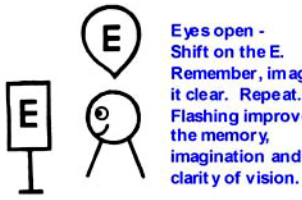
Glaucoma has been referred to as a very treacherous disease of the eye, because symptoms of blindness may become apparent at unexpected moments. The pain of glaucoma may be very severe. In most cases, the eyeball becomes very hard. The vision fails in a few hours, and all perception of light may be lost. These very severe cases are usually not benefited by operation nor drugs. The practice of a perfect memory has relieved all the disagreeable symptoms, and the vision has returned to normal.

There are patients who suffer from paralysis of one or more of the nerves connected with the eye. By resting the nerves or the muscles to bring about a condition of relaxation, which is best obtained by a perfect memory, the symptoms of paralysis are relieved. Paralysis of the nerves of the eye is caused by too great activity and is relieved by relaxation.

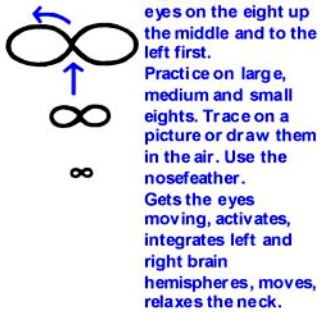


When one of the eyes has been injured or has a foreign body in the inside of the eyeball, the good eye may become affected and, in rare cases, may even be lost before the eye that has been injured is lost. This is called **sympathetic ophthalmia**. Through the use of the perfect memory, these cases, although of many years' duration, have been benefited and normal vision obtained. To be able to demonstrate a perfect memory habitually or unconsciously, it is necessary first to consciously remember with the eyes closed or open one thing perfectly, until an unconscious habit is formed.

A person can remember what his own name is without having a mental picture of each letter of the name. This is an example of what is known as an abstract memory. A concrete memory is a more perfect memory, because one remembers a mental picture of the object with the eyes closed, as well or better, than he can see it with the eyes open. One can remember perfectly only that which is seen perfectly. When a letter is seen perfectly, the whiteness of the card or page in the neighbor-hood of the black letter is imagined whiter than the rest of the card or page, or that part in which there are no black letters. The whiter that one can imagine the white in the neighborhood of a letter, or inside of the letter, enables one to see the blackness of the letter blacker than before. In other cases, where the whiteness in the neighborhood of the letter is apparently of the same whiteness as the rest of the card, the memory or the imagination of the black letter is imperfect.



Mental pictures are imagined perfectly when the memory is perfect. A great many patients complain that they are unable to remember mental pictures of the letters of the Snellen test card. They can remember what the letters are but have no mental pictures of them. To obtain perfect mental pictures, it is necessary that the sight should be continuously good. Most people, when they fail to imagine mental pictures, try to remember too much at once. When remembering a letter, it is not necessary to recall all parts of the letter. The memory of the color or one small portion of the letter is sufficient. The smaller the part of a black letter that you remember, the blacker it is, and the easier it is to recall. It should be emphasized that when one has a perfect memory, central fixation can always be demonstrated. When central fixation is absent, the memory of the letter, as well as the imagination or the sight, is always imperfect. One can regard a point or a small part of a letter by central fixation for only a short time, not longer than a few seconds, without the memory becoming imperfect. **Shifting is necessary to maintain a perfect memory**, which is continuous. In other words, when practicing central fixation, the point regarded changes frequently.



Shift from part to part on the letter and the memory, mental and visual picture of the letter is clear.

After a demonstration that central fixation is necessary for a perfect memory, one patient became able to imagine, with his eyes closed, a small letter "O" with a white center as white as snow, starch, or any other white object that he had ever seen. He had no trouble in doing this. He said that he could remember it easily and quite continuously. Then I requested him to remember an imperfect "O," which was a shade of light gray instead of black. It had no white center, but was covered with a blur or a fog. He was able to remember it quickly, easily, for a few seconds, but when he was requested to remember the imperfect "O" for a minute or longer, the gray shade became darker and, at times, lighter, and the memory of the imperfect "O" became very difficult. In spite of all the efforts he made, he was unable to remember the "O" continuously. In strong contrast to the memory of the perfect "O" the memory or the imagination of the imperfect "O" was difficult. He agreed with me when I told him that in order to fail to see perfectly, he had to stare, strain, and make a tremendous effort. On the other hand, the memory or the imagination of the perfect "O" was spontaneous, easy, and continuous, and he experienced a feeling of general comfort in all his nerves. He was able to demonstrate that he could remember the perfect "O," provided he imagined it was moving, and that he could not remember it when he tried to

imagine it stationary.
O is moving = The eyes are moving, shifting on the O.

Flashing is a great help in improving mental pictures. With the eyes open, one may see a letter quite perfectly and have a mental picture of that letter with the eyes closed for a fraction of a second. By repeatedly flashing the letter in this way, the mental picture becomes more frequent and lasts longer. When the sight becomes more continuously good, the memory is also benefited, and with this improvement in the memory, the mental pictures become more perfect. The converse is also true. When the memory is improved, the sight is improved. You cannot have a perfect memory by any effort or strain. The more perfect your memory, the greater is your relaxation, and the more perfect is your sight.
Memory, imagination, relaxation, clarity of vision function together, strengthen, improve eachother.
Practice on eyechart letters and any objects at close, middle, far distances.

Stories from the Clinic

No. 72: JANE

***By* EMILY C. LIERMAN**

A YEAR ago, a little girl named Jane, aged twelve years, came to me for treatment. She had worn glasses approximately four years for progressive myopia. Progressive near-sightedness is a very serious disease, in which the sight becomes worse more or less rapidly. With the increase in degree of near-sightedness, the retina becomes inflamed, and the vision is ultimately lost. This disease cannot be relieved by glasses nor by any known method of treatment, other than that recommended by Dr. Bates. Jane was also troubled with astigmatism.

When I first saw her, I was deeply impressed by her personality. She had unusual intelligence. Her parents were willing to make any sacrifice in order that Jane might be cured without glasses. She loved music but was ready to give it up temporarily, so that she could faithfully practice the daily treatment outlined for her.

When her vision was tested, she read 15/70 with the right eye and 15/50 with the left. After the first treatment, her vision with each eye improved to 15/40. The circular swing, which has proved so helpful in the cure of many patients, was her main treatment at the first visit. In this swing the head and eyes move in the orbit of a circle. They move continuously, and there is no opportunity to stare nor strain, as there may be when the head and eyes are just moved from side to side. The diameter of the circular swing should be as short as possible, because the greatest degree of relaxation can be obtained if **a short circular swing can be practiced.** There is this objection, however, that when the orbit of the swing is short, the patient may unconsciously stop the swing, and a stare or strain results. In a circular swing, in which the diameter of the circle is longer, relaxation is always obtained. The circular swing can be practiced with the patient standing or sitting. The results vary from time to time. At one time, the greatest benefit may be obtained while the patient is sitting, at another time while he is standing.



…and even smaller- do a fine print circular swing. (This diagram is a Circular Elliptical swing.)



- Do the Modern improved version: Infinity Swing, Figure eight.

Draw the figure eight in the air with the eyes. Draw with the eyes and Nosefeather. Draw with the entire body, combined with the Long Swing: eyes, nosefeather, hand, entire body moves as the eyes, hand traces around the imaginary figure eight in the air.
The figure eight can be drawn large in the entire visual field and smaller sizes, down to the size of tiny fine print.
Move the head/body with the eyes. The neck is relaxed and mobile.
See www.cleareyesight.info and picture, directions end of this book.
The infinity swing relaxes and brings movement to the eyes, head, neck, body, activates and integrates the left and right brain hemispheres, coordinated eye movement, improves balance, coordination and produces clear vision at all distances.

Having worn glasses steadily for four years, it was not so easy for Jane to go without them in the beginning. The second time she was treated she complained of a headache. This was immediately relieved by the circular swing, and her vision improved to 15/20. After this visit, she practiced the treatment at home for six months or longer, but she never failed to report the condition of her eyes.

About a month after her first treatment, her vision for the test card had improved to 15/10. In the treatment, we used a card with numbers, another with E's pointing in different directions, which is called Pot Hooks, and still another with different letters. She found no difficulty in reading all the letters and figures on these cards at fifteen feet. It was noticed, too, that her little nervous habits disappeared. I gave Jane several treatments, and in all her eye tests, she did not make a single mistake.

Her mother decided to try test cards unfamiliar to Jane, because she had memorized all the letters of the other cards, and so purchased a test card at an optician's office. As Jane tried to read the card, she strained her eyes and became very uncomfortable. So did I. The only letter that did not make me strain was the large letter at the top of the card. This is seen by the normal eye at 200 feet. All the other lines of letters were so closely set together that they seemed like a herd of black sheep. My head began to ache as I tried in vain to separate each letter in order to read the card. It could not be done. Before I asked Jane to palm, I reminded her of a figure five on the familiar "C" test card, which she had memorized. Her mind was then relaxed, and we were able to proceed further with her treatment. As I palmed with her, my mind drifted to the test card which her mother had purchased. Mentally, I tried to separate the letters as I would separate sheep, in counting them as they followed each other over a stile* or fence. The harder I tried, the less successful I became with my mental picture. Instead of imagining the sheep jumping over a fence or stile, one by one, I could only imagine their going over a precipice* altogether and falling over each other in doing so. This produced a pain in my head and eyes, which I relieved instantly by the sway of my body from side to side, seeing objects about the room, moving opposite to

the movement of my body. My advice to Jane's mother was, not to use that test card for practice at any time.

Other test cards, unfamiliar to Jane, were then used. I placed Jane thirty feet away from the card and without any hesitation or one mistake, she read every letter. She did not have to be reminded to blink her eyes regularly, because it had become a habit. Blinking helped so much in keeping her relaxed. Our small fundamental test card, pocket size, was then used. We placed it in a good light, and Jane surprised me by reading the R Z 3 line at six feet. This is read by the normal eye, at three feet.

This article ought to convince any patient that progressive myopia is curable. It should encourage those who have given the method a trial, to keep on practicing as Jane did and win out as she has. At no time have I met a more wonderful child. She loved to practice the method every day. I shall always remember the last precious hour I spent with her. Her last words to me were:

"There is one thing I am certain about and that is: None of my children, nor grand children, nor great grand children need ever wear glasses."

*Stile = Steps for crossing a wall or fence.

* Precipice = A extremely steep mass of rock, cliff…

The Magic Kitten

***By* GEORGE M. GUILD**



ONCE upon a time a small black kitten strayed about the streets. The city seemed a huge world, peopled with giants, who pushed and shoved him here and there. He tried to escape them, but their enormous feet seemed everywhere. Finally, he came to a crooked alley, which was quiet and peaceful. He crept behind an ash barrel, glad to be away from the terrifying crowds. He grew drowsy and was falling asleep when suddenly a loud crash sounded in his ears. His heart began to pound faster and faster, and he wondered what would happen next. He was so frightened that he could not move. When nothing happened his fear left him and, like all little kittens, he became curious. He poked his nose from behind the barrel, but could see no one. Then he grew very bold and jumped to the top of the barrel, where he saw only a broken flower-pot with some faded roses scattered among the fragments. With his paw, he gently touched one and then another of the faded blossoms. They all seemed to move. He jumped down, and in his excitement pushed one to the ground. He ran a little way off and then cautiously approached to look at it.

Slowly the petals unfolded. In the center appeared a tiny golden fairy waving a beautiful wand. She danced gaily upon one of the petals and beckoned to the little kitten to come closer. He was frightened, but he felt a magic power drawing him nearer and nearer. As he came toward her, she bent over and gently touched him with her wand.

How strange he felt! Happy and contented, not like the little stray kitten that stole about the streets looking for shelter.

"Now you are a beautiful kitten, golden as the sun. Gone is the ugly, black creature that you were. Favored of the fairies, scamper away and make others happy as I have made you!" Saying this, the fairy hopped into the center of the flower, and the petals folded about her.

The kitten ran off as fast as he could go, to carry out the bidding of the fairy. Soon he came to a group of boys and girls at play. The children stopped their games to look at the little golden kitten. As they crowded about him he danced merrily, swinging his tail in time with his steps. The children clapped their hands with glee. The more joyous they became, the more sprightly did he dance.

Suddenly he stopped before little Eppie who had been trying to see him dance. Poor little Eppie's eyes were crossed, and it was difficult for her to see anything, even with her spectacles on. The kitten began to sway rhythmically from side to side. Eppie watched him without moving her eyes. She tried so hard to see him, and stared so much that he seemed only a blur of gold. She wanted to see him so badly, but the more she tried, the less she saw. Finally, Eppie could no longer keep back her tears. Seeing her tears, he danced over to her and gently touched her with his paw. As she bent over to pet him the magic kitten reached up and pulled off her glasses and let them fall to the ground. He stood up on his hind paws, grasped both of Eppie's hands and began to sway slowly from side to side.

He then dropped her hands and scampered off a short distance. Eppie followed him and looked down into his shining eyes. He kept blinking up at her, looking very wise. Eppie blinked back at him, and all at once she realized that she could see him perfectly. He turned three somersaults in the air, landing gracefully on his feet, and stood before her swinging his beautiful tail. Eppie watched the movement of his tail, swaying her body in rhythm with it.

The children all cried: "Oh, look at Eppie's eyes! How straight they are, and she hasn't her glasses on, either!" Then, they, too, started to sway from side to side, as they watched the swinging tail of the golden kitten.

By this time it had grown dusk and the children had to go home. They all wanted to take the kitten home, but he clung close to Eppie. When the other children tried to touch him, a tongue of golden flame shot from his mouth, and they quickly withdrew. Eppie held him tightly in her arms and ran home to tell her mother and father the glad news.

Before she had a chance to tell them all about her wonderful experience, they cried out in amazement at her changed appearance. Eppie told them breathlessly about the magic kitten, and what it had done for her. At the mention of him the kitten jumped out of her arms and began to swing his golden tail. With one accord, they all swayed in time with its motion. And so they became very jolly and happy.

The next morning, when Eppie awoke, the kitten had disappeared. Disappointed, she set out for school. Much to her surprise, there at the door of the school-house stood the golden kitten, waiting for Eppie. He ran ahead of her and jumped up on the teachers desk. He stood there swinging his tail to and fro.

The children, who were waiting in their seats for the arrival of the teacher, took great delight in the kitten's performance. They felt impelled by his mystic power to sway in time with the swing of his tail.

In the midst of their merriment, the teacher entered the room. The children stopped in fear, but the magic kitten became even more animated. The teacher approached her desk, and as she leaned over to see the kitten, her glasses dropped off her nose and broke in a thousand pieces upon the floor. She became angry and was about to throw the kitten from the desk, when she, too, felt the magic power of his swinging tail. In spite of herself, she swayed from side to side. Her anger left her, and she forgot her broken glasses.

The children looked at her in amazement, for they or anyone else had never seen her without glasses. The teacher was just as amazed as the children, for she suddenly became aware that she could see her class clearly. She was as joyous as the children had

been.

"Surely this must be the magic kitten we read about yesterday!" she exclaimed.

While she was speaking the kitten jumped down from the desk, flourished his tail and disappeared. The children were dismayed, but the teacher said: "Even though the magic kitten has gone, we shall always remember what he has taught us. We will set aside a time each day to practice the swinging movements of the magic kitten.

Cases Benefited

***By* DR. CLARA C. INGHAM, Portland, Oregon**

CATARACT: A lady sixty-five. Vision of right eye 20/200; left eye 20/100. Unable to do any reading. Six months treatment gives vision 20/20. Can read diamond type print.

STRABISMUS: Child of ten years. Vision 20/40. After eight months' treatment, vision is normal and eye straight.
College student afflicted from childhood with extreme strabismus and oscillation. One of the most difficult cases for correction that ever entered my office. Sight in strabismic eye 2/200; in the straight eye 20/50. At the present time the oscillation has practically ceased while the strabismic eye is straight much of the time. Patient still comes about twice a week and while not yet normal, the vision of both eyes is greatly improved. This young man's mother is a teacher in the schools, and her son's restoration has done much to place Dr. Bates' Method before the schools.

PAIN: Patient a man of thirty-two. Vision 10/200. Severe pain in eyeballs and temples. Eye troubles from childhood. Says he was never conscious of absolute freedom from pain. After a year's treatment, is one of our greatest enthusiasts for good eyesight. He is an instructor in a college and will gladly spread the gospel.

NEAR-SIGHTEDNESS: Grammar school girl about fourteen, near-sighted from straining to see the blackboard. Vision in right eye 10/100; in left eye 10/70. After two months normal sight, and has learned how to protect herself against eye strain in school, so has no fear of a recurrence of the trouble.

ACUTE GLAUCOMA in right eye, the left eye having been completely lost its sight by the same disease more than a year previous. The right eye responded very readily to treatment, as has the left also, though seemingly past help when the patient first came.

Eyestrain

***By* W. H. BATES, M.D.**

EYESTRAIN is the cause of many serious diseases of the eye. It is always manifest when imperfect sight is present. The normal eye does not ordinarily have eyestrain. When it is acquired, the sight always becomes imperfect. When the sight is imperfect the eyes are under a strain. They are staring,—making an effort to see. This condition is not cured by glasses. The fact that wearing glasses always increases eyestrain can be demonstrated.

After treatment has been instituted, it is soon found that the use of eye-drops or drugs is of no avail. Bathing the eyes with a solution of boracic acid or other similar remedies does not give the desired results. Attention to general health, physical exercise, and diet does not relieve symptoms of eyestrain. It is commonly a chronic condition. Patients who are suffering from this malady have usually acquired a habit of continually making an effort to see. One cannot correct this bad habit of strain without substituting in its place the beneficial habit of practicing relaxation continuously.
Good nutrition, exercise/movement, muscle massage (especially shoulders, neck), correct posture, correct use of the eyes (shifting, central fixation…), improves the clarity of vision, when combined with removal of eyestrain, mental strain.

The normal eye is always moving. To demonstrate eyestrain, one must first imagine the eyes stationary or actually force them to be stationary. This should prove to the patient that the eyes are under a strain when stationary, or when objects are imagined to be stationary. The normal eye maintains the habit of relaxation,—of always moving. When the eyes move, stationary objects are imagined to be moving in the direction opposite to the movement of the head and eyes. When the normal eye has normal vision, the head and eyes are continuously moving. This is a rest to the eyes, and a habit which can be more easily practiced than the habit of straining the eyes in an effort to keep them stationary.

Many people state that they have no time to practice the method which will bring about relaxation. This objection is answered by the fact that everyone has as much time to use his eyes correctly as he has to use them incorrectly. When the eyes are used correctly, the patient feels more comfortable, which should encourage him to use his eyes properly. When the eyes are not used correctly, discomfort is felt. Pain, fatigue and other nervous symptoms are produced.

Subjective conjunctivitis is a very painful symptom of eyestrain. The eyes burn and smart and the patient suffers from pain, fatigue, and many other disagreeable sensations. Later the eyelids become inflamed.

In the year 1884 I roomed with a young medical student who was suffering from this form of eyestrain. During the examination period he could not read more than five or ten minutes before his eyes became so sore and painful that he was unable to read at all. His physician prescribed a spray which had no apparent benefit. Another doctor prescribed flesh gloves (Misprint? Should be cloves..?)to be used in rubbing the skin all over the body. He derived temporary benefit from this treatment, but it had to be repeated at frequent intervals. It seemed to me at the time that the eyestrain was relieved by the massage, but a more thorough observation later proved that this was untrue. The relief was manifest when the massage was delayed or postponed, or when he had

rested his eyes.

One evening while I was reading he said to me: "Why do you blink so often?"

"Because it is an easy way to rest my eyes," I answered.

He practiced blinking and obtained complete relief. "My eyes are cool and comfortable, my sight is perfect, and best of all, I can remember what I read more easily," he stated.

We investigated the facts. He demonstrated many times that when he read without blinking the symptoms of eyestrain soon appeared, and his vision became worse. Other students tried it as well, and we all were positive that staring or trying to see without blinking always caused eyestrain. When the blinking was practiced relief was always obtained. There were no exceptions.

Questions and Answers

Q—It is difficult for me to find time enough to gain perfect relaxation. What would you suggest?
A—You have just as much time to relax as you have to strain. Practice relaxation all day long. Whenever you move your head or eyes, notice that stationary objects move in the direction opposite to the movement of your head or eyes. When walking about the room or on the street, the floor or pavement appears to come toward you, while objects on either side of you move in the direction opposite to the movement of your body. Remember to blink frequently just as the normal eye does. Constantly shift your eyes from one point to another, seeing the point regarded more clearly than all other parts. When talking with anyone, do not stare. Look first at one eye and then the other, remembering to blink. Shift from the eyes to the nose, to one cheek and then to the other, then to the mouth, the chin, and back to the forehead.

Q—Why is it that I have perfect vision only in flashes? Can these flashes become permanent?
A—You have not yet lost your unconscious habit of straining. When relaxation methods are practiced faithfully at all times, the flashes of improved vision become more frequent and last longer until the vision becomes continuously good.

Q—What causes twitching eyelids?
A—Strain causes twitching eyelids and is relieved by rest and relaxation. Palming, sun treatment, swinging, blinking are very beneficial.

Q—Can you explain why I see yellow and blue spots after looking at the sun?
A—You are straining. Do not look directly at the sun until your eyes are more accustomed to it. Practice the sun treatment—sit in the sun with the eyes closed. Allow the sun to shine directly upon your closed eyelids, as you slowly move your head a short distance from side to side. Do this for half an hour or longer as often as possible whenever the sun is shining.

Q—Is working or reading under electric light harmful? Should a shade be worn?
A—It is not harmful to read by electric light if the eyes are used properly. Do not wear a shade or any other protection for the eyes. Practice sun treatment.

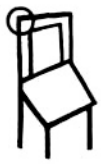
Q—When remembering a black period, I see a bright disk with a small black center. Is this seeing a period?
A—No, you are straining. The period that you imagine is very imperfect, because to remember the period, and at the same time a very bright disk, is an unconscious strain. You cannot strain and remember the bright disk, and simultaneously relax and remember a black period. When your bright disk is prominent, everything else is remembered under a strain. You cannot strain and relax at the same time.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MARCH, 1926

Demonstrate





E

Central fixation and shifting
Look at the upper left corner of the chair. Shift on that part.
That part is in the center of the visual field and is clearest.
Other parts of the chair are in the peripheral field and are less clear.
When the eyes move to a new part, the new part moves into the central field and is clearest.
Shift part to part on the chair and see one part at a time clearest.
The entire chair is seen clear.
Now practice on a letter.
Look at the top, then the bottom, then top, bottom, top...
See the letter move opposite the shift of the eyes. Shift left and right, any direction.
See one part best at a time.
Shift on a small letter and see one part best at a time.
Shift on a small part of the small letter and see one tiny part (small point) of the small part clearest at a time. See a small opposite movement as the eyes shift point to point.
The exact center, clearest area of the visual field is the size of the pointed end of a pin. The eyes, central field can shift point to point on a very small part of a object and still see one tiny point clearest at a time.

THAT **CENTRAL FIXATION** improves the vision. The normal eye is always at rest and always has central fixation. Central fixation cannot be obtained through any effort. When an effort is made by the normal eye, central fixation is always lost. In central fixation, one sees best the point regarded while all other points are seen less clearly.

Look at the upper left hand corner of the back of a chair. Note that all other parts of the chair are not seen so well. Look at the top of a letter at a distance at which it can be seen clearly. Then quickly look at the bottom of the letter. Alternate. When the eyes go up, the letter appears to move down. Then the eyes move down, the letter appears to move up. Coincident with this movement, you can observe that you see best the point regarded and all other points less clearly or less distinctly. When you can imagine the letter to be moving, it is possible for you to see best where you are looking.

The size of the letter or object seen, does not matter. Central fixation can be demonstrated with the smallest letters which are printed, or the smallest objects. Close the eyes and remember or imagine how the small letter would look if you imagined one part best. By shifting from one part of the letter to another, central fixation with the eyes closed may be made continuous for one-half minute or longer. Then with the eyes open, it is possible for one second or less to see, remember, or imagine the same small letter or other objects in the same way,—one part best.

Note that when the letters are read easily and clearly, they are always seen by central fixation, and relaxation is felt. Central fixation is a rest to the nerves and when practiced continuously, it relieves strain and improves the vision to normal.

Imagination

***By* W. H. BATES, M.D.**

Imagination is good. One may even see the white part of letters whiter than it really is, while the black is not altered by distance, illumination, size, nor form of the letters.

IMAGINATION is good in normal sight. When the sight is normal, the imagination is normal. The converse is also true,—when the imagination is normal, the sight is normal. A cure is obtained when the imagination is improved to the normal. One may imagine a letter of the Snellen test card very well, while regarding it, with the eyes open. When the sight is normal, the imagination may be as good and usually much better with the eyes closed than with the eyes open. When the sight is perfect, one can imagine with the eyes open, objects of all sizes and forms, familiar or strange, just as well as he can with the eyes closed. Under favorable conditions of environment, namely, light, distance, and restful surroundings, the imagination is usually good. A perfect imagination can only be obtained when the memory is perfect. When the memory is perfect, the consciousness of the movement of all things remembered or imagined can always be demonstrated. The eyes are constantly shifting when the imagination is good. After the shifting stops, the perfect imagination is modified, or lost.

Imagine a letter perfect - The white center pure white and the black ink dark black. Clear. When the letter is remembered, imagined, seen perfect, clear - all objects are remembered, imagined and seen perfect, clear. One of the first things a blind person regaining vision is taught, is to create, improve their mental pictures. The brain works with the eyes. Clear, familiar mental pictures of objects stored in the memory function with the brain to identify objects, create clear vision.

It is not possible to have a perfect imagination and an imperfect one at the same time. For example, one cannot remember a black color perfectly black, and a white color imperfectly white simultaneously. When a black letter with a white center is imagined perfectly, both the white and the black are perfect. It is impossible to imagine the letter with a perfect white center and an imperfect or gray-black outline. When the imagination is perfect for one thing, it is also perfect for all things. When a patient makes his first visit, the vision of each eye is tested for the Snellen test card at about fifteen feet. If the large letter of the Snellen test card cannot be distinguished at this distance, the card is brought closer until the letter is clear enough to be recognized. Experience has demonstrated that trying to improve the vision of such patients at fifteen feet or further is disappointing, but when they practice with the card at ten feet or nearer, the vision usually improves immediately. Some near-sighted patients have good sight at six inches, but not at twelve inches. By having them read as well as they can at six inches and then look at the card at twelve inches for a moment, the vision usually improves. Some patients can see very well at five feet for a short time. They are instructed to always close their eyes when their sight becomes imperfect, and when they open them, to keep them open for just a moment or a flash. This alternate resting the eyes by closing them and looking at the letters just for a second is a benefit to a great many. There are, however, a large number of patients who are not benefited at all by this method, because as soon as they open their eyes or even before that, they stare or strain and make an effort to see.

It helps very much to suggest to the patient that he use the word "imagination" and not the word "sight." To most people, to improve the imagination seems easier than to improve the sight, and quite a number believe that when they know what the letter is, although they may not see it, they can always imagine it. It is interesting to observe that when the imagination of a letter is improved by resting the eyes, other letters on the card not regarded become blacker and the whiteness of the card whiter. It is frequently demonstrated that one of the best ways of improving the sight is to improve the imagination of letters that are known. Often a patient says that he can imagine a known letter and sometimes thinks that he sees it, but he and his friends are usually very suspicious of the vision obtained when regarding a familiar card whose letters are known. It is necessary to demonstrate in various ways that when the imagination is improved, the vision is improved. This statement, however, does not convince the patient. The only test that is convincing is to test the patient with an unfamiliar card. It is oftentimes quite a shock to him to find that he can quite frequently read an unfamiliar card with much better vision than he is able to imagine or see the card that was familiar.

If a patient is unable to read fine print at twelve inches from the eyes or nearer, great benefit is derived from imagining the white spaces between the lines to be whiter than the rest of the card. When the white spaces are imagined perfectly white, the black letters are imagined perfectly black. When the imagination of the white is perfect enough, the imagination of the black letters is also sufficiently perfect, so that the letters are read easily without effort or strain, and without consciously looking at the letters. It is good practice to have a patient decide to imagine the white spaces perfectly white. If the letters improve, one should not try to read them. It is exceedingly difficult for most people to do this. With the slightest improvement in the white spaces coincident with a corresponding improvement in the blackness of the letters, the temptation to forget the white spaces and try to read the letters is very great. If one is unable to confine his attention to the white spaces, improvement in the ability to read may be very slow or impossible. To play the game, one must play it fairly and not be in a hurry to read the fine print when the imagination of the white spaces improves. In some cases it is well for the patient to close the eyes and remember the whitest white he has ever seen. This may be white snow, a white pillow, or whitewash. Then open the eyes and flash the white spaces, imagining them to be as white or whiter than the object remembered.

The imagination is not modified by the illumination. It is very interesting to find patients with good sight who can imagine things perfectly in a dim light. When this is accomplished, the clearness of all things seen, gives one the impression that the light has increased. For example, there are many people who, after the lights have been dimmed in the theatre, can read the program apparently as well as they can when the light is good. Patients with imperfect sight are troubled by the dim light more than are patients with normal vision.

Other environmental conditions affect the vision,—excitement of various kinds, unexpected noises and unusual occurrences. When some people go to a circus, they may become very near-sighted in a few minutes, although when attending a performance at the theatre, their eyes do not trouble them. Others cannot see well at the opera, because they are not accustomed to observing people's faces so far away, and yet on the street in all kinds of light they may have normal vision. When people with imperfect sight, try to find their way about in dark places, they strain their eyes to such an extent that they suffer pain, headache, and become exceedingly nervous. People with normal eyes and normal sight maintain a perfect imagination in strange as well as familiar places.

The normal eye is able to imagine the white centers of black letters whiter than they really are. Other people with imperfect sight

imagine the white center of a letter "O," for example, of the same shade of white, or less white than the rest of the card. The use of a screen helps such patients to improve their imagination. Use a card or piece of paper with an opening slightly smaller than the white center of the letter "O." Cover the black part of the letter with the card, exposing the white center. By alternately closing the eyes, resting them, the patient becomes able to see or imagine he sees the center of the "O" to be less white than it appears to be when the black part of the letter is exposed.

No patient is cured until he becomes able to imagine a letter at ten feet or further as well as he can see it at one foot or less. In this connection, it is well to emphasize the fact that the cure of imperfect sight can only be accomplished without effort. Too many patients believe that the cure of imperfect sight is very complicated, and that they have to make a great effort. It is only when they become convinced that the one way they can obtain perfect sight is by rest, or that when their sight is imperfect, a strain is necessary to keep it imperfect, that a permanent improvement, is obtained. A sufficient improvement of the imagination is a cure of imperfect sight. Patients with perfect sight have a perfect imagination of the things that they can remember. Patients with imperfect sight always have an imperfect imagination.

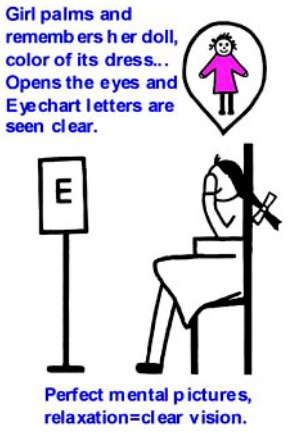
So many people look with contempt on the imagination, especially when it comes to treatment of the eyes. Most people do not associate imagination with perfect vision. They are of the opinion that they can imagine they see something without actually seeing it. This is not so. Perfect imagination and perfect vision are identical.

Of all the discoveries that I have made, there is none of so much practical value as the discovery of the importance of the imagination.

Stories from the Clinic

No. 73: MARGARET MARY

***By* EMILY C. LIERMAN**



MARGARET MARY is not yet five years of age. Her mother told me that an eye specialist prescribed glasses for her when she was two years old to be worn constantly for the cure of **squint**, which she had contracted after an attack of whooping cough. The squint was alternate, sometimes the right eye turned in, at other times the left.

When I tested her sight at the first visit, October 24, 1925, the vision of each eye was one-fifth of the normal. She is an obedient child and did what I told her. At my request, she covered both eyes with her hands. I asked her to remember her dollie. She smiled and asked: "Which one?"

I answered: "Your best dollies"

I found that Mary had a good memory for colors. When I asked her what the color of her best dollie's dress was, she answered: "Pink." As she, herself, was wearing a blue dress, I tested her memory for colors by asking her if the dollie's dress were the same color as the dress she was wearing. She peeped between her fingers, looked at me and said: "No, my dress is blue." I asked her if the dollie had black shoes like hers. She answered: "No, she hasn't any shoes."

All these questions were necessary in order to encourage the child to imagine perfect mental pictures and obtain relaxation. After she had palmed five minutes, I told her to remove her hands from her eyes and look at the card. Her vision, when tested, had improved to one-half of the normal.

I taught the child how to sway her body from side to side, as I held her hands and moved with her. While we were doing this, Mary's mother looked on. She was amazed when the eyes became straight from the swaying. Then I told the mother how important it was to have the child practice the swaying several times every day. She has a victrola in her home, and I advised the mother to play a waltz, if possible, when the child was swaying.



When Mary returned a week later, I noticed that the squint was much better. She placed her arms about me and said she loved me, because I removed her glasses. I tested her sight and found that it had improved considerably. When she was reading the card for me, there were times when she sighed. This was a signal that she was tired. I would then lead her to the drawer in which some candy is kept. If parents do not object, I give my little patients some good candy, while they are practicing. In my experience, nothing has relieved eye fatigue in children so much as a little candy.

During a treatment, in which her eyes were perfectly straight, two boys came into the room. I watched Mary and noticed that her left eye turned in considerably. I immediately placed the boys in another room. When I returned and spoke kindly to Mary, her left eye became perfectly straight again. Her aunt, who had brought her, was amazed at the quick relief of the squint. It was very evident that the unexpected presence of the two boys had caused a strain which produced the squint.

Before she left me that day, her vision had improved to four-fifths of the normal. On January 16, 1926, her vision had improved to the normal with the eyes straight. Up to this time, we had been using the card with the letter E of different sizes pointing in various directions. As she did not know numbers, I taught them to her with the aid of a Snellen test card consisting of figures up to ten, while holding the card about one foot from her eyes. She was delighted with the change and her eyes remained straight all the time. Her joy was unbounded when I told her that she could take the card home with her.

One week later, she was able to tell every figure on the numeral card.

This case was interesting. The child had been wearing glasses prescribed by a competent doctor for two years without relief. The squint was not cured nor benefited by them, because it returned just as soon as the glasses were removed. Even while wearing them, the squint was usually evident, and the vision was not improved. A study of her treatment and the results, showed that the cause of the squint and the imperfect sight, was a nervous strain. Many children as well as adults can produce a temporary squint by a stare or strain.

Investigation has proved that this fact should be emphasized. For more than one hundred years, ophthalmologists have declared repeatedly that the imperfect sight of a squinting eye is usually incurable. Many writers make the statement that children are born with squint. In these cases, the blindness is usually more marked at the centre of sight, and yet, with the ophthalmoscope, the

centre of sight may look perfectly normal. One celebrated writer tried to explain the facts in a few words by stating that the blindness of squint was a condition in which neither the patient nor the doctor could see anything, meaning, as was stated above, that although the sight of the squinting eye may be very poor or entirely absent, the ophthalmoscope shows no evidence of disease of the retina. All cases of squint are cured by treatment which eliminates strain.

Fundamentals

***By* W. H. BATES, M.D.**

(Vision Impairment Caused by Eyeglasses, Sunglasses)

1. Glasses must be discarded permanently because it is a truth that one cannot be cured without glasses while wearing them, even occasionally. **Dark glasses** and other measures to protect the eyes from the strong light are also objectionable. **The eyes become more sensitive to light with a loss of vision**. Magnifying glasses lessen the clearness of all colors, including black and white. The size and form of objects are modified by all kinds of glasses. Glasses for the correction of far-sightedness may, and usually do, give the wearer the impression that objects are larger than they really are; while near-sighted patients when wearing glasses are impressed with the fact that objects look smaller than they actually are. Glasses for the correction of astigmatism may cause dizziness.

In wearing any glasses, it is necessary to look directly through the center of the glass in order to obtain maximum vision. If one regards an object by looking in a slanting direction through the glasses, its form and location are changed. Many people, when they first put on glasses, feel as though they were a long distance from the ground. With other glasses, they have the sensation of being shorter, or that the distance from their eyes to the ground has become lessened.

The discomfort of glasses is very great with a large percentage of people who wear them. Frequently, when they complain to their ophthalmologists, or to the opticians who supplied the glasses, they are advised that by perseverance their eyes will become fitted to the glasses. This does not seem quite satisfactory, because people feel that the glasses should fit their eyes, and not that they should struggle along with all kinds of discomforts in order to make their eyes fit the glasses.

Tinted glasses, red, yellow, blue, green, or black, when worn constantly, usually feel comfortable to the patient because the amount of light is lessened. At the seashore, when the reflection of light from the water affects the eyes badly, causing pain and discomfort of all kinds, the wearing of colored glasses is, for the time at least, often a great relief. However, constant wearing of such glasses is later followed by sensitiveness to the light and the necessity for stronger glasses to obtain a sufficient amount of relief. The protection of the eyes by dark glasses, shades, and other measures has caused inflammations of the eyeball and of the eyelids. Pure sunlight is necessary for the health of the normal eye, and when people live in dark rooms, they usually find their eyes are weakened.

The shape of the eyeball is changing frequently. Sometimes the eyes are focused for distant vision and other times for near vision. Glasses which correct the sight for reading, very seldom enable the patient to see at the distance as well as without them. On the other hand, near-sighted persons whose vision is poor for distance, when wearing glasses to enable them to see distant objects, find that their ability to read with maximum vision is impossible with such glasses. When the glasses do not correct the vision for all distances, the eyes strain and try to overcome the bad effect of the glasses. Without glasses, the eyes may strain, but the wearing of glasses increases the strain. Glasses correct the eye trouble to a certain degree, but when the eye trouble varies, or the strain varies, the glasses do not relieve the wrong focus of the eye at all times. For example, the glasses that correct the imperfect sight, or the strain of imperfect sight at ten feet, may not do it when the eye strains and is focused for a nearer point, or for a more distant point. Many people complain that they do not get relief from wearing glasses at all hours of the day, because strain and inflammation of the eyeball produced by the strain, is so variable. When the eye becomes normal, or when it becomes able, as the result of treatment, to change its focus without difficulty, the patient is comfortable and can only be comfortable without glasses.

2. **Central Fixation** is seeing best where you are looking, and at the same time seeing worse where you are not looking. The letters of the Snellen test card, when seen clearly, are always seen by central fixation. Diamond type, when read slowly, or when one letter is seen clearly, continuously, for part of a minute, requires central fixation.

Concentration is an effort to see where you are looking and not to see at all where you are not looking. This is impossible without a strain. An effort to concentrate always fails to improve the vision. All persons with imperfect sight try to concentrate. When the vision improves, the effort to concentrate becomes less. Persons with normal sight never try to concentrate.

When thinking about something, it is normal for the mind to move from thought to thought: on the original subject, then to other thoughts, ideas connected to that subject, sometimes to other subjects, then back to the original subject. The mind uses mental pictures to think, a different picture for each thought. The eye does this; the eye looks at a object and shifts part to part on the object, then to other objects, then sometimes back to the original object. This is the normal function of the brain, eyes and produces relaxation (deep or active 'dynamic') and clear vision.

3. **Favorable Conditions**: Light may be bright or dim. Some persons are unable to see in a bright light. Their vision is usually improved by the sun treatment. They sit in the sun with the sun shining directly on their closed eyelids as they slowly move their heads a short distance from side to side. This is practiced for half an hour or longer whenever possible. The eyes are rested and strengthened, and gradually grow accustomed to the strong light of the sun. Individuals who cannot see so well in a dim light as in a bright light are benefited by the imagination of the halos, that is, the imagination of the centers of round letters to be whiter than the rest of the card. The memory of perfect sight also helps one to see in a dim light. By the memory of perfect sight is meant the ability to remember or imagine perfectly a letter or an object which has been seen perfectly.

The distance of the print from the eyes, where seen best, also varies with individuals. In some cases, the letter or object regarded and seen clearly, may be, as in near-sighted eyes, one foot or less from the face. To be able to see further off, requires practice. When things are not seen at a greater distance, two feet or further, the vision usually is improved by remembering one letter of the Snellen test card perfectly with the eyes closed. Then when the eyes are opened for a fraction of a second, it is possible to imagine (and see) the known letter at two feet or further.

Many middle-aged people can see well at twenty feet or further, but are unable to read the newspaper at two feet or nearer. The

same principle holds true in these cases, as in those of near-sightedness, except that the distance of the print from the eyes is gradually decreased until it is read without effort or strain at twelve inches.

4. **Shifting**. In normal sight the eyes are moving all the time. It is necessary when the eyes are at rest, that they keep moving, to avoid the stare. To stare, the eyes must be stationary. Shifting prevents the stare. When the sight is imperfect, the eyes strain or stare by regarding one point all the time. All patients with imperfect sight, when they look at a letter, see it stationary. They look at a part of the letter or the whole of the letter, and see it all alike. The vision always becomes imperfect when this is done.
Staring = eyes immobile, not shifting.

There are various ways of obtaining the habit of shifting. One has to first obtain the conscious habit. Shifting a long distance is readily accomplished, but when one shifts a very short distance, it is not always easy to be conscious that the eye really moves. One can be sure that the eye is moving when objects, not directly regarded, appear to move at the same time. No matter how great the strain of the eyes may be, it is always possible to shift a long distance, usually by turning the head in the same direction as the eyes move. The long shift is always some relief. When the shifting is shortened to one-quarter of an inch or less, when regarding small letters, the eye with imperfect sight may have difficulty in imagining the letter to be moving so short a distance. Near-sighted people who have good vision close to the eyes, at one foot or less, and can read the finest print, are able quite readily to imagine the eyes shifting as short a distance as the width of one of the small letters. The short shift is more difficult, but when it is successfully practiced, one obtains a greater amount of relaxation than can be obtained from the long shift. I wish I could emphasize the value of shifting.



Long shift - house to tree, tree to house.



Short shift - left and right on a small letter.

About five years ago, a patient whom I had cured of near-sightedness some years before, called to see me. His vision was normal not only for a familiar card, but he could read with normal vision, letters of an unfamiliar card.

"Did you have a relapse?" I asked him.

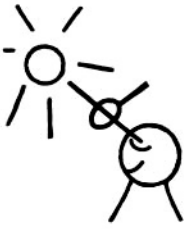
He replied: "I have never had any relapse." "What do you think has cured you?"

His answer was: "Shifting."

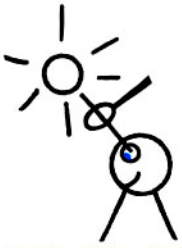
5. Swinging. When the eyes move slowly or rapidly from side to side, stationary objects appear to move in the direction opposite to the movement of the head and eyes. Some people have a very painful and disagreeable time in becoming able to imagine that stationary objects appear to move when the eyes move. If one stares directly at a stationary object, it does not move. This suggests very strongly that one should not expect stationary objects to move when he looks directly at them. When one shifts a long distance from one point to another without effort or without strain, or without trying to see, it is possible to imagine stationary objects not regarded, to be moving. Some people tell me that when they look out of a car window of a railroad train, they do not imagine the telegraph poles to be moving opposite to the movement of the train. On the contrary, they feel that they are moving and do not like to imagine the illusion of the telegraph poles to be moving. One has to treat such patients with much ingenuity. One patient could imagine things moving while she was running, but not while she was walking. I had her run around the office one morning until she obtained considerable improvement in the swing, but the exercise produced blisters on both feet. Later, she became able to obtain the swing of stationary objects when she did not run so fast or so long. At first she practiced a fast walk, and then a slower walk until she became able to imagine stationary objects to be moving, by just moving her head and eyes.
See objects moving by doing the Long swing, Rock (Sway) – Long large oppositional movement.
Shorten the Sway to 4 – 1 inches and see shorter, smaller oppositional movement.
See objects moving by shifting on small and tiny objects, fine print letter… – Short, small oppositional movement. Very clear vision!



Sunning - Face the sun, eyes closed and move the head slowly side to side.



Sunglass - Eyes closed. Head still. Sunglass with sunlight shining through the glass is moved quickly, 1-2 seconds on the eyelids.



Sunglass with eyes open - Head still. Eyes looking down, pupil under eyelid, away from the suns light. Sunglass moves the sunlight quickly, 1-2 seconds on the sclera, upper white area of the eye.

Sunglass is used only in cases of blindness, by an experienced ophthalmologist, only when other methods have not helped restore the vision.

Questions and Answers

QUESTION—When one uses electric light in place of sunlight—
(a) How strong a light is it proper to use?
(b) Because of the heat, how close to the light is it advisable to sit?
(c) How long is it advisable to sit at one time?
(d) How much time should be given to it in a day?

ANSWER—(a) One can use an electric light of 1000 watts with benefit.
(b) Sit five feet or further away from the light to avoid any discomfort from the heat.
(c) Practice for one-half hour or longer. The more light treatment taken, the better.
(d) Devote at least one-half hour a day to the sun or light treatment.

Q—Is the effect of the burning glass and that of sunshine falling on closed eyelids different, so that one needs both kinds each day?

Sunning and Sunglass Treatment

A—The sun treatment with the burning glass is more intensive than without it. At first, patients become accustomed to strong light by sitting in the sun and allowing the sun's rays to shine directly on the closed eyelids, as they slowly move their heads a short distance from side to side. Then, with the burning glass, the strong light of the sun is focused on the closed eyelids, and when the eyes are accustomed to that, one can consider the advisability of focusing the direct rays of the sun upon the eyeball, itself. This is done by lifting the upper lid while the patient looks down.

When the sun is focused upon the naked eyeball, one should keep moving the glass from side to side, and for a short time only, so as not to produce discomfort from the heat.

Q—If one practices reading fine print for a time each day, is it harmful to read print like that of the Forum (usual magazine type)?
A—No, the more you read, the better, even though you read with imperfect sight. Large print can be read with a strain, but fine print can only be read when the eyes are relaxed. It is all right to read print of any size if one reads it with perfect sight. When read with imperfect sight, the eyes are under a strain. Imperfect sight is always caused by a stare or strain, and one can stare or strain when regarding a large letter, blurring it to a considerable degree, and yet be able to tell what the letter is. The same amount of strain, which produces as much of a blur, when looking at a small letter, may make it impossible for one to read the small letter perfectly, although he can still distinguish the large letters. **Any size type can be read without strain if blinking, shifting, and central fixation are practiced.**

Q—In viewing moving pictures is it not more beneficial to sit as far back as one may and not strain, than to sit farther forward?
A—Sit at a distance from the screen at which you are most comfortable, i.e., where you can see the picture with the least discomfort. One can strain the eyes when sitting at almost any distance from the screen. To avoid the stare and strain as much as possible, it is necessary to keep shifting the eyes from one part of the screen to another, or to look off into the darkened room from time to time to give the eyes a rest. Some people are benefited by palming for a few seconds or longer, and in this way prevent the strain.

Q—When palming and seeing mental pictures, I almost never think whether it is black before my eyes or not. If I turn my attention to it, it is usually dark, more or less, but not a black. Am I right not to think at all about it?
A—When palming, do not try to think of anything. Just think of something pleasant, something that you remember perfectly, and let your mind drift from one pleasant thought to another.

RETARDATION NUMBER

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

APRIL, 1926

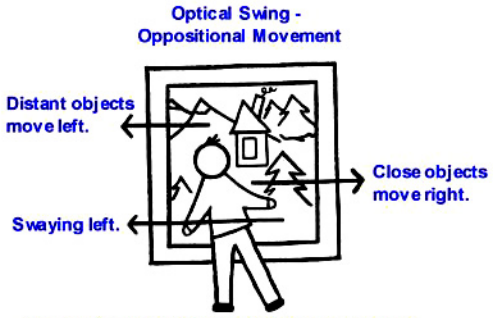
Demonstrate

THAT the optical swing always improves the vision.

Stand before an open window with the feet about one foot apart. Sway the whole body, including the head and eyes, from side to side. When the body moves to the right, the head and eyes also move to the right, while, at the same time, the window and other stationary objects are to the left of where you are looking. When the body sways to the left, the window and other stationary objects are to the right. Be sure that the head and eyes are moving from side to side with the whole body, slowly, without an effort to see. When the swaying is done rapidly, it is possible to imagine stationary objects are moving rapidly in the opposite direction. While the swinging is being practiced, notice that the window and other stationary objects which are nearer, appear to move in the opposite direction to the movement of the body, head and eyes. Objects (in distance) beyond the window may appear to move in the same direction as the body, head, and eyes move. (especially when there is a close object in front of the distant object)

Note that when the body is swaying rapidly, the window and other objects are not seen very clearly; but when the swaying is slowed down and shortened, so that parts of the window move one-quarter of an inch or less, the vision is improved for those parts of the window regarded. More distant objects, which move in the same direction as the movement of the body, head, and eyes, are also improved with the slow, short, easy swing.

After you have become able to imagine the window to be moving, practice on other objects. All day long, the head and eyes are moving. Notice that stationary objects are moving in the opposite direction to the movement of the head and eyes. To see stationary objects apparently stationary, is a strain which lowers the vision and may cause pain, fatigue, and other discomforts.



Sway left and right in front of a open window. The window (close objects) move in the opposite direction the eyes, head, body move to. Distant objects move with the eyes, head body in the same direction. Close and distant objects move against eachother in opposite directions.

↔

Sway shorter-1 foot or less:1-2, 4 inches, move slower and see the close and distant objects move shorter and slower. When the sway is short the eyes can shift on a object, letter.

These illusions of stationary objects moving help the brain, eyes, visual system determine: depth, distance, dimension, position, shape, size, time and other conditions of objects... in the visual field. Helps distinguish between two or more objects, especially when the vision is blurry. This improves the vision and other brain, eye, body functions, movement, balance, coordination...
Time = how long it takes to move to/from objects, speed of your movement...
If the eyes look at objects at a specific distance when moving left and right, the speed of the objects movement at different distances changes.
Normally the eyes do not look at any objects when swaying long =the eyes just sweep across the visual field and let the objects swing, move.

Retardation

***By* W. H. BATES, M. D.**

WHEN pupils in school fail to maintain the scholarship of other and normal children of the same age, their mental efficiency or their standing is said to be retarded. Such children may remain in the same low grade for several years with no apparent improvement in their scholarship, and are seldom promoted. The cause is rarely due to an impaired mentality. The fact that all of those observed have been benefited or cured by eye-mind education, is convincing evidence that retardation is functional.

Imperfect Sight

Imperfect sight is usually associated with retardation, which is very prevalent. When these cases improve, their vision always improves. One principal reported that all the school children in the rapid advancement classes under her jurisdiction had normal sight without glasses. In all the other classes the percentage of retardation was very high, and in some classes all the pupils were suffering with retardation. It was customary to separate the children whose retardation was extreme and put them all in one class under the control of one teacher. The teacher told me that after she had improved their vision, their scholarship advanced and they were transferred to the usual grades.

Retardation Cure

For many years, retardation has been studied by competent men; all sorts of causes have been ascribed to this condition, and remedial measures have been practiced which have heretofore not been of the slightest benefit. The method which I suggested was very simple. A Snellen test card was placed in the classroom in a place where it could be seen by all the children from their seats. Sometimes two or more cards were placed upon the wall. Every day for a short time under the supervision of the teacher, all the children read the card, first with one eye and then with the other, while one eye was covered with the palm of the hand in such a way as not to press upon the eyelids.
Modern left and right brain Hemisphere Activation and Integration methods and all Bates Method activities improve functions of the brain, left and right hemispheres; math, science, art, creativity, memory, imagination, sports, speech, social skills, clarity of vision.

Benefits

The teacher told me that the use of the cards in this way after a few weeks or months was followed by an improvement in the sight, when the retardation became less. One benefit of this practice was that it relieved or prevented headaches and other discomforts. The ability of the children to study was stimulated. The memory, imagination, judgment and other phenomena of the mind were very much benefited. It was also encouraging to note that, with the improvement in their retardation, a larger number of children continued in school than ever before. In the beginning, many of these children were so unhappy and so uncomfortable in school that they were usually anxious to stop school and go to work. After their retardation was improved and their vision benefited, they said that they could look at the writing on the blackboard and read it without discomfort. They also said that they could study without getting headaches. Furthermore, they seemed to become able to remember and understand what they read or what they studied.

Truancy

Truancy was very common among the children who were suffering from retardation. After the retardation was relieved or cured, truancy became very much less and the children volunteered the information that after they became able to read or study without discomfort, they could understand better the lessons that were assigned to them. Children who were very restless and mischievous, so-called bad boys or bad girls, became model pupils and very easy to handle.

Stare

The evils of retardation were numerous. The cause was always a stare, a strain, or an effort to see. The cure was accomplished by teaching the children how to use their eyes without staring or straining. While reading the Snellen test card in the way just described was a great benefit, there were other methods practiced by some children which were an added benefit. One teacher from the northern part of the State of New York was exceptionally good and was able to keep order in her classroom when other teachers failed. She wrote me that she always began the day by having the children palm, or cover both closed eyes with the palms of the hands in such a way as to exclude all light. This the children did for fifteen minutes and then they started in with their work, feeling rested and comfortable. When she noticed them becoming fatigued, she had them practice swinging, and the result was that they continued their work without becoming restless.

Memory

Another teacher, living in Chicago, found it an advantage to teach the children how to remember. This was accomplished in some cases by having the children remember their own signatures at first, as well as they could. They improved their memory by alternately looking at their signature and then closing their eyes while remembering it. The children were able to demonstrate that it was easier for them to remember one word of their signature than three or more words. They also found that they could remember one letter of their signature better than the whole word. By practice, they became able to remember a part of a letter better than the whole letter, and the smaller the part remembered, the more perfectly was it accomplished. Many of them became able to remember a small period perfectly black, as well with their eyes open, as they could with their eyes closed.

Imagination

This teacher also improved the imagination of her pupils. Some one would read a story. Then all the children would palm and remember the story as well as they could. After opening their eyes, they would try to illustrate the story in various ways. The teacher sent me about forty illustrations, and I found them very interesting. They were unusual, but the teacher claimed that doing these unusual things was a great benefit to a large number of children who were suffering from retardation. Coincident with the improvement in the memory and the imagination, was a corresponding improvement in the sight. There were other benefits just as important in value.

Adults

Adults also suffer from attacks of retardation. For example, a portrait painter may do good work for a longer or shorter period, but at intervals his work becomes decidedly poor, unsatisfactory, and a failure. Writers, financiers, inventors, teachers and professional people of all kinds, have attacks of retardation, when their mental efficiency is lost or impaired, usually suddenly, for longer or shorter periods of time.

Automobile Drivers



It is an interesting fact that people who drive motor cars suffer greatly from eyestrain. Taxi drivers are under more or less of a nervous strain. I am very fond of talking to these people about their work, because, being very observant, they teach me a lot. Many of them have told me that when they had an accident, it was difficult for them to believe that it was their fault. At one time a taxi-driver ran into another, broadside on. There was quite a smash-up and a number of people were injured. The taxi-driver was not detained very long, and later he came to see me about his eyes. Among other things he said: "Doctor, I never saw the automobile that I ran into. I never knew it was there until after the smash. Do you think there is anything wrong with my sight?"

I tested him very carefully and found that his vision was 20/20 with each eye. I examined his eyes very carefully with the ophthalmoscope and finally I said to him: "You have perfect eyes, but you don't always see with them."

"What do you mean?" he asked.

"I mean this,—that while your sight is perfectly good usually, there are times when you become totally blind. Everybody with perfect sight does not have perfect sight all the time."

"Well," he asked, "what am I to do?"

After talking to him for a while and explaining what I meant by the stare, the strain, or trying to see, and how one always stared when one had imperfect sight, I told him that the remedy was to use his eyes in such a way that he did not stare. Riding all day long in a moving car, he should notice that the road in front of him comes toward him, while objects on either side of him, move in the opposite direction. In this way he would not stare so much and the attacks of imperfect sight would be eliminated.

Sailors

A sea captain called on me one day with a history of imperfect sight at irregular intervals. When his sight was tested with the Snellen test card at twenty feet, his vision was normal. I told him that he had perfect sight. I examined him with the ophthalmoscope and told him that he had perfect eyes. "Well," he asked, "why do I have those attacks of blindness when I cannot even see a big lighthouse, when I cannot see a large vessel coming towards me sufficiently clearly to avoid a collision?" I talked to him the same way I had to the taxi-driver and he, very grateful, left the office.

Stories from the Clinic

No. 74: RETARDATION

***By* EMILY C. LIERMAN**

ABOUT seven years ago, a girl aged sixteen, was treated for a severe inflammatory trouble with her eyes. She was brought to me by her father. Her eyes were paining her continuously and her vision was very poor. To protect her eyes from the light, she was wearing glasses which were so thick that her vision was lowered to a great extent by them. The suffering of the girl was pitiable. It was impossible for her to do any reading whatever, and she had been compelled to stop school two years previously.

The first thing we did for her, was to give her the sun treatment with the aid of the sun-glass. Before she was placed in the sun, she was instructed to close her eyes and keep them closed until she was told to open them. She was then placed in a chair where the sun shone directly on her closed lids, while she moved her head continuously, a short distance from side to side. After ten minutes, her eyes had become somewhat accustomed to the sunlight. With a little encouragement, she succeeded in opening her eyes while looking far down. The upper lid of each eye was gently raised sufficiently to expose the white of the eye to the direct rays of the sun. Her eyes rapidly became more and more accustomed to the strong light, until she was able to stand the light focused in flashes on the white part of the eye with the sun glass. Her vision at times was 20/200. Best of all, she was able to open her eyes without discomfort. It seemed like a miracle. For the first time in two years, she was free from pain. Both she and her father were

very happy. Whereas, at the beginning, her father had led her in the room, she led him laughingly out, without the thick dark glasses on. Being of a nervous temperament she would, at times become hysterical as her vision improved, but after she was entirely cured, she seemed like a different person. Her nervousness disappeared and her manner was calm. As she became more accustomed to the strong light, her vision gradually improved to the normal.

Palming helped her very much. Imagining stationary objects to be moving whenever she moved her head and eyes, relieved or prevented the stare or trying to see. The memory or imagination of perfect sight enabled her, at the same time, to read the Snellen test card with normal vision, at first in flashes and later more continuously. The greatest benefit she obtained from the eye treatment, was that her mind became able to do things with much greater efficiency and her memory was decidedly improved. She became able to remember a small black object, or a small black period, as well with her eyes open, as she could with her eyes closed. Formally, when she read a page of history, she had to reread it half a dozen times before she could understand any page that she read. In three months time, her trouble had entirely disappeared; she returned to school and her friends and teachers were amazed at the great change in her. After her eyes were cured, she read the pages in her history book only once, and not only grasped the meaning but also was able to remember it for six months or longer without having to read it again just before examination time. At one examination, the questions were written on the blackboard and, after she read them, she was shocked to find that she could not answer a single question. Fortunately, she remembered her eye treatment and the little black period. With the help of palming, swinging, and the memory of perfect sight, she remembered the answers to all the questions.

This experience that she had, is very valuable because she was cured of an attack of retardation by simple methods which could be employed in all schools, colleges or elsewhere in the business world.

The principal of this school visited Dr. Bates to learn more about our method of treatment and also placed herself under his care until she was cured without glasses. She had been wearing them for presbyopia.

Some years ago I wrote about a group of children who were suffering from retardation. Their teachers could not understand so many failures. After it was discovered that they had imperfect sight, the school nurse sent them to the optician to be fitted for glasses. Later, it was noticed that even though they were wearing glasses, the retardation still continued. A little girl from the same school, who wore glasses, came to our clinic and was cured without them. She encouraged other children to come to us. Part of this large group of children who came were the "Wild Indians," I wrote about in my book, "Stories from the Clinic." The little girl who encouraged them to come, was a very good assistant for she knew exactly how to start each one with the treatment. With her help, all of them were cured without their glasses.

This happened in the Spring when the thought of being promoted was uppermost in their minds. Through one of their teachers, who was cured of her myopia by Dr. Bates, I learned that all were promoted with the exception of one little boy. Not one mother of any of those dear children was any happier than I, when they brought the joyful news to me. I was proud of my work and proud to tell it, too.

During that vacation, two public school graduates, who were under treatment for their imperfect sight during the previous Spring and had obtained normal vision, told me how they had successfully passed all their tests. One of them said, "If it had not been for the memory of a little swinging black period which I never forgot, I am sure that I would have failed." The other graduate said, "I did not need to remember anything in particular when the tests were easy, but you bet I never forgot the movement of a small black period when the test was difficult."

I believe retardation will no longer exist when imperfect sight is avoided and eye-glasses are a thing of the past.

Retardation

***By* M. F. HUSTED**

Superintendent of Schools, North Bergen, N. J.

IT has been found by educational experts that certain norms for the Age-Grade location of pupils should exist. Pupils above this age for the grade are classed as Over-Age for their grade and pupils of this age are classed as Normal Age and pupils below this age are classed as Under-Age. Classes, schools and school systems are considered in good condition when the number of over-age pupils does not exceed the number of under-age pupils. It is considered by administration experts that this standard test of a school system affords the best single test of the value of the school work done. The normal ages are determined by expert educational authority to be used as follows:

Grades	I	II	III	IV	V	VI	VII	VIII
Normal Ages...	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14

Pupils who are over this age are known as "Retarded" or as "Repeaters."

REASONS FOR RETARDATION

1. All experience shows that "All men are" not "created equal."

2. Parents change places of residence and pupils change schools. These pupils are not promoted at the end of the term, as are pupils who have spent the entire year in one school.

3. Ill health of a pupil or in a family, irregular attendance, prevents the receiving of the usual amount of instruction.

4. Entering school so late as to produce over-age.

5. Misfits for a grade for a time—those who do not speak English.

6. Changes of teachers are too frequent.

7. The quality of teaching is too low because teacher-training is too little.

NATIONAL EDUCATIONAL ASSOCIATION MEETINGS

The Boston National Educational Association Meeting in July, 1910, which the writer attended, contributed the following: "Children who make rapid progress (underage) through the grades shall at least equal in number those who make slow progress (over-age). At the present time this condition does not exist commonly, if indeed it does anywhere. It is probably a most conservative statement to say that in the average city there are at least ten times as many children making slow progress as there are making rapid progress. *To change this condition is the great school problem.*

"Develop and perfect measures:

1. For conserving and increasing the physical soundness of pupils.

2. For discovering and excluding cases of contagious disease.

3. For finding and having remedied physical defects.

4. For making the entire school and its surroundings happier, healthier and more wholesome.

5. For that sort of record-keeping that shall enable the school to keep track of each individual child from the time he enters school until he leaves and to tell *when he fails and why he fails and guide in preventing him from failure.*

6. For changing our courses of study or our methods of grading and promotions so that the children who make rapid progress through the grade, shall be at least equal in number to those who make slow progress."

One of the important remedial measures in solving this great problem is not emphasized, namely: *better and more efficient methods of teaching, this is what North Bergen has relied on to produce its progressive betterments in age-grade conditions.*

Because "Retardation" means a below normal standard of attainment for pupils, and a higher standard of cost for communities, North Bergen, N. J. has, since 1907, given this problem special attention.

EDUCATIONAL WASTE

The factors used in reducing this educational waste of time and money, and waste in community progress, are:

1. Better methods of teaching.
2. Closer supervision of school work.
3. Better cooperation of parents.
4. Better school attendance.
5. More of the play spirit in class work.

(TABLE A)

PERCENTAGE OF RETARDATION DIMINISHES

	1913	1916	1917	1918	1919
Under-Age	19	23	28	29	29
Retarded	27	19	16	13	13
	1920	**1921**	**1922**	**1923**	**1924**
Under-Age	29	30	30	30	29
Retarded	14	13	14	13	14

According to Dr. Ayres, the founder of the age-grade

According to Dr. Ayres, the founder of the age-grade method of measuring school progress, the table A, above, indicates a high standard of school attainment. Under-ageness of 19% in 1913 was gradually increased until in 1921 the table shows a 30% distribution. Retardation of 27% shown in 1913, is gradually further reduced and shows only 13% in 1918.

The excellence of these conditions is also seen from a comparison of North Bergen with other systems.

(TABLE B)
COMPARATIVE DATA FOR 9 CITY SCHOOL SYSTEMS
(American Ed. Digest, May, 1924)

City	Per cent Under-age	Per cent Normal	Total Under-age Plus Normal	Per cent Retarded
New York City	14.0	46.0	(60.0)	40.0
Seattle, Wash.	10.5	47.6	(58.1)	41.9
Newark, N. J.	14.3	40.7	(55.0)	45.0
St. Paul, Minn.	6.7	45.9	(52.6)	47.4
Reading, Pa.	7.2	44.9	(52.1)	47.9
Grand Rapids, Mich.	9.0	43.0	(52.0)	48.0
Omaha, Neb.	5.0	37.0	(42.0)	58.0
Portland, Ore.	4.0	31.0	(35.0)	65.0
Birmingham, Ala.	1.3	19.0	(20.3)	79.7
North Bergen, N. J.	29.0	57.0	(86.0)	14.0

Nine cities are ranked in the order of highest efficiency as shown by the combined number of under-age and normal pupils (column 3).

Nine cities are ranked in the order of highest efficiency as shown by the combined number of under-age and normal pupils (column 3).

The excellence of these conditions is also found in the fact that Americans exploited the efficiency of German schools—exploited by Germans to American pedagogues visiting the German Empire and they in turn to American Educators. Their schools contained 50% of retardation but this was not revealed until statistics leaked out after the war.

EYE-MIND EDUCATION

After working ten years upon the solution of the problem of Retardation, I found that we had about reached its maximum reduction for several reasons:

Teacher and pupil morale waned and effort accordingly, because:

1. Retardation problem was no longer a stimulation.
2. Because of the disorganization due to influenza epidemic.
3. Because of emphasis given to well known differences in pupils.
4. Because of emphasis given to intelligence testing.
5. Because of unsatisfactory salary conditions.

In the midst of these perplexities, salaries were raised and Eye-Mind Education was practiced for the purpose of maintaining the high standards we had attained. After careful analysis, observation, and personal tests, I became convinced of its great educational values. After seven years' experience with Eye-Mind Education, I class it as one of the marvelous discoveries of the present age, second only to that of radio waves and their control. The Bates' method of Educating the Eye-Mind, to prevent and remove eye and mental strains, to prevent and lessen Retardation in schools, is soundly established. Its contributions to the happiness of mankind is unspeakable.

Since 1920 our records of progress in Eye-Mind education have been carefully made.

Not only does eye-mind education place no additional burden upon the teachers, but by improving the eyesight, health, disposition and mentality of their pupils, it surely lightens their labors and furnishes an additional means of preventing retardation.

In 1924, out of 129 pupils wearing glasses, 18 were found with normal vision and 111 with vision below 20/20. Out of 4,026 pupils without glasses 1,133, or 28.1% had below-normal vision. The total below-normal vision was 1,244 out of 4,155 pupils or 29.9%.

In this year out of 118 below-normal pupils wearing glasses, 89 or 75.4% improved and of 1,072 pupils not wearing glasses but having below-normal vision, 693 have improved, or 64.5%. Out of a total of 1,190 pupils with below 20/20 vision, 782 improved, or 65.8%. Of those who improved 342 even attained normal vision, or 43.7%. This is indicative of what may be attained by this educative process under more systematic and persistent procedure.

Dr. William M. Carhart says in the Medical Times: *"Not all retarded children are so retarded from eye strain, but the effects of eye strain are one of the main causes of such retardation.*

The vision tests of 1925 showed that 17% of pupils with glasses had normal vision and 64% without glasses had normal vision. The year's work produced wonderful effects in Eye-Mind Education. The records show 70% of those wearing glasses were improved, that 87% of those not wearing glasses improved, and that of those improving, 56% attained normal vision.

PERSONAL EXPERIENCE

The writer had 24 years' personal experience in wearing glasses, most of the time with bifocals. After this 24 years' knowledge of the advantages and disadvantages of glasses, they were laid aside on August 15, 1924, and have not been worn since.

Owing to attained age and 24 years of Eye and Mind strains being physically recorded, Eye-Mind improvement was slow but marvelous and my visual difficulties are now confined to poor print, poor type and poor light. I have attained wonderful improvement in this one and a half years of Eye-Mind practice. On many occasions truly miraculous conditions prevailed. They were periods of reflective, very free thinking, when thought flowed, was created as fast as pen could write. There was ease, relaxation of eye and mind. A noted experience of this occurred on the morning of November 3, 1925, after I had read some article upon school work. I was seeing thoughts with my mind's eye. Near and distant vision was wonderfully free and clear. These experiences and phenomena have occurred many times during the past six months. The thrill of ecstasy, and feeling of freedom during these periods, arising from

a complete emancipation from the thraldom of wearing glasses and their effects, are indescribable. They indicate an intimacy of relationship between the mind and matter never fathomed, and they also indicate that man is still a free agent to search out truth and happiness, and if he wills to use and uses his intelligence and available scientific data, he may carve out a new birth of freedom and progress for the human race. Man creates his own destiny.

Eye Education as an ally of mind development, of eye and physical health conditions and of human efficiency and happiness, should be practiced in every American school. Excepting radio, it is the miraculous wonder of the great age in which we live.

Questions and Answers

Q—At intervals, sometimes months apart, I find my eyes twitching but it is hardly noticeable to an observer. What is the cause and how can I overcome it?
A—This is caused by mental tension which has a direct effect on the eye. Practice relaxation methods, palming and swinging.

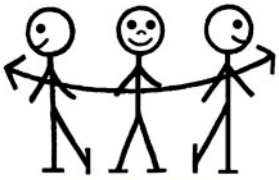
Q—Why does eating ice cream hurt my eyes?
A—**Because the nerves of the eye are in direct relationship with the roof of the mouth**, and the sudden chill makes the nerves sensitive.

Q—If I am worried at night and lie awake, my eyes burn and pain, and I have a feeling that a magnet is drawing my eyes through my head. What causes this and what is the cure?
A—This is caused by the tension of the mind. Just before retiring and the first thing in the morning, practice the long swing.

Q—If I am sitting in the sun reading, I can see the print perfectly and my eyes do not trouble me, but if I raise my eyes and look at any other object, everything seems blurred and there are colored spots before my eyes. Is this caused by the sun or the manner in which I read?
A—The sun is beneficial to the eyes but the glare of light on the white page produces a tension of the nerves. The sun treatment should help you to become accustomed to the strong light. Sit in the sun with the eyes closed, allowing the sun's rays to shine directly upon the closed eyelids as you slowly move your head a short distance from side to side. Practice this daily for half an hour or longer.

PRESBYOPIA NUMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
MAY, 1926

Demonstrate


The Long Swing

THAT the **long swing** not only improves the vision, but also relieves or cures pain, discomfort and fatigue.

Stand with the feet about one foot apart, facing squarely one side of the room. Lift the left heel a short distance from the floor while turning the shoulders, head, and eyes to the right, until the line of the shoulders is parallel with the wall. Now turn the body to the left after placing the left heel upon the floor and raising the right heel. Alternate looking from the right wall to the left wall, being careful to move the head and eyes with the movement of the shoulders. When practiced easily, continuously, without effort and without paying any attention to moving objects, one soon becomes conscious that the long swing relaxes the tension of the muscles and nerves.

Stationary objects move with varying degrees of rapidity. Objects located almost directly in front of you appear to move with express train speed and should be very much blurred. It is very important to make no attempt to see clearly objects which seem to be moving very rapidly.

The long swing seems to help patients who suffer from eyestrain during sleep. By practicing the long swing fifty times or more just before retiring and just after rising in the morning, eyestrain during sleep has been prevented or relieved. It is remarkable how quickly the long swing relieves or prevents pain. I know of no other procedure which can compare with it. The long swing has relieved the pain of facial neuralgia after operative measures had failed. Some patients who have suffered from continuous pain in various parts of the body have been relieved by the long swing, at first temporarily, but by repetition the relief has become more permanent. Hay fever, asthma, sea-sickness, palpitation of the heart, coughs, acute and chronic colds are all promptly cured by the long swing.



Read fine print with relaxation for clear close and distant vision.

Presbyopia

***By* W. H. BATES, M.D.**

PRESBYOPIA, or old age sight, occurs in people after the age of forty. Although the sight may be good for distant vision, it is always poor at a near point. While, in most cases, it occurs after middle age, there are exceptions in which it appears before the age of forty and even in young children.

Generally Accepted Cause

The cause is said to be due to a hardening of the lens, and the belief is that with advancing years the ability to read at the near point becomes much less, because with increased hardening of the lens, accommodation is difficult or impossible. The lens, I believe, is not a factor in accommodation. In my book, "Perfect Sight Without Glasses," I have described the evidence which proves that the change in the focus of the eye is not brought about by a change in the form of the lens.

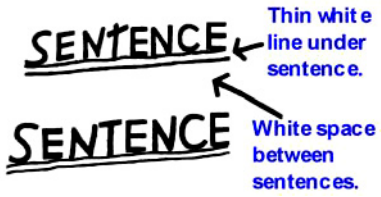
True Cause

The true cause of presbyopia is a strain or an effort to see. When a person with presbyopia tries to read without glasses and fails, the patient feels that an effort or strain has been made. When this effort to see is increased, the vision, instead of being improved, becomes much worse. One can demonstrate that it is not possible to improve the ability to read fine print by any kind of an effort. When a patient with presbyopia rests the eyes by closing them, or by looking away from the page and then looking back at the reading matter, the vision is temporarily improved. Some people have been cured by resting their eyes at frequent intervals during the day without trying to see. After resting the eyes, the vision is usually momentarily improved. In other cases, it can be demonstrated that the patient is trying to concentrate. Let me suggest that the reader look at the upper left hand corner of a letter F, which is of sufficient size to be distinguished. Try to imagine a small area of this corner to be the blackest part of the F. Without shifting your eyes or closing them, keep on concentrating or trying to concentrate on this one point. Note that for a few seconds it is readily done, but very soon one feels a strain, and that to keep the eyes fixed on this one point becomes more and more difficult. The eyes feel uncomfortable and every once in a while the eyes shift and the upper left hand corner of the letter becomes blurred and is frequently lost altogether. The whole letter, in fact, becomes imperfect and blurred while trying to concentrate on the upper left hand corner. It is usually a relief to look away from the F and think of something else. It can be demonstrated that trying to concentrate on one point can only be accomplished for a short time. In other words, concentration for any length of time is impossible. This experiment is of great importance because persons suffering with presbyopia fail to read because they try to concentrate. Concentration may be all right on numerous occasions, but it is of no value in improving the sight. There are people who are able to help themselves when they find out what is wrong. Knowledge of the true cause suggests the cure. For this reason, some people have cured themselves of presbyopia by just resting their eyes without trying to concentrate.

Treatment

When a patient with normal sight reads fine print, it can be demonstrated that while the letters are blacker and clearer, the white spaces between the lines appear whiter than they really are. If one looks at the letters, the eyes seem to become tired and the vision fails. If, on the other hand, one looks at the white spaces between the lines from one side of the page to the other, it is possible to imagine the white spaces much whiter than they really are without discomfort, fatigue, or loss of vision. Whenever one fails to read at the near point, the attention is not attracted to the white spaces between the lines, but an effort is being made to look directly at the letters. When one regards the white spaces, the whiteness may be improved by closing the eyes and remembering something else that is much whiter, such as white snow, white starch, whitewash. Now, when the eyes are open, the first glance at the white spaces enables one to imagine them whiter than before, but only for a short time, a second or a fraction of a second. Then close the eyes and remember the white as before. When the memory has become perfect with the eyes closed, again regard the white spaces with the eyes open, and note that there are times when the white spaces become intensely white. When the imagination of the white spaces improves, the imagination of the black letters also improves. By continuing to look at a white space, shifting from one side of the page to the other, after the imagination of the white space becomes more nearly perfect, the black letters are read correctly, easily, without any effort or fatigue.
When the black letters become clear: use central fixation – look directly at the letters to read them.

The Thin White Line



When the imagination of the white spaces has improved, it often happens that one can see or imagine he sees a **thin white line** much whiter than the white spaces, a line which extends from one side of the page to the other, which is **located between the bottom of the letters and the upper part of the white space between the lines**. The consciousness of this thin, white line is a wonderful help. Most people are cured of presbyopia when they become able to imagine they see this white line. It is bright, clear, and distinct. It gives a restful, pleasant feeling in all the nerves of the body when the thin, white line is seen, remembered, or imagined. In cases of inflammation, when one is able to imagine the thin, white line, pain in the eyes, head or other parts of the body disappears as though by magic.
A thin white, glowing, bright line can also be seen along the outer edge of a white piece of paper.

Failures

There are a number of causes of failures, and this number is oftentimes multiplied when different individuals become able by some ingenious method to bring about a failure. The most common cause of failure is to look at the black letters and to pay no attention to the white spaces between the lines. Regarding the black letters always lowers the vision and requires an effort, a strain which the patient can always realize. Sometimes, the white spaces may be improved sufficiently so that one begins to read the fine print, and almost immediately the vision is lost because of the great temptation to look at the letters.
Modern teachers state to look at the spaces, relax, imagine, see the spaces clear, then; look at/read the letters. If the eyes feel strain, return to the spaces or look to the distance. When the eyes are relaxed; read the letters again. Reading through the center

of the words also prevents strain, blur. When looking at the white spaces: shift on the space. Do not stare at it.

The thin, white line has been observed by many people who failed to read. In all cases, the white line was forgotten and an effort was made to read by looking at the letters. It seems to be a reaction of the human mind while using the eyes properly for people to at once stop using their eyes properly when their vision improves. They seem to think that they get a glimpse of good vision by the memory of the thin, white line, and all that they need is a start and that they can then get along without the thin, white line. It is the thin, white line that helps people to read and although I may get the habit of cautioning them about looking at the letters, and have them demonstrate immediately that looking at the letters is a bad thing, they find it exceedingly difficult to confine their attention to it. One elderly patient complained that she could see the white between the lines until the letters came out. The improvement in her sight was a distraction and prevented her from imagining the thin, white line. It required some weeks or longer before this patient was able to avoid the strain caused by an improvement in her vision.

When the vision flashes clear – keep shifting, blinking. Avoid freezing up with the body, eyes rigid, immobile in an attempt to hold onto the clarity.

Keep shifting, blinking, allow movement, relax.

Some patients keep their eyes open continuously without blinking. When resting the eyes by closing them, it is not always easy to help the patient to keep the eyes closed a sufficient length of time, or until one becomes able to remember a perfect white. When the memory is perfect, the eyes, mind, and all the nerves of the body are at rest. Rest of the eyes and mind increases their efficiency. When the eyes are open, and the white spaces between the lines are imagined, it is absolutely necessary that they be closed in about a second. Too many patients close their eyes for too short a time, and when they open them they are very apt to keep them open too long a time. It is really remarkable how difficult it is for some people to close their eyes for part of a minute and then to open them for just a second. They seem to forget everything they know as soon as they test their sight. Over and over again, I have had them prove that **testing the sight causes a strain which always lowers the vision**. Testing the imagination is different and is less apt to cause a strain. A patient with presbyopia can look up at the ceiling or a white cloud in the sky, and remember or imagine a mental picture of a perfect white color, and do it without any conscious strain or effort. Just as soon as they look at the fine print, they forget their imagination and fail by making an effort to see. One might suggest that in the cure of presbyopia, one should first find the principal cause of failure. It is necessary to be on the lookout for more than one cause. Some patients can produce many causes of failure in a short time. The ingenuity they exhibit is often times very remarkable.

After some of my tests, the patients ask questions or make statements which convince me that they pay no attention whatever to my directions for avoiding the strain. Many patients' minds seem to be bewildered by the numerous thoughts that they have about presbyopia, which have been told to them by other people. They have a bad habit of outlining their own plan of treatment, which they may practice unsuccessfully.

A Presbyopia Cure

A patient over sixty years of age came to me recently wearing convex 3.50 D. S. in each eye for distant vision and convex 6.50 D. S. in each eye for reading. Although these glasses enabled him to read fine print, they caused him continuous pain, discomfort and fatigue. His eyes were so bad that looking at the Snellen test card even at a distance gave him pain. Without his glasses, his vision was about 10/40 in each eye.

By looking at the spaces between the lines of black type of the Snellen test card at ten feet or further, he felt no pain; but when he looked at the letters, he very soon was able to demonstrate a strain which blurred the letters, produced double vision and caused him much discomfort. By practicing for several hours, his vision improved until he became able to read the bottom line in flashes at one foot and the twenty line of the Snellen test card at ten feet.

When looking at the white area, spaces, there is nothing to see, so the person avoids effort, strain to see. The mind, eyes stay relaxed. When this relaxation, no effort is continued when looking at the letters, the letters are seen clear.

When the vision is clear, the eyes can see the tiny details of the white paper, the small wood fibers the paper is composed of. Bring the paper close to the eyes and experience microscopic vision. Shift point to point on the tiny fibers. (Keep the edge of the paper away from the eye to avoid a paper cut to the eye.)

He was given a Snellen test card to hold in his hand at about one foot and was advised to regard the figure 2 in flashes, alternately closing his eyes and resting them. In about half an hour, he became able to flash the 2 at every trial. At first he could see it only for a fraction of a second, but finally became able to see it almost continuously for part of a minute. A card with fine print was fastened to the Snellen test card just below the figure 2 at about one foot from his eyes. By alternately seeing the figure 2 quite perfectly and flashing the fine print for about a second, he became able to see some of the words of the fine print without losing the figure 2.

There have been other patients who have been cured of presbyopia by similar methods.

Stories from the Clinic

NO. 75: PRESBYOPIA

***By* EMILY C. LIERMAN**

FOR some time I have been treating a woman, aged eighty, for presbyopia. She also has imperfect sight for distance which cannot be improved by glasses. This condition has been described by eye doctors as very difficult or impossible to cure. The retina, optic nerve, and all other parts of the eye, are seen to be normal when the ophthalmoscope is used. Recent observations have demonstrated that the cause is due to eyestrain. When the strain is relieved, the vision always improves and the sight may become normal.

Two years ago, when this patient's vision was first tested with the Snellen test card, she read 10/100 with the right eye and 10/70 with the left. She was unable to read fine print with either eye, at any distance. After resting her eyes during treatment, by just keeping them closed, she read 15/30, but some of the letters on the 30 line appeared double. Palming relieved the double vision.

Double vision is, of course, only an illusion and is caused by strain. The quickest cure for this is to cover the closed eyes with the palm of one hand, and only uncover the eyes to open them long enough to see one letter of the test card at a time. After doing this,

quickly close the eyes and cover them again with the palm of one hand. In this way, the patient does not keep the eyes open long enough to strain or produce double vision.

Later, this patient had a relapse and was discouraged to find that she could not read the test card so well. I soon learned that, although the patient had practiced many times a day, she had been making an effort to see better, and had made her sight worse. At a subsequent visit, she became able to read small print by rereading large familiar letters. Her vision for the test card also improved to 12/30 after closing her eyes for ten minutes or longer. This time she read the letters without seeing them double. From the beginning of her treatment up to the present time, her visits have been irregular and, because of this, it has taken her much longer to be cured.



Halo - White glow - The white paper closest to the edge of the black ink of a black letter appears whiter than other areas of the page, a bright, glowing, pure white. The glow also appears around colored letters, objects.

When most patients grow older, they are very apt to strain more than when younger, and they are not conscious of the strain produced while reading, sewing, or seeing at a distance.

The sunlight helped this patient tremendously. Whenever possible she was placed in the sun, and the sunlight was focused on her closed eyelids with the sunglass. This always improved her vision. When there was no sun, I placed her close to a strong electric light for a half hour or longer. She liked this treatment because the sunlight was so restful to her, and she could read the test card at ten feet.

I have been treating another patient, a **man aged sixty-four, with presbyopia.** The vision of both his eyes was the same, namely 15/30. He could not read newspaper nor magazine type at all without glasses. When he looked down, he had double vision in the left eye.

Very little could be done for him in the beginning of the treatment, because he had a bad habit of unconsciously staring. He also made a great effort to concentrate while reading or while otherwise occupied. What a surprise it was to him, when he learned that when he tried to concentrate, his vision was lowered. This also produced a great deal of pain and discomfort in his eyes and head, causing a general depression for hours afterward.

I advised him to close his eyes in order to rest them, and to remember something he had seen perfectly. At first he could only remember his pain and discomfort, but by showing him the Snellen test card, illuminated by a strong light and held about one foot from his eyes, he became able to see or imagine the whiteness of some of the halos. Then, when he closed his eyes, he remembered the halo for a moment. By alternately looking at the halo, closing his eyes and remembering it, he became able to flash the halo or to see it for a few moments. By practice, the white halo was imagined more frequently until his memory became almost continuously perfect.

The pain was soon relieved. It was an easy matter to treat him after that. Blinking became a habit, and he learned to shift quickly and easily. I find that some patients stare even though they do blink often. They keep their eyes fixed in one direction or on one thing. In this way they do not get any relief and the vision does not improve. The normal eye shifts about a quarter of an inch or less while blinking, but it is not noticeable. People who wear glasses seldom shift their eyes. That is the reason why eye-glasses become tiresome to so many people.

At a recent visit, my patient became able to read 10/20 with the test card, and he was no longer troubled with double vision. Closing his eyes often to rest them helped. Now that his distant vision had improved so much, I was anxious to help him to read fine print or diamond type. During one of his previous treatments, I helped him to read newspaper and magazine type, which was an encouragement to him. When the fine print was placed about eight inches from his eyes, he asked: "You don't think I will ever be able to read such fine type as that, do you?" This question amused me, because most patients with presbyopia ask the same question. I answered: "Yes, I know you will."

With a great deal of doubt in his mind, he followed my advice. He was given a booklet, which contains microscopic print, and told to hold it about eight inches from his eyes. Then directly above this print was placed the small diamond type card, which describes the Seven Truths of Normal Sight. Then above this was placed another, a little larger in size, describing the fundamentals of treatment by W. H. Bates, M.D. This card is made up of different sized type, which starts rather large at the top and graduates down to fine reading type at the very bottom of the card. The patient was directed to look at the white spaces between the microscopic type; then blink and shift his eyes to the white spaces of the diamond type; then blink and shift again to the larger white spaces of the Fundamental card. In this way, my patient read sentence after sentence of the Fundamentals until he had read the very small print at the bottom of the card. The patient is grateful for learning how to use his eyes normally.

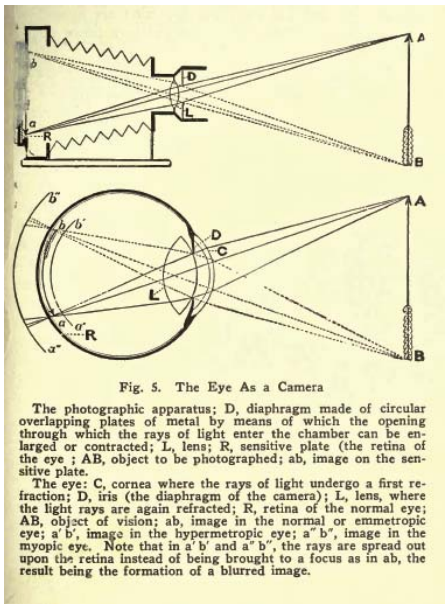


Fig. 5. The Eye As a Camera

The photographic apparatus; D, diaphragm made of circular overlapping plates of metal by means of which the opening through which the rays of light enter the chamber can be enlarged or contracted; L, lens; R, sensitive plate (the retina of the eye ; AB, object to be photographed; ab, image on the sensitive plate.

The eye: C, cornea where the rays of light undergo a first refraction; D, iris (the diaphragm of the camera); L, lens, where the light rays are again refracted; R, retina of the normal eye; AB, object of vision; ab, image in the normal or emmetropic eye; a' b', image in the hypermetropic eye; a" b", image in the myopic eye. Note that in a' b' and a" b", the rays are spread out upon the retina instead of being brought to a focus as in ab, the result being the formation of a blurred image.

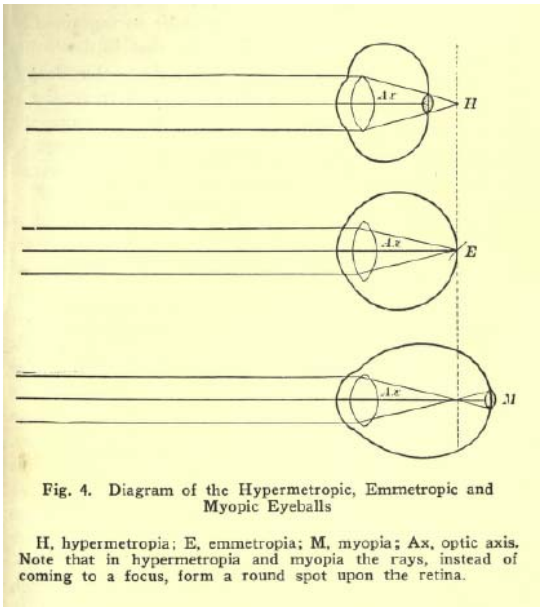


Fig. 4. Diagram of the Hypermetropic, Emmetropic and Myopic Eyeballs

H, hypermetropia; E, emmetropia; M, myopia; Ax, optic axis. Note that in hypermetropia and myopia the rays, instead of coming to a focus, form a round spot upon the retina.

Editor's Note: The little poem below by James Russell Lowell called "The Fountain" applies to the normal eye. The eye at rest is constantly moving just as the water in the fountain.

The Fountain

Into the Sunshine,
Full of the light,
Leaping and flashing
From morn till night;

Into the moonlight,
Whiter than snow.
Waving so flower-like
When the winds blow;

Into the starlight
Rushing in spray,
Happy at midnight,
Happy by day;

Ever in motion,
Blithesome and cheery,
Still climbing heavenward.
Never aweary;

Glad of all weathers,
Still seeming best,
Upward or downward,
Motion thy rest;

Full of a nature
Nothing can tame.
Changed every moment,
Ever the same;

Ceaseless aspiring,
Ceaseless content,
Darkness or sunshine
Thy element;

Glorious fountain,
Let my heart be
Fresh, changeful, constant,
Upward, like thee!

—JAMES RUSSELL LOWELL

This poem is written with the words placed in different areas of the page in order to get the eyes moving, shifting in a variety of directions.
Move the head with the eyes.
Shifting, movement = relaxation, clear vision.

The Blind Man



WE are sure that many of our readers will be interested to read about Edith Collins. Edith is a pupil of Miss Elizabet Hansen, a teacher in Chicago, who cures imperfect sight by Dr. Bates' method.

One day Edith and her little girl friend passed a blind beggar on the street and feeling very sorry for him, she stopped and talked with him. Edith had been treated and cured of imperfect sight by Miss Hansen, and had become very adept in applying the method herself, so she began teaching it to the old man. She and her little girl friend visited him twice each week in his hovel, and taught him to palm and use the sun treatment.

He was so ill that much of his time was spent in bed, but Edith told them to move his bed so that the sun would shine directly on his eyes. Little by little his sunken eyes came forward and he began to feel better. He followed the little girl's rules faithfully, even though a visiting nurse laughed and called the method "bunk." After three months, even the nurse must have changed her opinion, as the little girl rushed to Miss Hansen and told her that the old man was cured. She had met him on the street and he could see! He told little Edith he could read the headlines of the newspapers and smaller words in spots and that he was going out of town to look for work.

Miss Hansen wrote us about what Edith had accomplished, but to make it more authentic, we received the following misspelled

letter sent to Edith by the old man himself.

Dear edith:
i am in clear water florida i am traveling and you don't know how tickled it made me feel when i could see but when i reached my sister out here she nearly fainted when she saw me, and at first she wouldn't beleave that i could see so she took an apple and held it up to see if i really coud see now we are traveling and want to go California i hope you are well and thank you again and again for helping me.
i remain
your patient who was once a blind man.

Big and Little

This is a fact that is sad to tell:
It's the empty head that is bound to swell;
It's the light-weight fellow who soars to the skies.
And burst like a bubble before your eyes.
A big man is humbled by honest praise,
And tries to think of all the ways
To improve his work and do it well;—
But a little man starts of himself to yell!

—Joseph Morris.

Reading is to the mind what exercise is to the body. As by the one, health is preserved, strengthened and invigorated; by the other, sight, imagination and mental efficiency are enormously improved.

Do a little good every day. Tell your friend to blink more often!

STARING: 1 Kings XIV-4,

"But Ahijah could not see; for his eyes were set."

Effects of Presbyopia

***By* W. H. BATES, M.D.**

PATIENTS who have been cured of presbyopia, which is caused by eyestrain, are able to do more satisfactory work than those who have imperfect sight and wear glasses. We receive many reports from patients who have had difficulties in their special line of work and have found that they accomplished more and were more accurate after their presbyopia was cured. Frequently, people of fifty years or more, lose their positions because of mistakes made in figures or whatever their work may be. They are not always told the reason for their dismissal. They are simply discharged and a younger man put in their place.

One of my patients, sixty-four years old, told me that, after having worked faithfully and steadily for forty years in one place, he had been informed that he could no longer figure accurately. It was a shock to him when he was placed on half pay and sent to another department. He was presbyopic, but was cured by treatment without glasses. During the absence of the younger man, he was temporarily placed in his former position. His work was so accurate and efficient that he was reinstated permanently.

Artists have the same experience with colors. It can be demonstrated that colors, when seen under a magnifying glass, become less distinct. White becomes a shade of gray; black becomes a lighter shade of black. It can also be shown that objects seen through glasses do not appear to be of the same size as the same objects viewed with the naked eye. Many artists are disappointed with their work because for some good reason they feel that it is not appreciated. The great mistake they make is that, like other people suffering from presbyopia, they believe that because their ability to read is improved with glasses, their perception of colors and form is also benefited. It is not always easy to convince artists that glasses actually lower their vision not only for colors, but also for form.

Questions and Answers

Q—Why do animals' eyes shine, and why do they see better at night?
A—It is the reflection of the light from the front part of the eye which makes them shine. It is not known why some animals see better at night than they do in the daytime.

Q—Why do Albinos always have poor eyesight?
A—On account of the absence of pigment, Albinos' eyes are not protected from the light. However, they do not all have imperfect sight. It is because their mental equipment is imperfect that some have imperfect vision. When the memory or imagination is improved, the vision also improves.

Q—What color eyes are the strongest? I have been told that color matters, why?
A—The color of the eyes has no effect upon the strength.

Q—Doesn't it hurt to wear eye-glasses for near-work during the interval of eye practice?
A—You should use your eyes correctly all day long, no matter what you may be doing. Practice blinking, shifting, central fixation, and imagining stationary objects to be moving opposite to the movement of your head and eyes. Wearing glasses for any purpose whatever retards your progress and lowers your vision.

Thumb, Finger Movement



Q—What is the movement of the thumb and forefinger, and how does it help?
A—Let the ball of the thumb rest on the ball of the forefinger. Move the thumb in a circle, about one-quarter of an inch in diameter. When the thumb is moving continuously, one can imagine that all the nerves of the body are moving with the thumb. This prevents the stare and strain. This movement of the thumb can be practiced when inside a room at home, office… or on the street. When the right foot moves forward let the thumb move in the same direction. Then, when the left foot moves forward, let the thumb move backward. Alternate.
Example;
Right foot forward > Thumb moves forward >
Left foot forward > Thumb moves backward <
Alternate:
Right foot forward > Thumb moves backward <
Left foot forward > Thumb moves forward >
Then, practice alternating with the left and right hands.
This exercise also activates a form of oppositional movement as the thumb moves forward and backward on the finger and as the thumb moves with and opposite to the movement of the feet. This exercise relaxes the mind, body, eyes, improves eye movement and activates and integrates the left and right brain hemispheres.

When practicing the long swing, the movement of the thumb is a help. When you turn your body to the right, move your thumb in the same direction. When you turn your body to the left, move your thumb to the left. Let the movement of the thumb be a continuous movement.

When you practice the short swing, the slow, short, easy, circular, continuous movement of your thumb in the same direction as the movement of your head and eyes, it helps you to see better, to remember better, and to imagine better.
See larger picture of thumb movement in November 1921 issue.

Q—I am forty-five years of age and have worn glasses for eighteen years. As my eyes have pained me for so long, is it too late to expect help or to discard my glasses?

A—It is certainly not too late to discard your glasses and improve your vision. When relaxation methods are employed, the pain disappears and the vision improves. I suggest that you palm for five minutes ten times daily, or more often if possible. Practice the sun treatment for one-half hour, one hour, or longer, every day that you have sunshine. The circular movement of the thumb, as described above, relieves pain almost immediately.

CATARACT NUMMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
JUNE, 1926

Demonstrate

1. Demonstrate that when the eyes are stationary, they are under a tremendous strain. Stand before the Snellen test card at a distance of fifteen or twenty feet. Look directly at one small area of a large letter, which can be seen clearly. Stare at that part of the letter without closing the eyes and without shifting the eyes to some other point. The vision becomes worse and the letter blurs. Stare continuously, and note that the longer you stare, the more difficult it is to keep the eyes focused on that one point or part of the letter. Not only does the stare become more difficult, but the eyes become tired; and by making a greater effort, the eyes pain, or a headache is produced. The stare can cause fatigue of the whole body when the effort is sufficiently strong and prolonged.

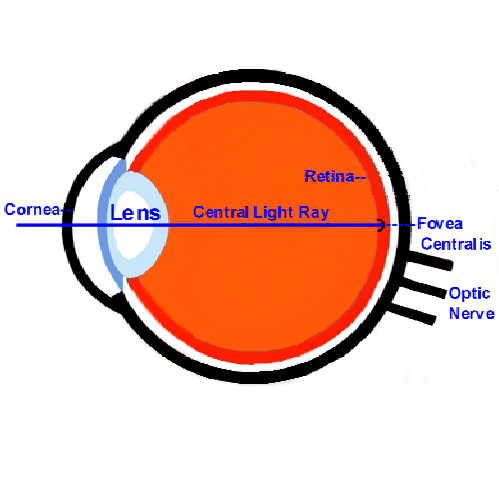
2. Demonstrate that when the eyes are moving from one point to another, frequently, easily and continuously, the stare, the strain, or the effort to see is prevented and the eyes feel rested. In fact, the eyes are not at rest except when they are moving. Note that when you look at a letter on the Snellen test card and alternately shift from the top to the bottom of it, the vision remains good or is improved. When the letter is seen perfectly, the eyes are shifting; and when seen imperfectly, the shifting stops.

3. Close your eyes and remember your signature. This can usually be done quite perfectly. Try to remember the first and the last letter of your name simultaneously. This is an impossible thing to do and requires a strain. If you shift from one letter to another, you can remember your signature, one letter at a time; but if you make an effort to remember it, the memory and the imagination of your signature disappears.

Cataract

By **W. H. BATES, M.D.**

Defined



CATARACT is an opacity of the lens of the eye. The lens of the eye is located in the pupil just behind the colored part of the eye, the iris. The lens is about the size of an ordinary pea. It is curved more on the front part than on the back. It is suspended in the eye by a bag-shaped structure, called the capsule. The capsule is a thin membrane. Covering the inside of the front part of the capsule is a layer of cells resembling in form and structure some of the layers of the skin of the body. The cells of the front part of the capsule are believed by some authorities to cause a secondary cataract after the lens has been extracted. Some years ago, I demonstrated by a long series of experiments that secondary cataract is not caused by these epithelial cells, but by scar tissue. The lens, itself, is composed of a number of layers of transparent tissue, which lie parallel to each other. When one places a number of sheets of plane window glass in a pile, with each pane of glass parallel to all the others, the pile of glass is transparent, but if one sheet or more is at an angle, that is, not parallel, the pile of sheet glass is clouded. This is a simple description of what takes place in the lens of the eye when it becomes opaque. When the lens is clear, its layers are parallel to each other. When the lens is opaque, one or more of the layers is at an angle to the rest. **Some patients with normal eyes are able by means of an effort to consciously produce a cataract.** When the cataract is beginning to show, it can be increased consciously by the memory of imperfect sight, which requires an effort with a resultant contraction of the muscles on the outside of the eyeball. When one group of eye muscles contract, the eyeball is lengthened and myopia is produced. When another group of muscles contract, the eyeball is shortened with a production of hypermetropia. When all the muscles of the eye contract sufficiently, the eyeball is squeezed in such a way as to change the parallelism of the layers of the lens with a consequent loss of its transparency.

Occurrence

SENILE CATARACT. There are various kinds of cataracts. The most common form is called senile cataract, because is usually occurs in elderly people after the age of fifty. Exceptions, however, are found in which the cataract may occur at a much earlier period. In the senile cataract at the beginning of the cloudiness of the lens, one sees opacities extending in nearly straight lines from the periphery, or the outside margin of the lens, to the center. Later on, the parts of the lens between these lines of opacities become clouded until the whole lens becomes totally opaque. A lens is said to be ripe when its whole structure becomes opaque, when the patient's vision becomes so poor that he is unable to count his fingers held about a foot from the eyes.

CONGENITAL CATARACT. When a child is born with an opacity of the lens, such a cataract is called congenital.

TRAUMATIC CATARACT. A traumatic cataract is caused by some mechanical injury like a blow or the puncturing of the lens by a sharp object. Being struck by a baseball or having a sharp object, such as a stick or a toy, thrust in the eye, is a common cause of traumatic cataract.

COMPLICATED CATARACT. When in addition to cataract, the patient has some disease of the eye, glaucoma, atrophy of the optic nerve, or serious inflammation of the interior of the eyeball, he has what is called complicated cataract. In these cases, the patient is usually unable to distinguish light in some parts of the field.

There are other kinds of cataract which occur less frequently.

Symptoms

Occasionally, a cataract may be sufficiently prominent to be recognized with the naked eye. In most cases, however, one cannot discover the cataract without the aid of the ophthalmoscope. When cataract is far advanced or the lens becomes totally opaque, the red reflex of the normal eye is not seen in the area of the pupil. If the cataract is only partially developed, one sees a red reflex shining through a clear part of the lens while other parts of the lens are more or less opaque.

Demonstrations

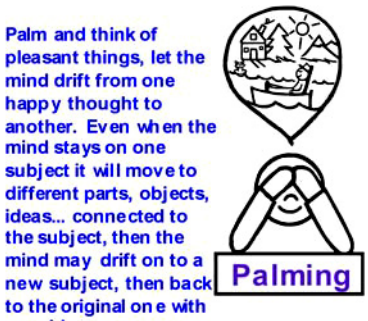
Some years ago, when I was attending lectures at a medical college, an experiment was performed which was so convincing that I have always remembered the details. A professor was talking about the eye. He showed us an enucleated eyeball of a cow, and called our attention to the fact that when he held the eyeball loosely in his fingers, the pupil was perfectly black. Then, when he squeezed the eyeball, almost immediately the pupil of the cow's eye became distinctly white from the pressure exerted upon the lens. Then, when the lecturer relaxed the pressure of his fingers, the pupil at once became perfectly black as it was before, and the cataract disappeared. The experiment was repeated a number of times. The pressure on the eyeball always produced cataract; relaxation of the pressure was always followed by the disappearance of the cataract.

Some years ago, I performed an experiment on a rabbit which had just been killed by chloroform. By dragging upon the muscles on the outside of the eyeball, it was possible to obtain pressure on the lens and produce a temporary cataract. When pressure on the eyeball was released, the cataract disappeared. By advancing the muscles and fastening them permanently to the back part of the eyeball with the aid of sutures, the cataract which appeared in the pupil was permanent so long as the pressure was maintained by the advancement of the muscles. The facts demonstrated very conclusively that cataract in the rabbit's eye can be produced by pressure on the eyeball with the aid of the muscles on the outside of the globe.

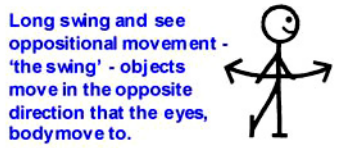
Treatment
(Cures for Cataract)

If cataract can be produced in a rabbit's eye experimentally, one would expect the same thing to occur in the human eye. Treatment which relieves pressure on the eyeball is always beneficial. It is very interesting to discover that all cases of uncomplicated senile cataract have been benefited by relaxation or rest, at first temporarily, later more continuously or permanently.

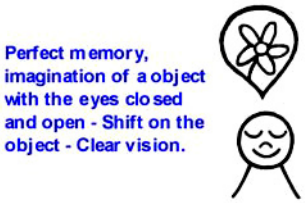
There are a great many methods of treatment which bring about relaxation in the cure of cataract. The measures employed are not injurious. In fact, there is no possibility of making the condition of the eye worse. It is well to emphasize the fact that the same method of treatment to obtain relaxation is not a benefit in all cases. Patients need to be treated as individuals.



1. REST. Closing the eyes and resting them, or covering the closed eyelids with the palm of one or both hands, without exerting any pressure on the eyelids, has improved the majority of my patients. In my book, I report a case of **cataract which was cured permanently by palming for a long period of time, twenty hours continuously.** Palming for five minutes hourly is usually beneficial. With the eyes closed and covered, it is well that the patient allow his thoughts to drift from one thing to another without trying to remember one thing in particular all the time. By thinking of pleasant things, it is often possible for the patient to forget that he has eyes and in this way a larger amount of relaxation is attained.



2. SWINGING. Swinging is very helpful in the cure of cataract. This swinging of the body can be done with the patient standing or sitting. Some patients have practiced the swing while sitting in a chair for many hours during the day. When tired, they would alternate with palming. When the swinging is done correctly, it is restful and a benefit not only to cataract, but to other conditions of the eye. In swinging, one moves the body, head and eyes from side to side. When the body sways to the right, the head and eyes move in the same direction. When the body moves to the left, the head and eyes also move to the left. When the eyes move to the right, all objects not regarded are to the left of where the eyes are looking. When the eye moves to the left, all objects not regarded are to the right. By practicing the swinging exercise, many patients soon become able to imagine stationary objects to be moving in the opposite direction to the movement of the head and eyes. The great benefit derived from the sway is that the stare, the strain, and concentration are prevented. One cannot sway, move the eyes, and at the same time hold the eyes stationary in order to stare or concentrate.



The normal eye with normal sight never sees anything with perfect sight continuously, unless it can become able to imagine it to be moving. This movement is usually about one-quarter of an inch from side to side. Things imagined to be stationary soon become imperfect.

3. MEMORY, IMAGINATION. It is not possible to remember a letter of the Snellen test card perfectly unless it is seen perfectly. It is not possible to imagine a mental picture of the letter perfectly unless it is remembered perfectly. **Furthermore, it is not possible to see the letter perfectly unless one has a perfect imagination of a known letter or other object as well with the eyes open as with the eyes closed.** One of my patients had normal sight with the right eye, but only perception of light with the left eye which had a ripe cataract, or a cataract in which the whole lens was opaque. With the right eye, she could remember or imagine perfectly the letters that she was able to see perfectly. When she covered the good eye with a screen, she told me that she could imagine the small letter on the Snellen test card as perfectly with her left eye as she, could with her right. She was told that because of her poor sight in the left eye, she was unable to imagine perfectly at the same time with her left eye open. She remonstrated with me and was very positive that she could imagine as well with her left eye open as with her right. Finally, I asked her how much she could see on the strange card, and much to my surprise she read it with normal vision. When the eye was examined with the ophthalmoscope at the same time that she said her vision was normal, the cataract had disappeared. She was right and had demonstrated the truth that when her imagination was perfect, her sight was also perfect and in order to have perfect sight, it was necessary for the cataract to disappear, which it did. This case was one of the strongest evidences that imagination treatment is one of the best methods that can be employed to cure cataract. It interested me so much and emphasized the value of the imagination so greatly that it has become a routine treatment for my other cases. While it is beneficial in most cases, it is seldom curative because very few patients have so perfect an imagination.

When using one eye at a time – notice the memory, imagination is best when using the eye with the clearest vision.
Using, improving the memory and imagination when working with the eye with less clear vision improves the clarity of vision in that eye. Improving the vision in that eye, both eyes, improves the memory and imagination.

I treated a woman, aged fifty-six for the first time on November 7, 1923. The right eye had incipient cataract with a vision of 15/70. The left eye had a ripe cataract with a vision of only perception of light. The numerous eye doctors, whom she consulted all advised an operation for the removal of the cataract of the left eye, and told her that no other treatment would be of any help. The

patient was benefited by palming, by swinging, and most of all by the use of her imagination. When her imagination, with the right eye open, improved, her vision improved to the normal. With her left eye open, her imagination was not so good, but even with an imperfect imagination her vision at once improved to 15/200. After two weeks of treatment, there were days in which her imagination became, with the left eye open, as good as with her right eye open, with normal vision in each eye. After some months of treatment without my supervision, the vision of the right eye became permanently normal and the cataract disappeared. By continuing the treatment at home, the left eye obtained normal vision for short periods of time only. Since she obtained normal vision with the left eye, although temporarily, it is possible for the temporary improvement to become permanent.

The memory of perfect sight is a rest to the eye, with a coincident relaxation of all tension or strain of the muscles of the eye.

4. FINE PRINT. Cataract patients become able to read fine print at six inches or nearer to their eyes more quickly than do patients with imperfect sight from other causes. By reading fine print frequently, or for long periods of time, the cataract becomes less.
People that have unclear close vision and wear stronger and stronger close vision eyeglasses develop increased eye muscle tension, abnormal eye shape, pressure, tension on/in the eye, blur at all distances, cataracts and other eye problems. Bifocals further increase the vision impairment and cataracts… Strong glasses for distant vision also causes this condition. Removing the glasses and improving the diet, avoiding drugs often reverses, removes the cataract.



Sunning. Face the sun, eyes closed, move the head side to side. Relax, think happy thoughts.

5. SUN TREATMENT. The eyes need sunlight. People who work in mines, where there is no sun, sooner or later develop inflammations of the interior of the eyes. The cloudiness of the lens from cataract is lessened by exposing the eye to the direct rays of the sun. When using the sun treatment, it is best to let the eyes become accustomed to the sun by mild treatment at first. Have the patient sit in a chair with his eyes closed and his face turned toward the sun. He should slowly move his head a short distance from side to side. **The movement of the head prevents concentration of the sun's rays on one part of the eye.** After some days of treatment, or when the patient becomes more accustomed to the light, one may use the sun-glass with added benefit. Direct the patient to look far down and while he does this, lift the upper lid gently, exposing to view the sclera or white part of the eye. Now, with the aid of the sun-glass focus the sunlight on the forehead or on the cheek, and then rapidly pass the concentrated light over various parts of the sclera. This requires less than a minute of time. It is not well to be in a hurry. One should wait until the patient becomes sufficiently accustomed to the sun to permit the upper eyelid to be raised while he looks far down, **exposing the sclera only. It is important that the patient be cautioned not to look directly at the sun.**

Prognosis

The cure of cataract is usually accomplished more quickly than the cure of some other diseases of the eye. My assistant, Emily C. Lierman, has had unusual success in treating cataract cases, as she adapts my methods to each individual case. In her book, "Stories from then Clinic," the treatment is described in detail.

Stories from the Clinic

NO. 76: CATARACT

***By* EMILY C. LIERMAN**

MANY patients, after being cured of imperfect sight, go their way and we never see them again. However, many come back, even after a period of five years or more, to report, or to show their gratitude. If a patient is cured quickly, he is very apt to forget that he ever had eyestrain. Normal vision helps him to forget, and he is able to go on with things that interest him without tension or strain. There is nothing that affects the whole nervous system more than eye strain.

I have deep sympathy for patients suffering from cataract. Some of these have told me that, when they first discovered, or were told that they had acquired cataract, the shock was so great it sometimes made them very ill. I have often wished that I could broadcast to every human being troubled with cataract, that they need not worry about an operation, nor fear blindness.

While treating patients at the Harlem Hospital Clinic, Dr. Bates placed under my care many patients with cataract. Some of them were children who were born with it, while others acquired it from an injury of some sort. If they faithfully practiced the daily treatment for their particular case, they always improved. There were no exceptions, although in all cases where the patient did not practice enough, it took much longer for a cure. Adults were also cured quickly when the directions for home treatment were faithfully carried out. Age made no difference.

A colored mammy, who was a faithful servant of one of our private patients, came regularly, three days a week for many months, and was treated for cataract. I have described her case in my book, "Stories from the Clinic." In the beginning of her treatment, she could not see the letters of the test card at five feet. As she explained it in her dialect: "Do you know, ma'am, ah can see nothin', no ma'am, nothin' at all at dis distance!"

Long periods of palming, early in the morning and late in the afternoon, when her work was done, helped her sight. In the clinic she was taught to sway her body slightly from side to side and to blink all the time. The swaying helped her to see things about the room moving opposite to the movement of her body. **The blinking prevented the stare, which is usually the cause of cataract.** The quickest way to obtain a cure is by palming, and I advise my private patients to practice it for several hours or many times each day. It would be impractical, however, to advise a clinic patient to use the same method, because they cannot spare the time from their work, nor can the employer spare them. If such advice were given them, their answer would surely be: "This treatment is only for those who can afford the time." Dr. Bates often tells them that it takes less time to use their eyes correctly than it does to use them incorrectly.

Clinic patients, as well as private ones, are advised to relax all day long. Mammy was to see things moving all day by watching

her broom as she swept the floors; the washboard as she washed the clothes; the clothes-wringer as she turned the handle; and the dishes as she dried them and put them in the cupboard. We treated her many times, but occasionally she had a relapse. These were sad times for mammy, when she had tears in her eyes and a heavy heart. Frequently she would say: "Ma'am ah knows der is no hope for me. Ah has displeased de good Lord." A kind word or two always helped her, and I made sure that she received many of them.

As time went on, she obtained normal vision with the use of the test card, and became able to read very fine print and to thread a needle. We left the Harlem Hospital Clinic, never thinking that we would hear from her again. Six years had passed, and new patients were coming and going from our own clinic, when one day about three months ago, we received a letter from mammy. All through the letter were words of gratitude and praise for what we had done for her. **She is now seventy-eight years old, and can still read her newspaper and thread a needle**. She asked for permission to come to see us. She wanted the Doctor to look at her eyes to prove that her cataract had entirely disappeared. We, of course, were anxious to see her. When she came both of her eyes were examined and no sign of cataract was found in either eye. Her vision with various test cards was 10/10, and she read fine print without any difficulty, because she did as she was told. She was cured. It was not always easy for her as her work at times required good eyes. Her madam had patience with her for she, also, was under treatment. During mammy's last visit, she said: "Ah jest knowed dat ah was cured 'cause ah could see de crumbs on de carpet to brush up, an' ah could see de dust all ober de furniture an' ah cleans better. De sun is clear now an' not in de mist no mo'."

About a month ago, another patient came with a report of good vision. She is **over eighty years old**, and has a disposition just as cheery as she had when I first knew her, about eight or nine years ago. Perhaps our readers will remember an article I wrote about her. She is the patient who was employed in an orphanage. Her duties there were to see that all the buttons were sewed on the clothes of little ones at the Home. She said she was the only daisy in the country while she was there. From the very beginning she had infinite faith that Dr. Bates could cure her without an operation. During one of her early treatments, when she noticed a decided improvement in her sight while palming, she could not resist the temptation to peep through her fingers at me and say: "I'll fool them yet." I asked her what she meant and she answered: "Oh! The other doctors who want to operate on my eyes." Well, she kept her word. She fooled them and was entirely cured. She has never worn glasses since her first treatment and the only reason for her being cured is, that she practiced faithfully the methods of treatment that helped her most. When she looks at you, her young, blue eyes twinkle and she wears a smile that won't come off.

A Radio Talk
(Military and Aviation)

The following lecture was delivered at Station WMSG, Madison Square Garden, on Tuesday, May 18th, by W. H. Bates, M.D.

FOR a few minutes this evening, I wish to talk to you about your eyesight. So many people are troubled with their eyes that I feel that anything that is a benefit to them should be broadcasted. In the first place, it is an error to believe that perfect sight requires hard work or an effort. Perfect sight comes without an effort. This is very easily tested. All you have to do is to look at a small letter in a book or a newspaper and note that when seen perfectly, it is seen easily. If you do something that is wrong, by trying to see this letter better or making an effort to improve it, your vision fails. If the efforts are continued and you concentrate on just one point of the letter, the vision not only fails, but your eyes begin to feel uncomfortable. Pain and headaches often occur when the eyesight is imperfect. People who have perfect sight are usually more comfortable than people who have imperfect sight.

It is generally believed that the normal eye has perfect sight all the time. A scientific study of the facts has convinced me that this impression so generally believed and taken for granted is far from the truth. **After forty years' special study of the eye under different conditions, I am convinced that the normal eye has imperfect sight most of the time.** Age is no exception, young and old are equally affected. (Perfect vision is clearer than 20/20. A person with 20/5 vision considers 20/20 imperfect.)

There is but one cause of functional imperfect sight, and that is, a strain or effort to see. The strain may be an unconscious one or it may be conscious and manifest itself by pain, fatigue, or other discomforts.

Light has a very important effect on the vision of the normal eye. The vision of all persons is imperfect when the eyes are first exposed to the strong light of the sun or the strong artificial light, but people who are super-sensitive to the light of the sun, should not dodge it, but should gradually accustom the eyes to the sunlight.

Moving pictures usually produce temporary defective vision. Some people have complained that they always suffered with pain and had poor sight whenever they regarded the screen with its flickering light. I believe that some years ago, when photography was less perfect than it is now, the pictures produced a great deal of eyestrain, much greater than at the present time. I always advise my patients under treatment for the cure of defective vision, to go to the movies frequently and gradually become accustomed to the flickering light. After this is accomplished, no other lights seem to bother them.

Noise is a frequent cause of defective vision of the normal eye. All persons see imperfectly when they hear an unexpected loud sound. Familiar noises do not lower the vision usually, but unfamiliar, new, or strange noises always do, at least temporarily.

Military

Artists, bookkeepers, lawyers, physicians, writers, mechanics, and others found their mental ability or efficiency increased many times with the aid of eye training. Many recruits for the army and navy were found to have imperfect sight and were rejected, although their eyes were normal. Eye training improved their sight.

The **cadets at West Point** and the **midshipmen at Annapolis** have been well trained to obey orders, and any method that was employed to improve the sight of the soldiers and sailors was grasped and practiced with unusual intelligence. One great difficulty, if not the greatest difficulty in helping the sight of the soldiers and sailors, was that those who had inquiring minds wanted to know the whys and wherefores of everything. They were slow in obeying orders and were, on the whole, difficult to cure, but those who were benefited usually had no questions to ask, no arguments to offer. They were sure to be benefited; they were sure to do as they were told, and because they did as they were told without any discussion, they obtained normal vision as a general rule at the first visit. The soldiers and sailors who were treated successfully, improved at the very beginning and improved so rapidly that most of them were cured in about an hour of eye education. Those who were cured became able to cure others.

The most important method employed was to have the patient sit with his eyes closed and rest them for half an hour or longer. Then, when he first opened his eyes, the vision was usually improved temporarily. It had a good effect when the patient was taught that a stare, a strain, or trying to see always lowered the vision, and often produced pain, headache, fatigue; or other nervous troubles. The demonstration that staring lowered the vision, helped the patient to avoid the stare. When he knew what was wrong with him, it made it possible for him to practice in such a way as to avoid the stare.



Natural Eyesight Improvement improves Marines target score on rifle range.

Blinking was a great help. The normal eye blinks, or opens and closes, unconsciously very often. It has been demonstrated that blinking consciously gives one temporary improvement in the sight.

A young man came to me soon after war was declared, begging me to help him, if possible, so that he could enlist in the **marines**. He told me that he had tried to enlist a number of times, but he was always rejected because of his poor eyesight. In order to be accepted, it was necessary for him to have perfect sight in each eye without the use of glasses. He proved to be an apt pupil, and by using his eyes without effort or trying to see, his vision soon became normal. The next time he applied for enlisting, he was at once accepted, because he had perfect sight. He wrote me a letter while he was in France, in which he reported that he went on the rifle range and made a score of 251 out of a possible 300 points. He was the second highest qualified man in his company, and was awarded a sharpshooter's medal. His best ranges on record day were the 600 yard slow fire and the 200 and 300 rapid. On the 600 yard range, he made six bull's eyes and four four's. The bull's eye for the 600 yard range was twenty inches in diameter. He had not been in Brest, France very long before a call came for fifty men from each company who had high rifle range records to go at once for quick preparation to enter the lines as machine gunners. He was among those selected.

Army Pilot during the war learns to avoid staring, strain, effort to see. He shifts on his compass, remembers a clear mental picture of the compass and his vision remains clear.



The **aviation branch of the army requires very good sight.** It is interesting to note that while aviators may have normal sight when they first enlist, in the course of a few weeks their vision will begin to fail. They complain that at irregular intervals they suffer from attacks of blindness. At first these attacks are not severe, but later on they become worse. During one of these attacks of blindness, the pilot will lose control and the machine will fall to the ground unless the aviator can recover his vision before it is too late. A number of aviators have told me that they did not know of one man whose sight as continuously normal. For this reason, the death rate among aviators has been so high.

During the war, an officer in this branch of the service had a long talk with me in which he described his personal experiences. He said that if he were not feeling very well or were more or less nervous, he would have an attack of temporary blindness, in which he would lose control of his machine for some seconds or part of a minute. He believed that if the attacks lasted much longer, he would not survive. I told him that the cause of these attacks of blindness was due to eyestrain. By having him practice in the office staring, straining, or trying to see, his vision was very soon lowered. By making still greater efforts, his vision became so poor that he was unable to distinguish ordinary objects and everything became black. **He was convinced that the stare, concentration, or an effort to see, when sufficiently strong, could cause an attack of blindness.** He also readily understood that to prevent these attacks of blindness, it was necessary for him to stop staring or trying to see. I advised him to look at his compass frequently and see it perfectly without straining his eyes. By consciously remembering a mental picture of the compass, his memory improved. With the improvement in his memory, there followed an improvement in his sight which not only became better, but improved continuously. The attacks of temporary blindness became less frequent until they disappeared altogether, but it was necessary for him to keep practicing and looking at his compass in order to prevent a relapse.

These facts have led me to the following conclusions:

+ First: All persons with normal eyes and perfect sight do not have normal eyes and perfect sight continuously.

+ Second: The cause is always an effort or strain to see.

+ Third: That treatment by eye training is successful when distant, small, familiar letters are read a few moments at least every day, and

+ Fourth and last: The good results obtained, justify the use of this method in all schools, the army, navy, merchant marine, and on all railroads—in short, by everybody who desires or needs continuous perfect sight.

If any of you are interested in the preservation of your eyesight for yourself, your family, or your children, I shall consider it a privilege to answer any question sent to me at this station.



Shift, Palm, Daydream Pleasant Thoughts. Remember, Imagine objects clear, in color, motion. Listen to a Johnny Cash song and imagine, visualize the story, objects (Trains…) he is sings about.

Another Radio Talk Through WMSG

On June 8th, about 8 P. M. (see exact time in Radio section of Daily Newspapers), Emily C. Lierman, Dr. Bates' assistant, will give an interesting and instructive talk on Eye Education.

Your comments will be appreciated.

MYOPIA NMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
JULY, 1926

Demonstrate

I. That the smaller the object regarded, the easier it is to remember. One can, with time and trouble, become able to remember all the words of one page of a book. It is easier to remember one word than all the words of a page. It is still easier to remember one letter of a word better than all the letters. Regard a capital letter. Demonstrate that it is easier to see or remember the top of the letter best, and the bottom of it less clearly than to remember the top and bottom perfectly and simultaneously. Now look directly at the upper right hand corner and imagine one-fourth of the letter best. Then cover the remaining three-quarters of the letter with a piece of paper. It is possible to look directly at the exposed part of the letter and imagine half of it best. Cover the part that is not seen distinctly, and demonstrate that half of the exposed part of the letter can be seen or imagined best, while the rest of it is not seen so clearly. With the aid of the screen, an area as small as an ordinary period, may finally be imagined. Demonstrate that the imagination of a perfectly black small period, forming part of a small letter at fifteen feet, enables one to distinguish that letter.

II. That, with the eyes closed, a small black period can be imagined blacker than one three inches in diameter. If this fact cannot be readily demonstrated with the eyes closed:

1. Stand close to a wall of a room, three feet or less, and regard a small black spot on the wall six feet from the floor. Note that you cannot see a small black spot near the bottom of the wall at the some time.

2. Place your hand on the wall six feet from the floor, and note that you cannot see your hand clearly when you look at the bottom of the wall.

Myopia

By **W. H. Bates, M.D.**

Definition

MYOPIA has been called near-sightedness, because the vision is usually very good for objects which are seen at a near point, while very dim or blurred for objects at ten feet or farther. In myopia, the eyeball is elongated. The normal eye, when reading fine print, becomes elongated, or myopic, during the time that the eye is focused for reading.

Acute myopia: When myopia is acquired, it is called acute myopia in the early stages. When treated at this time, it is readily curable without glasses. The practice of prescribing glasses in these cases, leads to a permanent use of them.

Progressive myopia: In these cases, the myopia increases quite rapidly, and may be accompanied by much discomfort, pain, fatigue, and loss of vision. In advanced cases, many become unable to see as well with very strong glasses as they can without them.

Complicated myopia: Many authorities have stated that the myopic eye is usually a diseased eye. It may be complicated with cataract or other eye diseases, or it may not. The exceptions are so numerous, that it can usually be demonstrated that diseases of the eye have nothing whatever to do with the cause of uncomplicated myopia.

Occurrence

Myopia usually occurs at about twelve years of age. It is rarely congenital. Some become myopic at the age of four, fifteen, seventy, or any age, earlier or later. Some children with normal vision may go through life without becoming myopic. Risley, after a careful study of the eyes of school children, believed that myopia was only acquired by children with astigmatism or with hypermetropia (far-sightedness). At one time, statistics were quoted that children living in large cities had myopia to a greater extent than those who lived in the country. I believe statistics are uncertain, because one can generally obtain statistics which prove the contrary.

It is a popular belief that habitual use of the eyes for reading, sewing, or for any other use at a near point, promotes the increase of myopia. Simultaneous retinoscopy always demonstrates that near use of the eyes—even under a strain in a poor light—instead of producing myopia, always lessens it or corrects it altogether.

Myopia – Distant Blur = abnormally elongated eyeball. 

Clear distant vision = Eye shape is round. 

Reading, looking at close objects, close distance with relaxation = The eye lengthens, elongates slightly and is almost round. This brings the abnormally elongated eye closer to the normal round shape necessary for clear distant vision. When the eye then looks to the distance, if relaxation is maintained, the eye tends to change to the correct round shape for distance and avoids the incorrect elongated shape that causes distant blur.

Another theory, that individuals who use their eyes repeatedly for distant vision suffer less from myopia, has also been disproved by simultaneous retinoscopy. A strain to see at the distance always produces myopia. During the late war, it was unusual to find sailors or aviators with normal vision, or normal eyes without eye-strain. In order to obtain recruits for these branches of the service, because of the general prevalence of myopia, the standard of the requirements for admission had to be repeatedly lowered.

Symptoms

Myopia is always accompanied by a strained look of the eyes, when regarding objects. Partly closing the eyelids, a form of squinting, is often observed in myopia. When the sight is imperfect, this practice may improve distant vision for a few seconds; but at a near point when the sight is good, about five inches from the face, squinting always lowers the vision, especially when one eye is covered. The habit of squinting at any distance lowers the vision at all distances.

Cause

Staring can always be demonstrated to be the principal cause, if not the only cause of myopia. There are no exceptions. We may say: "It is a truth that the cause of myopia is the stare." Contributing causes are numerous. Any child with normal eyes and normal sight, will at once become temporarily myopic if you scold him severely. Teachers with normal sight and normal eyes are usually relaxed, and do not stare or strain. On the other hand, teachers who wear glasses for myopia, are under a strain. This strain is contagious, and children under their care are more apt to acquire myopia than those who are under the care of teachers with normal eyes and normal sight.

Treatment

The cause suggests the cure. Since the stare or strain produces myopia, the cure would naturally be rest or relaxation. This is obtained by palming, swaying, and improving the memory and imagination.





Palm and think about pleasant things. Shift on objects, see them clear, in color. Imagine seeing oppositional movement of objects as the eyes shift on the imaginary objects and as you imagine walking into the scene and moving about.

1. Palming ; Close your eyes and rest them for at least half an hour. Some receive more relaxation by covering the closed eyelids with the palm of one or both hands thus excluding all light. By thinking of pleasant things, rest your mind as well as your eyes. Some mild cases have been cured, at first temporarily, and later more continuously by faithfully following this practice.



Sway left and right facing the eyechart and see the chart move opposite the movement of the body. Practice with the eyes open, closed, open.

2. Swaying ; Stand with the feet about one foot apart, facing the Snellen test card at a distance of fifteen feet. Sway from side to side, while moving the head and eyes in the same direction. It is a benefit to the sight to alternately open and close the eyes while swaying slowly, easily, and continuously a short distance from side to side. It is a help to imagine the Snellen test card, or one or more letters on the card, to be moving opposite to the movement of the body, head, and eyes. If the card, or a letter of the card, does not appear to move, the vision soon becomes imperfect.

While swaying from side to side, and observing that one or more letters appear to move in the opposite direction, it is possible for one with normal vision to imagine that the letters are seen with central fixation. By this is meant, seeing best the point regarded, and other points not so clearly. With normal sight, the point regarded shifts constantly. The vision is always imperfect if the letters are not seen, one part best. When regarding the letter "C," notice that when you look at the top of it, you see that part best, and the rest not so clearly. Then, notice that when you look at the bottom of the letter, you see that part best, and the top not so clearly. This can be done with any object. When regarding a chair, notice that when you look at the back of it, you see the back more clearly than the rest of the chair. Then, when you look at the legs, they are seen more clearly than the back is seen.

When practiced properly, without effort, the sway enables one to imagine each of the smaller letters to be as black as the largest letter on the card. The white part of all letters is also imagined to be whiter than other parts of the test card, where there are no letters.







Shift on the letter C and see one part best, clearest at a time in the center of the visual field.
Look at the top; the top is in the center of the visual field and is clearest.
Look at the bottom. The bottom is now in the center of the visual field and is clearest.
Shift part to part (dot to dot) and see one part (dot) clearest at a time in the central field. The central field moves with the eyes, part to part on objects and from object to object.
Practice on a chair. Shift part to part on the chair and see one part clearest at a time in the center of the visual field.

3. Memory and Imagination: Improving the memory and imagination, is one of the quickest methods of curing myopia. This can be done by practicing with two Snellen test cards. Place one on the wall of the room, and hold the other close enough to the eyes to enable you to read the smallest letters with good or perfect sight. Now, step back one inch from the card on the wall, and read one of the smallest letters on the card in your hand. Then quickly close your eyes for one second, and remember the letter as well as you have seen it. Open your eyes and flash the same letter on the wall-card. Quickly close your eyes, whether there is an improvement in the vision or not, in order to avoid the stare or strain. **Alternate, until the imagination of a letter on the wall-card at seven inches, becomes equal to the vision of the same**



Two Identical Familiar Eyecharts.
Distant chart onto a wall. Close chart at a clear distance. Shift on identical letters on the distant and close charts with the eyes open, closed, open and remember, imagine the letters perfectly clear. Read complete directions on the left.

letter on the hand-card at six inches. When this is accomplished, increase the distance to eight inches from the wall-card. When the known letter can be imagined on the wall-card at eight inches for a second or fees, in flashes, as well as it can be seen at six inches for a longer period of time, increase the distance to nine or ten inches. Continue to increase the distance by gradually stepping back, as long as you can flesh the known letter on the wall-card, as well as, you can see it at six inches on the hand-card. When your ability to imagine or flash a known letter fails at five feet or farther, it is usually best to move closer,—close enough to flash successfully without effort.

One patient with myopia of 7.00 D. S., vision 4/200, obtained more benefit from "flashing" than from any other method. In half an hour, she became able to flash the letters at fifteen feet, as well as she could see them at six inches. When this was accomplished, her myopia disappeared, and she read a strange card 'with normal vision at fifteen feet, almost as well as she could see it at six inches.

Prevention

In order to prevent, as well as to cure myopia, it is necessary that you use your eyes correctly all day long.

1. Blink frequently, just as the normal eye does. Staring is a strain, and always lowers the vision.

2. Shift constantly from one point to another, seeing best the part you are looking at, and other parts not so clearly.

3. All day long, your head and eyes are moving. It is important that you notice stationary objects to be moving in the opposite direction to the movement of your head and eyes. When you walk around the room or on the street, notice that the floor or pavement appears to come toward you, while objects on either side of you, appear to move in the opposite direction to the movement of your body.

4. Practice daily with the Snellen test card for five minutes or longer.

Shifting, blinking, and imagining stationary objects to be moving, can be practiced at all times and in all places, . no matter what you may be doing.

Stories from the Clinic

No. 77: MYOPIA

***By* EMILY C. LIERMAN**

MANY times I have been called upon to answer the question: "How do you treat or cure myopic cases?" This has been asked not only by laymen, but also by physicians. It is not an easy question to answer, because myopic cases vary in their response to treatment, and each requires an individual application of the method. Some patients with a high degree of myopia improve or recover in a reasonable length of time, while others with only a slight degree become despondent, because it takes so long to be cured. These patients fail, because they are unable to retrain from making an effort to see. Myopic cases are cured quickly when they do exactly as they are told, instead of straining their eyes by trying to see.

Progressive myopia is generally believed to be incurable, and to my knowledge there is no method of benefiting or curing it other than the bates method.

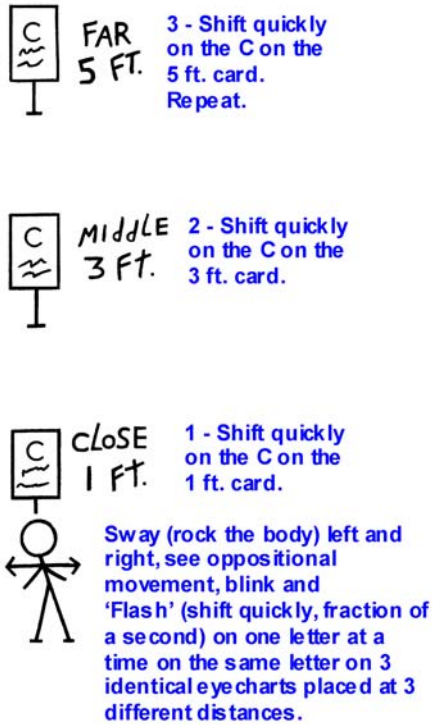
A man, seventy years of age, called on me recently to learn what he could about the method. He said that he had been myopic since birth. Several eye-specialists had told him that he could never be cured. Opticians had also told him the same thing. His eyeglasses were changed every two or three years, and each time he was given stronger ones. When he was examined with the ophthalmoscope, it was found that he had incipient cataract in both eyes, in addition to myopia. When I told him about the cataracts, he said that other doctors had also informed him of them. He asked if I could help him, when so many others had attempted to do so by fitting him with glasses, and had failed. I told him glasses were not necessary, and suggested that he try the Bates method. With much hesitation, he finally consented. He said that he would believe in the treatment if I could improve the vision of either eye, for the distance, in one visit. At ten feet from the test card, he could see only the two hundred line, or the letter "C," but he said even that looked very much blurred.

I taught him to palm, and while he was resting his eyes in this way, asked him if he could remember a favorite chair in his home, or the title of a book he had read. I reminded him of a sunset, and a white cloud in a blue sky. He visualized the mental pictures described, and nodded his head as I mentioned one thing and then another. I continued this method for half an hour, and then asked him to remove his hands from his eyes, but not to open them. I told him to stand with eyes closed, and sway his body a short distance from side to side, just as an elephant does. This made him smile, but he did as I told him. He was than directed to open his eyes, and to blink frequently as he swayed. While moving his body from left to right, he was able to flash the letters of the test card, and without stopping, he read 10/50 with both eyes.

His face expressed his pleasure, and his eyes twinkled as he remarked: "I'm coming back for more treatment and will prove to those, who gave me no hope, that I am cured!"

Another patient, a woman, thirty-five years of age, was cured of myopia in two months' time. Her vision of the test card was 5/40 in each eye. During her first treatment, she made very little progress, because she strained so hard to see beyond two feet from her eyes. Palming seemed to tire, instead of helping her. She frequently removed her hands from her eyes, although she still kept them closed. I decided to have her try swaying her body from side to aide, first while sitting in a chair, and later while standing. To help her to sway rhythmically, I practiced with her, and reminded her to blink all the time. When she became able to imagine things about the room to be moving in a direction opposite to the movement of her body, I told her to Flash one letter of the test card at a time. When she saw things moving in an opposite direction about the room, her eyes remained open in a natural way. Just as soon as she glanced at the letters of the test card, she squeezed her eyes, practically closing them, and the muscles of her face became tense. When she was again seated in her chair and had closed her eyes, I placed three large test cards, all similar, at different distances from where she was seated. I placed the nearest about one foot away, the second three feet, and the third, five feet from her eyes. We again started the standing sway and, while blinking, she was directed to look at a letter on the card nearest her, then to flash the same letter on the next card, and to repeat this with the distant card. This method was successful, and she was overcome with joy as she flashed each letter in turn on the cards.

Eight weeks later, she read 10/10 on different test cards. The retinoscope showed no more eyestrain, and the patient has not had a relapse since.



The Great Delusion

"Wearing Glasses to Strengthen the Eyes"
A Billion Dollar Industry Based on an Error!

***By* DR. WENDELL A. DIEBOLD**

TENS of thousands make their living in a profession whose basis is founded on a misconception! Strong statements I grant you, yet the saddest part is that they are only too true.

Fitting of glasses to aid our vision on the theory that the lens of the eye is a factor in accommodation, is the present practice. It is true that glasses do enable some people to see better—for a time—just as any crutch may help a lame man to get about, but when his lameness is gone or his broken leg has mended, he can throw away his crutch. Not so with the crutches of the eye. The longer, in most cases at least, glasses are worn, the poorer becomes the vision and the stronger must the lens be. In other words, the eyesight gradually becomes less acute—its keenness diminishes.

If glasses really strengthened the eyes, why should stronger and stronger lenses, ever so often, be required? If the theory that we are born with defective organs of sight (a rare condition), were correct, there might be some justification for the enormous number of folks with glasses, but all errors of refraction are functional, therefore, curable by the proper methods.

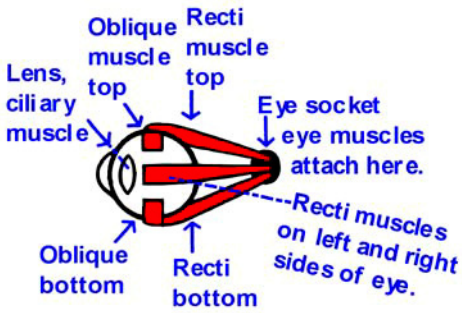
The general teaching regarding the eye has been that it is more or less of a fixed organ. It is supposed that some are born with short eyes and therefore they are apt to have various degrees of far-sightedness, and astigmatism—while others are supposedly born with long eyeballs, and therefore they are doomed to short or near-sight, technically known as myopia.

Helmholtz Lens Theory

Experiments, made over a hundred years ago by Helmholtz and others in photographing a candle light's reflection from the front of the lens, are supposed to have demonstrated that the curvature of the lens changes during accommodation. Helmholtz's conclusion from his experiments was that the lens contracted and expanded. This supposed contraction and expansion of the lens was thought to be the factor that enabled the eye to accommodate for the near and distant point in reading. I say, it seemed so to them, although Helmholtz was never entirely satisfied himself, but his followers "more loyal than the king," for over a hundred years have accepted what he considered as the probable cause of the fact without further question, or attempt to prove or disprove the idea. All our present practice has been and is based upon this theory. If the theory can be shown to be wrong, then the whole present practice of the eye glass fitting fraternity, based on that theory, will have been proven to be wrong. A correct practice cannot be founded on an incorrect or untrue premise.

Now, while the rank and file of the eye glass fraternity have blindly accepted the teaching handed down to them in their colleges and schools, there have been many experiences in their actual application that have not coincided with their theory. A classical example is the cases of people who have had their lenses removed through a cataract operation and still have been able to acquire the ability to accommodate without a lens. This could never have occurred if the lens were the factor of accommodation. Again, tens of thousands of cases of near-sight, far-sightedness and astigmatism have been corrected and normal vision secured. It is evident that these results could not have been secured if the error of refraction were a fixed thing—something people were supposed to have been born with, and not a functional condition as first maintained by Dr. W. H. Bates of New York City.

Dr. Bates Experiments



Dr. Bates, as long ago as 1886, cured cases of myopia by a simple method based on a principle that he later demonstrated scientifically. He was one of the few who was not satisfied with the usual explanations and when he found that he could by some simple methods secure correction of "errors of refraction," he realized that the old theory must be wrong. What did he do? He tried to prove, by reenacting the same experiment that Helmholtz performed, that the lens accommodation theory was correct. He worked almost continuously for two years and every experiment made proved that the theory was wrong, due to a mistaken interpretation of certain facts. Then he had to prove his own theory, which is, that the extrinsic muscles that move the eyeball also control its shape. The oblique muscles in contracting elongate the eyeball, producing myopia, and the recti muscles in contracting shorten the eyeball and produce hypermetropia. He made many thousands of experiments on animals of all kinds. He found that by cutting the superior oblique muscle that the retinoscope would not show any focusing of the eye. When it was sewed together again, the eye focused normally as before. This proves that the tension of the extrinsic muscles determines the shape of the eye, therefore, its focusing. So, on this basis, **Dr. Bates says that the bad habit of staring and straining (and squinting) to see (and other conditions of mental and bodily strain), causes an undue tension on the extrinsic muscles, which does not allow the eyeball to accommodate through shortening or lengthening at will, as it should, and therefore give us perfect vision**. Now the proof of the pudding is in the eating; not only has Dr. Bates, for many years, corrected all kinds of defective vision in tens of thousand of cases, but many other physicians all over this country and England, by using his methods, are securing the correction of far-sight, short-sight, "old age sight," astigmatism, cross-eyes, and even cases of cataract and glaucoma.

Dr. Bates' work and researches are undoubtedly one of the greatest boons of this century that has come to suffering mankind. Generations unborn will do homage to him. He at last has made it possible for nearly everyone to regain normal sight. The practice of a few of his simple rules will positively prevent children from ever developing defective vision. From a lifetime of study and practice, he asserts with the conviction of one who knows whereof he speaks, that to put glasses on children is a crime. My own experience convinces me that children and young people can regain perfect vision if they have lost it, or maintain it if they are now blest with it. The results in at least seventy-five per cent of adult cases have been more than gratifying in that their vision has been restored to normal. Even the cases where restoration could be only partially accomplished, because of the great degree of degeneration that had taken place, have been much improved.

All cases can secure improvement by these methods. Most cases can secure good sight without glasses, and young people and children can secure perfect vision without glasses.

In they year 2009 there are different theories, facts concerning what causes/cures unclear vision, how accommodation (eye looking at close distances) occurs.
Dr Bates proved that the outer eye muscles can produce accommodation.

Dr. Bates experiments proved that outer eye muscle tension disrupts the shape, function of the eye, cornea, lens, eye muscle function, focus of light rays in the eye, circulation, pressure on/in the eye resulting in unclear vision at close and far distances, astigmatism, strabismus, cataracts, conical cornea, detached retina, glaucoma, macula degeneration and other eye problems.

Dr. Bates proved that relaxation of the eye muscles returns the eye, cornea, lens to normal shape, function, eye muscles to correct function, correct focus of light rays in the eye, normal eye pressure and circulation resulting in clear vision and removal, prevention of astigmatism, strabismus, cataracts, conical cornea, detached retina, glaucoma, macula degeneration and other eye problems. Tension is also removed from the optic nerve enabling it to return to normal health, function.

The old Helmholtz theory, (now being stated as fact by most modern ophthalmologists) states that the lens changes shape due to action of the ciliary muscle to produce accommodation. Some eye doctors state that both the lens and eye change shape, others theorize the lens moves forward and backward as in a camera to focus on close and distant objects.

The size of the pupil, (controlled by the iris muscles) also changes and affects clarity of vision when looking at different distances, in different levels of light. The pupil constricts, becomes smaller in low light and when looking at close distances.
Accommodation and pupil constriction occur together. The ciliary and iris muscles may function together.

Mood, thoughts, emotions, pain, drugs, alcohol, caffeine, aspartame sweetener, some herbs affect pupil size, function.
A negative mood, fear, worry, tension, drugs… can cause abnormal pupil size in light, dark and affect the clarity of vision and may affect accommodation, un-accommodation.
Since accommodation, un-accommodation occurs/functions with convergence, divergence, these functions can also be affected.

The Bates method relaxes and activates correct function of <u>all the eye muscles</u>; outer – oblique, recti, muscle for tears, blinking… and the inner eye muscles – ciliary, iris… - resulting in clear vision.

The state of the mind, emotions, brain function also effects vision. Tension, strain in the mind can cause unclear vision and other eye problems even when the muscles are working normally, relaxed and the eye shape is correct.
The Bates method also improves the clarity of vision, eye health by relaxing the mind, improving brain function, left and right brain hemispheres, memory, imagination…emotions, thoughts.

The old theory of accommodation states that because the lens becomes hard with age (40 and up) the ciliary muscle can no longer change the shape of the lens to produce accommodation for clear close vision.
Many people 40 years and older, senior citizens, persons that have had cataract surgery, full removal of the lens see clear at close and far distances. People that have experienced unclear close vision at any age; young, 40, older have improved their close vision to normal with the Bates Method. This occurs due to the outer eye muscles changing the shape of the eye or the lens never becoming hard or the lens becoming flexible again, or the ciliary muscle relaxing, being freed from tension, strain, dysfunction, improved diet, circulation to/in the eye, lens or all of these conditions.
The lens and cornea refract/bend, focus light rays entering the eye, onto the retina. **Cornea 80%, lens 20%.**
The cornea and lens also control the amount of sunlight entering the eyes, acting as natural protection from overexposure to sunlight.
The size of the lens continues to grow into old age. The cornea can rebuild/heal itself, repairing injury, ulcers, scars.
The Bates Method helps activate this natural healing.

The Bound Volumes of
Better Eyesight Magazines From July 1925 to June 1926, inclusive, are now ready. Our copies are limited so mail your order now.

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A Radio Talk on "Better Eyesight"

***By* EMILY C. LIERMAN**

I BELIEVE that most people are interested in knowing how to prevent eyestrain. Strain is the cause of much discomfort, pain, and fatigue. I want to reach those who must use their eyes all day long, those who are employed in offices, factories, stores, shops, and, in fact, wherever good eyesight is required.

I would like to say a few words to the business man who really needs good sight for the work he does. If he can accomplish his work without the aid of eye-glasses, it is done with less fatigue and in less time than when glasses are worn. Reports which have been received from those who have been treated, verify this fact.

When glasses are worn, the eyes and the mind are not at rest. When the eyes and mind are under a strain, it is difficult to work efficiently. When the business man or woman is arranging a business deal, unless the mind and body are relaxed, mistakes are made which may mean a great loss.

Eyestrain is contagious. This is particularly obvious in the department stores. While waiting at a sales counter to be served, I have watched the person ahead of me, straining her eyes as she explained to the saleslady just what she wanted. Unconsciously, the saleslady feels the strain of the customer and, not realizing the cause, suffers throughout the rest of the day, unless she knows how to relax. The saleslady, in attempting to please, tries so hard that she often fails to make a sale, because of the tension of all the nerves in her body. She does not know that this is caused by eyestrain. In five minutes' time she can be relaxed if she knows what to do. If she will remember to blink her eyes frequently, just as the normal eye does, all day long, she will feel relaxed and rested. When she talks to a customer, she should shift her eyes from one part of the customer's face to the other remembering to blink as she shifts from one eye to the other, to the nose, from one cheek to the other, the chin, the mouth, and back to the forehead. In this way she feels no fatigue whatever. I am not thinking so much of her sales ability, as I am of the restful feeling she desires to have when her working hours are over.

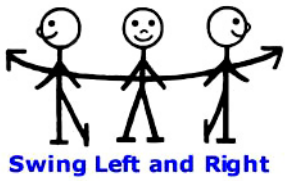
This applies not only to those who work in department stores and shops, but also to office workers. The stenographer who has to listen sometimes for hours at a time, taking dictation from the nervous employer who perhaps finds it hard to be pleasant, also needs all the pleasure and recreation that she can get. While she is taking the dictation, she must be careful not to be affected by the strain in the sound of the voice dictating to her. If she is not careful, she will make mistakes or be in a much strained condition of mind and body, when she leaves the office. Her strain can be relieved by watching her pencil move as she writes, being sure to blink frequently. Her employer appreciates her efficiency much more when she is able to take dictation without tension or strain.

Most people **strain their eyes while they are asleep**. Indications of strain are swollen eyelids upon rising in the morning, a feeling of heaviness and of not having had enough sleep. Early morning headaches are usually caused by eyestrain during sleep. This strain can ordinarily be relieved or prevented by palming. By this, I mean to close the eyes and cover them with the palms of both hands in such a way as to exclude all light, without exerting any pressure on the closed eyelids. If this is practiced before retiring and immediately upon rising in the morning, the eyes become relaxed sometimes within a period of five minutes.

Avoid twisting the neck when sleeping. Do not sleep on the stomach. Sleeping on the back is best to remove all pressure on nerves, muscles, vertebrae, joints. Some people prefer to sleep on their side. If its not causing tension, its ok.

Have you ever noticed an elephant as he sways his body from side to side? Sometimes he is looking straight ahead of him, or he is watching his trunk, as he sways his body. It means everything to the comfort of the elephant to keep swaying from side to side. This gives him a feeling of rest and relaxation and prevents him from becoming discontented and ugly.

The lion and tiger in captivity are always pacing up and down their cages. They are contented knowing that sometime or other the keeper will satisfy their appetites. They keep moving all the time they are awake, because in this way they obtain rest and relaxation. As the animal receives rest and relaxation, so may the human being, by swaying from side to side without effort or strain.



The **long swing** is particularly beneficial in improving the vision, and invariably helps those who do not sleep well. Stand with the feet about one foot apart, facing squarely one side of the room. Lift the left heel a short distance from the floor, while turning the shoulders, head, and eyes to the right, until the line of the shoulders is parallel with the wall. Now, turn the body to the left, after placing the left heel upon the floor and raising the right heel. Alternate looking from the right wall to the left wall, being careful to move the head and eyes with the movement of the shoulders. When practiced easily, continuously, without effort and without paying any attention to moving objects, one soon becomes conscious that the long swing relaxes the tension of the muscles and nerves.
(in the body and eyes.)

Stationary objects move with varying degrees of rapidity. Objects located almost directly in front of you appear to move with express train speed and should be very much blurred. It is very important to make no attempt to see clearly objects which seem to be moving very rapidly. By practicing the long swing fifty times or more just before retiring and immediately after rising in the morning, eyestrain during sleep has been prevented or relieved.

I would like to encourage the tired mother who stands on her feet most of the day, performing duties of the household which are seemingly endless. It is not always the small baby that tires her most; but the strain and tension caused by her concern for the comfort of her husband and other members of the family. Her desire to attend to all of her duties sometimes causes a great deal of eyestrain. This is more noticeable to her when she is called upon to thread a needle or to sew. Before she tries to thread a needle, she should close her eyes and rest them for just a second or two, holding the needle in place so that when she opens her eyes, she

may see the eye of the needle. By blinking, she will soon become able to thread the needle without her glasses. She should remember, while attending to other duties in the household, to blink her eyes and sway her body slightly from side to side. She can do this all day long, no matter what she may be doing, whether cooking or sweeping the floor, washing dishes, or anything else, and she will feel relaxed and happy.

It is a wise mother who keeps a rocking chair handy to rock her baby to sleep. The swaying back and forth gives rest to the baby and peace of mind to the mother. If she has children who attend school, she can easily teach than to relax by palming and swaying for a very short time before school. The mother can remind her child to blink the eyes often and not to stare at the blackboard or at the teacher. The child will soon notice that his vision becomes better.

For the benefit of those who desire to improve their eyesight and to work without the aid of eyeglasses, I shall be glad to answer any question addressed to me at this station, WMSG.

WMCA Radio Talks

Perhaps it may interest our readers and their friends to know that each day, between four and four-thirty P. M., a short book-review on the works of Dr. Bates and Mrs. Lierman will be broadcasted from the Hotel McAlpin Station, WMCA. Any criticisms or suggestions will be appreciated.

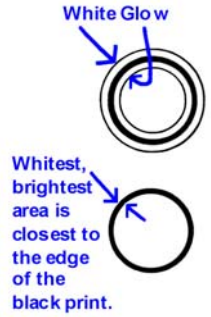
SCHOOL NUMBER

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

AUGUST, 1926

Demonstrate



That vision is always imagination, either perfect or imperfect. What we see is only what we think or imagine we see. The white center of the letter "O", when seen perfectly, appears to be whiter than it really is, or whiter than the rest of the card. That part of the center of the "O" which is in contact with the black appears to be the whitest part of the white center. By covering the black part of the "O" with a screen, which has an opening in the center, the whiteness of the center of the "O" appears to be the same shade of white as the rest of the card. Now, remove the screen, and at the first glance, the center of the "O" appears for a short time to be much whiter than it really is. In other words, one sees something which is not really seen, but only imagined. When some people enter a room which is totally dark, they often imagine that they see a white ghost. They don't really see it; they only imagine it, but their imagination may be so vivid that no amount of argument will convince them that they did not see the ghost.

When one looks at the upper right hand corner of a large letter of the Snellen test card, it is possible to see that point best, and all the rest of the letter not so black. The part seen best appears blacker than it really is. The part seen worse appears less black than it really is. Things seen more perfectly than they really are, are not seen, but imagined. Things seen less perfectly than they really are, are not seen imperfectly, but are imagined imperfectly.

School Children

***By* W. H. BATES, M.D.**

MOST children have normal eyes when they enter school. In a few years, their sight may become imperfect. Acute cases are usually benefited or cured by prompt treatment without glasses.

CAUSES

I have frequently called attention to the fact that in all cases of imperfect sight, **STARING** is present, and can usually be demonstrated. It is the cause of imperfect sight. When treatment corrects the habit of staring or trying to see with an effort, the vision becomes normal.

The surroundings have an important effect upon the vision. It is possible to lower the vision of any child by an unexpected noise or by punishment, either physical or mental. The vision is usually affected by the temperament of the people with whom the child comes in contact. When a child is comfortable, the sight is good. When a child is nervous, the vision is lowered.

The following case illustrates these facts. One-half hour after birth, a child was observed to squeeze its eyelids, wrinkle up its forehead and, in fact contract the muscles of its whole body. The child's eyes were examined with the retinoscope, and when it was straining so terribly, it had a high degree of near-sightedness. A drop of strong atropine solution was put into both eyes. Atropine is supposed to lessen the eyestrain which causes myopia. This child, however, was not benefited in the slightest,—the pupil dilated, but the near-sightedness continued. The remarkable fact was repeatedly observed that in spite of the atropine, the child produced at about fifteen minute intervals, or more often, all the errors of refraction known, for which glasses are prescribed. Sometimes it was far-sight in both eyes; sometimes far-sight in one eye and near-sight in the other. Astigmatism would come and go, and the degree, as well as the axis, was variable within short periods of time. Sometimes the retinoscope demonstrated that the eye had mixed astigmatism, that is, it was flatter than normal in one meridian, while the one at right angles to it was more convex than in the normal eye.

The nurse, who was not a graduate of any hospital, took the child in her arms, and began to rock it from side to side. Watching the child's face, one could see the muscles begin to relax, the wrinkles become less, the contraction of the muscles of the arms, limbs, and of the whole body, become relaxed. The little one opened its eyes and smiled; at this moment both eyes were normal.

Then it turned its face to the nurse's breast and promptly went to sleep.

The child was examined daily for about a week, then less frequently, about twice a week for several months, and then only occasionally. When she was four years of age, her eyes were normal. She was sent to kindergarten, and after being there for about a month, the retinoscope showed that she had myopia in both eyes, which strong atropine drops did not correct. I asked the teacher to encourage this child to dance and run as much as possible while at school. After two weeks, the child was examined again with the retinoscope and the eyes were found to be normal, with no myopia nor astigmatism whatever. At this time, the eyes were straight. A month later, the child was again examined. The right eye was normal, but the left eye was very far-sighted and turned in toward the nose. With the right eye open, the child could distinguish her parents, relatives, and some of her playmates across the street, at a distance of more than fifty feet. With the right eye covered and looking with the left eye, she could not recognize her acquaintances further off than fifteen feet. It was very evident that the sight of the left eye was imperfect.

Not long afterwards, I visited the kindergarten and was much shocked to find that the child was wearing glasses for the correction of the squint. It annoyed me so much that I at once called on the parents, and had a heart to heart talk with them. The father was a friend of mine and teased me a little for taking the matter so seriously. The mother remembered how much time I had spent on the child previously, and was willing to have me treat the child. The child's glasses were removed permanently and she practiced shifting, swinging, and palming. Reading a Snellen test card (the card with "E's" pointing in different directions) for about five minutes each day, was a benefit. In a short time, the eyes became straight and the vision of both eyes became normal at the same time.

Later, the child had a relapse which was evidently caused by being annoyed by a girl who had joined the kindergarten class during the previous month. It so happened that the child who annoyed the patient went away for a visit, and while she was gone, the patient's eyes became straight and remained straight. When the irritating child returned to the school, the patient again had a relapse. I recommended that the patient be taken out of the kindergarten and kept in agreeable surroundings with children and others who did not make her nervous. The child outgrew this nervousness and ten years later there had been no return of the squint.

TREATMENT

AGE—One of the first questions that people ask is "How old should a child be before it can be treated?" The answer is that the younger the child, the more successful is the treatment.

FREQUENCY—Another question frequently asked is "How long does the child have to be treated before good results are obtained?" My habit is to ask the parents to wait and see the results of the first treatment. I am then usually able to tell them that the child has a temporary cure and does not necessarily need to come to see me again. If the child is only partially cured, however, it may be advisable to have him come for a few days, a week or longer, until he becomes able to improve his sight without my supervision. Then he may continue to practice at home until cured. If the cure is delayed, it may be necessary to take more treatments under my personal supervision.



PALMING—When palming, the patient closes the eyes and covers them with the palm of one or both hands, (Modern = both hands–see picture last page this book) in such a way as to avoid pressure on the eyelids. Babies, three years old or younger, have been taught to palm. When they find that the discomfort in their eyes or head is relieved by the mother covering their closed eyelids with the palms of her hands, the children may acquire the habit of doing it themselves. I have had cases of whooping cough, in which children three years old have stopped the cough by palming, after they had obtained benefit from palming done for them by an older person.

While nursing her baby, whose sight was imperfect and eyes inflamed, one mother was observed to cover its eyes with her hand. She said that the palming relieved the pain in the eyes, improved the sight, quieted the child, and promoted sleep.

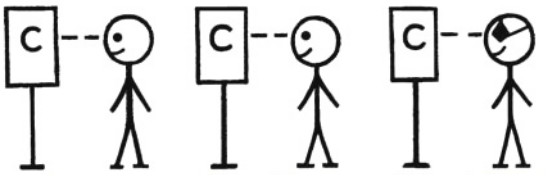
SWINGING—One of the best methods for preventing staring is to practice the swing. We often see babies laugh or scream with delight when someone swings them sideways or up and down. They open their eyes wider, breathe more deeply, and the muscles of their arms, limbs, and whole bodies relax with pleasure and happiness. It is not conceivable that a baby so happy could have pain, poor sight, or be cross-eyed. Children and babies are forced to wear large tortoise-shell rimmed glasses, which invariably kills the joy in their hearts. They seldom smile, the eyelids contract, wrinkles appear on their faces, and the world becomes a place in which to be sad. Let us bring back the rocking chair, the swing, the cradle, and encourage mothers to swing their babies in their arms as they love and pet them.

REST—Children of all ages are benefited by resting their eyes and minds for a few minutes, several times a day. Teachers realize the benefit of rest in the school-room, and books are laid aside, windows opened, and a few exercises with deep breathing, are practiced. I am not aware that the school authorities have ever been criticized for devoting this daily amount of time to rest.

A more effective method for obtaining relaxation of the mind is as follows: A **Snellen test card** is permanently placed on the wall in front of the children, where it can be read by all of them from their seats. Twice each day or more often, the children read the card with each eye separately as well as they can. When practiced properly, reading the Snellen test card with both eyes open, or alternately with each eye, the other being covered, has improved the vision in all cases. In some cases, the vision became normal in two weeks or less, while other required a longer time to obtain this result. Practically all of the children were temporarily cured in three months.

It rests the eyes to read the Snellen test card with good vision. To fail to read it perfectly, requires a strain or an effort. When these facts are demonstrated and the child realizes the cause of its imperfect sight, much good may follow. When children do not know the cause, they have more trouble in obtaining relief.

Read a Familiar Eyechart twice+ per day with:
Both eyes together, one eye at a time, both eyes together again.
Use all correct vision habits: shifting, central fixation, blinking, shifting on a letter and remembering, imagining it clear, moving (the swing) with the eyes open, closed, open. Practice with the chart at a variety of close, middle, far distances. Practice with 3 identical eyecharts placed at 3 different distances in the sunlight.

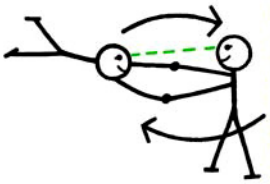


Both Eyes together.

Using left eye with right eye patched.

Using right eye with left eye patched.

The Swing



Swing the child around by the hands clockwise, counter-clockwise, clockwise. Child looks up into parents eyes and also sees oppositional movement of objects in the visual field moving by in the opposite direction the body is spinning toward. Improves clarity of vision, gets the eyes relaxed, moving normal, straightens crossed, wandering eyes, activates, integrates left and right brain hemispheres, relaxes body, mind, eyes in a active, dynamic, fun state of mind.



Rocking Chair.
See oppositional movement;
Rock up - objects move down.
Rock down - objects move up.
Rock under a tree, sunlight shifting through the branches for saccadic sunning/eye movement.
Daydream and sleep.



Tree swing.
See oppositional movement when swinging.
Occasionally lean the body back and forward when swinging.



Rocking Cradle for baby. Good for the developing eyes, brain, body. Keeps baby feeling relaxed, safe and secure.

All forms of 'The Swing' gets the eyes shifting, moving, produces appearance of oppositional movement, keeps the body, muscles, joints mobile, active, relaxed, improves blood, lymph, energy flow, relaxes and sooths the mind, body, eyes, and keeps the eyesight clear.
Movement is natural, healthy!
Different types of The Swing are:
The Long Swing, Rock/Sway, Eye Shifting, Swinging a child by the hands, or in your arms, Rocking a child in your arms, Rocking Chair, Rope Swing, Cradle, See Saw, Merry Go Round, Dancing...

Stories from the Clinic

No. 78: SCHOOL CHILDREN

***By* EMILY C. LIERMAN**

DURING the last year, I have had more **squint** cases under treatment than any previous year. My records show that all of these cases also had imperfect sight. All, with the exception of two little boys who were in the second and third grade, were too young to attend school. At the close of the Clinic in June, it was not necessary to send them to kindergarten, as every one of them was ready for the first grade.



Eyepatch helps improve the vision and movement of a crossed/wandering eye, gets the eye moving correct.

I am very sure that parents who have children with squint or cross-eyes went to know what to do to correct the trouble.

Many of them, who visited us, were unwilling to have their girls or boys operated upon for the cure of squint. If the patients are faithful in the daily practice, we can assure them of a cure. In some cases where the sight of one eye is imperfect, while that of the other eye is normal, we advise a black patch to be worn over the good eye, especially during practice. This is done only when the eye with imperfect sight turns in or out.



Alternate palming and reading the test card. Sway, blink, flash (shift, fraction of a second) on one letter at a time. Relax.

It is always encouraging to the patient if he can see the eyes improve, or become straight, while under treatment. If I notice a decided improvement while treating such a case, I place my patient before a large mirror, and direct him to closely follow my instructions. I then quickly draw his attention to his eyes, and before he has a chance to strain, he notices the improvement. This usually encourages them to continue their practice until they have a permanent cure. Other patients who are not troubled with squint but have imperfect sight, are treated in a different way.



Sway left and right. Relax, blink.

When children are too young to read the alphabet or figures, we use a test card with the letter "E" pointing in various directions. This card is placed at five or ten feet from the patient, and he is requested to tell in which way the letters are pointing. When the letters become smaller, they begin to look blurred. Then it is best to advise palming for five minutes or even less. When the patient again reads the test card, the vision is usually improved for one or more lines of letters. The child is then shown how to sway by standing and gently moving the whole body with the head from side to side. Most patients must be reminded to blink, so the child is frequently encouraged to blink, while swaying, just flashing the card and seeing one letter at a time. When children understand the great benefit derived from the sway of the body, there is no difficulty in curing their imperfect sight or squint. Most of the patients have some kind of music at home, and children as well as adults, enjoy keeping time with it, as they practice the sway which helps the patient to relax. Relaxation being the only way to improve the sight, the patient is thus benefited by the sway.



Long Swing. Swing and turn left and right. See oppositional movement.

I am always able to teach my tiny tots their letters and figures by playing a game with each one. If he has squint, I place the card close to the eyes and point to the largest letter, and ask what it is. He may say, "I don't know," and then I mention whatever the letter is. After this, he is directed to play peek-a-boo, which means to look quickly, repeat the letter after me, and then close the eyes. This is exactly the same method used for adults, only it is not a game of peek-a-boo. When a child is instructed in this way, the second treatment becomes more interesting, and each time he is taught a few more letters.

I never forget to praise my little patients after each treatment, as it makes them more anxious to help me when treating them. The little fundamental cards play an important part in the treatment and cure. They help grown-ups, as well as children.

Mothers may at first find it a task to devote the necessary time and care to their children with imperfect sight, but the result is worth the effort. Children can practice the sway at home for five minutes before they go to school. When they read letters or words written on the blackboard, their vision always improves, providing they do not stare at the letters. Blinking frequently, while looking slightly below the line of letters they are reading, relieves all tension and strain. When no effort is made, children can read from their books, feeling relaxed and rested, both in mind and body. Boys and girls from the high schools, who have been treated and cured, appreciate this fact. Many school children whose defective vision has been cured, have interested their teachers in the matter. As a result, they came to Dr. Bates for treatment and were also cured. Dr. Bates and I realize the strain under which teachers of the Public Schools work. Many of them do not know how to relax, and their anxiety to instill knowledge in the minds of the children, keeps them constantly tense.

A young man who was just about to enter Columbia College, recently told me that every morning for one whole year after he was cured, he never missed an hour's practice with his eyes. He said it helped him to keep relaxed during school hours, and that he noticed that his mind was benefited. He could think easier and his memory, which was very poor while he was wearing eyeglasses, was so much improved that he found no difficulty in studying his mathematics and history. More boys than girls seem anxious to cure their imperfect sight. I believe this is because boys and young men are interested in more strenuous sports. Eyeglasses are useless to the oarsmen, football and baseball players and, for the sake of these sports, they are willing to practice faithfully to bring about a cure.

What the Bates Method Did for One School Boy

By **MAY SECOR**

Special Teacher of Speech Improvement, New York City public Schools and Pupil of Dr. Bates

JOHN was **cross-eyed**; the taunts of his schoolmates kept him well aware of this. When he looked at an object directly in front of him, the pupil of his "lazy eye" was only partly visible; with this eye he could see the large "C" of the Snellen chart, only when he was within sixteen inches of the chart. John was nearly seven years old; he was retarded at school, having been obliged to repeat Grade 1A. He was a neurotic child,—extremely erratic in his behavior at school and at home.

During the latter part of his second term in 1A we began to instruct him in Dr. Bates' method of Eye Education. We aimed to keep John relaxed and happy; to present each exercise as a game; to suggest each game in such a way that he would be anxious "to try it"; to foresee an outburst of passion when it was brewing, and ward it off; in general, we aimed to instruct John in methods of relaxation, keeping him busy with happy, healthful thoughts and activities, thus avoiding correction and possible outbursts of passion. We admit that the case was difficult, and required much time and study. We used the following methods:

1. INSTRUCTION TO PARENTS AND TEACHERS: Teach the child's parents and teachers the principles underlying the Bates Method, and gain their sympathy and co-operation.

2. REST PERIODS: Enjoy two rest periods each day,—after lunch and after school or work. Go to your bedroom, open the window, remove your shoes and other tight clothing, and lie down and sleep.

3. BLINKING: Notice how gently and often a tiny baby blinks. Close your eyes and remember a baby blinking, and gently blink as a baby does. Blink as you read an eye chart or a book, play cards and other games, watch automobiles pass, or enjoy physical exercises.

4. SWAYING: Watch the moving pendulum of a large clock. Close your eyes and remember the pendulum moving. Gently sway as the pendulum does, and see things moving in the opposite direction, as you blink. Vary your position. Stand with your feet slightly apart as you sway your body. Sit in a comfortable chair and sway. Sit in a comfortable chair and gently sway the head from side to side.

5. SWINGING: Enjoy the long swing, the memory swing, and the variable swing fully described on the fundamental cards. As you shift, see letters and objects swing.

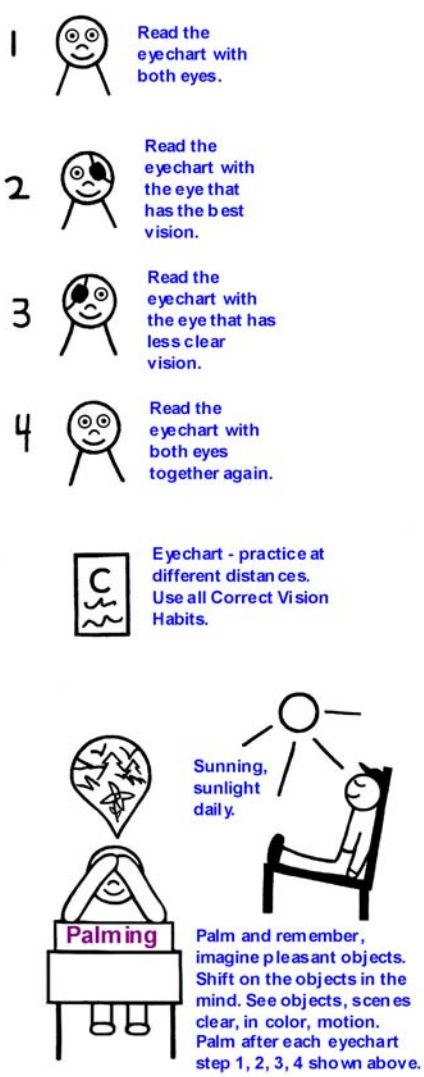
6. PALMING: Lie down or sit in a comfortable chair, and rest your feet and legs on a stool, which is as high as the seat of your chair, and tuck a pillow under each elbow. Gently close your eyes; cup your hands, and place them gently over your eyes, and enjoy the following: See something which is very black (a black cat, a black overcoat, or black velvet). Practice the memory swing as you make believe that you are swaying, reading the chart, looking at a certain picture, watching automobiles pass or playing a game.

7. READING TEST CARDS: Stand and sway, or sit in a comfortable chair, and rest your legs and feet on a stool which is as high as the seat of your chair. Read the Snellen card lazily, comfortably, and gently blink as you read. Read the test card with your better eye and then palm. Read the test card with your worse eye and then palm. Read the test card with both eyes together and then palm. Practice with the pot-hooks chart as follows: Name or indicate with the hand the direction in which the letter points. Copy the chart, using white paper and black crayon. Read it with the "lazy eye" (eye pad on other eye). Copy a line at a time with black Kindergarten splints which have been cut in corresponding lengths.

8. MEMORY: While you palm, practice the memory swing. Recall the face of a friend, a certain picture, the odor of a rose, or the tune of some song you like.

9. IMAGINATION: While you palm, imagine you are taking a trip to the country or that you are drawing a small picture of a house or a dog.

10. SUN TREATMENT: Learn how to sway and blink with relaxation before using the sun treatment. Enjoy the sunshine; walk, play, or lie in it. Stand or sit in the sunshine, and gently blink, sway, and see things moving. Enjoy the long swing.



11. READING BOOKS: Read any book which is "easy for you to read" with fairly small print. Sit in a comfortable chair with legs and feet on a stool, and gently blink and read. Occasionally palm for a few minutes. Let the mind drift and visualize some episode in the story. Comic books, adventure, mystery, interesting stories.



Reading Comic Books improves the clarity of vision by activating many correct vision habits, natural eye functions;
+Relaxation, positive thoughts; as the person reads the interesting, entertaining story.
+Memory and imagination; as the person looks at the pictures and also visualizes his own pictures, remembers/imagines the story, things the pictures, story describe.
+Color treatment; as the person looks at the variety of colored pictures.
+Shifting; the eyes move in a variety of directions as the eyes shift from picture to picture and from one 'bubble' of printed words to another.
I know of three children that have improved their vision to clear, close and distant, by reading comic books in the sunlight and at night, in dim light under a blanket with a flashlight.
Their mind, body, eyes are perfectly relaxed when reading the comics = the mind, eyes do not strain = the vision is clear.
Remember when you were a child and would sit in your favorite chair and go off into a fantasy world reading your favorite comic book collection. My Favorite Comic book hero is Dr. Strange. Reading his stories of 'Ghost Flying' - Traveling in his Sprit, Astral Energy Body to combat evil in the Universe!

The mind, eyes can experience strain when being pressured to hurry, memorize quickly when reading school lessons, worrying about getting good grades… and when reading boring, uninteresting subjects at school, work.
The comics and other interesting stories, with pictures keeps the mind entertained, positive, relaxed in a deep and/or active 'dynamic' state, and this prevents strain, blur. It is easy to remember a story, picture you enjoy.

Dr. Bates cured unclear vision by getting the patient to think about, fantasize, remember, imagine pleasant, happy things, subjects the person enjoys.

12. LEARNING NEW EXERCISES: Begin by learning how to relax, blink, and sway, and then very gradually add other exercises.

13. USE OF EYE PAD: Wear an eye pad (patch) over the better eye at first for one-half hour, and then gradually increase the length of time.

14. ENVIRONMENT: Enjoy your lesson at patient's home, indoors or on porch, at instructor's studio, on a pier (if fond of boats), or in a park. **Select cheerful, pleasant people as companions.**

15. SLEEP: Before retiring: sway, blink, palm, and read the chart. Open bedroom windows, and if possible, retire at eight thirty, and remain in bed until six thirty or seven A. M. If wakeful during the night, palm and practice the memory swing.

In this way, we applied Dr. Bates' method of Eye Education to John's case. We treated John for seven weeks. He then spent two months in the country without treatment. Upon his return, we again took up the work.

The muscular control in the crossed eye improved from the second lesson on. The vision improved greatly, and the crossed eye gained the ability to fixate. But this was not all. In the fall, John's mother reported that he was "made over." At home John was pleasant and obedient; and whereas he had formerly been retarded at school, his record is as follows since he has been under our care:—

June 1925—Promoted to 1B
Oct. 1925—Advanced to 2A
Feb. 1926—Promoted to 2B

John has been re-educated—from the standpoint of vision, of nervous make-up, of behavior, and of intelligence. Since Dr. Bates' method has accomplished this for John, may we not apply it with equal success to other cases?

Dr. Bates will resume his lectures to patients, at 383 Madison Avenue beginning the first week of September. Invitations will be issued to patients.

Announcement

Our readers may be interested to know that of November first, Miss S. I. Paisley, formerly of Washington, D. C., will be in Los Angeles as a representative of Dr. Bates.

Other representatives who have just completed Dr. Bates' Course on the "Cure of Imperfect Sight Treatment Without Glasses" are:

DR. J. B. CLAVERIE,
1467 East 53rd Street,
CHICAGO, ILLINOIS,
and
DR ST. GEORGE FECHTIG,
97 Madison Avenue,
NEW YORK CITY,
and
PALM HARBOR,
Pinellas County, Florida.

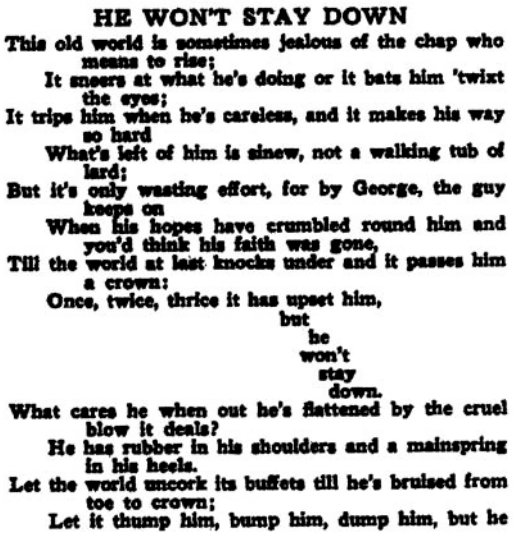
HE WON'T STAY DOWN

This old world is sometimes jealous of the chap
who means to rise;
It sneers at what he's doing or it bats him 'twixt
the eyes;
It trips him when he's careless, and it makes his way
so hard
What's left of him is sinew, not a walking tub of
lard;
But it's only wasting effort, for by George, the guy
keeps on
When his hopes have crumbled round him and
you'd think his faith was gone,
Till the world at last knocks under and it passes him
a crown:
Once, twice, thrice it has upset him,
but
he
won't
stay
down.

What cares he when out he's flattened by the cruel
blow it deals?
He has rubber in his shoulders and a mainspring
in his heels.
Let the world uncork its buffets till he's bruised from
toe to crown;
Let it thump him, bump him, dump him, but he
won't stay down.

Sinew = solid resilient strength

My opinion of this poem is: That it describes Dr. Bates lifelong struggle against the optical industry.
Dr. Bates determination to keep Natural Vision Improvement available to the public. To cure eye problems without eyeglasses, surgery, drugs.



HE WON'T STAY DOWN

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It sneers at what he's doing or it bats him 'twixt the eyes;
It trips him when he's careless, and it makes his way so hard
What's left of him is sinew, not a walking tub of lard;
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When his hopes have crumbled round him and you'd think his faith was gone,
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Let the world uncork its buffets till he's bruised from toe to crown;
Let it thump him, bump him, dump him, but he

Questions and Answers

Q—My sight is good, but I am suffering from eyestrain caused by muscle imbalance. No oculist has been able to help me. I have had to become a cook from being a typist and dressmaker. If I focus my eyes on my fingers for more than a moment, terrific pain shoots th47rough my eyes. I cannot stand light and have to cover the kitchen tables with a dark cloth. Please tell me what to do. Is it possible for me to discard the dark glasses I wear?
A—It is evident that when you look at your fingers for more than a minute, you stare, strain, and make an effort to see. Practice the variable swing. Hold the forefinger of one hand six inches from the right eye and about the same distance to the right. Look straight ahead and move the head a short distance from side to side. The finger appears to move, and the stare is prevented.

In order to overcome your sensitiveness to light, I suggest that you obtain as much sun treatment as possible. Sit in the sun with your eyes closed, and the sun shining directly on the closed eyelids. Slowly move your head from side to side in order to avoid discomfort from the heat. This should be practiced for half an hour or longer daily, whenever possible. When your eyes become more accustomed to the strong light, the sun should be focused on the closed eyelids by moving the sun-glass rapidly from side to side above the eyelids. Later this can be done with the eyes open as you look far down, exposing the white part of the eye by lifting the upper eyelids. (Directions for use of the sun-glass can be obtained from the Central Fixation Publishing Company).
The sun is focused and moved on the white part of the eye, not the pupil or iris.

Q—Often, when I am trying to see a thing, it will come to me, but my eyes will commence to smart, and then I blink and lose it. What shall I do to overcome that?
A—Blinking can be done correctly, and it can be done incorrectly. You strain while you blink. The normal eye blinks easily and frequently. Strain is always accompanied by the stare. By standing and swaying from side to side so that your whole body, head and eyes move together, the stare is lessened. The swing and the movement of the eyes lessens the tendency to stare.

Q—What does "seeing things moving all day long" mean?
A—Your head and eyes are moving all day long. Notice that stationary objects appear to move in the opposite direction to the movement of your head and eyes. When you walk around the room or on the street, observe that the floor or pavement appears to come toward you, while objects on either side of you, appear to move in the opposite direction to the movement of your body.

Q—My trouble is cataract. Shall I cover up the good eye while practicing?
A—Practice with both eyes together until your vision is normal. Then, cover the good eye and improve the vision of the poor one.

Q—Could cataract be caused by diseased teeth?
A—While it is possible for abscesses of the teeth to cause cataract, most cases are caused by eyestrain, and are curable.

REST NUMBER

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

SEPTEMBER, 1926

Demonstrate



Sway left and right in front of the Test Card. See it move opposite the movement of the body.

1. That the sway improves the vision because it prevents the stare.

Stand with the feet about one foot apart, facing a Snellen test card about fifteen feet away. Sway the body from side to side, at first with a rapid, wide swing. When the body, head and eyes sway to the right, observe that the Snellen test card is to the left of where you are looking. Then sway the body, head and eyes to the left. The test card is now to the right of where you are looking. Practice this sway for a few minutes and, without looking at the Snellen test card directly, observe that the whiteness of the card becomes whiter and the black spots on the card become a darker shade of black. The test card appears to move in the direction opposite to the movement of the eyes, while objects beyond the card may move in the same direction as the eyes move.



Variable Swing - finger to side of face. Move the head side to side and see the finger move in the opposite direction.

2. That when the forefinger of one hand is held about six inches in front and to one side of the face, the finger appears to move from side to side in the direction opposite to the movement of the head and eyes. (Move the head side to side, left and right.) Close the eyes and let the hand rest in the lap and remember the swing of the finger. Imagine that the hand, which is fastened to the finger, moves with it. Realize that when the hand moves, the wrist, the arm, the elbow and other parts of the body, being joined together, all move with the finger. Now try to imagine the elbow is stationary, while the finger is moving. It is impossible to do this. When the finger moves, you can imagine not only your body, but also the chair on which you are sitting, the floor on which the chair rests, the walls of the room, the whole building with its foundation, in fact, the universe to be moving with the finger. This is called the universal swing and is possible only when the memory, imagination, or the sight is good.

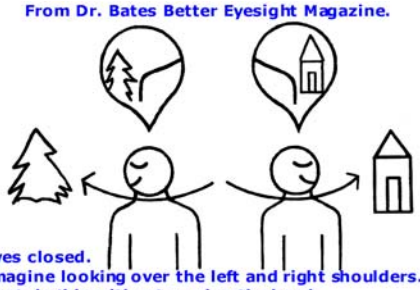


Variable Swing - finger in front of face. Move the head side to side and see the finger move in the opposite direction.
Practice seeing this in the imagination with the eyes closed.

Rest

***By* W. H. BATES, M.D.**

From Dr. Bates Better Eyesight Magazine.



Eyes closed.
Imagine looking over the left and right shoulders.
First do this without moving the head.
Then, imagine looking left and right and move the head with the eyes. Move relaxed, easy - look left, then right, left, right... no hurry.
Notice the eyes move under the closed eyelids when imagining looking left and right.
The brain, memory, imagination, left and right hemispheres... control eye movement.
This activity relaxes the eyes, eye muscles, brain, head, neck, activates easy eye movement/shifting and activates, integrates the left and right brain hemispheres.

REST and relaxation of the eye and mind is perfect when the vision is perfect, and can always be demonstrated.

When the eye is at rest, it is always moving. To demonstrate this, instruct the patient to close his eyes and imagine that he is looking fast over his right shoulder, then over his left shoulder. By alternating quite vigorously, the eyeballs can be seen to move from side to side. While the eyes are still closed, one can place the fingers on the closed eyelids and feel this movement. Now instruct the patient to imagine a shorter movement of the eyes from side to side, that is, look a shorter distance from right to left while the eyes are closed. The movement can usually be felt, but it is not so manifest to the observer as it is when the wide movement of the eyes is made. However, after a little practice, five minutes or more, when the patient is imagining the eyes are moving, one can feel the movement even though it may be very short, one-quarter of an inch or less. If the patient stares at a part of an imaginary letter with the eyes closed, the memory or the imagination of the letter becomes blurred and the movement of the eyeball is not continuous. On the other hand, if the patient remembers a letter perfectly, and shifts on it in the mind, the eyeball appears to move continuously a short distance in various directions.

When central fixation is practiced, that is, when one remembers or imagines one part of a letter best, the eyeballs move. If one tries to remember or imagine a letter, all parts equally well, the movement of the eyeballs cannot be seen or felt, and the eyeballs appear stationary. One can demonstrate the movement of the eyeballs very well with the aid of the ophthalmoscope. When the optic nerve is regarded with this instrument, one can always see the movement of the pigment of the eye or of the blood vessels of the retina when the sight, memory, or imagination is normal. This movement is slow, short, easy and continuous. When the sight, memory, or imagination is imperfect, the eyeball may move very irregularly, with frequent periods when it is stationary.

Eye immobility, impaired shifting = unclear vision.



Eyes closed - imagine looking back and forth over the left and right shoulders and lightly touch the fingers onto the upper closed eyelids and feel the eyes move left and right.
Next - imagine shifting left and right on a small letter and feel the eyes movement become smaller, shorter. The eyes, eye muscles and brain, mental pictures work together.

In nystagmus, the eyeballs move from side to side, usually continuously, a distance so great that it is conspicuous. The rapidity of this movement may vary. It is always stopped after closing the eyes and resting them a sufficient length of time, several minutes or longer, or by practicing the slow, short, easy swing.

Nystagmus is generally believed to be difficult to cure. In fact, it is so difficult that very few cases have ever been reported as benefited by orthodox methods of treatment. It has usually been considered an incurable symptom of disease of the eye. Nystagmus is, however, to a greater or less degree, under the control of the mind of the patient. Some people are able to stop the movement at will. These cases, however, are rare. Some

children acquire the ability to practice nystagmus just as they learn to look cross-eyed. Nystagmus requires a strain. When practiced either consciously or unconsciously, the vision is always lowered. When the nystagmic movements are lessened or stopped altogether, the vision improves and has frequently become normal, either temporarily or permanently.

Some years ago I treated a boy, aged ten, for the cure of nystagmus. His mother told me that she had visited many physicians and had sacrificed a great deal financially in order to obtain a cure for her son. I tested his vision and found it normal at times, when the nystagmus would stop. Repeated tests demonstrated the fact that his vision was always worse when he had the nystagmus. While he was reading with almost normal vision, I said to him: "Stop the movement of your eyes!" Much to my surprise, he did what I told him and then read the card with normal vision. Then I said to him: "Start it up again and read the card." This he did very promptly, but he was unable to obtain normal sight. Again I asked him to stop the nystagmus and his vision became normal and remained normal as long as he had no nystagmus.

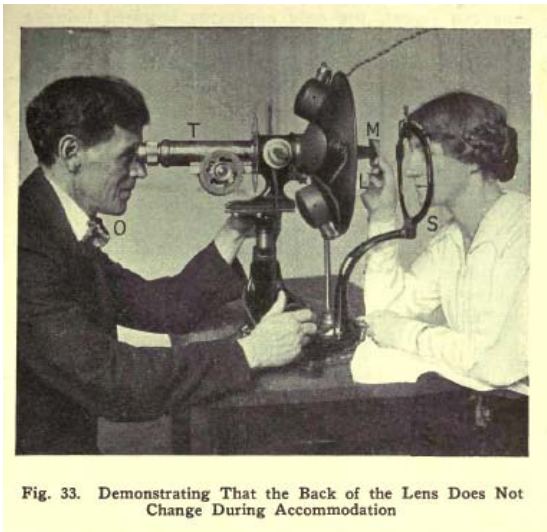


Fig. 33. Demonstrating That the Back of the Lens Does Not Change During Accommodation

The mother paid close attention to the conversation. She realized that the boy was able to produce or stop the nystagmus at will. He seemed to be pleased by the attention he received when he showed off his control of ft. The mother asked me no questions. There was no need of questions after the convincing demonstration that the boy gave of his ability to control the movement. There was a grim determination in her face when she left the office, and she grasped the arm of her boy with a great deal more force than was perhaps necessary. She spoke to the boy with considerable emphasis: "Just you wait until I get you home!" I am sorry that I cannot report what happened later, but I can guess. I hope that she was able to stop this bad habit without much severity.



Fig. 8. The Usual Method of Using the Retinoscope
The observer is so near the subject that the latter is made nervous, and this changes the refraction.

It can be demonstrated that when the eyes are not at rest, the vision is always imperfect. When the memory or imagination is perfect with the eyes closed, the vision is improved when the eyes are opened. Usually the improvement of the vision is only temporary, and may last for only a second, or in flashes. In these cases, the memory soon becomes imperfect with the eyes open. By alternating perfect memory with the eyes closed, the memory with the eyes open usually improves. By practice, many patients become able to remember or imagine with their eyes open a small area of black or white, as well as they can imagine it with their eyes closed. When such patients look at a blank wall, where there is nothing in particular to see, no effort may be made to see and the vision improves. One can practice with the Snellen test card and remember for a moment one known letter of the card, with the eyes open, as well as one can for a longer time with the eyes closed. When one letter of the Snellen test card is improved, all the letters and other objects are also improved. The perfect memory of a known letter with the eyes closed is perfect rest, while an imperfect memory or imagination with the eyes closed or open is always a strain. It is a great help to many people with imperfect sight to demonstrate that rest improves the vision, while the stare or strain always lowers it.

To fail to see requires an effort. When the patient regards the letters which are so blurred and indistinct that he cannot tell what they are, he is always straining, trying to see, either consciously or unconsciously. People are cured of their imperfect sight when they cease to strain, stare, or make an effort to see. When I explained this to one of my patients, she said that I was wrong, that the only way she could see was by means of an effort. I had her test the facts. When she looked at the Snellen test card at ten feet, she could not read it with normal vision. At five feet her vision was better, but when she made an effort, her vision became much worse. The same was true when she regarded letters at a nearer point, three feet, two feet, or even one foot. An effort to see always made her sight worse. She had to demonstrate the facts repeatedly before she was finally convinced that her vision was good only when her eyes were at rest and no effort was made.

Blinking

Blinking, when practiced properly, promotes relaxation or rest. The normal eye blinks continuously all day long when the patient is awake. **At night, when the patient is asleep, a movement of the eyeballs can be seen which resembles the movement of the eyeballs when the eye blinks.** When the eye blinks slowly and the upper eyelid is slowly closed, distant objects appear to move up. When the eyelids slowly open, objects appear to move down. This movement is usually accompanied by an improvement in the vision. Blinking is absolutely necessary in order to obtain continuous normal vision. The normal eye blinks unconsciously, easily, sometimes with great rapidity and at other times rather slowly. It is impossible to stop the blinking of the normal eye. Any effort to do so is a strain, which lowers the vision and, if kept up for some minutes or longer, produces pain, fatigue, dizziness, and other nervous symptoms.



Shift left and right from one period to the other.
One period at a time is seen clear in the center of the visual field. When looking at a period: shift on it: tiny part to tiny part to see it clear. Blink.

The normal eye is shifting or looking from one point to another continuously, not only when one is awake, but also when one is asleep. **This continuous movement of the eyes brings about a condition of perfect rest.** To stare at one point for a few seconds or part of a minute is a difficult or painful thing to do. It requires a great effort which lowers the vision. It is not possible to see two black periods perfectly black at the same time. The only way that they can be seen perfectly black is to shift from one to the other alternately. It is not possible to see a large letter or a small letter perfectly without shifting or looking from one part of the letter to another part. It is well to realize that the human mind is not made to see more than one thing perfectly at a time. To see two or more things perfectly at the same time is impossible, but one can shift from one thing to another and alternately see each perfectly for a short time.

When regarding a person's face, it is impossible to see the whole face perfectly at once. It is necessary to shift from one part of the face to another to see those parts perfectly. If the shifting is more or less rapid, one gets the impression of seeing the whole of the face at once, when, as a matter of fact, only a small area is seen at a time.

One of my patients had normal sight in one eye and one-half normal vision in the other. He was very positive that he could see every letter of the Snellen test card perfectly at the same time. He was not aware that he shifted from one letter to the other, or that he shifted from one part to another of large and even small letters in order to see them clearly, or to be able to distinguish them at all. When he covered his good eye and looked with the poor one, he could read only one letter at a time. He was quite conscious that he did not see even the large letters perfectly; but when he practiced shifting with his poor eye, his vision improved not only for the large letters, but also for the small letters. It required considerable time and much patience to convince him that it was impossible for him to see all parts of any letter perfectly at the same time. When he demonstrated that staring lowered his vision, and that shifting improved it, he obtained normal vision in each eye.

Palming

When palming is done correctly, the vision, memory, and imagination always improve. By palming is meant to close the eyes and cover them with the palm of one or **both hands** without exerting any pressure the closed eyelids. Think of something pleasant, something that you can remember perfectly. Then let your mind drift from one pleasant thought to another. This should be practiced for five minutes ten times daily, or more often when convenient. Some people obtain more benefit by palming for one-half hour, an hour or longer.

There are patients who have difficulty in palming, that is, they strain and make hard work of it. For them it is easier to simply close their eyes and in this way rest them. Other patients obtain relaxation by closing their eyes for part of a minute, then opening them for part of a second, and quickly closing them again. This is called flashing, and usually improves the vision immediately.

It is true that when the eye is perfectly at rest, the sight, memory, and imagination are always normal. Conversely, it is impossible for the sight to be imperfect when the eyes are perfectly at rest. Not only are all errors of refraction benefited and cured by rest, but also organic diseases of the eye,—**glaucoma, cataract, opacity of the cornea, disease of the retina, choroid, or optic nerve are cured by rest and relaxation.**

Stories from the Clinic

No. 79: RELAXATION EFFECTIVE

***By* EMILY C. LIERMAN**

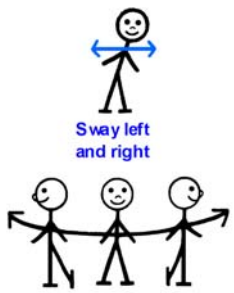
WHEN some of my patients are told upon their first visit that glasses will not be prescribed, they wonder what kind of treatment they will receive and they become very much frightened. During my first year of study in clinic work, I noticed that adults, especially, were so frightened that it was difficult to test their sight. Under these trying conditions, a fair test could not be made. Each time the patient was told to read the test card, the retinoscope showed a change in the shape of the eyeball. As I studied each case under treatment, I became convinced that **mind strain had a great deal to do with eyestrain**. I planned a way to approach such patients and put them at ease, and found it effective with adults and children.

I have had many school children under my care who, for no apparent reason, became nervous as soon as they entered school. When I questioned them about their teachers, the answer was usually a favorable one. Sometimes they would complain about some boy or girl whom they feared, and I was able to help them solve the problem. I would find out sooner or later that my patient was suffering from mind strain and fear. It was necessary to convince the patient, after an eye test with the Snellen test card, that it was eyestrain and undue effort to improve in school studies, that caused the trouble. After the vision was improved, there were no more complaints from either the patient or the school officials.



An interesting case was that of a house-painter who spent most of his working-hours on a scaffold, painting the outside of high buildings. He would become so dizzy that he was finally compelled to give up his work. Other jobs were not so easily obtained, and he began to worry because there was no income for his wife and family. He called on a doctor about the dizzy spells and was advised to go to our clinic to have his eyes examined. With the ophthalmoscope, Dr. Bates could find nothing organically wrong with either eye. Dr. Bates said that apparently the man was in general good health. I questioned the patient about his former position as a painter. He told me that his fellow-workman on the scaffold had lost control of himself, had fallen to the ground and been killed. Since that time, the patient had had attacks of dizziness.

Palming seemed to give him relief almost instantly, even though he had his eyes covered for a very short time, a period of five minutes or less. At fifteen feet from the test card, he easily read down to the forty line, but beyond that line the letters were blurred and the dizziness returned. He was instructed to palm again, and while doing this, I told him to remember moving objects. He said it was easy for him to remember an automobile moving slowly, or a street car stopping at a corner, letting off passengers and taking on others. He could imagine boats moving up and down the Hudson River. In this way, we passed on from one thing to another, and after a few minutes of palming, he read the whole card without stopping and without a mistake. I placed my forefinger on the card to guide him in seeing the white spaces between each letter and reminded him to blink as he flashed each letter. The dizziness disappeared and he said that he felt as though a great load had been removed from the top of his head.



During each treatment, I was careful not to mention the scaffold or the accident, but we did talk about paints and colors as he sat with his eyes closed. He seemed eager to explain and I encouraged him to do so. It was interesting to hear him tell how colors were mixed to produce the correct shades desired. His mind became free from strain and his dizziness disappeared entirely. Test card practice was continued both in the clinic and at his home. Later, I added the swing to be practiced with eyes open and with them closed.

One day he came with an interesting story of how he had treated and cured his little son, nine years of age, who was nervous and destructive. Punishing him seemed to make him worse. When his father first practiced the swing, the boy imitated him in fun. Later, it became a natural thing to see both of them swaying and keeping time with the victrola music. Other practices of the Bates Method also became a daily habit to the boy. He especially enjoyed keeping his eyes closed while his father told him of a farm out west where he had lived as a boy.

Faithful practice has given the father normal vision and a relaxed mind, and he has returned to the scaffold and painting with no more attacks of dizziness.

Recently, while crossing the river on a ferry-boat, I stood where I could see the pilot at the wheel and watched him carefully. He was a man about the age of fifty, and did not wear glasses. As we started out of the ferry-slip, we moved slowly. The pilot looked straight ahead and I observed that he blinked his eyes frequently. At first I counted five blinks to the second; then he blinked so often and so irregularly that I could not keep count. I continued to watch him, however, as we crossed the river, and noticed that his head moved about half an inch from side to side and that he blinked his eyes all the time. It particularly interested me to note that when he changed his position a little, perhaps to stand more comfortably, he kept on swaying his body and blinking. The ferry-boat went into the slip as though it were sliding on ice, and there was not the slightest jar as the boat touched the sides of the ferry slip. The pilot had good vision.

Near our office building there is a traffic policeman who manages a steady flow of traffic. He sees things moving all day long. Sometimes his right hand is raised and other times the left, as he halts traffic. He turns his body to the right or to the left, whichever way the traffic is going. His eyes serve him well because he keeps them moving. His whole body appears to be perfectly relaxed, and he demonstrates the efficiency of a relaxed mind.

The following radio talk was broadcasted from Station WMCA, Hotel McAlpin, on Thursday, July 8th, at 4:15 p.m.

"Eye Education"—Blinking

***By* MAY SECOR**

HAVE you a tiny baby in your home? If so, he will teach you how to use your eyes with relaxation. Notice how gently he blinks his eyes—and how often! If you have no baby in your home go to the park tomorrow, and learn your lesson from a baby there. You will notice that when Baby blinks, his eyelids simply drop. He blinks very, very gently.

A new born baby's eyes shift less often than a older baby. The baby's brain, eyes become familiar with each new object it sees, and the eyes shift on the object, eyes, brain become **familiar** with the object, stores a **clear mental picture of the object in the memory**. The next time the baby sees the object it is recognized, remembered, imagined clear, the eyes shift easy, quick on the object and it is seen clear.

Adults also do this; when seeing a object for the first time, it may not be perfectly clear until the eyes shift part to part on the object, figure out what the object is, store a clear memory picture of the object in the brain. Then when the object is seen again, the brain activates fast, perfect eye shifting for that object and it is immediately seen clear.

Now, will you please sit in a very comfortable chair. Rest your feet and the calves of your legs, on a stool which is as high as the seat of your chair.

Let us all palm. Gently close the eyes. Cup the hands, and place them gently over the eyes.

Think of something that is very, very black.

Now imagine that you are watching a tiny baby as he lies in his carriage. See how gently he blinks! And how often!

Now place your hands lazily in your lap. Gently blink, slowly turn your head to the right, as you—

Blink, blink, gently blink, slowly turn your head to the left, as you blink, blink, gently blink; very, very gently blink.

Slowly turn your head to the right, and blink, blink, gently blink; very, very gently blink.

Slowly turn your head to the front, and blink, blink, gently blink; very, very gently blink.

We hope that you have enjoyed this little lesson in Eye Education. Other exercises which will improve your sight are described in Dr. Bates' book entitled "Perfect Sight Without Glasses."

The Original Nut

***By* GEORGE M. GUILD**

JIMMY was ten years of age and much interested in fairies. One day he was walking along a country road when he saw a great many bees flying among the flowers, looking for honey. Every once in awhile, a bee would rest upon a flower and then almost instantly the flower disappeared and there stood a little fairy, for some of the flowers were fairies in disguise. When they saw Jimmy approaching, they called out to him: "Little boy, little boy, where are you going?"

He answered: "I am looking for The Original Nut"

"And who is The Original Nut, pray?" they asked.

"I do not know, but I am very curious to find him and see what he is like," Jimmy said.

"Why doesn't your father help you?" questioned the fairies.

"He is very busy. He is a policeman, a traffic cop.
When he raises his hand, the automobile drivers stop quickly. If they hesitate or argue, they receive a ticket and have to go to court and see the judge about it."

"Does your father believe in fairies?" they asked.

"No, he thinks fairies are of interest only to little boys and not to big policemen," Jimmy answered.

Then the fairies told him that if he could persuade his father to believe in them, they would help him to find The Original Nut. He promised faithfully to do this and continued on his way. Jimmy had walked a long distance when he became tired and lay down on a mossy, grass-covered bank to rest. After awhile it grew dark. The stars came out, looked at him and winked their eyes. Jimmy was becoming more and more sleepy, but he winked back at them. Then the fairies began to come in large numbers. They danced as they circled about him.

A little while later, the fairies had gone and as Jimmy lay on the grass, he saw a man looking down upon him. It was so dark that he did not recognize him until he spoke. It was his father. He told him all about the fairies and that they had promised to help him to

find The Original Nut if he could persuade his father to believe in them.

Jimmy's father laughed and said: "Why, Jimmy, I do believe in the fairies. They are always happy as they sing and dance, and do all they can to make the world a better place in which to live."

Jimmy jumped up and down in his joy, threw his arms about his father's neck, kissed him on both cheeks, and hugged him tightly. His father placed him on his shoulder and carried him back to his home. Jimmy went to bed and was soon fast asleep. It was not long before he began to dream. He thought he was on the top of a high mountain, looking down upon a large lake at its foot. On the shore of the lake he saw thousands and thousands of fairies happily singing and dancing. With a great deal of difficulty, Jimmie found his way down through the trees which covered the mountain until he came to the shore of the lake. There the fairies were circled about the Fairy Queen. Jimmy ran up to her, fell down on his knees before her, and told her that his father did believe in fairies.

The Fairy Queen smiled and said: "Now, I suppose you want to find The Original Nut. Follow me and I shall lead you to him."

Jimmy walked along behind the Fairy Queen as fast as his little legs could carry him, and he had to walk very fast because the Fairy Queen covered the ground with amazing speed,—almost as fast as a horse could trot. After traveling, as Jimmy thought, many, many miles, they came at last to a house which was made of glass. The roof was glass, the chimney was glass, the porch was glass, all four sides of the house were glass and through them one could see the chairs, the tables and all the furniture in the house.

In a rocking chair on the porch sat a queer little man who was cracking nuts with a nut-cracker. As fast as he cracked the nuts, he threw the kernels to a number of glass chickens that surrounded him. Each time a chicken swallowed a nut, all the glass on that chicken was smashed and out of the broken glass a duck stepped. It immediately turned and waddled down to the lake, jumped in and swam across.

The Fairy Queen told Jimmy that the glass chickens were not really chickens, but were little boys and girls in disguise who had been turned into little chickens by an ogre who lived on the other side of the lake. Only The Original Nut could change them back to little boys and girls by first transforming them into ducks. They would then swim across the lake and come out on the other side as little girls and boys, like they had previously been.

When Jimmy awoke from his dream, he found his father standing beside his bed, looking down upon him and smiling. He had a flower pinned to the lapel of his coat. His father pointed to the flower and closed his eyes. Jimmy, with his eyes wide open, saw that the flower was the Fairy Queen who smiled at him. She removed the pin from the stem of the flower and the coat. The fairy then climbed down to the floor and waved her hand to Jimmy and his father and beckoned them to follow her, which they were glad to do. Although the fairy was very small, she ran so fast that they had all they could do to keep up with her. They passed through the chicken yard which was filled with glass chickens, all anxious to go along also.

The Fairy Queen soon led them to the shore of a lake, which oddly enough, seemed to be the same lake that Jimmy had dreamed about. There were the same fairies, thousands of them. The Fairy Queen with her magic wand led them to the foot of the mountain to the same glass house with The Original Nut busily cracking his magic nuts with the same magic nut-cracker. The Original Nut was glad to see them and greeted them joyously.

Surely dreams come true, especially to little boys who have loving, kind fathers who are traffic cops and are busy many hours of the day, doing all they can to make everybody safe and happy.

Questions and Answers

Q—What is **retinitis pigmentosa**?
A—Retinitis pigmentosa is a disease of the interior of the eye, in which small areas of the retina and other parts of the eye are destroyed. They are replaced by small black pigment patches.

Q—Can **opacity of the cornea** be cured?
A—Yes. The treatment which is most beneficial is the sun treatment as described in "Perfect Sight Without Glasses," by W. H. Bates, M.D.

Q—Are all cases of **squint** curable without glasses or an operation?
A—All cases of squint or cross-eyes are curable by the Bates Method.

Q—Is it possible to cure squint in a child under two years of age by the Bates Method, and what is the treatment employed?

Squint, crossed/wandering eye treatment

A—A child, two years of age or younger, can be treated and cured of squint, with or without imperfect sight, by the Bates Method. The treatment is varied. The swing can be practiced by the mother holding the child in her arms. If the child is able to stand or walk, it is held by the hands and the sway is practiced with the child moving from side to side. Keeping time with music encourages the child to continue the swaying for a longer time.

Improving the memory and imagination is also recommended. The child is encouraged to play with toy animals and is taught the names of the different animals. Usually the animals are placed on the floor in groups and the child is asked to pick up the animals as they are named. As the child reaches for one and then another, the parent may observe whether the child goes directly toward the toy or reaches to either side of it. This method is used in extreme cases of squint where the child does not see perfectly where it is looking.

Colored yarns are also used in these cases. The child is taught names of the different colors. An improvement is always noted after such treatment because the child is constantly shifting his glance from one colored skein of yarn to the other as he selects the one called for. The problem is to educate the eyesight. The more the eyes are used, the better.

Palming is beneficial in the cure of squint. If the child is told that it is just a game of peek-a-boo, he immediately becomes interested and enjoys it. Reading a story to the child so he palms is usually beneficial, and improves the squint.

With children three years a older, the Pot Hooks card is used. This is a test card with the letter "E" pointing in various directions. The child tells whether it is pointing up or down, left or right. If a mistake is made, palming is introduced in order to rest the eyes.

Children with squint are usually unruly, disobedient, or destructive. When the squint is improved, a change in their conduct is also noted. They become quiet, obedient, and their mental efficiency is improved.

Q—Is **diabetic cataract** curable?
A—Diabetic cataract is curable when the general disease of diabetes can be relieved by treatment.

In other articles Dr. Bates tells how eyesight was improved even when the diabetic condition was not cured. Correct diet, and use of Bates method improves the health of body, mind and eyes.

Q—After a serious illness eight years ago, my pupils became very large. Is there anything you can suggest that will help them to contract?
A—Dilated pupils are not usually symptoms of disease of the eye. The sun treatment is beneficial. Sit in the sun with the eyes closed, allowing the sun's rays to shine directly on the closed eyelids, moving the head a short distance from side to side to avoid discomfort from the heat. This should be practiced for a half-hour, an hour, or longer.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

OCTOBER, 1926

Demonstrate



1. That a strain to see at the distance produces near-sightedness. Look at a Snellen test card at twenty feet and read it as well as you can. Now strain or make an effort to see it better, and note that instead of becoming better, it becomes worse.

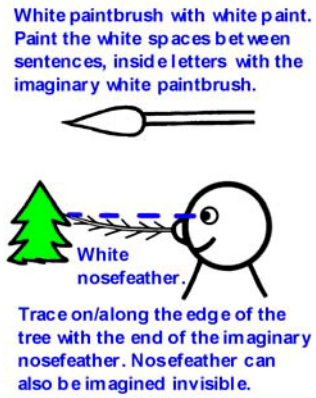
2. That a strain to see at the near point does not increase near-sightedness, but always lessens it. Modern teachers state that straining the eyes at any distance can cause blur at all distances. Use the eyes relaxed at all distances for clear vision at close, middle, far distances.

Look at a card of fine print at six inches from your eyes and read it as well as you can. Now make an effort to see it better, and note that your vision for the near point is lowered, while the ability to read the fine print at a greater distance is improved.

3. That when a mental picture is perfect with the eyes closed for part of a minute or longer, a perfect mental picture can be remembered, imagined, or seen for a second or less with the eyes open.

Remember a black kitten. If your mental picture is gray or an imperfect black with the eyes closed, imagine that you are pouring black ink or black dye over it. Note that the clearness of the mental picture improves.

Look at a page of fine print. Then close your eyes and imagine the white spaces between the lines to be perfectly white. If they appear to be a grayish white, imagine that you are painting the white spaces between the letters, inside the letters, and between the lines, with white paint or whitewash. Then open your eyes for a fraction of a second and note that the white spaces between the lines will appear whiter, if you do not make an effort to see either the black letters or the white spaces.



Lord Macaulay

***By* W. H. BATES, M.D.**

LORD MACAULAY, who will always hold an eminent place among English men of letters, was born October 25th, 1800 and died December 28th, 1859. Before he was 30 years of age, he became a member of the House of Commons, and later held positions of trust and importance which required him to visit different parts of the world. At one time he wrote a code of laws for the benefit of the people of India and devoted considerable time to the work.

Lord Macaulay was said to be the most rapid reader on record, and had the ability to remember perfectly what he had read ten or more years previously, without refreshing his memory by re-reading it. He was able to read a page of five hundred words in one second. Not only could he remember the words that were spelled correctly, but also those words which were spelled incorrectly. He was able to remember the page on which they could be found, the line of the page, the location of the words on the line, and how each word was misspelled. For example, if the word "which" were misspelled, he could remember that it was the fourth word on the fifth line on page 120, and that it was spelled "whiche." This seems a remarkable statement to make, but I have had patients who became able to read almost as rapidly as Lord Macaulay after a course of eye education. This training consisted of central fixation and the imagination of the halos, i.e., the white spaces inside the letters, between the letters and between the lines of letters.

Central fixation is the ability to see best where you are looking and not so clearly where you are not looking. This requires shifting from one part of an object to another part. To have perfect sight, Lord Macaulay unconsciously practiced central fixation. If he had consciously tried to see a letter or to keep his attention fixed on one part of a letter, or if he had tried to see all parts of a letter at once, his vision would have been imperfect. To see the top of a letter perfectly, it was necessary for him to look at and see the top of the letter best, and the rest of the letter not so well. To see each of the other sides perfectly, it was necessary for him to look at and see each side best, and the rest of the letter not so well. Since the average number of letters in each word is five, he shifted four times five, or twenty times, to see each word with maximum vision. **To recognize five hundred words, it was therefore necessary, for him to shift five hundred times twenty, or ten thousand times in one second.**
(Includes saccadic, microscopic, high frequency and other natural shifts, eye movements.)

In order to see perfectly, it is necessary that one imagine perfectly. Macaulay remembered or imagined the white spaces between the lines to be whiter than they really were. When the white spaces were imagined perfectly white, the black letters were imagined perfectly black, because the white spaces could not be imagined perfectly, without the black being imagined perfectly at the same

time. For the same reason, when the blackness of the letters was imagined perfectly, the form of the letters was also imagined perfectly. It has been demonstrated that trying (using effort, staring, squinting) to see the black letters is a conscious strain, or is attended by a conscious strain, and always lowers the vision.

It is a truth that one cannot remember a letter perfectly unless it has been seen perfectly. When the memory for one letter is perfect, the memory for all letters is also perfect. A letter cannot be imagined perfectly unless it has been remembered perfectly. It cannot be seen perfectly unless it has been imagined perfectly. We see only what we imagine we see. The speed of reading is greatest when the vision is perfect.

After a course of eye training, some of my patients were able sub-consciously to remember large letters of the Snellen test card, which they had previously regarded, without being conscious of distinguishing any of the letters. Many of these patients have become able to remember or imagine small letters of the test card at thirty, forty, or fifty feet. I have had some patients glance for a few seconds at a page of diamond type at ten feet or further, without consciously reading any of the letters. With their eyes closed and covered with the palms of their hands, some of them became able to remember or imagine one or more letters of the fine print. They must have unconsciously seen the fine print to have been able to imagine the letters, because one cannot imagine something not remembered, and one cannot remember perfectly unless one has seen perfectly. Therefore, in order to imagine a letter perfectly, it is necessary that the letter be seen previously, either consciously or unconsciously.

The method of rapid reading practiced by Macaulay is invaluable and should be more widely employed.

Some types of speed reading causes vision impairment

In my Writings I have remonstrated against the methods employed to teach rapid reading. The usual procedure was to encourage the student to see all of the letters of a word at once, or to see all the letters of a paragraph of words at the same time. This was accepted as the correct method and very intelligent scholars have recommended it. My research work has proved that there is nothing more injurious to the eyes than to make an effort to see a whole letter or a whole word, all parts equally well. If one looks at the first letter of a word, the last letter is not seen perfectly at the same time. If an effort is made, the whole word becomes blurred and may not be distinguished. The stronger the effort that is made, the more injurious it is to the mind and eyes.

In the public schools of the City of New York, teachers are advised to practice this method of rapid reading with young children. Although the result is unsatisfactory, many teachers still persist in their efforts to teach the impossible. It is interesting to know that children who have perfect mental pictures of letters, or other objects, have a normal memory or a memory that is just as perfect for letters or objects. The scholarship of such children is much better than that of others whose memory or mental pictures are imperfect. A number of school children have told me that at the time of their examinations, they could read a question on the blackboard and have no conception of what the answer might be, but if they closed their eyes and remembered the first letter of the question perfectly, it helped them to remember the answer to the question.

One teacher with a class of children who were mentally deficient, found that the practice of central fixation, palming, and the use of the imagination was of great benefit to the minds of those children. A school teacher in Chicago has made a practice of teaching her pupils how to imagine things perfectly, with the result that no matter how ignorant they may be, at the beginning of the school term, it is not long before they become able to make the same progress as other children in the rapid advancement classes.

The dean of the department of metaphysics of one of our prominent universities came to me and complained that he was suffering with all kinds of mental and eye troubles because he had lost the power of concentration. The strain was so great that he was compelled to give up his work. Glasses were of no benefit. He demonstrated that to concentrate on one letter or one part of a letter it was necessary for him to make an effort, and in a few seconds his vision became very imperfect.

With perfect sight, no effort is made and the eyes and mind are at rest. There is no fatigue, and one can read with great rapidity for many hours continuously, without being conscious of having eyes.

Looking down to read, head, neck bent down, lowers blood, oxygen flow to the brain, eyes, lowers the memory, imagination, brain function, clarity of vision. Use a book holder to keep the head, neck up straight.

Stories from the Clinic

No. 80: FEAR

***By* EMILY C. LIERMAN**

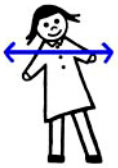
FEAR is one of the many symptoms which accompanies imperfect sight. This is more noticeable in adults than in children. If pain results from imperfect vision, the fear is much greater. Many of our patients have been to other clinics, or other doctors, and were told that if glasses were not worn, they would go blind. Sometimes they were told that they had an organic disease of the eyes, such as glaucoma, iritis, keratitis, atrophy of the optic nerve, or cataract. The patient has cause to fear. It is my belief that the doctor should tell his patient what the trouble is; but when he is not absolutely sure of his diagnosis, he commits an error in telling the patient something which he himself would be afraid to hear. Such cases are numerous, and Dr. Bates and I both know that they come to us feeling that it is their last hope. Their fear is always noticeable.

A case which is worth mentioning is that of a woman over fifty years of age, who came with little hope of being cured. She had been treated and fitted with glasses by several eye-specialists without any relief of pain or improvement in her sight. Two doctors who had examined her, said that all her pain was caused by glaucoma, which she had in both eyes. She said that she had a constant fear of going blind, and many times had a strong desire to end her life. The effort to conceal this desire from her family, who loved her dearly, produced more tension and strain.

Dr. Bates examined her eyes thoroughly and said that there was no opacity of the lens or other parts of either eye. Both optic nerve and retina were normal. Her vision of the test card, with each eye separately, was 10/40. Although the letters were blurred, she could tell what they were. I noticed that she stared a great deal as she explained her trouble to me. Since palming usually stops the stare with most patients, I taught her to palm, being sure to keep up a steady flow of conversation in order to distract her attention from her eyes.

I knew that she had been studying Dr. Bates' book, "Perfect Sight Without Glasses," and I asked her what she thought Doctor meant in his book by mental pictures. She said that she had no mental pictures while her eyes were closed and covered. I knew then that she made an effort to imagine things with her eyes closed, so I did not mention mental pictures again. However, I did not get away from the subject, but, while talking, I mentioned the color of the dress which she wore, and asked her if she could remember the design in the trimming of her dress. She explained the design accurately. Then I asked her which she thought was the whitest

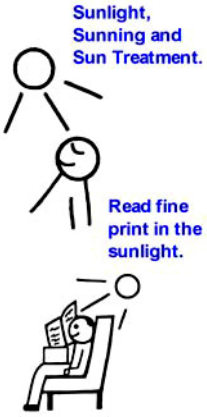
white, a white cloud in a blue sky, or a drift of snow. She answered that she could think of nothing whiter than the white of snow. All this time, I believe that she had had mental pictures of the white cloud and the snow, as well as the design in the trimming of her dress. While her eyes were still covered, I asked her if she had any pain. She said no, that she had forgotten all about it.



Sway side to side, blink, relax and 'flash', (shift for a fraction of a second) on a letter on the eyechart, 10 feet away.

She was then taught to sway her body, while standing with her feet about one foot apart. She did this very gracefully. I told her to keep up a constant blinking of her eyes as she swayed from side to side, getting a glimpse of the letters of the test card ten feet away. She was instructed to look at only one letter at a time and to quickly look away from the card to avoid the tendency to stare or strain. We continued to practice this for ten minutes and in order to keep up her interest, I swayed with her all the time. Her vision improved to 10/20 and she said every letter was clear and distinct.

In treating her again the next day, I used a different test card, the Pot Hooks card with the letter "E" pointing in various directions. She had faithfully carried out instructions which had been given her for home treatment, otherwise she could not have gained as much as she had in so short a time. Her vision with each eye separately was 10/15. Other cards were used, but she did not read them so well. Sometimes this happens, especially with patients as nervous as she.



Sunlight, Sunning and Sun Treatment.

Read fine print in the sunlight.

It is strange that some of us have likes and dislikes, even with an ordinary test card. This fact ought to convince school nurses and doctors, that when children's eyes are being examined with the various test cards, they cannot do so well with some cards as they can with others. A person with an unsympathetic mind would scoff at the idea that a test card could make a difference in the vision, but it is a fact which can be demonstrated.

To vary her treatment, I used a small test card with the fundamental principles of the method, written by Doctor Bates, on the opposite side. The letters on this card are printed in unusually large reading type at the top of the card, and they gradually decrease in size to very fine print, or diamond type, at the bottom of the card. When she first took the small card, she held it at arm's length in order to read the largest type on the card. Rather than worry her by telling her to hold the card closer, I took her out in the sunshine, told her to close her eyes, and gave her the sun treatment with the sun-glass. At first she drew her head away, indicating that she did not like it. In a soft tone of voice, which I had used from the beginning, and which I realized helped to alleviate her nervousness and fear, I suggested that she let me try it again. I told her that babies enjoyed the sun treatment, when the sun-glass was used on their closed eyes. I explained how many of our boys, who returned from France, after the war, enjoyed this wonderful sun treatment which Dr. Bates had discovered was so beneficial for all sorts of eye troubles. During all the time that I talked with her, I used the sun-glass on her eyes. I noticed that she responded, because her body relaxed and she settled in a more comfortable position in her chair. When I stopped the movement of the sun-glass for a moment, she immediately asked for more, so I continued using it on her closed eyes for more than twenty minutes. After this treatment she read three sentences of the fundamental card, at eight inches from her eyes. The type of the third sentence is about the size of book type.

During her third treatment, she smiled most of the time, whereas she had been very sad before. She suggested that I test her sight with a strange test card. By swaying her body from side to side, as she stood twelve feet from the card, she read the ten line letters, one at a time, looking away from the card after seeing each letter.

Having watched her carefully, I noticed that at times she forgot to blink. When she finished reading the card, and complained of a burning in her eyes, I reminded her that she had not been blinking often enough while reading the test card. She then practiced blinking often, just as the normal eye does.

I believe, she will always remember the next treatment she had. The balcony which surrounds our office is a delightful place on sunny days, and I gave her sun treatment there for almost half an hour. Then we turned our backs to the sun, and I placed my book, "Stories From the Clinic," in her lap. Before she started to read, I took one of the **small black test cards, with white letters**, and put it on the opposite side of the page which she was reading. **By looking at a white letter of the test card, she began immediately to read sentence after sentence of the book.** For the first time in twenty years, she was able to read book type without glasses. During her last treatment, she read words and numbers in the telephone book. Her pain was gone; she no longer wished to die, and she is now a happy woman, because she can read her books without the aid of glasses.

Case Reports
Blind Aunt kate

We take pleasure in publishing the following letter from a patient of Dr. Bates.

My dear Dr. Bates:

May I take a few minutes of your time to read something very interesting which I am eager to tell you?

It is the case of a smart old lady of 86. She is called "Blind Aunt Kate" and I thought when I met her, that she must be totally blind, as I saw her grope her way along. She was unable to distinguish me from some one else although my face was within six inches from her face. A week ago today, August 29th, I tested her eyes outdoors in the sunlight. At first she was unable to see the large E on the black card; then she read it at eight inches, and later at eighteen inches. After palming for five minutes, she distinguished it at twenty-eight inches and at thirty-six inches; after palming again F and P came out at eight inches, and after palming again, at twenty-six inches. The following day she saw L, P, E, D, at thirty-five inches and the large E at sixty-six inches. Also she was able to see all the rest of the lines at various distances and two letters of the very last line at six inches. Today is dark and rainy, but she showed great progress after one week's work. Indoors, she could distinguish the large E at seventy-six inches; E, P, at sixty inches and T, O, Z came out still more clearly at sixty-nine inches. Also through the rain she could see the barn, a wagon in the yard, the path and road and a stone fence following the road, things which she hasn't been able to see on a bright day for over a year. She also distinguished different faces (including mine), half way across a large room.

She is so happy over her week's improvement, she says if she can see this well for the rest of her life, she won't complain. She is very faithful in her work and would gladly do anything more that I would suggest, but I have been afraid of directing her wrongly,

though I have done nothing but have her palm, blink frequently (she has been staring so persistently), swing her eyes horizontally, and see things moving by as she walks.

Her eye doctor here used to call her trouble an enlargement of the eyeball, and said glasses would do her no good. She wore glasses for forty-five years and took them off a year ago. She has not read, even coarse print in four years. She says for the past two months her eyes had failed so rapidly that she was trying to resign herself to utter blindness. She is a very sweet, patient old lady and is quite unhappy from outside influences, so I am very eager to give her all the help for her eyes I can. It almost seems as if my Mother's spirit has led me right to her. If you could give me some special exercises for her to follow, I could help her even more, I'm sure, in the two weeks remaining of my vacation. On a bright day she can see every letter of the black E card. I am just beginning to work with her on the white card but today indoors, she could read the first three lines as far off as on the black card. I did not test her on the rest of the lines.

Hoping I am not asking too much of an already busy man, and thanking you, I remain

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The following letter came a few days later.

Dear Dr. Bates:

Your very encouraging letter was received and made both Aunt Kate and myself very happy. I should be very glad indeed to have you publish her story, and she says too, that it would make her so happy if she thought someone else might be helped through her experience.

She has been ill for two days so that I had to discontinue the work on the card. She has, however, kept resting her eyes and at 6 o'clock this evening, when it was very gloomy, we sat at an upper window together and she suddenly remarked: "Now, I can see that old stone wall across the road so plainly"! I hope tomorrow we can resume the work with the card.

I wrote you on September 5th, which was, I believe, a dark day and just one week from the day I first tested her eyes. The next day was sunny again and I tested her eyes with this result, which you will agree was splendid.. The large E she saw at 174 inches; F, P at 136 inches; T. O, Z at 142 inches; L, P, E, D at 78 inches; P, E, C, F, D at 53 inches; E, D, F, etc. at 41 inches. (All but Z, which she saw at 35 inches), D, E, F, P, etc. at 18 inches. The last two lines she made out entirely by holding the card closer to her eyes. So, according to my most careful measurements she saw the various lines at from five to ten and seventeen times the distance she saw them eight days previous.

I am telling you this in such detail so that you will realize there is no mistake in my previous story. I measured the distance so carefully on each occasion. You may also make use of these latest figures in your magazine account of Aunt Kate if you wish.

Sincerely yours,
ALICE AVERY PRICE,
159 So. Broadway, White Plains, N. Y.

Cured in One Visit

A report from Miss Anna Woessner, Teacher of Dr. Bates Method

MADELINE, aged 12, had very poor vision for things up close, and in school was unable distinguish figures on the blackboard. Outdoors, all objects at 20 feet or further, were blurred to her. She had worn glasses for a year and they constantly annoyed her. When she heard about the Bates Method of treatment, and that I was treating patients, she was eager to obtain help from me so as to discard her glasses, if possible. When I met her, the only test card available was a small letter card with the fundamentals by W. H. Bates, M.D. printed on the opposite side. The test card begins with the letter C which can be seen clearly with the normal eye at fifty feet. Madeline could not see even this letter clearly at five feet. While palming I asked her to describe her doll to me. Then she told me about her bicycle and imagined it was moving with her, as she was riding. Before she opened her eyes to look at the card, I put it off at a distance of eight feet and told her to stand, open her eyes, sway her body, and while blinking to look at the card, then at a bird-cage near by. Without a stop she read up to 5, C, G, O, or the letters, which are seen by the normal eye at fifteen feet. With more practice of this kind, her vision improved from the third to the bottom line at nine feet away. These letters are read by the normal eye at four feet.

Sun treatment was given her which she enjoyed, and this helped to improve her near vision, so that she could read the finest print of the fundamentals on the opposite side of the small test card. Madeline had just one treatment. Greatly encouraged, she promised to practice often every day and not put on her glasses again. One month later I saw her again, but she did not need another treatment. Her vision was normal at the near point, as well as for the distance.

Madeline's sister Regina is 15 years of age. She has **congenital astigmatism** and, although she has worn glasses for ten years, she still "hates them." Without glasses, her eyes were mere slits. Her vision was 10/40 with the left eye and 10/30 with the right.

After impressing her with the importance of shifting and blinking (which she had been very careful not to do), I gave her a short period of sun treatment. At first this was very distressing, as she was unable to open her eyelids for even a moment. After swaying, with closed eyes, this was overcome, and at the end of the treatment she read the greater part of the 10 line.

After several more treatments, her vision became practically normal. She is continuing her treatment under my supervision, and after a few more I feel confident that her vision will be normal.

Anyone wishing to confer with Miss Woessner, can reach her by calling New York, Murray Hill 8446, or by writing her at her home in West Nyack, N. Y.

"The Swing"

All things are in Motion;
Let's fall into time,
And Swing along with them,
While chanting this rhyme.

Well keep our swing steady,
By Grandmother's Clock,
Its pendulum swinging,
Its measured tick-took.

In Memory I'm seeing
A fine old elm tree;
Its low-hanging branches
Seem beck'ning to me.

A brown bird sits rocking
On that topmost limb.
I wonder who taught
The Bates System to him.

With eyes all a-sparkle,
Face turned to the Sun,
His head ever turning,
His day is begun.

White clouds float above him
In limitless blue;
His wee throat is swollen
With song, the day thru.

Teach us, then, oh brown bird,
To start our day right;
That our Eyes like yours,
May be sparkling and bright.

Written by Mrs. A. J. Campbell, patient of Dr. Jean B. Claverie, Chicago, Ill.

Questions and Answers

Q—What causes redness and smarting sensation of the eye even when plenty of sun treatment has been given? Should one continue with sun treatment under the circumstances?
A—Take the sun treatment frequently for five or ten minutes at a time daily, increasing the length of time until the eyes become accustomed to the sun. The eyes should always be benefited after the sun treatment, and one should always feel relaxed. When done properly, the redness and smarting should soon disappear. If the eyes are not benefited, it is an indication that you strain while taking the treatment. Alternate the sun treatment with palming or closing the eyes to rest them.

Q—What makes the eyes seem extremely heavy upon rising in the morning?
A—Eyestrain while sleeping. See the May number of "Better Eyesight" on Presbyopia.

Q—What causes a white matter to appear in the corner of the eyes after the sun treatment?
A-The white matter in the corner of the eye is produced by infection, and is cured by the sun treatment.

Q—Is it harmful to sit facing the sun, while reading a book in the shade, thus getting sun treatment?
A—To sit facing the sun, while reading a book, is not injurious to the eyes, provided the patient is comfortable. Some people become uncomfortable, which produces a strain, and the sun is of little benefit under such conditions.
Try with the sun behind you, shining on the back, over the shoulder onto the book.

Q—Does sun treatment have to be continuous to be effective, or can short spells be substituted?
A—Sun treatment does not have to be continuous. Short periods are equally beneficial.

Q—Is resting the eyes by palming a more effective cure for smarting of the eyes than the sun treatment?
A—This depends upon the individual. Some are benefited more by palming, while others receive more benefit from the sun treatment.

Q—Should sun treatment be moderated due to the heat of the sun—as in the tropics?
A—Take as much sun treatment as you can with the eyes closed while slowly moving the head a short distance from side to side to avoid discomfort from the heat. Should it make you uncomfortable and nervous, lessen the length of time that the sun treatment is employed.

Q—Is smoking in moderation injurious to the eyes?
A—Smoking in moderation is not injurious to the eyes. I disagree: Smoking is a main cause of health impairment, lowers circulation, blood/oxygen to the brain, ears, eyes, causes many eye problems, including glaucoma.

Q—Should motor goggles be worn as protection against wind?
A—No protection is needed against the wind if the eyes are used correctly. Blinking, shifting, central fixation, and the imagination of stationary objects to be moving, should be practiced while motoring, and, in fact, all the time. Motor goggles weaken the eyes and make them sensitive to the sunlight.
Goggles protect the eyes from eye injury from insects, other debris flying into the eyes.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

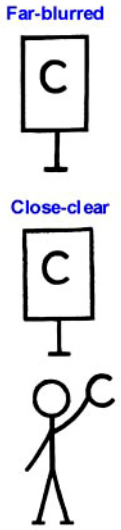
NOVEMBER, 1926

Demonstrate

That by practicing you can imagine a letter at ten feet as well as you can see it at one foot.

Regard (shift on) a letter of the Snellen test card at a distance where it cannot be readily distinguished and appears blurred. Now look at (shift on) the same letter on a card at the near point, one foot or less, where it can be seen perfectly. Then close your eyes and with your finger draw the same letter in the air as well as you can remember it. Open your eyes and continue to draw the imaginary letter with your finger while looking for only a few seconds at the blurred letter on the card at ten feet. Then close your eyes again and remember the letter well enough to draw the letter perfectly in your imagination with your finger. Alternate drawing the letter at ten feet in your imagination with your eyes open and drawing it with your eyes closed as well as you see it at one foot or nearer. When you can draw the letter as perfectly as you remember it, you see the letter on the distant card in flashes.

By repetition you will become able not only to always imagine the known letter correctly, but to actually see it for a few seconds at a time. You cannot see a letter perfectly unless you see one part best, central fixation. Note that you obtain central fixation while practicing this method, i.e., you see one part best. Drawing the letter with your finger in your imagination enables you to follow the finger in forming the letter, and with the help of your memory, you can imagine each side of the letter best, in turn, as it is formed. By this method the memory and the imagination are improved, and when the imagination becomes perfect, the sight is perfect. **You can cure the highest degrees of myopia, hypermetropia, astigmatism, atrophy of the optic nerve, cataract, glaucoma, detachment of the retina and other diseases by this method.**



Distant card letter C is unclear.
+Look at, shift on the identical clear letter C on the close card.
+Next: Close the Eyes. Remember, imagine and draw with your finger in the air the clear letter C that was seen on the close card.
+Open the eyes, continue to draw the letter C and look at, shift on and imagine clear the distant card's blurry letter C for a few seconds.
+Close the eyes and draw the letter C with the finger again perfectly clear in your imagination.
+Eyes open, shift on the distant C again while drawing and imagining the C clear.
+Repeat.
+Look at the clear letter C on the close card occasionally to reinforce the clear memory, mental and visual image of the clear letter C.
The distant C will be seen clear.

Detachment of the Retina

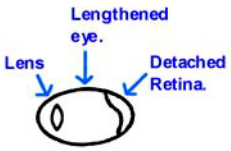
***By* W. H. BATES, M.D.**

Occurrence

IN **DETACHMENT OF THE RETINA**, the inner coat of the three coats of the eyeball become separated from the other coats. At first only a small part of the retina may become separated, but later the detachment may increase in extent until the whole retina is separated from the other parts of the eye. In the early stages, the sight may be good and remain good for some months and even for some years. Usually the patient complains of a loss of vision almost from the beginning.

Detachment of the retina occurs frequently in high degrees of myopia. Some statistics report that one-third of all cases of extreme myopia sooner or later develop detachment of the retina, at first in one eye and afterwards in the other eye. However, it may occur in normal eyes without any inflammation of the other coats. The detachment, which is observed covering tumors of the eyeball, usually presents a different appearance from other forms of detachment. Detachment of the retina is a rare disease. "Galezowski found it in 5/10 of 1% of ophthalmic cases. It is supposed to be caused by muscular exertion, coughing, sneezing, vomiting, anger, or fear. Injuries of the eyeball cause a small proportion of cases." (Ball.)

I believe that mental or ocular strain is the principal cause.



Abnormally lengthened eye. Tension, pressure, stretching on/in the eye, retina, lens, cornea... due to outer eye muscle tension, stronger and stronger eyeglass lenses. Can also be caused by head/eye injury.

Detached retina is often caused by a progressively lengthened/elongated eyeball shape (Myopia) caused by increased outer eye muscle tension and mental strain resulting from stronger and stronger eyeglass lenses. The abnormal lengthened eye shape causes increased pressure, pulling, stretching on/in the eye, cornea, lens retina, optic nerve resulting in retina detachment, cataracts, cornea ulcers and other eye problems.
Progressively shortened and/or irregular eye shape (farsight/astigmatism), due to increased outer eye muscle tension, mental strain caused by stronger and stronger glasses for close distance can also cause detached retina.

If the eye has had a treatment/operation for detached retina, will the Bates Method help it heal as Natural Eyesight Improvement returns the eye to normal shape, removing pulling, tension, stretching on/in the eye/retina or will it interfere with the surgery? Ask your doctor. The Bates method can help to prevent detached retina by keeping the eye healthy, preventing eye muscle tension and abnormal lengthening, shortening... of the eye. Avoiding eyeglasses is the main way to avoid detached retina caused by Eye muscle tension, abnormal eye shape caused by stronger and stronger eyeglasses.

Symptoms

"In the beginning, the symptoms of detachment are periodical dimness of vision, flashes of light and the appearance of sparks, **dust or soot before the eyes**. The field of vision becomes less and there may be the appearance of a cloud or **floating specks before the eye**. Patients have complained that they can see only a part of an object at a time. So long as the center of sight is not involved, the vision of objects straight ahead is good. Sometimes the detached retina may functionate for a time, producing **vertigo**. In uncomplicated cases, there is no pain." (Ball.)

Orthodox Methods of Treatment

Ball in his "Modern Ophthalmology" states:—"The treatment of retinal detachment is an unsatisfactory—in fact, almost hopeless—task. While in a few rare instances the retina has become reattached spontaneously, and a few recoveries have followed the administration of saline purgatives, and some cures have followed the internal use of mercury, iodid of potassium, and salicylic acid, the majority of successful results thus far reported have been attributed to surgical intervention. Surgical intervention, proposed by Sichel in 1869, has assumed numerous forms: simple puncture of the sclera and chorioid (Sichel), discission of the retina (Von Graefe), drainage by a fine gold wire passed to the chorioid by means of catgut (Galezowski), dislaceration with two needles (Bowman), iridectomy (Galezowski and others), injection of iodin into the subretinal space (Galezowski, Gelpke, Scholar), electrolysis (Gillet de Grandmont), cutting of vitreous bands and transfixion of the eyeball (Deutschmann, Jaencke), injection of a 3.5 per cent strength solution of gelatin in a physiologic salt solution between the sclera and capsule of Tenon (de Wecker), puncture of the eyeball with the galvanocautery (Galezowski, Abadie), injection of normal salt solution into the vitreous after evacuation of subretinal fluid (Walker), and injection of air into the vitreous (Jensen). Most of these procedures should be ruled out of the domain of modern ophthalmology. All are dangerous to the integrity of the globe, and one of them—intra-ocular injection of iodin—has been followed by meningitis and death."

Holth (Wien. Med. Woch., Feb. 3, 1912) claimed that in cases of detachment of the retina, a piece of the sclera was excised from the eye without injuring any of the coats of the eye (chorioid). The hardness of the eyeball was then diminished for some weeks or months, and in two cases the detachment of the retina disappeared, and the field of vision became enlarged but vision itself did not improve. The most important point was that in one case the myopia decreased from 18 Diopters to 5 Diopters, in another from 16 Diopters to 10 Diopters and in a third case from 12 Diopters to 5.5 Diopters.

The author explains the effect of the operation as follows: "In the first months after the operation subchorioideal lymph oozes through the opening in Tenon's capsule and on account of this the absorptive capacity of the chorioid is increased. By the traction of the outer eye muscles, the walls of the myopic eye become compressed, and the myopic refraction becomes diminished."

The Writer's Method of Treatment

The results of the preceding methods of treating detachment of the retina as well as of many other methods which are not reported, have been practically of no benefit. It is my desire to call attention to the fact that detachment of the retina is curable because it has been cured. In the course of a lifetime, most ophthalmologists have seen one or more cases of detachment which recovered spontaneously, or without any treatment. This fact suggests that if some patients recover without treatment, detachment is curable under certain conditions. It can be demonstrated that the **cause of detachment of the retina is a mental strain and is not necessarily due to an injury to the eye by a blow.** If it is due to mental strain, relaxation of the mental strain should be followed by a benefit. In all cases of retinal detachment which I have observed, **relaxation methods of treatment have always been followed by an improvement or a cure of the detachment**. These methods of obtaining relaxation are those which are unconsciously practiced by the normal eye, when the normal eye has normal vision. For example, the stare or the effort to see distant or near objects, always causes imperfect sight. Rest or relaxation of the eyes is always a benefit to those with imperfect sight. The normal eye is moving all the time, and an effort to keep the normal eye stationary is always followed by imperfect sight. People with normal eyes and normal sight are always moving their heads and eyes from one point to another, and do not look fixedly at any one point continuously.

One can rest the eyes by blinking without necessarily staring or straining. To keep the eyes wide open continuously always makes the sight worse. Patients with detachment of the retina use their eyes in the wrong way, just as near-sighted people use their eyes incorrectly. In many cases of detachment, the patients suffer from the annoyance of bright sunlight. By gradually accustoming the eye to the sun, the symptoms of retinal detachment usually improve.

Cases

A sharpshooter came to me for treatment of detachment of the retina. He said that when he saw the bull's eye at 1000 yards, it appeared to be moving. When he tried to stop the movement, the effort made him very nervous and his sight became so imperfect that he could not see the bull's eye at all. When he allowed the bull's eye to move, the score was better. At that time, he spent so many hours at target practice that he became very nervous and tired. The interesting fact was that the left eye which was not used in aiming, developed detachment of the retina while the right eye, which was used almost constantly, remained normal. If the detachment were caused by eyestrain, we would expect the eye which was used to be affected. On the contrary, the eye that was not used developed detachment of the retina. It was the strain of his mind, and not the strain of his eyes which caused the retinal detachment.

The dark glasses which he was wearing to protect his eyes from the sun, were so strong that they seriously interfered with the vision of his good eye. The left eye had very disagreeable symptoms. He imagined he saw red, blue and other colored lights. All the treatment that he had received in the hospital had not relieved these sensations. These lights disappeared after he had practiced the various swings for many hours daily. Subjective symptoms disappeared first, and when he became able to obtain a considerable

amount of relaxation, the objective symptoms or detachment then disappeared. The treatment which brought about this result was much the same treatment that is employed in the cure of myopia, astigmatism, far-sightedness, or squint. Relaxation or rest was very beneficial. Palming was particularly helpful. Any treatment which promoted relaxation was always followed by an improvement in the detachment of the retina.

A patient suffering from a high degree of myopia, which was progressive was suddenly afflicted with detachment of the retina in one eye. He received the usual orthodox treatment from a number of ophthalmologists living in Pittsburgh, New York, Chicago, and other places, but without any benefit. When he finally came to me and was treated by relaxation methods for the relief of the high degree of myopia, the detachment became less and the myopia decreased. Considerable relaxation was obtained by the practice of the optical awing, which has been described many times in this magazine. He was first treated on July 30, 1925. The vision of the right eye was 8/200, while that of the left eye, which had the retinal detachment, was only 1/200. Looking straight ahead with his left eye, his vision was imperfect. At times he had some vision, for a few seconds only, while looking straight ahead.

His visits to the office were irregular. On October 17th, 1925, after three month's treatment, the vision of the right eye had improved to 15/200, while that of the left eye was 15/200 plus. After the long swing, the vision of the right eye immediately improved to 15/100, while that of the left eye improved to 15/100 plus. With the ophthalmoscope, the **retina appeared reattached and was otherwise normal**. The field of vision was normal.

The patient returned home very much pleased. However, he made a mistake, I believe, in calling on some of the eye-specialists whom he had previously consulted, and who had all pronounced his imperfect vision from the detachment to be incurable. Some told him that they must have made a mistake in diagnosing his case, because if he had had detachment of the retina, the eye would not have recovered. They believed that all the other men who had made the diagnosis of the detachment of the retina, had also made a monumental blunder. This would have been perfectly satisfactory, but unfortunately the patient neglected the treatment I had prescribed and had a relapse. He again visited the same eye-specialists without being encouraged, and when he came back to me, he was very much discouraged. I believe that he would have returned sooner had not the other ophthalmologists influenced him against the relaxation treatment.

After studying these and other cases, I believe that **the cause of detachment of the retina is usually some form of mental strain**. It is gratifying to have proved that when this strain is relieved, the detachment of the retina disappears and the eye becomes normal.

Stories from the Clinic

Mind Strain

***By* EMILY C. LIERMAN**

THERE are many causes of mind strain and hundreds of people suffer from its effects without realizing it. People who have difficult problems to solve are subject to mind strain. Business and financial worries also cause mind strain, which is usually accompanied by eyestrain. If these people are taught the proper way to relax, mind and eyestrain can soon be relieved. It is not easy to relax. Osteopathy helps some people, but the difficulty lies in being able to continue the relaxation methods after the doctor has completed his treatment. This is true of the Bates Method of relaxation. Most patients who have been treated for eyestrain leave the office after their first treatment, feeling entirely relieved of pain, fatigue, and mind strain, and with decided improvement in their vision, either for the distance, the near point or both. Such patients obtain normal vision permanently by carrying out at home the advice given by the doctor.

Many patients ask why their pain or other discomforts return after treatment. The answer is obvious. It is caused by a patient not continuing the practice or by trying too hard while practicing. We are very apt to forget that which is most essential for obtaining better eyesight;—relaxation, rest of mind and body. Always remember that the eye is at rest only when it is moving. Dr. Bates emphasizes this fact, because patients so often forget. When the mind is under a strain, it is difficult to solve a problem or to think clearly.

A well known business man from the West, called to see Dr. Bates not long ago. He had been warned that Dr. Bates was not sincere nor scientific. The man was too busy to experiment with new ideas in eye treatment, so he went to Europe hoping to find a doctor there who could cure his eyestrain and the intense pains in his head. Opticians in Europe did their utmost to relieve him. When specialists in England failed to help him, he tried Germany, France, Switzerland and Italy. Had his search only carried him to Spain, he might have found Dr. Ruiz Arnau of Madrid, who is now there introducing Dr. Bates' method into schools, and to those medical doctors who desire to learn a better way of obtaining perfect vision, than the use of eyeglasses. Dr. Arnau became interested in the Bates Method some years ago when he himself was suffering with continual headaches and other discomforts caused by mind and eyestrain. He came from San Juan, Porto Rico, leaving a good practice to seek the only Doctor who could help him. Dr. Arnau has shown his appreciation for what Dr. Bates has done for him by writing a book entitled, "El Uso Natural de la Vision," which he dedicated to Dr. Bates.

Many other doctors, who were seemingly incurable, have come to us and were cured. They in turn help their patients, so that eyeglasses can be discarded, or not become necessary.

The Westerner came back to America feeling very much discouraged, and with no hope of being cured. In a skeptical frame of mind, he came to Dr. Bates, as a last resort. After one treatment, in which he was entirely relieved of pain, he placed himself in Dr. Bates' care and in less than two weeks of daily treatment, was able to read letters, newspapers, and book type without the aid of eyeglasses. Many patients have visited Dr. Bates, through his recommendation, and his letters to Dr. Bates are full of gratitude for the cure of his mind and eyestrain.

When patients learn how to do their work, without effort or strain, regardless of the nature of the work, mind, memory, and, most of all, their imagination is improved.

During the summer months of this year, I cured a woman with a terrific amount of mind strain. She obtained no relief until she realized that making an effort to see, in reading, sewing, or doing other things, prevented a cure. "Take things easily," is only a short sentence of three words, but I repeated that sentence to her, seventy times seven, before she realized its great significance. I gave her a treatment daily for some weeks and when she left for her home, many miles from New York, she said she felt like a new woman, and would always be grateful for the results I had helped her to obtain. She now reads her books without the aid of eyeglasses, which she had worn constantly for more than twenty years. Palming, the long swing of her body, while reading the test

card, one letter at a time, helped. Constantly reminding her to blink, was most necessary.

Mind strain causes many things. It destroys the finest nature and many an innocent human being, and often drives people far away from pleasant surroundings, killing quicker than any electric storm.

One can strain so much that the eyeball will become as hard as stone, and the pain unbearable. When this condition becomes more or less permanent, it may be **glaucoma**. This is an organic disease which sometimes causes blindness overnight. I have described a case of glaucoma in my book, "Stories From The Clinic," in which a dear old lady seventy-nine years of age, had absolute glaucoma in one eye, with no perception of light. When I first began treating her, I did not realize that I could ever bring back any sight at all in that eye. Before she left the clinic, at her first treatment, she was able to distinguish some of the large letters of the test card, as it was held close to her face. Within five months' time, she had normal vision in that eye.

It is not always easy to treat the severe cases. When a patient has been under a strain for a length of time, it is sometimes difficult to relieve the strain permanently, in a short time. Patients vary in their response to treatment. While some obtain permanent relief in a few visits, others find it necessary to place themselves under treatment for a longer period.

Dry Heat and Sun

***By* A. P. SCHULTZ, M.D.**

ON March 25th I was taken with an attack of irido-keratitis. The onset was very sudden, while diving. All laboratory tests were negative. X-ray examinations and clinical examinations likewise. The tuberculin test was not tried. I consider it worthless, it is positive in too many people, whatever their state of health, and in my case would have been utterly useless as all the symptoms of a positive tuberculin test developed by omitting atophan for one day. After two months treatment, and after many consultations the conditions were worse than before. The diet all along was of the simplest antacid kind. Atophan alone gave relief, and that only for the time being. The instillation of one half percent of atropin solution was intolerable, dionin impossible. After taking atophan almost continuously for five weeks, I decided to discontinue it. It should not be taken continuously for longer than five or six days. On May 23rd I took instead of it 80 grains of sodium salicylate. Pain, redness, lachrymation, photophobia, increased. On May 24th I took forty grains of sodium salicylate and twenty-five grains of aspirin; the pain decreased a little. All other symptoms were worse. On May 25th all symptoms were much worse. I added sixteen capsules of colchi-sal to the other drugs. The hot fomentations I continued. There was no relief. During the night the pain was terrible. Hot applications were unbearable. I had to go back to atophan, 15 grains gave relief for an hour. I took fifteen grains more of atophan and a little later one half grain of codeine. The pain was better, but all other symptoms were as severe as before. This medication could not go on. I tried hot baths and hot compresses again; they were intolerable. Steaming the eye was unbearable. Tension of the eyeball remained normal.

On May 26th the eye was terribly inflamed, the color of a dark red cherry. Iris and pupil were indistinguishable, the whole being one equal gray. Sight almost gone. I could count fingers if I moved them in a good light and if less than one foot away. To have something crawl over the eye separating the individual from the rest of humankind is one of the most terrible experiences a man can have.

I thought of the electric heater with the copper reflector. The thought proved an inspiration, a Godsend. I had the diffused hot light fall on forehead, temple and eyelid for one and one half to two hours, and what relief!! It was phenomenal, truly miraculous!! The thermometer held in front of the eye registered 138 degrees. The heat burned the skin, the eyebrows and the eyelashes, but I could feel the eye improve. In less than two hours the pain was gone. This was about 9 p. m. on May 26th. On May 27th in the morning all the symptoms were better and I decided to give the hot light application a thorough trial as a curative measure. I had that heat pour on the parts from 10 a. m. to 12 noon, and from 1 p. m. to 5:30 p. m. The results were truly wonderful, the photophobia was all gone, so was the pain and the lachrymation, and the redness was fifty per cent less. The treatment was an ordeal, and frequently I had to increase the distance from the heater. A man who is in danger of losing an eye can stand much more than he thinks. On May 28th I repeated this hot light radiation treatment from 4:30 to 10 a. m., when I was completely exhausted from heat and perspiration, too weak to stand but the eye wonderfully improved, very little redness left and sight also improved. I used this method for about one hour in the morning and about one hour at night for about a month.

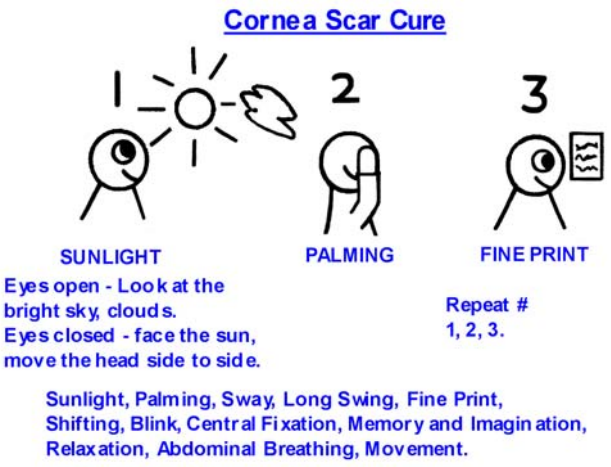
What caused the good result? It was not the heat alone, for hot fomentations had been used for months without effect. For about two months a hot pack had covered the eye day and night without good effect. I wrote to the Bureau of Standards, Washington, and received this information: "The copper reflector emits about **1% of visible radiation and 99% infrared rays**. Some of the rays of **short wave length** will penetrate deep into the interior of the eyeball. Most of the rays penetrate only 0.01 to 0.5 mm. into the eye."

About one month after the end of the inflammatory process a thick scar persisted which prevented vision; everything beyond six feet was a gray wall into which men, automobiles, houses, everything disappeared. How to get rid of the scar was the problem. The instillation of dionin and of theosinamin proved irritating and had to be stopped. The internal use of potassium iodide caused skin eruptions and other symptoms of iodism and also had to be stopped. I used the following:—The very restricted antacid diet was continued, consisting of vegetables (usually raw) and fruits, many lemons (one lemon to a glass of water) oranges, grapefruits, raw sauerkraut. Every now and then a day on fruits and water only. I have reasons for believing that increased alkalinity of the blood helps to dissolve scars. From August 23rd, 1925 to September 6th, 1925 the fast was complete except for water. It did some good. Exercise helps to overcome the results of inflammations of joints, why not in the eye? I exercised the eye by rolling it in various directions, rolling it under the closed eyelid added gentle massage of the cornea. I used the alternating bath. This works well to improve the circulation in people suffering from cold feet. There is no reason why it should not work equally well on the other end of the anatomy. The alternating bath consists in putting the part in hot water for a few minutes and then in cold water, alternating six or eight times. I did this two or three times a day. It did some good, the opacity was less but still marked.

In June, 1926, I wanted to play handball and found that I could see the swiftly moving ball intermittently only. I thought that the scar prevented the left pupil from contracting and dilating in harmony with the right pupil and that the mind suppressed the confused image completely. I decided to use the sun. **I looked straight into the sun with the left eye, then put the hand over the eye (darkness) and then read the smallest print that the eye could make out, looked into the sun again, etc. This worked wonders, the scar contracted and the opacity became thinner from day to day, today little is left of it.** Days on which there was no sunshine, and there were many, I used the electric heater. **The sun cured the opacity after every other factor had failed.** Something else happened. My eyes were myopic. Left eye 8½ diopters, Right eye 9.50 diopters. I had worn these eyeglasses since 1921. They began to trouble me some days for ten minutes only, on other days for hours. The refraction changed several times

on the same day. One examination revealed for the left eye, the treated eye, myopia of 4/50 diopters, for the right eye myopia of 8 diopter. Presbyopia was suggested. But vision at the near point was very good, much improved in fact. I looked up the subject, but found no explanation until I found Dr. Bates' wonderful book. On October 13th Dr. Bates gave me the first treatment, and in a few days I had flashes of normal sight, that is, I recognized the 10 lines of the Snellen test card at ten feet,—the first time in my life that I can remember. These periods are increasing in frequency and in duration, so that I have reason to believe that I shall be free of the myopia in a short time. **At the same time the sun treatment, aided by the treatment for the myopia: palming, swaying, swinging and reading of small print, is diminishing the opacity quickly.**

I do not advise placing the eyes near a electric heater as this man did. I think if he had tried only natural full spectrum sunlight, sunning and the other Bates methods he described he would have had the same cure, maybe quicker.



Dr. Bates recommends to his patients, Ruth Loebrich, who has received instruction from him for two years in the Cure of Imperfect Sight by Treatment Without Glasses, and assists in the Clinic, conducted by Emily C. Lierman.

Miss Loebrich treats patients at the following addresses: 457 East 9th Street, Brooklyn, N. Y. Tel. Windsor 5655, and No. 60 West 49th Street, Apt. 4, N. Y. C.

Questions and Answers

Q—Should one practice with fine print by holding it where it can be seen best or at the normal distance.
A—Hold the print at the distance from your eyes at which you see best. Remember not to look directly at the letters.
Modern Bates teachers state: to look directly at the letters (central fixation). Shift to see the letters clear: Move the eyes along the sentence. Avoid staring, squinting. Occasionally take a break, stop reading and then: look at, shift on the white spaces between the sentences, relax, daydream something pleasant, look to the distance. Return to the print when the eyes, mind are relaxed. Looking at the white spaces is not necessary to improve the vision and is not needed after the vision improves.

Q—Is age a factor in the cure of imperfect sight without glasses?
A—Age is not a factor. I have cured hundreds of patients past sixty.

Q—What method is best to relieve the tension in the back of the neck?
A—The variable swing. This is described in the September, 1926, number of the Better Eyesight Magazine. See Demonstrate article Paragraph 2. Infinity Swing/Figure Eight, Long Swing, Massage, Shifting, Tracing with the Nosefeather. See last pages this book.

Q—Is the swing apt to cause nystagmus?
A—No, the swing relieves strain, whereas nystagmus is caused by eyestrain.

Q—When taking Dr. Bates' treatment, could one wear glasses for a few hours each day for close work?
A—No, each time you put on your glasses, your progress is retarded.

Q—What causes the lids of the eyes to itch and sometimes become scaly?
A—This is due to strain. Practice relaxation methods all day long,—shifting, blinking and central fixation. Get as much sun treatment as possible.

Q—What causes my vision to improve for a day or two, and then relapse?
A—This is caused by lack of practice and by straining your eyes. When the vision is good, you are relaxed.

Q—In palming, should one close the eyes tightly?
A—No, easily, lazily and naturally at all times.

Q—Why is my vision worse on a rainy or cloudy day than in broad daylight?
A—Because you strain to see on a dark day.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

DECEMBER, 1926

Demonstrate

THAT it requires an effort or a strain to produce imperfect sight.

Look at the notch at the top of the big "C" of the Snellen test card at fifteen feet. Keep your eyes fixed on the notch. Make an effort to see it and increase that effort as much as you possibly can. Notice that it is difficult to keep your eyes and mind fixed on that one point. Notice also that it is tiresome and makes your eyes pain. If you keep it up long enough, your head begins to ache and all the nerves of your body are strained.

If you look at some of the letters on the lower lines which are much smaller than the big "C", they may appear so blurred that you are not able to distinguish them. Trying to see these small letters blurs them still more.

Now hold the test card in your hand about one foot from your eyes. The big "C" is seen plainly and without any effort. Try to see the top and the bottom of the big "C" perfectly black at the same time. Notice that the "C" becomes blurred and the strain which blurs it also gives much discomfort.

From this evidence, we can conclude that perfect sight comes easily, without any effort or strain, while, imperfect sight is always produced by a strain or an effort to see.

Astigmatism

***By* W. H. BATES, M.D.**

MANY people who have astigmatism often talk about it in a boastful way as though it were a mark of distinction. This is not so strange, considering the fact that so many eye doctors claim that astigmatism does more harm to the eyes and nerves than any other condition. They tell their patients that in order to prevent serious eye diseases, glasses should be worn constantly. Such patients, accordingly, become much worried and are in constant fear of serious eye trouble developing, and probable blindness resulting. It is true that the glasses prescribed may give temporary relief; but no patient under my observation was ever cured or benefited very much by glasses.

Definitions

The normal eye is spherical in shape and all the meridians are of the same curvature. The curvature of the cornea is like that of a segment of a sphere; but when astigmatism is present, it is said to be lop-sided; that is, one principal meridian of the curvature is more convex than the meridian at right angles to it. With an instrument called the ophthalmometer, it is possible to measure all the meridians of the curvature of the cornea.

Astigmatism may be simple hypermetropic, simple myopic, compound hypermetropic, compound myopic, mixed or irregular.

In **Simple Hypermetropic Astigmatism**, one principal meridian of the cornea has a normal curvature, while the meridian at right angles to it is flatter than all the other meridians.

In **Simple Myopic Astigmatism** one principal meridian of the cornea has a normal curvature, while the meridian at right angles to it is more convex than all the other meridians.

In **Compound Hypermetropic Astigmatism**, the two principal meridians are flatter than the meridians of the normal eye, one being flatter than the other.

In **Compound Myopic Astigmatism**, the two principal meridians are more convex than a normal meridian, one being more convex than the other.

In **Mixed Astigmatism**, one of the principal meridians is flatter than a meridian of the normal eye, while the other principal meridian is more convex than a meridian of the normal eye.

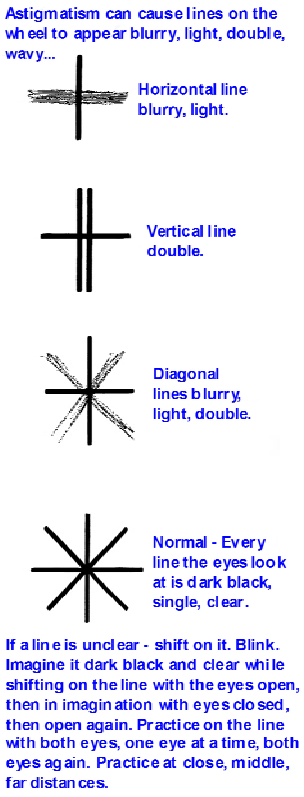
In **Irregular Astigmatism**, the meridians of the curvature of the cornea are so malformed that no glasses can correct the astigmatism.

Occurrence

Astigmatism is the most common defect of the human eye. Most people with astigmatism have had it since birth. In some cases, it may increase, while in other cases it may become less or entirely disappear.

Nine-tenths of the cases of **astigmatism** are due to **imperfect curvature** of two or more meridians of the **cornea**. The other cases of astigmatism are due to imperfect curvature of the **lens**, or less frequently to a malformation of the **eyeball**.

Symptoms



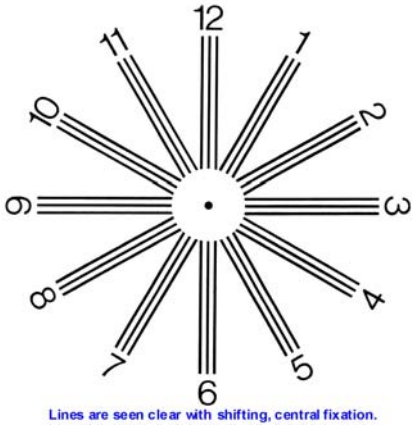
When a high degree of astigmatism is present, the vision is appreciably lowered. Usually when vertical lines are regarded, they may appear more distinct than horizontal lines, or the reverse may be true. It was found that so many patients with astigmatism failed to see vertical lines as well as horizontal lines, or had trouble in seeing oblique lines, that a card, called the clock-faced card, was designed with lines at various angles. At one time it was believed that astigmatism could be diagnosed when the patient was able to see horizontal lines on this card better than the vertical lines or vice versa. Some patients with astigmatism could see distinctly the line pointing to five o'clock, while the line at right angles to it could not be seen so well. With increased experience, however, it was found that some patients with astigmatism could see horizontal and vertical lines equally well. On the other hand, patients with normal vision have complained that they did not always see vertical or horizontal lines equally well.

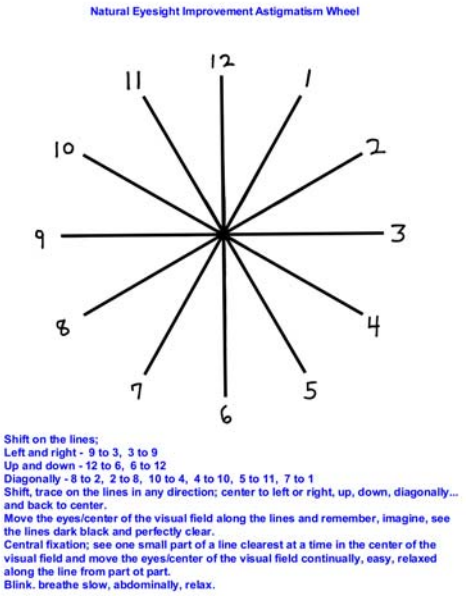
A man, sixty years of age, was found to have unusually good vision without any symptoms of astigmatism; but when he regarded a number of vertical, horizontal, and oblique lines, his vision immediately became very imperfect with a production of six diopters of astigmatism. When he closed his eyes and rested them, his vision soon became normal and the astigmatism disappeared.

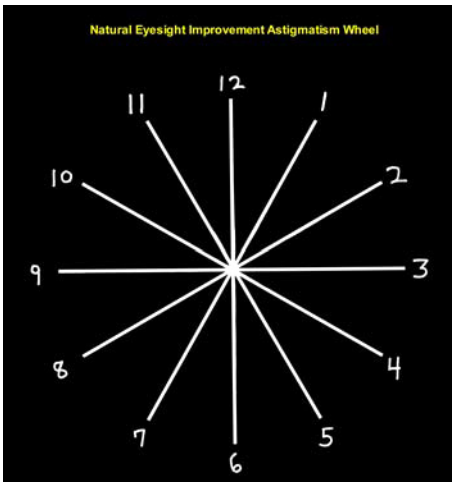
The standard, old clock face card (astigmatism wheel) is not an effective test for astigmatism and often results in unnecessary eyeglass prescriptions with astigmatism correction. This occurs because the eye doctor tells the patient to use incorrect eye function to see the clock: The patient is told to keep the eyes immobile, looking at only the dot in the center of the clock while at the same time, also trying to see all the lines around the clock in the peripheral field perfectly clear. This prevents central fixation and shifting, two major normal eye functions necessary for clear vision. It also causes temporary strain, blur and astigmatism during the test. Other conditions of the standard card astigmatism test also produce incorrect results.

The resulting unnecessary astigmatism eyeglass prescription causes, increases astigmatism resulting in more vision impairment.

A Natural Eyesight Improvement astigmatism wheel allows the person to look directly at and shift on the lines, one at a time to test for and remove astigmatism. The standard old card is also seen clear when it is used correct with shifting and central fixation.







Astigmatism can appear and disappear in the normal eye without discomfort, notice. Doctors state that the eye/cornea can change shape temporarily due to temporary occasional eye muscle tension, stress, neck tension, sinus congestion, diet resulting in slight astigmatism.

Cause

The cause of astigmatism is always associated with an effort or a strain. In all cases the stare can be demonstrated. An imperfect memory requires an effort or a strain and always produces astigmatism. An imperfect imagination also requires an effort or strain and always produces astigmatism. A mental strain of any kind always causes astigmatism. In the normal eye, astigmatism can be produced with a very slight amount of strain or effort to see. In those cases, however, where a great effort is made for a length of time, the astigmatism becomes very much increased, and may be more or less permanent. Irregular astigmatism is caused by the contraction of scar tissue, either from ulcerations of the cornea or from an incised wound.

Treatment

Some years ago, I published an article in the Archives of Ophthalmology with the title, "A New Operation for the Cure of Astigmatism—A Preliminary Report." In this article, I described an operation in which the more convex meridian of the cornea was incised at right angles to its curvature, but not penetrating into the anterior chamber. The scar produced by the cut of the knife usually healed very promptly, and the traction of the scar tissue flattened the curvature of this principal meridian. A number of cases were reported with good results. It was not very long, however, before I had some unsuccessful experiences in which, for some reason or other, the operation failed. The theory was so good that I expected the facts to verify it. I became disappointed with my operation and did not investigate the facts any further after the first six months. A year or two later, my operation was performed by some one in England, and a report of some interesting cases that were apparently cured was published in an English Medical journal. Other articles were published in medical journals, confirming my earlier claims and giving me due credit.

I no longer believe that an operation of any kind should be performed, because all forms of astigmatism can be demonstrated to be always temporary. Astigmatism is not organic; it is always functional, even when scar tissue is associated with it.

Scar Tissue

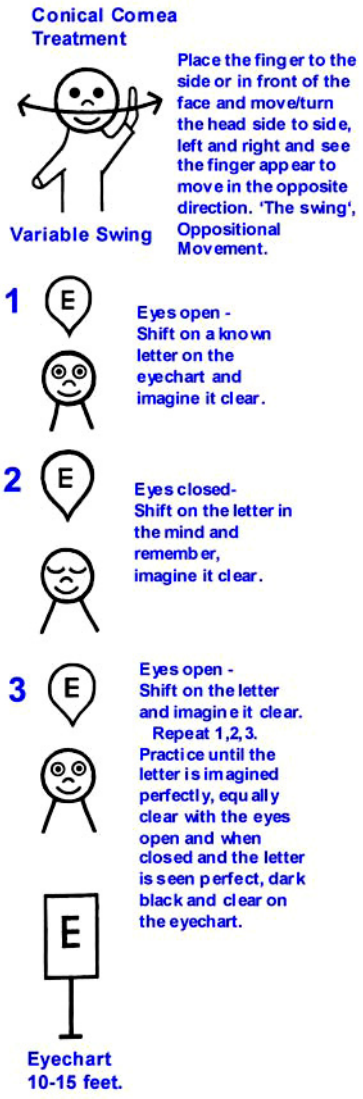
It is very interesting to observe cases of astigmatism in which scar tissue of the cornea is a complication. Scar tissue, as is well known, is composed largely of new connective tissue. With the aid of the memory and the imagination, this connective tissue sometimes disappears in a very short time. When the memory is perfect for some letter, color, or object, the scar tissue disappears. When the imagination is perfect for a letter or other object, the scar tissue disappears. Imagination or memory of perfect sight is a cure for astigmatism.

Conical Cornea

The most serious effect of astigmatism is to produce conical cornea. In this disease, the front part of the eyeball becomes more conical in shape, and after some years the apex of the cone becomes ulcerated: This ulcer becomes steadily worse with an increase of the astigmatism. Not only is the vision progressively lowered, but the patient may also suffer from severe pain. There is no operation which has been generally accepted which is satisfactory in correcting conical cornea, nor has any treatment heretofore practiced been curative or even beneficial.

The treatment in my experience which has yielded the best results is the practice of the variable swing. The patient holds the forefinger of one hand about six inches in front and to one side of the eyes. When he moves his head a short distance from side to side, the finger appears to move in the direction opposite to the movement of the head and eyes.

While practicing the variable swing, the patient is directed to regard one known letter of the Snellen test card at ten or fifteen feet, and imagine it as well as he can with his eyes open for a few seconds. The eyes are quickly closed while the patient remembers the same letter more perfectly than it was seen. He then opens his eyes and imagines the known letter on the card, as well as he can for a few seconds. The patient alternately remembers the known letter perfectly with the eyes closed and imagines it with the eyes open for a few seconds, until he becomes able to imagine he sees the known letter nearly as well with his eyes open as he can remember it with his eyes closed. By this method, the patient can improve his vision for each known or unknown letter of the Snellen test card. It is remarkable how promptly the conical cornea subsides when the variable swing is practiced in this way. Some patients have obtained normal vision in a much shorter time than one would expect.



Case Reports

Recently a man, aged sixty years, was treated by me for the relief of eye troubles, caused by one-quarter of a diopter of **astigmatism**. He suffered intensely from strong light and complained of **floating specks**. He was not able to read fine print with or without glasses for any length of time without pain and fatigue. It seemed very strange that he should suffer so much from so low a degree of astigmatism. His distant vision was almost normal, while his ability to read was only slightly impaired by the pain. When his astigmatism was corrected by treatment, his vision, with each eye, for distance improved until it became normal, and the floating specks disappeared. After practicing the swing and improving his vision for the Snellen test card, the fatigue which he had felt when working and reading was also lessened. He no longer suffered from discomfort in the strong light of the sun, after he had received the sun treatment with the sun-glass.

Hypermetropic Astigmatism

About a month ago, a fourteen year old girl came to me for treatment. She had about three diopters of hypermetropic astigmatism in each eye. The vision of each eye was one-half of the normal. After practicing rest and the short away of her body for an hour or longer, her vision became almost normal without glasses.

Without any treatment, she read the fine print imperfectly at twelve inches. She was directed to close her eyes and to imagine the spaces between the lines to be as white as snow, white starch, whitewash or a white handkerchief. With her eyes open and moving her head a short distance from side to side, she became able to imagine the white spaces between the lines to be more perfectly white. By alternating, her imagination of the white spaces increased, until she became able to read diamond type at six inches or less, without any fatigue or discomfort. Her ability to read had been improved by her imagination. When her symptoms were relieved by this treatment, it was found with the aid of the retinoscope that the astigmatism had disappeared.

Compound Myopic Astigmatism

Another patient was a girl, aged fifteen. The vision of the right eye was one-third of the normal, while that of the left eye was one-fifth of the normal. She was wearing glasses for the correction of compound myopic astigmatism, in which the astigmatism in each eye was less than one diopter. With the aid of paining, swinging, and the use of her imagination, her vision became normal in each eye and the astigmatism disappeared.

This patient had but one treatment and obtained a quick cure, which is very unusual.

Simple Hypermetropic Astigmatism

On June 1, 1924, a man, thirty years old, became a patient. The vision of his right eye was 10/70, while that of the left eye was 3/200. For the correction of astigmatism, he was wearing a convex 5.00 D.C. in the right eye and convex 5.50 D.C. in the left eye. His glasses were not satisfactory, and he suffered from double vision. He could not remember mental pictures or read fine print.

After palming, swaying, flashing and blinking, his vision was temporarily improved and the double vision disappeared. He obtained a considerable amount of rest from the drifting swing. The universal swing was also a great benefit. His ability to read was improved by having him imagine the white spaces between the lines of black letters to be whiter than they really were. It helped when he imagined that he was painting the white spaces with white paint, alternately with his eyes closed and with his eyes open. His vision was very much improved by the imagination of the white centers of most letters to be whiter than they really are.

His visits were irregular. Nevertheless, on October 22nd, the, vision of the right eye had improved to the normal, while the vision of the left eye had improved to 15/70. With the aid of the retinoscope, it was demonstrated that the astigmatism of the right eye had entirely disappeared, while that of the left eye was very much reduced.

The histories of these cases indicate the possibilities of relieving all degrees of astigmatism without the use of glasses.

Emily C. Lierman and W. H. Bates, M.D., take this opportunity of wishing you a Merry Christmas and a Happy New Year.
They desire to thank you for your interest and hope that the Better Eyesight Magazine will be improved upon in the New Year.



Stories from the Clinic

The Christmas Party

***By* EMILY C. LIERMAN**



THE same Christmas spirit prevailed at our clinic last year as it had in other years. This time our tree was more beautiful than ever. Dr. Bates helped in selecting it, and it was so large and beautiful, that everybody at the party marveled at its splendor. Generous contributions from our friends made it possible to purchase appropriate gifts for our clinic family. Those who have had clinical experience will agree that the poor are not always willing to accept charity. They are more willing to give, and sometimes sacrifice a great deal. Even before many of these patients are cured of their own imperfect sight, much of their time is spent in helping others. They obtain test cards and other material and give them to those who need help for their eyes, but who cannot attend our clinic, because it is held during their working hours. Considering this attitude, it is necessary to use tact in extending our Christmas cheer.

Last Christmas, little Margaret Mary, who was under treatment for squint, held the interest of every child and mother present. Even the private patients forgot their eye troubles to watch this happy little girl. The dolls were placed on a table near the tree with its many colored lights. Each little girl was asked to choose her doll, as they were all different. There was one doll in the group that was not so pretty as the others, and I feared very much that she would not find a mother. I had a mental picture of her being left behind while some other doll or toy was chosen. It was Margaret Mary's turn to choose, and she held her breath as she stood before the dolls. She looked at each one in turn, and then back to the plain little doll. For a few minutes she stood still. Suddenly her arms went out to the plain doll and she held it tightly to her. I shall always remember her expression as she chose it. It was one of mother love and I am sure everyone recognized it as I did.

Among the children was a boy, aged ten, whose father was a foreigner and could not speak very good English. This little chap had been coming to the clinic for some time before Christmas and was being treated for hysterical blindness. A note from his teacher explained why she had sent him to me. The school nurse said that he was mentally deficient. He knew the alphabet and could read numbers, but could not spell a word. The nurse and teacher were under the impression that glasses might help the condition of his mind, as well as his sight. His name was difficult for me to remember, so I called him Bobby. Bobby always kept his head lowered and his eyes almost closed while I talked to him. Until his third visit, his answers to my questions were unintelligible. His father was always ready to reply to the questions I asked Bobby, but I could not understand him either.

After many failures in trying to interest Bobby in the test cards with various letters and numbers, I turned to a large geographical globe in my room and began to turn it, at first slowly, and then more quickly. He watched me, raised his head and opened his eyes

wide. I observed him closely as his staring eyes, scarcely blinking, followed the turning of this strange thing that fascinated him. His facial expression changed and I knew that he was interested. Slowly he came toward the globe and gave it a turn or two himself. I was hoping he would do that, but his father apparently did not want him to touch it. He rose quickly from his chair and in a rough voice, ordered Bobby to be seated. Bobby's eyes again lowered and his head dropped. I had discovered one cause of Bobby's trouble. His father's harsh manner reacted upon the child's eyes. During my many years of clinical work, I have seen other fathers like him and, I am sorry to say, some mothers, too. Poor Bobby! I could not say much, but I would like to have requested the father to wait outside during the treatment, but he would not have understood.

Later Bobby made progress with the use of the Pot Hooks Card, which had the letter E of different sizes, pointing in various directions. After the third visit, Bobby's sight continued to improve and he learned to pronounce words and read them correctly.

At the Christmas party, Bobby's keen interest in the large Christmas tree and its many lights was a joy to see. There were games and toys for the boys, according to their ages, and silver stick pins and cuff buttons for the young men. Bobby was standing near the toys and games, and was asked to choose his gift. He disappointed us all by choosing a pair of cuff buttons. He smiled with gratitude and we knew that he was pleased.

Bobby did not return for any more treatment, but his mind had improved with the improvement of his eyesight, and he no longer lowered his head and eyes when spoken to. I felt that something real had been accomplished.

Among others at our Christmas party, was a man who had been a brakeman on a train for some years. When his vision became so poor that glasses no longer helped him, and the loss of his eyesight endangered the lives of others, he was discharged by the company for which he worked. His family of five were in want and he could not find steady work.

He had come for his first treatment, two months before Christmas. He had progressive myopia, and even with glasses he could not see clearly beyond six feet. His vision was 10/100 with each eye. Toward the end of March, less than six months later, he was again working on the freight trains without glasses, and with almost normal vision. On his last visit, his sight had improved to 10/10 and his nervous condition was benefited at the same time.

At the Christmas party, he received a little gift for each member of his family and enough oranges and candy for all. As he left, he had tears of joy in his eyes.

The Cross-Eyed Fairy

***By* GEORGE M. GUILD**

FAIRIES are magnetic, attractive and pretty. They are usually free from care and trouble, and spend most of their time in dancing, singing and playing with nice little boys and sweet lovable girls. Their eyes are usually bright, sparkling, loving and kind. It is very unusual for a fairy to have any eye trouble. One warm summer night while I was asleep, some one whispered in my ear: "Have you seen the cross-eyed fairy?" Of all the fairies I had seen and I had seen many thousands, not one could I remember who was cross-eyed.

The whisper was so faint that it did not wake me, but it was sufficient to startle me and make me very restless. I imagined that I saw a fairy with cross-eyes and not only was one eye crooked, but her nose was also turned out of line. I tried many times, but it was not possible for me to get hold of the nose in order to twist it back to where it belonged. The fairy ran away, dodging behind bushes, trees, and flowers, just like a will-o-the-wisp. I searched everywhere in my dreams for the little sprite, but in vain.

When I woke up, I decided to visit the fairies and, if possible, have a talk with the cross-eyed fairy that evening. There was a full moon so bright that I knew that the dell where the fairies assembled would be almost as bright as though it were daylight. Soon after I arrived where the fairies were gathered, I sought the queen and found her. When she saw me, she asked me if I had seen the cross-eyed fairy. I told her that nothing could interest me more than to meet her. "Would it make you love the little fairy less," she asked, "if you saw her with cross-eyes?"

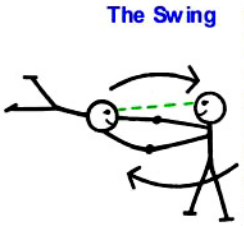
I answered, "No, please let me see her."

"Perhaps you would try to cure her by an operation?"

"Oh, no," I replied, "I would never do that!"

"Do you think glasses would help her? she asked.

The thought of a pretty fairy wearing large heavy glasses was repugnant to me. I told the queen that I had never known of anybody with cross-eyes who was cured by wearing glasses. I had seen many cured, but they had all recovered without the use of glasses and needed no operation.



Swing the child around by the hands clockwise, counter-clockwise, clockwise. Child looks up into parents eyes and also sees oppositional movement of objects in the visual field moving by in the opposite direction the body is spinning toward. Improves clarity of vision, gets the eyes relaxed, moving normal, straightens crossed, wandering eyes, activates, integrates left and right brain hemispheres, relaxes body, mind, eyes in a active, dynamic, fun state of mind.

The queen then led me to a part of the forest where the cross-eyed fairy had sought refuge from the pitying eyes of her friends. I had noticed that most cross-eyed people were extremely unhappy, and I had always tried to cure them and make them happy. The queen of the fairies remembered that I had always done something to relieve fairies who were unhappy. I had found that fairies suffered just as much as anybody else, and needed some help as well as mortals. The queen then took me to the cross-eyed fairy who lay on a soft bed of moss with her head and face turned away from the fairies who were curious. When I arrived, she was crying and sobbing continuously, suffering as only a sensitive fairy can suffer. Many of the other fairies tried in vain to comfort her. We were all overwhelmed with a great pity, but it was difficult to know what to do.

"How did she become cross-eyed?" I asked.

One fairy answered that she caught it from Mary, a four year old child who had visited her. I asked where Mary lived and went to see her. I found her living in a cottage on the shore of a lake. Her father and mother and brothers and sisters were all very nervous, so I persuaded them all to dance and play. **Mary enjoyed being thrown around in a circle fast and then faster, until her feet could not touch the floor.** One of the older boys held her hands in his, while he played this new game, of swinging her feet clear of the floor. When she practiced this swing, it made her laugh. She enjoyed it so much that she begged everybody to swing her. The Swing in its many different forms cures squint, cross/wandering eyes.

While swinging I told her to look upwards and her eyes became perfectly straight, temporarily. By practicing the swing more continuously her eyes remained straight for a longer time. She said that her eyes were not tired any more and she felt rested. I swung with her for hours, and then her father, mother and others relieved me and swung her feet from the floor, until late in the afternoon.

Before the moonlight appeared, I took Mary to visit the cross-eyed fairy. There she was, still lying on her face, and crying bitterly. Mary told her how she had been cured by the swing. The cross-eyed fairy stopped crying and listened attentively. All the other fairies listened, too, and then began to swing her until her feet were flying around without touching the ground. They all enjoyed this new game and were very gay. The fairy with the cross-eyes enjoyed it most of all and kept begging for more. She said that her eyes became straighter and straighter until they were almost cured. She said that it made her eyes feel better and she felt relaxed all over.

All the fairies became so happy over this, that they led me to a nearby hamlet where dozens of boys and girls had cross-eyes. At once the queen caught hold of a cross-eyed boy and swung him in a circle until his eyes became straight. I did the same to others, until all were temporarily cured. Then a wonderful thing happened. The cross-eyed fairy swung another child, the last one of all, until the eyes became straight, and then they were all completely cured, including the cross-eyed fairy. I visited them the next and many days later and found all of them completely and permanently cured.

Years later I returned to the little hamlet and found no more children with cross-eyes and everybody there was very happy.

ANNOUNCEMENT

Miss Katherine Hayes, of the Central Fixation Publishing Company, will be pleased to improve cases of imperfect sight by treatment without glasses at 303 West 122nd Street, New York City, Telephone—Cathedral 3450.

Questions and Answers

Q—What causes my vision to become blurred upon sudden confusion or when I have a number of activities coming at once?
A—The fact that your vision becomes blurred at such times is proof of your eccentric fixation. Do not try to see or do several things at once. Practice central fixation, seeing the part regarded best and other parts not so clearly, all day long.
Organize, make a list, then do one project at a time. Learn dexterity: use of left and right hands, feet for tasks.

Q—If bad eyesight is caused by some physical ailment, will your methods help?
A—Yes, relaxation is always a benefit, not only to the eyes, but to all the nerves of the body.

Q—My daughter, aged ten, is practicing your method for the cure of cross-eyes. Would it help to cover her good eye with a shield, which is easy for her and keeps the left eye straight for a certain period of time, besides making it work? It helped her so much when she wore glasses, that I thought it might help her without them in the same way.
A—It is first necessary to improve to normal the vision of both eyes, when used together. Then cover the good eye and practice improving the vision of the poor eye.

Q—I am sixty-five years old and, in addition to bifocals, I am wearing strong prism glasses for reading. These tire me and strain my eyes. Am I too old to be helped by your methods, and would the adjustment of my eyesight increase the dizzy attacks which I have had and which I dread most of all?
A—Age is not a factor in the cure of imperfect sight by my methods. Patients, eighty years and older, have become able to read fine print at six inches and have obtained normal sight for distance. Relaxation prevents dizziness and is beneficial to the entire system. (See December, 1925, number of "Better Eyesight" on **Dizziness**.)

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JANUARY, 1927

Demonstrate

1. That perfect sight is not possible unless one imagines a letter to be moving, and that an effort to imagine a letter stationary always fails. Close your eyes and remember a small letter of the Snellen test card. Imagine that some one is moving the test card a short distance from side to side so that all the letters on the card appear to be moving with the movement of the card. Remember the small letter moving. You can remember it provided you imagine it is moving. Now try to stop this movement by staring at one part of the small letter and imagining that it is stationary. The letter soon becomes blurred.

2. That the circular swing prevents the stare and relieves pain and fatigue.

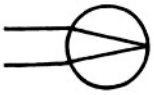
Hold the forefinger of one hand about six inches in front of one eye and a few inches to the outer side of the face. By moving the head and eyes in a circular or an elliptical orbit, notice that the finger appears to move in the direction opposite to the movement of the head and eyes. Now realize that the hand must move with the finger because the hand and finger are fastened together. When one moves, the other moves in the same direction, up, down, to the right or left. The same fact is true of the arm fastened to the wrist. When the finger moves, the hand, wrist and arm in turn, all move and in the same direction. Likewise when the finger moves, the shoulder moves with it and other parts of the body fastened directly or indirectly to the finger. You may soon become able to imagine the chair on which you are sitting to be fastened indirectly to the finger. When one moves, the other always moves in the same direction. When you become able to imagine all things, one at a time to be moving with the finger, i.e., the universal swing, the stare is prevented and pain and fatigue disappear. The memory, imagination and vision are also improved.
Distant objects will appear to move in the same direction the eyes, head, body move to.

Hypermetropia

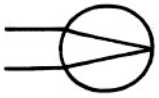
By **W. H. Bates, M.D.**

Definition

BY HYPERMETROPIA is meant a shortening of the diameter of the eyeball so that images are focused behind the retina instead of in front of it as in myopia. The vision for distant objects may be imperfect. Some writers have defined the hypermetropic eye as a far-sighted eye, because near vision is usually imperfect, while distant vision is usually good. The myopic eye is called near-sighted, because the vision is usually good at a near point.



Round Eye.
Light rays from distant objects focus on the retina.
Clear distant vision.



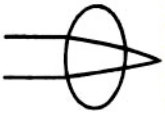
Slightly lengthened eye.
Light rays from close objects focus on the retina. Clear close vision.

Occurrence

Hypermetropia occurs more frequently than any other form of imperfect sight. Some statistics have shown that about eighty per cent of all people have hypermetropia. Hypermetropia is acquired by persons who strain their eyes to see at the near point. After the removal of the lens, as in cataract extraction, a high degree of hypermetropia is produced. It is not unusual for people to acquire hypermetropia at the age of forty or fifty, when presbyopia is prevalent. With few exceptions, all persons fifty years of age have acquired hypermetropia, to such an extent that they are unable to read without glasses.



Abnormal lengthened eye.
Light rays from distant objects focus before the retina.
Distant vision is unclear.
When the eye is lengthened too much (as shown in the diagram), close vision is also unclear.



Abnormal shortened eye.
Light rays from close objects focus behind the retina.
Close vision is unclear.
When the eye is shortened too much (as shown in the diagram), distant vision is also unclear.

Symptoms

Hypermetropia may cause much pain, headache, fatigue, and other nervous troubles. The vision at the near point is not so good in hypermetropia as in the normal eye, while the vision for distance is not impaired to the same extent. There are, however, a great many cases of far-sightedness, in which the vision for distance is much less than some cases of myopia. To classify cases of hypermetropia as being farsighted is not always correct.
The hypermetropic eye is not always a farsighted eye.

If the shape of the eye is progressively impaired: too long  too short  : light rays from close and distant objects focus incorrect before and/or beyond the retina resulting in unclear close and distant vision.

Cause

Hypermetropia is usually a functional condition of the eye, i.e., it is caused by a mental strain. There are, however, cases of hypermetropia which occur after the removal of the lens, as in cataract extraction; but even in these cases, mental strain to see at the near point always increases the hypermetropia. In all forms of hypermetropia, relaxation at the near point lessens the hypermetropia, whatever the cause may be. Knowing that the cause is due to a mental strain at the near point, the successful treatment of all forms of hypermetropia is suggested.

Treatment

All measures which prevent strain and promote relaxation are always beneficial. Hypermetropia responds to "strain" almost immediately. A strain at a near point always increases the amount of hypermetropia or produces it in the normal eye while **a strain to see at a distance lessens hypermetropia and the vision may improve and continue to improve until myopia is produced, when the vision is lowered.** When the lens is removed in the normal eye, the hypermetropia produced is still functional and curable.

The cure of hypermetropia is accomplished by lessening or correcting the strain to see at the near point. The correction of the distance strain is usually more readily accomplished. With perfect sight, there is no strain. The eyes are at rest. Any effort that is made to improve the vision is always wrong and never succeeds. When the vision is normal, the eyes are at rest.

Strain to see at the distance might cause the abnormal shortened eye shape (that causes far-sight/unclear close vision) to change to a round shape, then to the abnormally lengthened shape that causes unclear distant vision. If the shape is not lengthened too much, then, the eye will be in the slightly lengthened shape that is normal for clear close vision. Continued strain to see at the distance (and at any distance) will eventually cause increased abnormal eye shape and unclear vision at all distances.

A strain to see up close might cause the abnormally lengthened eye, that causes unclear distant vision to become more/closer to the round shape needed for clear distant vision, thus producing clear distant vision.
This strain will also eventually lead to unclear vision at all distances.
Some people use eyeglasses for the wrong distance (Example: close vision, plus lenses for distant…) in an attempt to force the eye muscles to change the eyes shape and produce clear vision. This results in extreme eye muscle tension, malfunction, confusion,

strain in the brain, eyes, visual system, unclear vision at all distances and can cause cataracts and other eye problems. Straining to see at any distance, and use of eyeglasses is unnatural.

Avoid eyeglasses. Do not strain the eyes at any distance.

Use relaxation, Bates Method and vision will become clear naturally.

Imagination

Demonstrate that perfect sight is accomplished when the imagination is good, and that you see only what you imagine you see. Take a Snellen test card and hold it at a distance from your eyes at which your sight is fairly good. Look at the white center of the large "O" and compare the whiteness of the center of the "O" with the whiteness of the rest of the card. You may do it readily; but if not, use a screen, that is, a card with a small hole in it. With that card, cover over the black part of the letter "O", and note the white center of the letter which is exposed by the opening in the screen. Remove the screen and observe that there is a change in the appearance of the white, which appears to be a whiter white, when the black part of the letter is exposed. When the black part of the letter is covered with a screen, the center of the "O" is of the same whiteness as the rest of the card. It is, therefore, possible to demonstrate that you do not see the white center of the "O" whiter than the rest of the card, because you are seeing something that is not there. When you see something that is not there, you do not really see it, you only imagine it. The whiter you can imagine the center of the "O", the better becomes the vision for the letter "O", and when the vision of the letter "O" improves, the vision of all the letters on the card improves. The perfect imagination of the white center of the "O" means perfect imagination of the black, because you cannot imagine the white perfectly, without imagining the black perfectly. By practice you may become able to imagine the letter "O" much better than it really is, and when this is accomplished, you become able to actually see unknown letters.

Test Card Practice

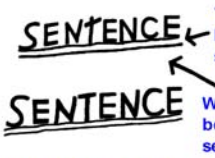
Practice with the Snellen test card at ten feet. Regard the known letter and imagine that you see it. Your imagination of the letter may be imperfect with your eyes open. Then close your eyes and the letter may be remembered more perfectly. Open your eyes for a second and imagine the known letter on the card at ten feet, close the eyes quickly and remember the known letter better for part of a minute. Then when the known letter, with the eyes closed, is remembered perfectly, open your eyes and imagine it on the card. By doing this alternately, the imagination of the known letter, with the eyes open, improves, until you become able to imagine you see the known letter clearly enough to tell what it is. If you become able to imagine you see the known letter quite clearly, you actually can see the unknown letters and read the whole line.



Sway left and right in front of a eyechart and distant objects and see The Swing: the eyechart moves in the opposite direction the body, head, eyes move to. Distant objects appear to move in the same direction the body, head/eyes move to. The eyechart moves over the background, distant objects. The chart and distant objects move against eachother in opposite directions.

Swinging

It is also beneficial while practicing this method to sway the body, head and eyes, a short distance from side to side, and imagine the card and the letters to be moving in the opposite direction. It may help you to imagine the card moving by regarding the background close to one vertical edge of the card. By swaying from side to side the edge of the card appears to move over the background. The shorter the movement of the body, head and eyes, the shorter is the movement of the card and the better is it remembered, imagined or seen. **The short swing is more beneficial than the long swing**. It is necessary to realize, however, that it doesn't require much of a strain to stop the short swing and blur the whole card. When the short swing stops, you should increase the swing or the swaying of the body from side to side, until the card can be again imagined to be moving. This combination of swaying, memory with the eyes closed, and imagination with the eyes open, is a cure for hypermetropia.



The Thin White Line also appears directly above, along the top of the sentence. The thin white line above and below sentences is the combined halos of the top and bottom of the letters in the sentences.

Fine Print

When the vision for distance becomes nearly normal, the vision at the near point can then be improved to normal. Hold a card of fine print about ten inches from the eyes. Do not look directly at the letters. Imagine that where the bottom of the letters comes in contact with the white space between the lines, that the whiteness is increased, and with practice your can become able to imagine a thin, white line, which is below the letters and whiter than the rest of the white space. When this thin, white line is imagined white enough, the letters are imagined black enough to be read.

If you fail to imagine this thin, white line, with your eyes open you may be able to imagine it with your eyes closed. Then open your eyes and imagine it as well as you can. Close your eyes and remember or imagine the thin, white line whiter. Then bring the card up an inch or two closer and imagine the thin, white line as well with the eyes open as you can remember it with the eyes closed. By alternately remembering, with the eyes closed, the thin, white line quite perfectly at ten inches, it becomes possible to imagine it with the eyes open at nine inches or six inches, or even nearer, and to imagine it as well with the eyes open as with the eyes closed. When you become able to imagine the thin, white line as well at six inches with the eyes open, as you can remember it with the eyes closed, the hypermetropia is usually corrected. This treatment has cured hypermetropia of 16 D.S.

Central Fixation

The following case illustrates the possibilities of the cure of hypermetropia by treatment without glasses.

Mr. George, aged thirty-five, was employed as an assistant in a library. His vision without glasses was only 5/200, with convex sixteen diopters his sight was improved to 20/50. A second pair of glasses, convex 20 diopters was required to enable him to see to read and do his work.

An operation had been performed some years previously for the removal of congenital cataract. This case was apparently one which was not curable. However, he was given relaxation treatment to find out how much benefit could be obtained.

After closing his eyes and resting them for half an hour, his vision without glasses improved to 20/200 which continued only for a very short time, a few seconds. He demonstrated that concentration, trying to see by an effort, always lowered his vision very quickly. Blinking frequently, or palming, i.e., covering his closed eyes with the palms of both hands, was restful and his sight improved temporarily. He became able to imagine one part best of a large letter, while the other parts of the letter were seen worse, i.e., central fixation. He demonstrated that the practice of central fixation was restful, easy, required no effort, and always helped his sight.

After he regarded a Snellen test card which was moved an inch or less from side to side, he became able by practice to imagine the small letters of a stationary Snellen card to be moving or swinging. With the help of this movement central fixation was demonstrated until his vision improved continuously to 20/40, a vision which was better than that with his strong glasses.

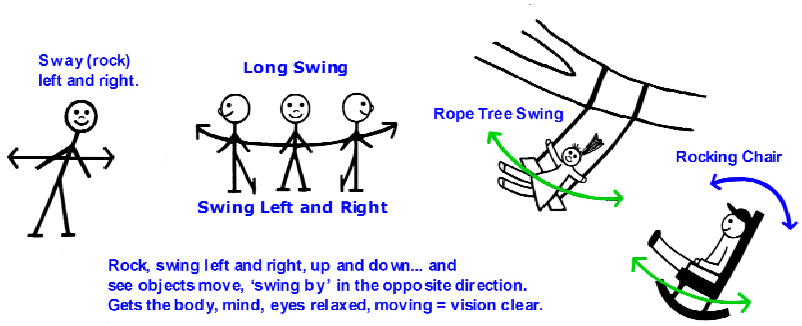
This unusually good result was an encouragement to attempt to improve his vision for reading. When tested with the fine print, diamond type, he demonstrated that with the card held at two feet he read no letters, but the white spaces between the lines of black letters could be imagined whiter than the rest of the card and without effort or strain. By practice, with his eyes closed his memory or imagination became better than with his eyes open, It was suggested that he keep his eyes closed for part of a minute while remembering the whiteness of snow and to imagine it with his eyes open for only a short time. By alternating, his imagination with his eyes open improved for the whiteness of the white spaces and for the blackness of the letters. His vision became better for the diamond type at six inches than at twelve inches.

Stories from the Clinic

The Swing

***By* EMILY C. LIERMAN**

RECENTLY I had the pleasure of talking to a large gathering of people in Chicago who were interested in the Bates Method. I was very much impressed by the fact that there was not a corner or part of the large room that was not lighted. As I watched the people coming in, I noticed an air of cheerfulness about them which attracted me. The meeting was held in the office of Dr. Jean Claverie who is very successful in treating and curing patients by the Bates Method. A number of doctors mingled with patients and their friends in the audience. After the lecture, several important questions were asked which helped all of those present to better understand the Bates Method. It was not difficult to determine those in the audience who knew nothing about the Bates Method, and the benefits that could be derived from it, as they were wearing glasses and the more I talked, the more they stared at me. This staring was an unconscious act on the part of these people. I told them about the various ways in which patients could be relieved of their eye strain, and spoke of those who stare and the suffering it caused. I added that there were quite a number who were listening to me who forgot to blink their eyes. It was interesting to watch the blinking habit begin. I mentioned the fact that those who did not have trouble with their eyes, blinked unconsciously and irregularly all the time, except when they were asleep. It was surprising to me and to Dr. Edith T. Fisher and Miss Elisabet Hansen, both students who were also present, to note how few there were who continued to stare after I brought this fact to their notice.



There were several school teachers there who asked me questions which I enjoyed answering, not only for their benefit but also for the benefit of others whom I knew were skeptical by the expression on their faces.

One teacher asked: "Should I apply the swing to the class in general or instruct each pupil separately?"

I answered: "Have them all stand up and sway together with you. Be sure to have them blink their eyes as they sway."

Benefits

The body swing, which is so relaxing and helpful in relieving all strain of the body as well as of the eyes, is similar to the movement of the eyes themselves. When the eye blinks, it also moves slightly from side to side, without effort or strain. Dr. Bates has proved that when the eye is at rest, it is moving. I have observed many people in great pain and have recognized the fact that they do not blink often enough. Not knowing that blinking is a good habit, they stare and make their condition worse. Staring

brings on more tension, therefore the pain becomes more intense. When the patient is reminded not to stare and is told to move the head slightly from side to side, even though he cannot move the rest of his body, he becomes relaxed and soon falls asleep. Moving the head from side to side on the pillow is in the nature of the swing. Many patients erroneously believe that they have to sway the whole body, in order to produce the relaxation necessary for the relief of eye strain. I believe that the swing is just as essential to the human body as it is to animals. **It is a good plan to watch the animals and learn a lesson from them**. The tiger and lion as well as other animals move most of the time while they are awake, and are, therefore, relaxed. The elephant sways his bulky body from side to side, because it rests him.

Children are often moving, active, They are in a state of deep or active 'dynamic' relaxation. Watch a child that has clear vision and you will get a free Natural Eyesight Improvement lesson. Notice the natural, easy way their eyes shift, see the '**moving twinkle**' **in their eyes.** Don't let them know you are paying attention to their eyes because this will make them conscious of their eyes and that disrupts complete, natural eye shifting.

People who work in offices, department stores and other places of business can practice a short, easy swing of their bodies. The movement can be so slight as not to be conspicuous to others. It is always interesting to watch soldiers march and observe the sway of their bodies in unison with the rhythm of the music. A mother who is busy with her household duties is always grateful for the few minutes of rest and relaxation she obtains when rocking the baby. A baby in its cradle enjoys the movement of the rocking. If the heart stops beating, which is really a sway inside the body, the blood no longer has a chance to flow nor the pulse to beat. If the pendulum of the clock stops, the clock does not tell the time. In my opinion the swing is as great a blessing as the sunshine. Just as the benefit of the sun is lost, when wearing dark glasses or green shades, so is the swing lost by staring and straining.

A few months ago I treated and cured an interesting case of cataract. The patient, an old lady of sixty-eight, was a chronic invalid, most of her body being paralyzed. The sun treatment was a great relief to her and she liked to sit in her chair and have the sun shine on her closed eyelids, as she moved her head gently from side to side. While the light and heat of the sun was very beneficial and helped her to relax, the movement of her head, which I shall call the swing, gave her more relaxation than when she held her head still.

In the beginning of her treatment, I was not sure that I could cure her, because of her helplessness. Her crutches were constantly by her side and she needed help in order to go from one place to another. When I first saw her, she had just been told that an operation for the removal of the cataract would be necessary within a few months. I had great hope for an improvement in her condition because she enjoyed the sun treatment.

She had been skeptical that her eye trouble could be cured, but when I had her demonstrate the benefit of the swing as she sat in her chair, she had more confidence. She soon became more cheerful and there was a change not only in her eyes but in the expression of her face. Keeping up the sway of her body, moving from left to right as she sat in her chair, soon enabled her to hold one crutch with her crippled hand, place it under one arm and then take the other crutch, lean forward and place it under her other arm. Continued practice of the sway from her waist line up, enabled her to stand by herself and walk slowly with the aid of her crutches.

Temperamental Strain

By **L. M. STANTON, M.D.**

NEW YORK

IT IS more natural to do things, both good and bad, unconsciously than consciously. Yet the road of progress is the reverse of this, and perhaps there is no felicity greater than that of translating unconsciousness into consciousness. Were a dog capable of it, he would be altogether human and no longer a dog.

Dr. Bates has well said—and what does he not say well?—that it is easier to strain unconsciously than consciously, and in order that we may deplore and so correct it, he advises us to prove it for ourselves. Ninety-nine per cent of those who suffer from poor vision are unaware that they strain in seeing and to convince them of it is not an easy task.

In spite of what has been written of strain and relaxation, we are still far from able to accomplish the one and avoid the other. In the matter of relaxation relating to vision, we practice the exercises given us in the Bates Method. That is, after learning what the eye does and does not do in order to see, we consciously imitate the unconscious behavior of the normal eye. As perfect sight is due to the absence of straining to see, we speak of these exercises as relaxing exercises. But on observing the vast difference in the results of these exercises upon our patients, we ask why this difference? Why is it that we get quick cures, rapid progress in one case and not in another, when apparently the exercises are practiced by both equally well? Dr. Bates repeatedly states, whether speaking of palming, shifting or swinging, that the practice can be done in the right or in the wrong way. In the successful case, the patient overcomes his strain, does the exercises easily, while in the unsuccessful case the element of strain remains—he does not do the exercises easily, his straining is yet to be realized, to be brought from unconsciousness to consciousness and dealt with. One who has only the strain in his eyes to contend with progresses rapidly, while one who has to detect the strain in himself has a harder task.

There are, then, two avenues of approach to normal sight, one through one's eyes and the other through one's self. The subject of strain in ones self, the temperamental strain, is vast and to do more than call attention to it in this article for Better Eyesight is impossible. I will, however, relate a few cases and some of my own experiences that may be suggestive. The experiences point to temperamental and the patients to simple visual strain.

On returning city-wards one evening, I had been reading comfortably on the train. When nearing the station, the train was delayed for some time by the home-going commuters. My eyes soon began to trouble me in an unaccountable way. I asked myself what was the matter, since they should have hurt me less in a quiet than in a jolting car. I found that while giving attention to what I was reading, I was at the same time anxious over the thought that I would be late for dinner, and that I had promised the cook an early dinner with an evening out; also that I had to visit a patient before returning home to my belated meal. In other words, I was mentally trying to give equal attention to several things at the same time. I was straining. It was as disrupting as trying to watch a Three Ring Circus. I could in a moment produce discomfort in my eyes not only by anxious thought, but by ungoverned, disorderly thinking.

On another occasion when reading a sign across the car there was one word I could not see in spite of blinking, swinging, etc. Suddenly the lights went out for an instant and when they came on again, I instantly saw the unseen word. The momentary rest to

my vision gave me the relaxation I had not otherwise obtained. I had been straining, but when the matter was taken out of my hands, the strain vanished and I saw.

A boy, ten years old, with slight convergent squint and a history of very marked squint when younger, could read 10/10 with the left eye, but only 10/70 with the right. The diamond type card he could not read at any distance with the right eye. With the left eye covered, the letters below 10/70 were seen gray with the right, the amblyopic eye, but when he imagined the letter swinging, which he very *easily* could do, he saw them black and soon could read the 10/30 line. It was the "easily" in his case that worked the miracle.

Another boy could not form a mental picture of his dog, but when he remembered one of the dog's legs, then another, when he thought of his back, then of his tail, and told me whether the latter was straight or curled, whether the color of the tail was the same as that of the back, his mental picture was much improved and so was his vision. The delight that this boy *felt* in his reconstructed dog was an important factor in his mental picture.



A boy shifts part to part on a mental picture of his dog, remembering, imagining the color, shape, size.... of different parts of the dog. His memory of the dog becomes perfect and this relaxes his mind, eyes causing his vision to become clear.

A man found that salmon fishing was an excellent mental picture, that he could hold it while looking at the card and could with great joy imagine the salmon jumping the rapids, thereby improving his eyesight. It was not only his imagination, but his *emotion* that had overcome his straining vision.



A man enjoys salmon fishing. He can easily remember, imagine a perfect, clear mental picture of himself in color, motion, action, fishing for salmon, in a happy, positive state of mind while looking at the eyechart. His vision becomes clear.

Now let us suppose three other cases with refractive errors paralleling the three just mentioned but i5n respect to temperament quite different. The first boy, we will say, cannot easily swing the letters, seeing them black, nor can he do anything with ease; the second boy's dog is not his comrade and he has no delight in a mental picture of him; the man cares nothing for nature and takes no pleasure in the leaping salmon. Here we have psychological problems, temperamental insufficiencies, to meet before the relaxation is established that cures the imperfect vision of these patients, and yet physical sight is no whit worse in the latter than in the former group.

If only we could give up, let go, let the thing be done for us, of how much strain would we rid ourselves! What a difference between trying to do a thing and doing it; between trying to see and seeing!

Questions and Answers

All readers of this magazine are invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

Q—(1) Does working by artificial light affect the eyes? I work all day by electric light—am a book-keeper, and suffer a great deal from my eyes. I have been fitted with glasses, but cannot wear them. I feel that my eyes, instead of getting better from wearing them, get weaker.
(2) When I go out in the street after working I cannot stand the glare of the sun, and must keep my eyes half closed; otherwise I suffer a great deal of pain. Is it so because of my eyes being accustomed to the artificial light? It is not so on Sundays. (
3) Is it advisable to wear an eye-shade while working?—S. S.
A—(1) Working by artificial light should not injure the eyes. If it does, it is because you are straining them. The idea that the light is injurious may cause you to do this. If you think of it as quieting and beneficial, it may have the opposite effect. You are right in thinking that the glasses injure your eyes.
(2) The sun hurts your eyes when you go out on the street after working because you have been straining to see, not because you have been working by artificial light. Because you strain less on Sundays the sun does not hurt you.
(3) It is not advisable to wear an eye-shade while working.

Q—Can the blindness of squint be cured?—F. C. E.
A—Yes. It can be cured by the same methods that are employed to relieve strain in other cases of imperfect sight.

Q—Do you get as much benefit from gazing at the sun through a window as you would outdoors? I have read that it did no good to take a sunbath through glass.—E. C. H.
A—Yes. The strength of the sunlight is not appreciably modified by the glass.
Modern teachers state that; all glass, plastic... (windows, eyeglasses) block part of the suns light spectrum resulting in unbalanced, unhealthy, partial spectrum light entering the eyes, brain, body. This impairs health, function of the eyes, brain, body, left and right brain hemispheres, sleep, hormones, other body systems and clarity of vision. Sunlight through a window is better than no light but pure full spectrum sunlight is best.

Q—1. **When objects at a distance clear up they are double**. Can you suggest a remedy for this double vision?
(2) When I open my eyes after palming my sight gradually clears, but an intense pain often comes in my eyes, so that they close. The pain always starts with very clear vision. Is this eyestrain?—H. M.
A—1. If the objects are double when they clear up, relaxation is not complete, and the only remedy is to secure a greater degree of relaxation. This may be done in many ways. Use the method you have found most effective.
2. Yes. Your sight should be best when you open your eyes. If it clears up afterward, it is because you are making an effort to see. This produces the pain.
Seeing objects slightly double as vision is improving is common. The eye muscles are relaxing, returning to normal function, the eye, cornea, lens, is changing back to normal shape. The brain, left and right hemispheres are relaxing, returning to correct

function, integration. This can cause a slight temporary astigmatism/double effect. Keep shifting, central fixation, relaxation and the double effect will correct itself, double images will merge into one perfect clear image.

Q—1. How long should one palm and how often?
2. How young a patient can you treat by this method, and up to what age can you expect results? How would you handle a child that did not know its letters?
3. Is astigmatism curable by this method?
4. How long has the method been known?—J. H. W.

A—1. As often and as long as possible.
2. The age is immaterial. It is a matter of intelligence. Patients as old as eighty-two have been relieved. Children can be treated as soon as they are able to talk. Any small object can be used for eye training, and in the case of children who do not know their letters, kindergarten and Montessori equipment is often useful.
3. Yes.
4. Its evolution began thirty-five years ago. (1892) It has improved as experience was gained, and is still improving.
Bates Method is the natural, normal function of the eye: It has been in existence since the beginning of life, evolution of the eye in animals and humans.

The Use Of The Sun Glass

In using the sun glass, it is well to accustom the eyes of the patient to the strong light by having him sit in the sun with his eyes closed, and at the same time he should slowly move his head from side to side, in order to avoid discomfort from the heat. Enough light shines through the eyelid to cause some people a great deal of discomfort at first, but after a few hours' exposure in this way, they become able to gradually open their eyes to some extent without squeezing the lids. When this stage is reached, one can focus, with the aid of the sun glass, the light on the dosed eyelids, which at first is very disagreeable. When the patient becomes able to open the eyes, he is directed to look as far down as possible, and in this way the pupil is protected by the lower lid. Then by gently lifting the upper lid, only the white part of the eye is exposed, while the sun's rays strike directly upon this part of the eyeball. The sun glass may then be used on the white part of the eye. Care should be taken to move the glass from side to side quickly. The length of time devoted to focusing the light on the white part of the eye is never longer than a few seconds. After such a treatment the patient almost immediately becomes able to open his eyes widely in the light.
The light through the sunglass is constantly moving and is used for a short time to prevent the sun from burning the eye.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

FEBRUARY, 1927

Dizziness

DIZZINESS is caused by eyestrain. Some people when standing on the roof of a house looking down, strain their eyes and become dizzy. Usually the dizziness is produced unconsciously. It can be produced consciously, however, by staring or straining to see some distant or near object.

Other people, when riding in an elevator, become dizzy and may suffer from attacks of imperfect sight with headache, nausea, and other nervous discomforts.

An old lady, aged sixty, told me that riding in an elevator always made her dizzy, and produced headaches with pain in her eyes and head. I tested her vision and found it to be normal both for distance and for reading without glasses. To obtain some facts, I rode in an elevator with her from the top to the bottom of the building and back again. I watched her eyes closely and found that she was staring at the floors which appeared to be moving opposite to the movement of the elevator.

I asked her why she stared at the floors which appeared to be moving by. She answered that she did not like to see them move, and was trying to correct the illusion by making an effort to keep them stationary. She said the harder she tried, the worse she felt. I suggested that she look at one part of the elevator and avoid looking at the floors. Her discomfort was at once relieved, and she was soon cured.

In all cases of dizziness, the stare or strain is always evident. When the stare or strain is relieved or prevented, dizziness does not occur. With advancing years attacks of dizziness and blindness occur more frequently than in younger individuals. All attacks of dizziness with blindness are quite readily cured by practicing the imagination of the swing, the memory of perfect eight, or by palming.

A stiff neck, limited neck movement, stiff, tense muscles, joints, limited body movement can cause different types of dizziness. Relaxation, movement, correct posture cures the dizziness.

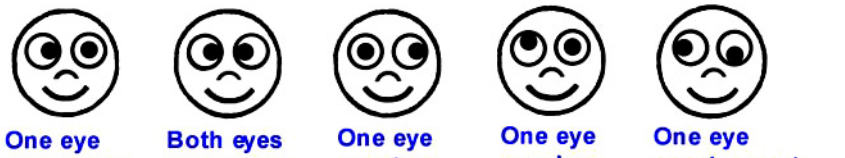
Tense muscles in the shoulders, neck pull on the vertebrae, brain stem, nerves, blood vessels that travel to the eyes, ears.., causing dizziness, even vertigo in extreme cases. Eye and ear muscle tension, unclear vision, floaters, spots... in the visual field, crossed/wandering eyes, ear ringing, headaches result.
Misaligned vertebrae in the neck caused by a bad chiropractic treatment caused the author of this book vertigo, dizziness and a variety of vision problems. Conditions improved after new, good chiropractor treatment, physical therapy, better posture.
Incorrect posture, looking down at computer keys all day or pushing the head/neck forward.., holding the arms up or in other positions that lead to tension causes the muscles in the shoulders, back, neck, head, chest to become tense. Chronic muscle tension, strain, knots... in the muscles occur. Vertebrae can be pulled out of alignment in the neck. Another pair of muscles that cause dizziness, lowered vision is the muscle that attaches to the bone behind the ears, back/side of the neck and travels down to the front of the chest attaching to the collar bone. Massaging these and the other muscles helps to prevent tension.

Squint
(Strabismus, Crossed, Wandering Eyes)

By **W. H. BATES, M.D.**

SQUINT is a condition of the eyes in which both eyes do not regard one point at the same time. It is very common, and more prevalent among children than adults. Many cases improve with advancing years, while others may become worse. Squint may occur at the same time with myopia, astigmatism, or hypermetropia, or with any disease of the inside of the eye.

Different types of Squint - Strabismus - Crossed, Wandering Eyes.



One eye crossed in. | Both eyes crossed in. | One eye wanders out. | One eye wanders up. | One eye wanders out, other eye down.

Other variations of incorrect eye movement can occur and it can change, alternate. A person with squint can learn to move their eyes in any direction and to control, manipulate double images of a object (candle flame...) and this can teach them how to avoid the tension, strain that causes incorrect eye movement and to remove the Squint.

Symptoms

In squint, one eye does not look in the same direction as the other. For example, the left eye may look straight at the Snellen test card with normal vision, while the right eye may turn in toward the nose, and have imperfect sight. The squint is variable in some cases. At times it may be less or disappear altogether, while at other times it may be more pronounced. In some cases of squint, the patient is conscious of the strain. When the eyes turn in, he may be conscious that his eyes are not straight. When the eyes are nearly straight, he is usually able to realize that the eyes are not so strained.

Cause

The cause of squint in all cases is due to strain. **When the eyes are under one kind of strain, they may turn in, and with a different strain, they may turn out, or one eye may be higher than the other, all caused by strain**. The relief or cure of one kind of strain relieves or cures all forms of strain. Squint in any form is always benefited by rest.

Various cures for crossed/wandering eyes

Rest

The best treatment for squint is mental rest. Many patients with squint suffer very much from eyestrain. By closing the eyes and resting them, or by palming for a few minutes or longer, about ten times a day, most of these cases are cured without other treatment.

Patch

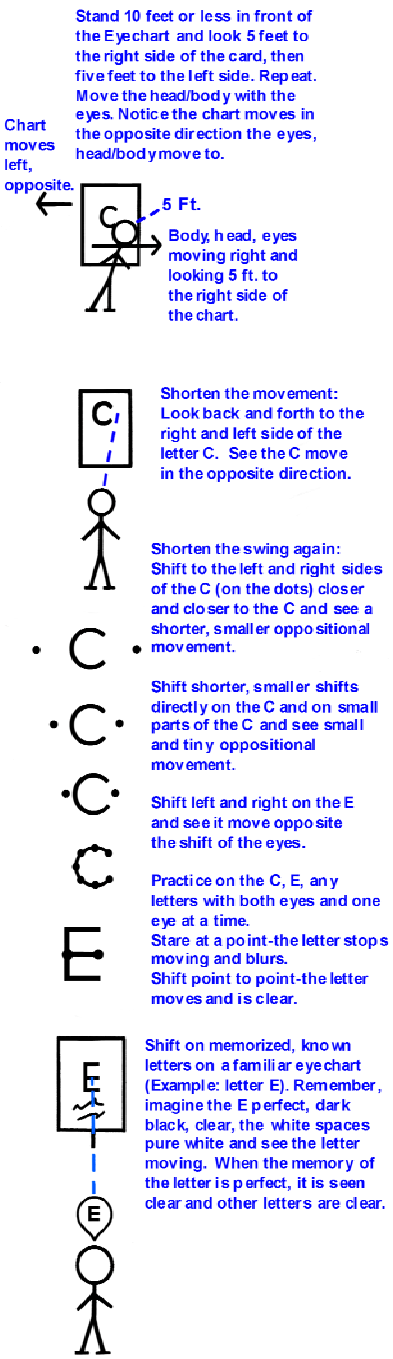
Eyepatch



In many cases, the squinting eye has imperfect sight. When the eyes are examined with the ophthalmoscope, no change can usually be discovered in the retina. Such cases have what is called "amblyopia ex anopsia." Some cases are **benefited by wearing a patch over the good eye, so that the patient is compelled to use the squinting eye for vision**. After several weeks or months, the vision of the squinting eye may become normal by constantly wearing a patch over the good eye. **Many cases of squint are cured in this way.**

Swinging

The strain, from which so many of these patients suffer, is benefited by the **swing**. Almost all squint cases can be taught to imagine, while the good eye is covered, that stationary objects are moving. In cases where the swing of stationary objects is not readily accomplished, any of the following methods may be effective:



1. The forefinger is held about six inches in front of the face, and a short distance to one side. By looking straight ahead and moving the head from side to side, the finger appears to move. This movement of the finger is greater than the movement of objects at the distance, but, by practice, patients become able to imagine not only the finger to be moving, but also distant objects as well.

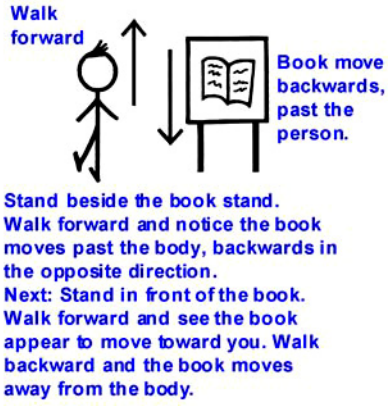


2. The patient may stand about two feet to one side of a table on which an open book is placed. When he steps one or two paces forward, the book and the table appear to move backward. When he takes two or more steps backward, the table and the book appear to move forward

3. The patient stands in front of a window and looks at the distant houses. By swaying his body from side to side, the window, the curtains, or the curtain cord may be imagined to be moving from side to side, in the opposite direction to the movement of his body, and the more distant objects appear to move in the same direction that he moves his head and eyes.



4. The patient stands ten feet or less from the Snellen test card and looks to the right side of the room, five feet or more from the card. When he looks to the right, the card is always to the left of where he is looking. When he looks to the left side of the room, the card is to the right of where he is looking. By alternately looking from one side of the card to the other, the patient becomes able to imagine that when he looks to the right, everything in the room moves to the left. When he looks to the left, everything in the room appears to move to the right. After some practice, he becomes able to imagine that the card is moving in the opposite direction to the movement of his eyes. This movement can be shortened by shortening the movement of the eyes from side to side.
(Oppositional movement)



5. When the patient regards the Snellen test card at fifteen feet or nearer, and looks a few inches to the right of the big "C", the letter is always to the left of where he is looking. When he looks a few inches or further to the left of the "C", it is always to the right of where he is looking. By alternately looking from right to left of the "C", he becomes able to imagine it to be moving in the opposite direction. By shortening the distance between the points regarded, the swing is also shortened. The patient is encouraged to practice this swing with the good eye covered. When the swing is practiced correctly, there is always a benefit to the vision and squint.
Practice shifting left and right on the letter **E**.

Memory

Some patients are very much benefited by being encouraged to remember the letters on the Snellen test card perfectly, i.e., to remember the black part of the letter perfectly black and the white part perfectly white. When the memory is perfect, it is possible for the imagination to be perfect. This being true, the patient becomes able, by practice, to imagine he sees each and every letter of the Snellen test card, and to imagine them to be moving. The movement of the swing can be stopped by staring at one point of a large or small letter, with the result that the vision is always lowered and the squint becomes worse. When the patient becomes able to imagine known letters perfectly, he is soon able to imagine the letters of a strange card perfectly. **When the letters are imagined perfectly, they are seen perfectly. Practice with a familiar card, or with a card whose letters are remembered, is one of the best methods known for curing the imperfect sight of squint and the squint itself.**

Central Fixation

Another satisfactory method is to have the patient practice central fixation, or seeing best where he is looking, and seeing worse where he is not looking. **In practicing central fixation, it is necessary for the patient to shift constantly and to blink frequently**. To teach a patient central fixation, his attention is called to the fact that when he looks at the top of the card, he can distinguish the large letters, but the letters on the bottom of the card cannot be distinguished. When he looks at the bottom of the card, he sees the small letters where he is looking, better than the large letters on the upper part of the card, where he is not looking.

Eccentric Fixation

Some patients have what is called "eccentric fixation", which is the opposite of "central fixation." Such patients see best where they are not looking. Eccentric fixation can always be demonstrated to be present when the vision is imperfect, or when the squint is manifest. To cure eccentric fixation, it is necessary to demonstrate these facts, and by practicing with the small letters, the results are usually good. The patient is told to look at the first letter on the bottom (left) line of the Snellen test card, which may be read at ten feet or nearer, and have him note that the letters toward the right end of the line are blurred or not seen at all. By alternately shifting from the beginning of the line to the end of the line and back again, the vision is usually improved, because eccentric fixation is lessened by this practice. Sometimes, it is necessary for the instructor to stand behind the card and watch the eyes of the patient, who may look a foot or more away from the letter that he is requested to regard with the squinting eye, while the good eye is covered. He may look a foot above or a foot below, or at some point a foot or more away from the letter which he is asked to regard. The instructor is usually able to tell when the patient is not looking at the letter desired. The instructor directs the patient to look down when he sees that the patient is looking too far up. The patient is directed to look to the right, when it is observed that he is looking too far to the left, and by watching him closely, the eccentric fixation can be corrected to such an extent that the vision becomes normal and the squint disappears.
Persons that have cataracts, macula degeneration, extreme blur and other vision impairments develop the destructive habit of eccentric fixation: to use the peripheral field of the retina, peripheral field of vision to see a object. This increases eye muscle tension… vision impairment. Central fixation and shifting cures this incorrect eye function.

Fixing Eye

A great deal has been said about the "fixing eye" in squint, i.e., the eye that looks straight. Sometimes the vision of the squinting eye may be very poor, and one would expect the patient to focus with the eye that has better vision. This is not always the case, because some patients with a high degree of myopia in the left eye will turn the right eye in and look straight with the left eye. These cases are very interesting, no two are exactly alike and one needs to study the individual case in order to obtain the best results.

Imagination



When a letter is imagined, remembered, 'guessed' correct, clear - it is seen clear.

There are some rare cases where the vision is perfect in each eye, and yet the patient will suffer from squint. One may have considerable difficulty in finding the method of treatment which will cure or relieve these cases. One of the best methods is to have the patient practice the imagination cure. The patient can look at a page of a book twenty feet away and not read any of the letters. If the letter "O" is the second letter of the fourth word and on the 10th line, the vision may not be good enough for the patient to recognize the letter, but he may become able to imagine it. If he imagines that the left side is straight, it makes him uncomfortable and the left side is not imagined perfectly black. If he imagines that the left side is curved, he feels comfortable and the left side appears clearer and blacker. By imagining each of the four sides of the letter "O" perfectly, the imagination of the letter is improved, but if one or more sides are imagined imperfectly, the patient is uncomfortable and the vision or the imagination of the "O" becomes imperfect. Some patients are able to imagine perfectly and are conscious when they imagine imperfectly.

In one case, a girl eleven years of age was able to look for half a minute at diamond type which was placed ten feet away, at a distance where the patient could not distinguish the letters. She then closed her eyes, palmed, and imagined correctly each letter that her mother designated. For example, her mother picked out the capital letter "M", the first letter of the fourth word on the 10th line. While palming with her eyes closed, the patient imagined the left side straight, the right side straight, the top open and the bottom open. I asked her if it could be an "H." She answered that it could, but that she could imagine an "M" better, which was correct. Some patients are able to use their imagination correctly and imagine small letters just as well as capital letters. In order to obtain perfect results, it is necessary that the eyes be perfectly relaxed, and when the eyes are relaxed, all the nerves of the body are also relaxed. Those cases of squint which become able to do this are soon cured.

Imagination of crossed images with the eyes closed is characteristic of divergent squint, i.e., squint with the eyes turned out. **The patient imagines the crossed images alternately with the eyes open and with the eyes closed**. When, by practice, the imagination becomes as good with the eyes open as with the eyes closed, the squint is usually corrected.

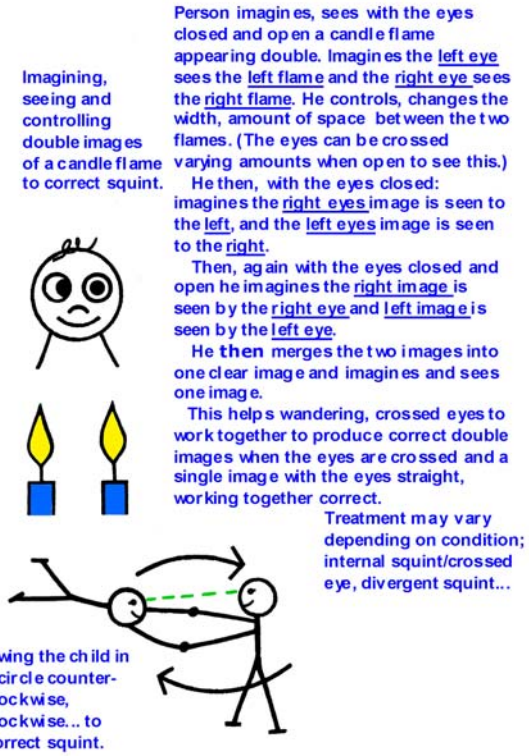
Double Vision

(Effective Cures for Squint: Imagining, Controlling Double Images)

After (in the event that) the usual treatment of squint has failed, it is well to teach such cases to see double. When the right eye turns in toward the nose and the left eye is straight, the letter or other object seen by the left or normal eye, is seen straight ahead, while the image seen by the right or squinting eye, is suppressed by an effort and is not seen at all. To teach the patient to see with both eyes at the same time requires much time and patience. When double vision is obtained, the image seen by the right eye is to the right, while the image seen by the left eye is to the left. We say that the images are seen on the same side as the eye which sees them. With the eyes closed, the patient is taught to imagine a letter, object or a light to be double, each image imagined to be on the same side as the eye with which the patient imagines he sees it. With an effort, the two images may be made to separate to any desired extent. By repeatedly imagining the double images with the eyes closed, the patient becomes able, with the eyes open, to imagine the double images to be separated a few inches or less, a foot apart or further.

Patients become able not only to imagine images with the eyes closed, apparently seen on the same side as the eye which imagines them, but also—and this suggests curative treatment—to imagine crossed images, that is, the right eye image is imagined to the left, while the left eye image is imagined to the right. With one or both eyes turned in, each of the double images is imagined on the same side as the eye which imagines it. When the images are crossed, the convergent squint is over corrected and the eyes turn out.

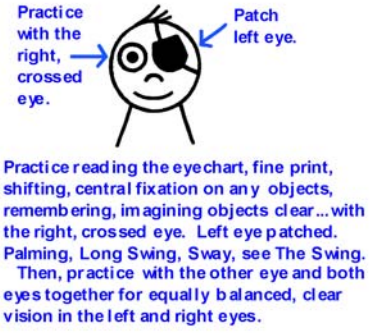
All this can at first be accomplished more readily with the eyes closed than with them open. **When the patient controls the separation of the images with the eyes open as well as with the eyes closed, the squint is benefited.**



Case Reports

I.

A boy, two years of age, had developed squint in his right eye several months before I saw him. He was just beginning to walk. At his first visit, I took hold of his hands and swung him round and round, until his feet were off the floor, and had him look up toward the ceiling. While doing this, his eyes became straight. The father and mother also took turns in swinging the child, and when he looked up into their faces, his eyes were straight. Every day, one or more members of the family would swing the boy around for at least five minutes. A year afterwards, the squint had not returned. Swing the child around in a circle counter clockwise, clockwise, counter clockwise…



II.

A girl, aged fourteen, had an internal squint of the right eye. The vision of this eye was very poor, and she was unable to count fingers at one foot from that eye. The vision of the left eye was normal. She was encouraged to **use her right eye by covering the left with a patch**. She did not like the patch, so the lenses were removed from their frame, and an opaque glass was placed in the frame for the left eye. The girl was very nervous and wearing the glass gave her continual trouble. Her playmates teased her so much that she deliberately dropped them in the snow. Her father talked to her and insisted that she wear the frame with the opaque glass all the time. When she realized that she must keep the good eye covered until she was cured, her vision immediately began to improve. In less than a week, she became able to read the ten line on the Snellen test card at twenty feet with each eye. She also became able to read fine print with the right eye, just as well as she could with the left. The realization that she would have to wear the glass until she was cured was an incentive for her to practice those methods which improved her sight. When she looked at the Snellen test card at one foot, and remembered that the large letter at the top was a "C", with the aid of her imagination, she became able to see the "C." When she closed her eyes and remembered a better "C", she was able, with her eyes open, to imagine it at a greater distance, three feet. In a short time, her vision improved to 20/200 by alternately remembering a better "C" with her eyes closed, and imagining it as well as she could with her eyes open in flashes. Palming was a help and improved her vision to 20/40. A few days later, her vision had improved to 20/20 with the aid of the swing.

III.

A young woman, twenty-four years of age, called to see me about her left eye which was causing her more or less pain. The left eye became very much fatigued when she tried to read. Her vision in that eye was 20/40. Her right eye had no perception of light and was turned in. A great many doctors had told the patient that the blindness was hopeless, and that nothing could be done to improve the vision of the right eye.

I had the patient practice the usual relaxation exercises, swinging, palming, ect. The vision of the left eye improved very rapidly, and, much to my surprise, the vision of the right eye also improved. After two weeks, during which the patient had received about six treatments, the vision of both eyes became normal. The right eye which had had no perception of light was sensitive now to a light reflected from the ophthalmoscope into her pupil. The pupil of the right eye always contracted when the light was turned into either eye.

The squint disappeared and she was able to see the same object, with both eyes, at the same time.

Stories from the Clinic

Case Reports

***By* EMILY C. LIERMAN**

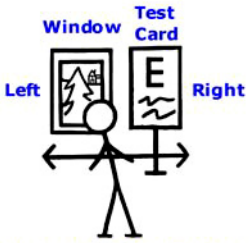
BEFORE knowing about the Bates Method, I did not think it possible that a person of seventy or more years could see without the aid of eye-glasses. After practicing the Bates Method, I discarded the glasses, which I had worn for thirteen years, and I have had good sight ever since.

Dr. Lilian Wentworth, of San Diego, Cal., who is now taking a course in the Bates Method, has brought several interesting facts to my attention. Her grandfather discarded glasses at the age of seventy-five, because he could not see with them. Living in the country, it was difficult for him to be fitted with suitable glasses for reading or distant vision. After being without glasses for a few weeks, he would read large print to while away the time. He had in his possession a book of psalms which was printed in rather large type, and he read this print daily to amuse himself. He then started reading the head lines of newspapers. This was very thrilling to him and the knowledge that he could do without his glasses caused him to boast to his friends about it.

Dr. Wentworth believes that we would be much happier if all of us would find something to occupy our minds. She urged her mother to take up glove mending at the age of seventy-five and her mother soon became successful with the work.

At the same time, Dr. Wentworth's mother conceived the idea of leaving off her glasses. She thought that she might become able to see and read without them just as her father had done at that age. An oculist had told her ten years previously, that she had incipient cataract of both eyes and that, in time, she would undoubtedly be forced to have the cataract removed by an operation. From the time she began mending gloves until she died, at the age of eighty-two, she did not use glasses again.

An operation had not been necessary because the **cataract had either disappeared or become absorbed**. That which interests me most in her case, is the fact that in glove mending it is necessary to use the finest silk or cotton thread obtainable. It was necessary for Mrs. Wentworth to make very fine stitches in mending the gloves or she would have failed. At all times her work was satisfactorily done and she was highly praised by those who gave her their work to do. Although she did not use glasses while working or reading, she put them on from time to time to test her ability to see with them. She complained that they did not fit her. In order to test her vision, she tried several times to find someone who could fit her with glasses, but was unsuccessful. She was always informed that there was nothing wrong with her sight.



Sway, swing the body left and right in front of a open window and eyechart. When moving left: look out the window, shift on a distant object. When moving right: shift for a 'fraction of second' on a letter on the test card, then move left and look out the window again. Repeat. Prevents staring, strain, blur.

I told Dr. Wentworth that I believed her mother had actually **cured herself of cataract by doing this fine sewing**. It is generally believed that fine work causes eyestrain, but it proved a benefit to her sight. Dr. Wentworth's mother enjoyed doing this work in her old age, and enjoying it, did not strain her eyes. I believe she forgot all about her eyes while using a fine needle and in making fine stitches.

Fine sewing is like fine print. If one strains to read fine print, one always fails; so it is with fine sewing. The more effort one makes while reading or sewing, without the aid of glasses or even with glasses, the more trouble one has in seeing. People with whom I have come in contact, who have had trouble with their eyes when reading, sewing or doing any kind of work with their glasses, were always better off without them, even though their vision was not good.

One of my patients, a woman, aged sixty-five, had myopia and cataract. Her vision was 6/50 in both eyes, in other words, she read the letters on the fifty-foot line of a test card, at six feet. **Palming** seemed most difficult for her to do. Closing her eyes to rest them helped temporarily, but when asked to read the same line of letters that she had just read, after having her eyes closed for a few minutes, she was unable to see the letters clearly enough to read them. I then realized that I must use another method, so I tried shifting. I had her **stand with her feet about a foot apart and swing her body to the left, as she looked out of the window off in the distance, then back to the test card, looking only at one letter that I was pointing to and then swinging her body, as she looked out of the window again.** Her vision in both eyes improved to the forty line. Shifting quickly from the test card, thus avoiding the stare, helped her to see all the letters clearly on that line. As she was a nervous person, I did not have her keep up this exercise very long. **I decided to teach her to swing back and forth, first placing the right foot forward, and swinging her body toward the test card; then after a few moments of this, she was told to reverse the movement and put the left foot forward. In this way, while seeing things move in the opposite direction, she read the thirty line letters, but she did not see them continuously.**



Move the thumb side to side 1/4 inch or, do the thumb on finger tip movement as described in previous chapters. Move the eyes with the thumb. Imagine stationary objects moving, 'the swing' when the eyes shift.

She complained of being tired, so I placed her in a chair and gave her a foot stool to rest her feet, as I wanted to be sure that she was comfortable. Then I taught her the **thumb movement exercise, i.e., making a small round circle with the thumb on the tip of the fore-finger of her right hand.** After she had practiced the thumb movement for a few minutes, I gave her some white thread and a needle with a large eye and asked her to thread it. I told her to imagine one of the letters of the test card perfectly black, as she held the needle and thread in

place. She failed to accomplish what I asked her to do. I found I could do nothing more for her at that time, so I instructed her to keep up the thumb movement whenever she read her test card or practiced any other part of the method.

At her next lesson, her vision was 10/30 with both eyes and she saw all the letters clearly. **Shifting and swinging helped**. She read some of the letters of the twenty line as she looked from the test card to a design on the floor, which she had previously remembered and described to me when her eyes were closed.

She was told to resume the thumb movement exercise and blink as she looked at the twenty line letters. By looking down in her lap at her black dress, then glancing at the test card while blinking, she read the whole of the twenty line letters, one letter after another without stopping.

At her third lesson, she became able in a few minutes time to thread a needle without any trouble. I placed her in the sun and had her move her head from side to side, allowing the warm sun to shine on her closed eyelids. In less than an hour's time, her vision had improved to 10/10 in flashes.

Questions and Answers

All readers of this magazine ere invited to send questions to the editor regarding any difficulties they may experience in using the various methods of treatment which it recommends. These will be answered as promptly as possible, in the magazine, if space permits, otherwise by mail. Kindly enclose a stamped, addressed envelope.

THE USE OF THE SUN GLASS

In using the sun glass, it is well to accustom the eyes of the patient to the strong light by having him sit in the sun with his eyes closed, and at the same time he should slowly move his head from side to side, in order to avoid discomfort from the heat. Enough light shines through the eyelids to cause some people a great deal of discomfort at first, but after a few hours' exposure in this way, they become able gradually to open their eyes to some extent without squeezing the lids. When this stage is reached, one can focus, with the aid of the sun glass, the light on the closed eyelids, which at first is very disagreeable. When the patient becomes able to open the eyes, he is directed to look as far down as possible, and in this way the pupil is protected by the lower lid. Then by gently lifting the upper lid, only the white part of the eye is exposed, while the sun's rays strike directly upon this part of the eyeball. The sun glass may then be used on the white part of the eye. Care should be taken to move the glass from side to side quickly. The length of time devoted to focusing the light on the white part of the eye is never longer than a few seconds. After such a treatment the patient almost immediately becomes able to open his eyes widely in the light.

Most modern Natural Eyesight Improvement teachers do not apply this sunlight method.
Ophthalologist Bates cured many vision problems, eye diseases with this sunlight and sunglass treatment.

Q—In practicing the universal swing, beginning with the finger, then the hand, the chair, and so on until one gets to the sky, ought one to hold continuously in mind each object added together with the sky, or just the sky moving with the finger?
A—Imagine only one thing at a time moving with your finger.

Q—In Mrs. Lierman's book, "Stories from the Clinic," page 16, suggestion 11, she says: "It is very important that you learn how to imagine stationary objects to be moving without moving your head or body." Is this to be accomplished by a slight conscious movement of the eyes or is it entirely mental?
A—This is not accomplished by a conscious movement of the eyes. It is imaginary and mental. Let the eyes move on their own, automatically.

Q—Will relaxation methods alone remove a **blood clot from the vitreous humor**?
A—Yes, provided the patient practices my methods correctly and faithfully.

Q—How is it possible to get sun treatment when there has been no sun for days?
A—I should advise you to purchase a 250 or 500 watt electric light and sit in front of it with your eyes closed. It would be well to use the sun swing at this time which is moving the head a short distance from side to side. See the Ques. and Ans. column in October No. of B. E.

Q—When you suggest new methods do you mean to discontinue with the old?
A—Not necessarily, all the methods I recommend have relaxation for their object. It is for the patient to determine which treatment is most beneficial and to continue its practice faithfully. Some patients tire easily when one thing is done continuously. For this reason several are suggested in order to vary the practice.

Q—I have been able to improve my vision in one eye but not in the other. Can you give me a reason for this?
A—This is caused by imperfect imagination. If you will practice my methods of memory, imagination, blinking and shifting, your other eye will also improve. I suggest that when both eyes together are improved to normal, you wear a patch over the good eye as often as possible and practice until your other eye is also improved to normal.

Q—I am told that I am losing my "central vision." Is it possible to regain what I have already lost or to forestall the loss of the remainder?
A—Yes, it is possible by faithful practice of my methods.

Q—What causes my **eyes to flash violet sparks and splashes?**
A—This is caused by a **mental strain**. Learn to **relax** and **improve your memory and imagination**. **Palming** should help you a great deal.
Neck, eye muscle tension, incorrect posture, staring at close distances, especially with the head, neck bent down and/or pushed forward for a long time, sinus pressure, congestion cause sparks of light, floaters and unclear vision.

The Sun Glass treatment must be done a specific way by a professional Bates Method Ophthalmologist.
Plain full spectrum sunlight without the sunglass can be equally beneficial.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MARCH, 1927

Demonstrate



Open - 'Flash' shift on the letter for a second or less, 'fraction of a second'.

That memory and Imagination improve the vision.

+Look at the large letter at the top of the card and note that it may be more or less blurred.

+Close the eyes and remember or imagine the same letter perfectly.

+Then open both eyes and imagine it as well as you can.

+In a second or less, close your eyes and remember the letter perfectly.



Closed - Shift on the letter in the imagination, part of a minute, 10-30 seconds.

+When this is accomplished open the eyes and imagine it as well as you can.

+Close them quickly after a second or less.

+Practice the slow, short, easy swing and alternately remember the large letter with the eyes closed for part of a minute or longer, and then open the eyes and imagine it as well as you can.

+When done properly, you will be able to improve your vision of the large letter until it becomes quite perfect.



Open - 'Flash' shift on the letter for a second or less, 'fraction of a second'. Repeat.

+Then practice in the same way with the first letter of the second line.

+Improve your imagination of the first letter of the second line in flashes, until it improves sufficiently for you to recognize the next letter without looking at it.

+Improve the sight of the first letter of each line by alternately remembering it with the eyes closed for part of a minute and then flashing it (looking at/shifting on it) for just a moment, a second or less.
You should be told what the first letter of each line is. With your eyes closed remember it as perfectly as you can. Then open your eyes and test your imagination for the letter for a very short time, one second or even less. Keep your eyes closed for at least a part of a minute, while remembering the known letter.

The flashes of the known letter with the eyes open become more frequent and last longer, until you become able to see, not only the known letter, but other unknown letters on the same line.

Blinking and Shifting

***By* W. H. BATES, M.D.**

BY BLINKING is meant the opening and closing of the eyes more or less rapidly. The normal eye with normal vision blinks almost continuously. Sometimes the upper lid just covers the pupil while in other cases both lids may be completely closed. With the aid of the moving picture camera it has been demonstrated that one may blink five times in one second without being conscious of it.

When an effort is made to stop blinking, whether successful or not, the vision is always lowered. When the eyes are permitted to blink regularly, easily, continuously, the vision is usually benefited. The camera also shows that the lower lids move up with a strong contraction of the muscle.

In many cases of normal vision, especially in those cases which are even better than the average normal vision, blinking is sometimes practiced with incredible rapidity, and on other occasions the eyes may blink infrequently, perhaps once in ten or fifteen seconds. The blinking of the normal eye varies or is different from the blinking of the eye with imperfect sight. The blinking of the eye with imperfect sight is usually very irregular and jerky and is accompanied by a manifest strain of the muscles of the eyelids. With imperfect sight an effort is always being made to hold the eye stationary and to stop the blinking.

If the eyes are allowed to shift and to blink, the vision improves.

Blinking is fundamental and very important, because one cannot shift frequently or continuously with improvement in the vision, unless the eyes blink often. To keep the eyes open without blinking requires an effort, a stare or strain, the patient becomes unable to shift easily or rapidly, and the vision always becomes imperfect.

The best way to rest the eyes is to close them while many things in turn are remembered or imagined. Blinking is a rapid method of resting the eyes and can be practiced unconsciously all day long, regardless of what one may be doing.

It is interesting to observe some people's eyes when they are **asleep**. One may note that the **eyelids are blinking**, which prevents the eyes from staring or straining, although the patent is unconscious of his eyes.

It is a well known fact that when people are asleep the eyes are often under a terrific strain. The first thing in the morning, after such a patient opens the eyes, he may find that his sight is very imperfect. He may suffer from pain in the eyes, pain in the head or in other parts of the body, or from extreme fatigue, as if he had been awake and hard at work all night long. When first opening the eyes, the patient may experience a feeling of dizziness, after the eyes have been straining during sleep. It is not an easy matter to recommend successful methods of obtaining relaxation, to such patients so that instead of working hard during sleep, the eyes may be completely relaxed and rested.

In some cases, the patient may have fairly good vision when he first opens his eyes after a good sleep. However, such cases are uncommon.

When the normal eye has normal vision it is always at rest, shifting. (The eye is relaxed, at rest when it is in motion, shifting.) During sleep, however, with the aid of simultaneous retinoscopy it has usually been demonstrated that the eyes are straining, staring or making an effort to see. The unconscious blinking is nature's method of resting the eyes during sleep.

"Shifting"
(Directions - How to Shift)

When the normal eye has normal vision it is always shifting or moving from one point to another. This is true with the eyes open as well as with the eyes closed. The shifting with the eyes open may be from side to aide, from above, downward, or in any other direction. The horizontal shifting is practiced more than the other forms of shifting. The eye is never stationary. When the vision is imperfect, the shifting is also imperfect and may be jerky. It may result in discomfort of the eyes, the head or in any other part of the body. The shift of the normal eye varies and is more or less irregular.

To know the proper way to shift the normal eye, in order that the vision may be continuously normal, it is well to demonstrate the wrong way. **When the shifting is practiced or the eyes move from point to point, the vision is usually benefited, provided one shifts slowly, easily and continuously.**

(The eye, brain will activate saccadic and other faster shifts automatically, on its own.)

Advise the patient to look directly at one point or one part of the smallest letter which can be distinguished. When he does this for a few seconds, he usually becomes able to feel that an effort is being made, and when the effort is continued or increased, much discomfort is felt and the vision always becomes imperfect. The patient is encouraged to prove that concentration does not last long, and that it is impossible for the eyes, memory or mind to see perfectly, remember perfectly, or imagine perfectly, when an effort is made to concentrate. When the eyes shift from one point to another, a feeling of relaxation soon follows and the vision improves. When the eyes do not shift from point to point, it can always be demonstrated that the vision becomes worse and that the eyes, mind and all the nerves of the body are uncomfortable and may be conscious of an effort or strain.

To constantly stare at one point of a letter or other object is wrong, because it lowers the vision and causes discomfort to the eyes. Perfect sight is not possible and cannot be imagined continuously, unless the shifting is continuous. The movement of letters or words which can always be demonstrated in normal vision, depends upon the shifting.

When the eyes stare and do not move, or when an effort is made to imagine letters or other objects to be stationary, the shifting stops, and if things seen are imagined to be stationary without shifting, or an effort is made to stop the shifting, the vision always becomes imperfect.



Shift part to part on a letter and from letter to letter to remember, imagine and see letters clear. Long Shift: Shift 4 to R, R to 4.



Shift part to part (dot to dot) on the E to see it clear. Short shift: Shift dot to dot on the E, then try on a fine print E, then on one fine print dot.

With the eyes open, it is possible to shift from the first letter of a line, of the Snellen test card, at fifteen feet, to the end of the line and improve the sight. In most cases a known letter of the Snellen test card can be remembered more or less perfectly with the eyes closed, but only when the eyes or the mind shifts from one letter to another, or from one part of one letter to another part. The letter remembered can be **imagined or a mental picture of the letter obtained only by constant, slow, short, regular, continuous, easy shifting.** When the patient can remember or imagine letters or other objects perfectly with the eyes open, as well as with the eyes closed, the vision is always benefited. If shifting is not practiced the vision always becomes worse.

Many people with imperfect sight are not able to shift or move their eyes without an effort. They complain that they lose their mental control because they are unable to shift easily or continuously. **Much better vision is obtained with a short movement or shift of the eyes than with a long shift.** (Shifting on small objects, parts of objects, fine print letter.)

It is necessary for those who have imperfect sight caused by a stare, a strain or an effort to see, to become able to shift in such a way as to benefit their vision. Keep the eyes closed for a large part of a minute and open them for a short time, a second or less. It takes time to stare, concentrate or make an effort to see. It is not possible to stare and lower the vision in a fraction of a second. Perfect sight is inconceivably quick. It is easy, regular and continuous. **When shifting is practiced rapidly, easily and continuously, the symptoms of imperfect sight and other symptoms caused by strain are relieved at once.**

Shifting can be practiced slowly or rapidly, as long as effort, strain is avoided. Relax, practice easy.

The general belief is that when we read we are looking at the letters. When one reads with perfect sight one does not look at the letters, but at the white spaces between the lines and imagines the white centers of the letters to be whiter than they really are. Look directly at a small letter of the fine print that can be read and concentrate your mind and eyes on one part of the letter. You soon feel an effort or strain and the vision is always lowered. If the vision was not lowered, you were unable to keep your attention fixed on the same part of a small letter for a continuous length of time.

Modern teachers state: use central fixation. When you want to read the letters: look directly at the letters, move the eyes along the letters.

Do not try to read by looking at/moving the eyes along the white spaces. This would be eccentric fixation, diffusion; looking at two things at the same time, central and peripheral field. Eccentric fixation, diffusion causes mental and visual strain, blur.

Shifting is very often practiced wrongly and the vision becomes lowered or no benefit is gained. To shift rapidly, look up for a moment and then look down quickly, rest the eyes for part of a minute; then repeat, look up and down quickly without paying much, if any attention to the sight. While looking down again, rest the eyes for part of a minute. Alternate until the shifting up and down can always be accomplished rapidly or rapidly enough to avoid testing the sight. When the eyes move up the test card or other stationary objects move down. When the eyes move down stationary objects move up or in the opposite direction to the movement of the shifting eyes.

Try shifting relaxed, continuously from point to point on a object and from object to object. Blink.

Normal sight cannot be demonstrated continuously unless the eyes are continuously shifting. The patient is usually unconscious that he is shifting rapidly when he believes that he can see one letter of the bottom line perfectly and all the time.

Many people have said that they can see a letter with normal vision at fifteen feet or further without moving their eyes, and without imagining the letter to be moving. In other cases where some people thought they could regard one letter with normal vision without shifting, it was found that while doing this the eyes, when observed at the near point, a few feet or further, could be seen to move very quickly, up, down, from side to side or in other directions. **The movement of the eyes was so rapid that it was not noticeable, unless the patient was observed very closely.**

When the top of a large letter is regarded, that part may be seen best for a short time, while the rest of the letter is seen worse, i.e. central fixation. One cannot see with central fixation and have normal vision unless one is continuously shifting. When the bottom of the letter is regarded, it may be seen best, while all the rest of the letter is seen worse. By shifting alternately from the top to the bottom of the large letter, the vision is usually improved. At the same time, the uncomfortable feeling in the eyes or head is relieved and all pain is benefited.



Shift top and bottom, left and right, part to part in any direction on a letter, seeing one small part clearest at a time in the center of the visual field for relaxation, clear vision.

One patient with very unusual vision read the bottom line marked "10" not only at ten feet but at a much greater distance. In a good light she claimed that she could see one letter of the "10" line at fifteen feet continuously without blinking and without shifting. Although she was not conscious of the fact she must have been blinking or shifting because the moving picture camera has always demonstrated that no one could see one letter of the Snellen test card continuously without **rapid blinking or shifting**.

It requires time for one's sight to become imperfect. The habit of staring or straining cannot be accomplished in a second. It takes a longer time to fail than it takes to succeed. Perfect sight can only be obtained quickly without effort or strain. **The cure of imperfect sight, then, is to stop all effort**. It is not accomplished by doing things; it can only come by the things that one stops doing.

Stories from the Clinic

Four Boys and a Girl

***By* EMILY C. LIERMAN**

DURING my many years of clinic work with children, I have found that boys are easier to treat and cure of imperfect sight than girls of the same age.

Robert, aged eight, was one of the first of a group of four to be tested with the Snellen test card. His mother had noticed, during the last year, that his left eye was beginning to turn in. The school nurse had also noticed this and had recommended glasses for him. Robert had refused to be fitted with them. He said if he were compelled to undergo an examination for glasses, and they were purchased he would refuse to wear them.

I knew before I started treating Robert that I would have no trouble in improving his sight, if it were necessary. I was doubtful about his having imperfect sight, because I had watched him as he moved about, before I began treating him. I did notice, however, that he had a habit of keeping his head more to one side, which caused an unnecessary, strain and prevented him from seeing with both eyes straight. I noticed that at intervals, he had a slight convergent squint of the left eye.

Robert read 10/10 with the test card with each eye separately. While he was reading the card, I had his mother sit where she could watch his eyes. He read the test card so fast that it was hard for his mother to keep up with him, to notice whether he had made a mistake in reading the letters or not. He read up to the twenty line of the test card with his eyes perfectly relaxed. Then, as he read from the twenty to the ten line of letters, he began to frown and stare. It was then that the eye turned in. His mother was quick to observe this and commented on it. I asked her if she could describe to me what he did after he had read the twenty line letters. She said she noticed that he frowned and that the eye turned in, but that was all. I asked Robert if he could tell me what he did that was wrong when he arrived at the twenty line letters. He did not know so I explained to him and his mother that he had not blinked once, until he had read the last letter of the card.

When Robert first began reading the card I noticed that he blinked only twice from the time he started with the large two hundred line letter until he arrived at the twenty line. I explained to both of them that this was not enough; that the normal eye blinks often, irregularly and in an easy way, and that it is done unconsciously by persons with normal sight. I explained how necessary it was for Robert to consciously blink often, all day long, no matter what he was doing.

I taught him to palm, asking him to tell me what he was most interested in. I meant his school work, but did not tell him so. Before I had an opportunity to say that I meant school work, Robert cried out: "I like to play best." It was evident from his mother's expression that she thought I would be displeased with his reply, but it is natural for boys to enjoy and to like their play most. I told Robert to imagine he was playing basketball in the gymnasium, which I knew was part of his school routine.

While he palmed, I asked him to remember how he held the basketball, then threw it in the air, and finally made the basket. He smiled as I described this to him. After he had removed his hands from his eyes, he was instructed to stand and sway, and by reading one letter at a time, blinking for each letter, he read the whole card without frowning and with both eyes straight. His mother said I had performed a miracle. I told her that the cure was only temporary, and that Robert would unconsciously stare again and the eye would, undoubtedly, turn in. This would happen at irregular times, from day to day, until Robert made it a habit to blink and shift, as the normal eye does.

The next time I saw Robert and his mother they informed me that I had made a mistake. Robert's eye did not turn in again, neither did he forget to blink regularly and often. His second test was better than the first one. I had him stand fifteen feet from a strange card, which he had not previously read. He read every letter of the card with each eye separately and with both eyes together, not forgetting to blink and shift, and at all times both eyes were straight. Just saying to Robert's mother that he would forget to blink and that the eye would, without a doubt turn in again, made him determined to remember to use his eyes right.

Two other boys of this same group are brothers. One is nine and the other twelve years of age. James, the younger of the two, is keener, but more nervous. He read the whole test card, 10/10, without a mistake. Having watched Robert during his test, he knew exactly what was required of him. It was amusing to see how serious James was during the whole procedure. I had explained previously to Robert that the elephant has intelligence enough to sway his body in order to obtain relaxation and prevent strain. I explained that the elephant must sense that standing still is not good for him because it makes him uncomfortable, therefore, he keeps moving. James was anything but graceful; he swayed like a little elephant in reality. Everyone in the room watching him laughed, but not a smile out of James. At first I thought he was going to cry, because he became so excited and nervous. I stood quite close to him, and directed him to hold my hands and sway with me. After swinging with me for a short time, he learned to swing by himself. He had to be reminded that blinking alone was not sufficient. James began his lesson by blinking but not looking away. He stared at every letter until I stopped him. After he realized that it was necessary to shift, I had very little else to do for him. Looking out of the window and then back at the card, seeing one letter at a time, swaying, in this way for each letter, his vision

improved to 15/10. His second test was even better. He stood twenty feet from a card that he had not seen. He read straight through it without a mistake, with each eye separately.

James' grandmother, who was with him noticed that his nervous twitching ceased. Before, he had not been able to sit still in his chair longer than five minutes at a time, but now he could sit quietly with a book in his hand and read in any kind of light, and not move until it was bed time.

Jack, James' brother, acted as though he were a grown-up man. He very readily stood ten feet from the card and read it through like a race horse, staring all the while he did so. He had either forgotten that it was wrong to stare, or did not realize that he was staring. After he had finished reading the card, I asked him if that was the way he read his books, or the blackboard at school. "Oh, Yes," said he, "I can read even faster than that." Jack evidently thought that speed was what counted in the test. He was waiting patiently for praise and looked very forlorn when I found fault with him. He soon realized that the way he read the card was not correct, and that he was under a tension and strain when reading so rapidly. For a half hour I impressed upon his mind that he must not look at more than one letter of the test card at a time without blinking and looking away, which means shifting from the card to a blank wall, or some other place where there are no letters. He asked me why it was necessary to look away from the card after seeing each letter. I told him that when he looked away from the card, after seeing each letter, he prevented any strain of his eyes by looking at something that was not hard to see. In other words, shifting is something the normal eye does all the time, only people with good eyes do not notice that the eyes shift because it is done unconsciously.

The next time I saw Jack, I had him stand twenty-five feet from a strange card, and he read it correctly by seeing one letter at a time and looking away. Later he read each line of the card backwards, not looking at the card, but shifting from one side of the card to the other. I asked him to read from one of his books that he had with him, and show me how he read so that I could guide him if he did not read it correctly. After each sentence or two, he would look on the opposite page and see a capital letter at the beginning of a sentence, blink and then proceed with his reading. He told me he could read this way, without any feeling of fatigue, if he blinked his eyes, which he usually remembered to do.

Harold, aged eleven, was the tallest and stockiest of the group. His eyelids were swollen and very red, but his vision for each eye was 10/10. He had a habit of keeping his eyes open for a long time without blinking at all. Blinking was one of the first things I encouraged him to do. I had him stand by himself, in a corner of the room, and told him not to remove his hands from his eyes until I told him to do so. He nervously wiggled about in his chair after sitting a minute or so. I suppose that five minutes of palming seemed like five hours to him. When a boy of his age has imperfect sight but is perfectly healthy otherwise, it is almost impossible to expect him to be still, even for so short a time. I wanted to see whether palming would relieve the redness of the eyelids and I was glad to see that there was less redness, after he stopped palming. I then had him stand twenty feet from a strange test card and he read the ten line with each eye separately. He whispered in my ear that he was just a little afraid that the other boys would get ahead of him. There was a little sun streaming in one of the windows of the room. He stood there and closed his eyes while I used a sun glass on his eyelids. At first he was a bit frightened for fear that I would harm him, but after I had focused the sun's rays through the glass on his hand, he was reassured. The sun was most beneficial to his eyelids, and the redness disappeared before he left. I feel that the **redness of his eyelids was not wholly from eye strain, but from eating much candy and other sweets**, which he confessed he was fond of. If Harold follows my advice, I am sure that the condition of his eyelids will be normal, the next time I see him.

Anne, a girl aged twelve, who has myopia was my next patient. She was harder to convince and much harder to treat than the entire group of boys. Having difficulty to see at the distance even with her glasses, and not being able to see the blackboard or other things distinctly caused her to be sullen. The child's eye strain kept her from being happy as most children of her age are. She was reluctant to leave her glasses off, after her first treatment as she felt she looked better with them. I asked her what difference it made whether she was better looking with or without her glasses as long as her eyesight improved with the treatment. I told her about the boys whom I had just helped, and that not one of them had thought of how they would look without their glasses. She then promised to practice. Before treatment, her vision with the test card was 10/70 with each eye separately. After she had palmed a while, then swayed as she stood ten feet from the card, her vision improved to 10/50.

On her second visit, Anne's attitude had changed. She said that only one day had she worn her glasses in school since her first treatment, and that she was getting along very well without them. She practiced every day, as I directed her and palmed for more than ten or fifteen minutes at a time, while someone read a favorite story to her. By having someone read to her, she was able to **improve her mental pictures with her eyes closed,** and her vision is now 10/10, by flashing one letter at a time. She is not entirely cured, but if she continues to keep up her enthusiasm to rival the boys who did so well at the start, I feel sure that Anne will soon be cured.

Case Reports

The following are case reports sent in by one of Dr. Bates' representatives, Miss Elisabet Hanson, of 1504 Capitol Bldg., Chicago, Illinois.

Dear Dr. Bates:

It has been so interesting to watch the unfolding of a recent case, pronounced hopeless by ophthalmologists, that I am writing about it.

Dr. M. L. Cleveland, Palm Beach, Florida, came to Chicago, July 9, 1926, having been told that she had glaucoma in one eye, would be blind in three months, and more than that, the eye would have to be moved in the faint hope of saving the other.

Her vision with glasses was 10/15 minus. Without glasses both eyes 10/100 minus, right 10/75 minus and left 10/100 minus. When she had done the long swing until she was fully relaxed, she palmed, listening to happy memories of snowy mountains, plains, forests, skies, etc. After half an hour of this, she was asked to open her eyes and look at the test card, which she read to 10/50. You can easily imagine that enthusiasm had full sway. Handing me her glasses, she said she was through with them. It being a sunny day, I gave her the sun treatment for a short while with the burning glass, and taught her the easy sun swing. This she said was delightfully soothing.

July 10th, the following the day, her vision had improved to 10/40. There was a good reason for this. Dr. Cleveland has a wonderful imagination, and quickly saw how to use it. We began with the flashing lesson, that is, with the perfect memory of a known letter with closed eyes, she was able to flash every letter on the 10/30 line. Then I gave her a diamond print card and noticed

that she tried to read it and did not blink at all.

For relaxation, I explained the value of blinking and imagining white spaces on the card swinging.

Our lessons were interrupted for a while—Dr. Cleveland had to attend a Convention out West, but having already gained perfect confidence in the Bates system of Better Eyesight, she know she was on the right track, and kept on with her exercises. When we met again, August 23rd, her vision had improved to 10/15 minus. Looking into the eye with the retinoscope, I saw that the dark shadow had disappeared almost entirely and the pupil, that had been abnormal, was now nearly normal in size. Moreover the hardness of the eyeball and terrible pain were gone. Continuing our lessons (thirteen in all) until she had to return to Florida, her progress was wonderful. She was ingenious, used each lesson in a way that best suited her case, and between lessons practiced in the house, on the porch, and in the park. In the latter she was able to read the ten line at twenty-five feet, and when she left Chicago she had perfect far vision and almost perfect near vision.

Blindness reversed

At this time Mrs. W., an elderly lady, was brought to me. She had been **blind for sixteen years.** The ophthalmologists called it obstruction of the optic nerve. She had only perception of light—the right eye being a little better than the left.

We began the treatment by practicing the long swing and palming. Then after imagining the big C, she discerned it on the chart at about six inches distance, as something dark and round. After palming again, she was able to get the two letters on the next line as two moving black spots. I ended this lesson by teaching the sun swing with closed eyelids. The next time she came, she told me she had swung the sun and palmed many times a day. We began our lesson with the sun glass treatment; palmed and swung the sun with closed eyes; more palming and to her surprise, she saw, with the card at one foot instead of six inches away, the big C and the smaller R B easily, and the still smaller letters down to the 20 line, as spots. Corrections had to be made: when she became very interested, she narrowed her eyes in an effort to see more. As this was evidence of an attempt to see through strain, the habit had to be curbed at once.

After more palming and the memory and flashing exercises of the black period, she could make out bushy forms in the garden, saw that some were more compact than others, and as we were going down the walk, at the end of the second lesson, she recognized by their shape some hollyhocks she was passing. Those were the first objects she had been able to identify in all her years of blindness.

Following this great encouragement the next striking improvement was seen through the retinoscope. Day by day the veins of the optic nerve took on a healthier color, and in a short time there was a contraction of the pupil in noticeable accommodation to light. After nine lessons, the eye, which had first failed her and which had been least able to discern light, is beginning to show the same improvement as has gone on so gratifyingly in the other, and with this encouragement the patient and her family are enthusiastically looking forward to renewed sight for this sixty-three-year-old woman, who has been blind since her forties.

Very cordially yours,
ELISABET HANSEN.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

APRIL, 1927

Demonstrate

1. **That palming improves the sight.**
   When both eyes are closed and covered with one or both hands in such a way as to exclude all light, one does not see red, blue, green or any other color. In short, when the palming is successful one does not see anything but black, and when the eyes are opened, the vision is always improved.
   (Modern teachers say the colors will disappear as relaxation occurs. Don't concentrate on the colors.
   Relaxation of mind, eyes, body is the goal when palming. Seeing black is not mandatory. Just relax and let the mind drift from one pleasant thought to another, remember, imagine a happy scene, objects in motion, action, color and clear like a movie in the mind.)

2. **That an imperfect memory prevents perfect palming and the vision is lowered.**
   Remember a letter "O" imperfectly, a letter "O" which has no white center and is covered by a gray cloud. It takes time; the effort is considerable and in spite of all that is done, the memory of the imperfect "O" is lost or forgotten for a time. The whole field is a shade of gray or of some other color, and when the hands are removed from the eyes, the vision is lowered.



Remember, imagine imperfect vision: The O unclear-Black print is a light black, grey and the white center and paper around the edge of the O a fuzzy grey blur. Strain and unclear vision occur.

3. **That when a perfect letter "O" is remembered, palming is practiced properly, continuously and easily and the sight is always benefited.**

4. **That to fail to improve the sight by palming, or to palm imperfectly is difficult.** To fail, requires a stare or a strain and is not easy. When an effort is made, the eyes and mind are staring, straining, trying to see. When no effort is made, the palming becomes successful and the vision is benefited. Successful palming is not accomplished by doing things. Palming becomes successful by the things that are not done.



Remember, imagine perfect, clear vision: letter O clear, black ink a dark black, white center and paper around the O a pure bright white. Relaxation and clear vision occur.

5. **That the longer you palm, the greater the benefit to your vision**. Palm first for two minutes, then four minutes, six, etc., until you have palmed for fifteen. Notice the improvement gained in 15 minutes has been greater than that in four minutes.
   Let the mind drift from one pleasant thought, image to another. Shift on objects in the imagination. Remember, imagine

objects, scenery clear, in color, motion: bird flying, butterfly flying from flower to flower, tree branches, apple on a tree, see its details; antennas, colorful wings, legs.., then it fly's through a field, lands on a high blade of grass, fly's off again to a distant tree, then back up close, then off again zig-zagging in the air, flying along the river.., imagine the wind blowing the trees, grass in a field, sun sparkling on the water. Hear the wind blow, feel the warmth of sun. Imagine walking into the scene, become part of it.

Presbyopia: its Cause and Cure

By W. H. Bates, M.D.

Most people, when they reach the age of forty years or older, become unable to read or see things clearly at the near point, while their sight for distance is usually good. This is called presbyopia or middle-aged sight. It is sometimes, although infrequently, found in children.

Old Gentleman Cures Unclear Close Vision by Reading, Writing Fine Print

While it is sometimes very difficult to cure presbyopia, it is, fortunately, very easy to prevent it. Oliver Wendell Holmes told us how to do it in "The Autocrat of the Breakfast Table," and it is astonishing , not only, that no attention was paid to his advice, but that we should be warned against the very course which was found so beneficial in the case he records:

"There is now living in New York State," he says, "an old gentleman who, perceiving his sight to fail, immediately took to exercising it on the finest print, and in this way fairly bullied Nature out of her foolish habit of taking liberties at the age of forty-five or thereabouts. And now this old gentleman performs the most extraordinary feats with his pen, showing that his **eyes must be a pair of microscopes**. I should be afraid to say how much he writes on the compass of a half dime, whether the Psalms or the gospels, or the Psalms and the gospels, I won't be positive."

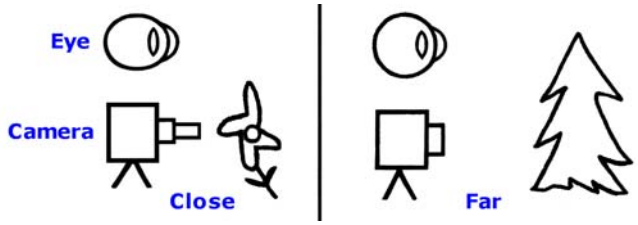
Presbyopia Cure

Persons, whose sight is beginning to fail at the near-point, or who are approaching the presbyopic age should imitate the example of this remarkable old gentleman. **Get a specimen of diamond type, and read it every day in an artificial light, (sunlight is best) bringing it closer and closer to the eye till it can be read at six inches or less. Or get a specimen of type reduced by photography until it is much smaller than diamond type, and do the same.** You will thus escape, not only the necessity of wearing glasses for reading and near work, but all of those eye troubles which now so often darken the later years of life.
Reading fine print prevents cataract and other eye problems. The smaller the print, the more vision improves.
Shifting point to point on tiny details of small objects; stone, jewelry… at close distances from the eyes also improves close vision.
Practice relaxed, no effort, no force.

I remember an old darkey who said he was a **hundred and six years old, who was quite blind for distant objects, and was unable to read an ordinary newspaper at one foot or further**. With the aid of eye education, his vision for distance soon became normal, and his vision for near point also improved so that he could read diamond type at six inches without glasses.

The cause of presbyopia has been ascribed by most authorities to a hardening of the lens of the eye, so that the focus of the lens cannot be readily altered. This theory is incorrect. **When the lens has been removed for cataract or some other reason, most cases have become able, by education, to read fine print at six inches or less without glasses.**

Authorities on ophthalmology have always claimed that the focus of the eye was benefited by a change in the curvature of the lens. The evidence that the lens is not a factor in accommodation has only been recently proved. The eye changes its focus by a change in its length, brought about by the action of the muscles on the outside of the eyeball. In near-sightedness, the eyeball is squeezed by the external muscles and the optic axis is lengthened, i.e., the eyeball becomes elongated.



The human eye acts in the same way as a photographic camera acts. If a picture is taken at the near point, the bellows of the camera is lengthened in order to focus the near object, while to focus objects at the distance the bellows of the camera is shortened. When the eye is at rest, it has the form of a perfect sphere.
See more info on the lens, outer, inner eye muscles, accommodation in the July, 1926 'The Great Delusion' issue of Better Eyesight Magazine.

Fundamental Facts

Memory and Imagination



Shift on the letter O and remember, imagine, see it clear with the eyes open, then in the imagination with eyes closed, then with the eyes open again. See it dark black, clear with a bright, pure white center.

In studying the cause of presbyopia it is well to remember or to demonstrate some fundamental facts. In the first place, the printed page has more white exposed than it has black. One can look at the white spaces between the lines and hold the book very close to the eyes four or five inches or more without any discomfort, but if one looks at a letter or part of a letter and tries to keep his mind fixed on that one part continuously, sooner or later the eyes become tired, the mind wanders, and the vision becomes imperfect. Looking at the white spaces and imagining them to be perfectly white, is a rest and can be accomplished more readily than improving the black letters by an effort.
Shift when looking at the spaces and when looking at the letters.

When the white center of a letter "O" is seen gray, blurred and indistinct, one is seeing something that is not there. In other words, imperfect sight is never seen; it is only imagined. With perfect sight one may see the white center of the letter much whiter than it really is, or whiter than the rest of the card. By covering over the black part of the letter "O" with a screen and exposing only a part of the white center, one can demonstrate that the whiteness in the center of a letter "O" when seen perfectly, is not really seen, but imagined. Imagination of perfect sight is easier than imagination of imperfect sight. When one remembers a letter "O" perfectly, it is accomplished without effort, and it may be remembered more or less continuously, but if a letter "O" is imagined imperfectly

without a white center, blurred, or cloudy, it prevents the letter from being seen, remembered or imagined clearly as an "O." To improve the memory or the imagination of an imperfect "O" requires time, a second or longer. To make an attempt to remember an imperfect "O" continuously is difficult, requires much trouble, causes pain in the eyes and head, and discomfort of various kinds in all the nerves of the body. The memory of imperfect sight is difficult, because it requires so much effort to maintain it. In spite of all the efforts that are made to remember imperfect sight, one soon demonstrates that the imperfect letter "O" will not be remembered continuously. It is the things that we stop doing that promote the memory of perfect sight. We do not need to practice something new nor learn by mental training how to do something that we have never done before. When a patient is convinced of these facts it is difficult to realize why he keeps on doing wrong, when using his eyes correctly is so much easier and brings renewed vision.

Fine Print

When people are able to read fine print with perfect sight at six inches or further, the white spaces between the lines are seen or imagined whiter than the rest of the card. The ability to imagine the white spaces between the lines to be very white is accomplished by the memory of white snow, white starch or anything perfectly white, with the eyes closed for part of a minute. Some patients count thirty while remembering some white object or scene with the eyes closed. Then, when the eyes are opened for a second, the white spaces between the lines of black letters are imagined or seen much whiter than before. By alternately remembering something perfectly white with the eyes closed and opening them for a few seconds and flashing the spaces, the vision or the imagination of the white spaces improves. One needs to be careful not to make an effort or to regard the black letters. When the white spaces between the lines are imagined sufficiently white, or as white as they can be remembered with the eyes closed and with the eyes open; then, look at the black letters, see them clear, the black letters are read without effort or strain, or without the consciousness of regarding the black letters.



Read fine print for clear close vision.
See the 'Swing':
Place the fine print 6 in. from the eyes and the thumb 5 in. from the eyes in front of the fine print and 1/4 in. to the left of a letter. Move the head and eyes side to side and see the thumb move opposite the movement of the head/eyes and the fine print move in the same direction with the head/eyes. This prevents staring, keeps the eyes moving, relaxed and vision clear. See the thin white line.

The Thin White Line

Many people discover that they can imagine a thin white line where the bottom of the letters comes in contact with the white spaces. **This thin line is very white, and the thinner it is imagined to be, the whiter it becomes.** When it is imagined perfectly, the letters are read without the consciousness of looking at them and the vision or imagination of the white is very much improved. This thin white line can be imagined much whiter than any other part of the page, and is more easily imagined or seen than any other part. **Of course, the eyes have to shift from the thin, white line to the letters in order to see them, but the shifting is done so readily, so continuously, so perfectly that the reader does not notice that he is constantly shifting.** When the vision of the thin, white line is imperfect, the shifting is slow and imperfect and the vision for the letters is impaired. The memory or the imagination of the thin, white line is usually so easy, so perfect and so continuous that everything regarded is seen with maximum vision. Patients with **cataract** who become able to imagine this thin, white line perfectly, very soon become able to read the finest print without effort or strain, and the **cataract always improves, or becomes less**. Patients with **hypermetropia, astigmatism, squint, diseases of the retina and optic nerve are benefited in every way by the memory or the imagination of the thin, white line. Reading fine print with perfect sight benefits or improves all organic diseases of the eye.**

Another reason Dr. Bates has the person remember, imagine and look at the white spaces, white line is that: white functions as/with 'light', and activates the eyes retina. For this reason there are eyecharts with white letters printed on a black, blue… background. They are easier to see and relaxing especially for patients with low vision.

The Universal Swing

There are a number of varieties of the **optical swing** which prevent, improve or cure presbyopia. Of these, perhaps the best one of all is called the **universal swing**. When one can practice the universal swing, and at the same time test the imagination of the thin, white line or the white spaces between the lines, the presbyopia is usually very much benefited. The universal swing differs from all other swings in that the eyes, as well as the body, are all moving in the same direction as other objects seen or imagined.

If you hold your finger about six inches from your eyes, by moving your head from side to side it is possible to imagine the finger to be moving in the opposite direction. This is the **variable swing**. While the eyes are moving in the opposite direction to the movement of the finger, all other objects can be imagined in the same way. (to be moving opposite the movement of the finger. Also, close objects will show most appearance of moving opposite to the movement of the eyes, head). Usually distant objects do not swing as much as the finger and may appear to be almost stationary (or appear to move in the same direction the eyes/head move to and also appearing to move opposite the movement of the finger.)

With the **eyes closed**, one can remember the finger moving from side to side and imagine that all objects to which the finger is connected, directly or indirectly, appear to move in the same direction, and the same distance as the finger moves, the only difference being that the eyes move with the finger and with everything else, while with the eyes open in the variable swing, the eyes (and head) always move in the opposite direction to the movement of the finger. One can improve the universal swing by remembering the movement of the finger with the eyes closed. This swing can be demonstrated more readily with the eyes closed than with the eyes open.

This paragraph does not state whether the eyes/head are physically moved side to side when the eyes are closed.
There are different impressions seen by the minds eyes when the eyes/head are not moved and when they are moved:
+I notice that when I do not move the eyes/head side to side, left and right when the eyes are closed, while imagining seeing the finger move opposite, right and left, the closed eyes will follow the movement of the imaginary finger.
+If the eyes/head are moved left and right when the eyes are closed and imagining the finger moving opposite, the closed eyes will move opposite the imaginary moving finger the same as when the eyes are open.
It is relaxing to move the eyes/head side to side when imagining the finger moving opposite with eyes open and closed.

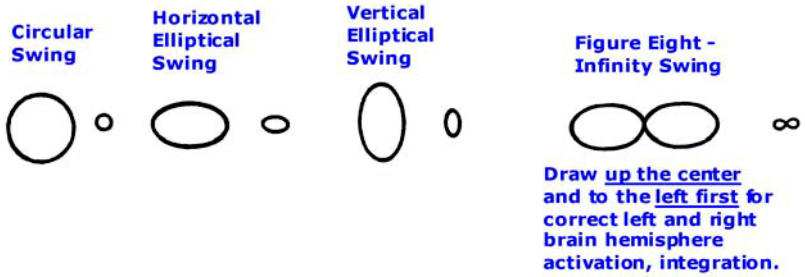
Oppositional Movement with Finger and Thumb

By holding the diamond type about six inches from your eyes and holding the thumb about an inch nearer the eyes, and about one-quarter of an inch to the left of one letter of the diamond type, one can demonstrate that when the head and eyes move from side to side, the thumb appears to move opposite, while the fine print appears to move with the movement of the head and eyes. At once, the fine print improves sufficiently to be read and the thin white line also becomes more perfectly seen or imagined.

Some patients are able to move the thumbnail more or less rapidly close to the bottom of the letters and read the fine print, perfectly continuously and rapidly. The thumbnail moving from side to side improves the imagination of the thin, white line, and when the thin, white line is imagined sufficiently white the letters are flashed sufficiently black to be distinguished.

Moving the head from side to side prevents the stare and in this way the vision is improved, but when the eyes and head move in a horizontal direction to the right, the movement stops before the head and eyes can move to the left. When the movement stops, time is given for the stare, or an effort to be made and the vision is lowered. When the head and eyes move in a circular direction, the movement becomes continuous and the vision is also more continuous. The **circular swing** may be practiced with the head and eyes moving in the orbit of a large circle. When the movement of the head and eyes in a circular direction is shortened, the vision is further improved. However, one has to realize that in a short, circular swing, the movement stops readily, thereby lowering the vision. Patients should demonstrate that a short, circular swing, while being a greater benefit, may be unconsciously stopped, while the large circular swing is more apt to be continuous. When the vision becomes lowered, while reading with the help of the circular swing, it is evidence that the circular swing has been unconsciously stopped.

Practice drawing large, medium, small Circular, Elliptical and Figure Eight Swings in the sunlight. Draw counter-clockwise, clockwise, counter-clockwise… Draw in the air with the eyes, hands and nosefeather, draw on paper.



Draw the Figure Eight, Infinity Swing – See chapter 16 in the book: Do It yourself – Natural Eyesight Improvement.

Another cure of presbyopia is accomplished with the aid of the memory. When one can remember a color, letter or an object perfectly, presbyopia disappears and the vision becomes normal. Perfect memory is always accompanied by perfect relaxation with perfect sight.

Stories From The Clinic
Presbyopia

By Emily C. Lierman

I have recently had a few cases of presbyopia which were cured in a short time. One was a woman sixty-three years of age who did fine sewing for her livelihood. She had worn glasses for more than thirty years and during the past two years her eye specialist found it difficult to fit her with glasses correctly. She had purchased her last pair the day before she came to me, and told me they made her so nervous and irritable that she could not possibly wear them more than half a day.

Her vision for the distance was normal, 15/15 with each eye separately. I gave her a small test card to hold, which has the Fundamentals by Dr. W. H. Bates on the opposite side and asked her to read what she could on it. She held it at arm's length and said that she knew there was some kind of print on the card but could not tell what it was. In despair she looked at me and said, "I fear you will have a hard time getting me to read this." I gave her the small booklet containing the **microscopic type** and also a small card with diamond type. I placed the booklet at the lower part of the Fundamentals card and the diamond type card in the center. She was told to hold these about twelve inches from her eyes and not to worry about reading the print. The patient looked at me in a blank sort of way wondering how it was possible to cure presbyopia in this manner. As she was optimistic, it was easy for me to treat her. She was willing to believe that I could do for her what had been done for others whom she knew had been cured by Dr. Bates. I told her to look at the small white spaces between the lines of print in the booklet, close both eyes and remember the white spaces. She could remember them white with her eyes closed. I told her to open her eyes and again look at the white spaces. She said they appeared whiter than they had the first time. Again I told her to close her eyes and remember the white spaces and to open them in less than a second, look at the white spaces of the diamond type card, close her eyes and remember the white spaces; then for just a second to open her eyes and look at the white spaces of the Fundamentals card. I told her to keep this up while I was out of the room and left her to herself for almost a half hour. Before leaving I warned her about trying to read the print, telling her that she was to flash only the white spaces. When I returned she looked at me very much frightened and said "What am I to do, I cannot help but tell you the truth, I can read this Fundamentals' card." I noticed that she held the Fundamental card eight inches from her eyes instead of twelve. She read one sentence after another for me.

I told her to be careful about staring at the type, and be sure to look at the white spaces directly below the sentence she was reading instead of at the letters. (Modern teachers state to look at the white spaces, remember/imagine the white spaces clear, pure, bright glowing white, then, when the eyes are relaxed; look directly at the black letters and read the words. Trying to read by looking at the white spaces while seeing the words in the peripheral field is diffusion, the opposite of central fixation and causes strain and unclear vision. Always look directly at the object you want to see clear and shift, move the eyes upon it. After reading a sentence of the Fundamentals card she would shift to the white spaces of the blue booklet and then to the spaces of the small card and back again to the Fundamentals card. The treatment lasted about one hour. I told her to telephone me the next day and let me know if she had forgotten what I had directed her to do. She called, and said that she was able to read some of the Bible type as well as all of the print on the Fundamentals card. Having read my book before she came for treatment, she knew that staring produced much

discomfort and realized that she should blink frequently. Her knowledge of the benefits of blinking helped her to be cured more quickly than the usual case of this kind. The last time that she telephoned she reported that her sewing was much easier to do. She has entirely discarded her glasses and promises never to wear them again.

The second patient was a man fifty-eight years of age, a bank teller. He had heard of a bank president who had been cured by Dr. Bates. Then he obtained my book and Dr. Bates' book, "Perfect Sight Without Glasses," from the public library. He understood the directions described in each book, but there were times when he was unsuccessful in getting good results, so he came to me for help.

His sight was tested for the distance and he read 15/30 with each eye separately, although he saw some of the letters double. He complained of headache and pain in the back of his eyes, especially while working. He was then directed to **palm** and to imagine that he was adding accounts. He said it caused more strain and discomfort in his head and eyes. He said that it would be impossible to palm during business hours. I told him that it would not be necessary, that there were other things that he could do to prevent his headaches and eyestrain. I taught him to **blink** and **shift all day long like the normal eye does in order to keep the eyes relaxed and in good condition**. He was told to **remember something perfectly, easily and without effort.** He said he could remember the ocean with the tide coming in and that every seventh wave was the largest. Knowing the game of football helped him to imagine the size, color and shape of the ball. All these little details which **improved his memory** helped to **relax his mind** while his eyes were closed.

After ten minutes, he was instructed to stand with his feet about one foot apart and **sway his body to the right and then to the left.** As the window was close by, I directed him to look off in the distance and notice objects moving with his body, eyes and head, while things up close seemed to move opposite. He said he was hoping I would let him do that for quite a while because the bad headache he had just before coming to me, was disappearing.

Then I told him to keep up the swing, looking out of the window and then toward the test card. As soon as he saw a letter I told him to look away, keeping up the swing all the while. This time he read 15/10 with each eye separately. When I gave him the Fundamental card to read, he could see only sentence No. 2. All the rest of the card was very much blurred to him. Again I directed him to stand and swing and notice distant objects moving with his eyes and body, while things close appeared to move opposite.

I then had him sit in a chair with his back to the sun and told him to remember the sway of the body with his eyes closed. In a short time he began to practice again with the Fundamental card, and this time he read up to No. 8 by imagining the white spaces whiter than they really were. I watched him as he tried to read further and when he began to read the small type, he stopped the blinking unconsciously and stared at the print. I noticed that his forehead became wrinkled and that he squeezed his eyes almost shut to read. (Squinting) I stopped this and asked him to close his eyes quickly and tell me how he felt. He had produced a strain that caused his head and eyes to ache. I reminded him that by squeezing his eyes and staring and making an effort, a strain had been produced. While his eyes were covered with the palm of one hand, he remarked, "Now I realize what I must do all day long to see without straining." I told him that when patients found out for themselves that staring brings on tension and pain, they are cured much more quickly than others who do not realize this fact. He was cured in three visits.



Sway the body left and right in front of a window. See distant objects move with the body, eyes in the same direction and close objects move in the opposite direction. Sway and alternate looking out the window at distant objects, then at a close eyechart, shifting quickly for a 'fraction of second' on a letter, then back to objects outside the window.

My third case of presbyopia, which took the longest time to cure, was a music teacher forty-nine years of age. It was very hard to convince her that I could benefit her.

Her vision for the test card with each eye was normal, 15/15. When I gave her the Fundamental card to read, she was quite positive that she would never read any of it without her glasses. I gave her a "Better Eyesight" Magazine and told her to look at the title. She said that she could see it, but that the type was blurred as she held it at arm's length from her eyes.

She was told to close her eyes and palm with one hand and remember one of the letters of the test card that she had read at fifteen feet. Then, in less than a moment's time, I told her to remove her hand from her eyes and look at the white spaces of the Fundamental card. She did this a few times and then began to smile. She said the print was beginning to clear up, but that it soon faded away and she became unable to read it again. When I told her to avoid looking at the type, she laughed. Immediately I became convinced that this was the way she read her sheet music. She looked directly at the notes and lowered her vision by staring. By closing her eyes and remembering white spaces, then opening them and looking at the white spaces, words began to clear up and she became a very different person. When she was successful in doing as I directed, she read up to No. 3 of the Fundamental card. I saw her once a week for more than a month before she was able to read the entire Fundamental card, eight inches from her eyes. She was told to place the small black test card on the piano near the sheet music and to frequently flash a letter of the card; then read her music. In this way she was cured. All patients cannot be treated in the same way, no matter what trouble they may have with their eyes. Eyestrain has a great deal to do with the mind and the Bates Method has surely proved it.
It is ok to look directly at the print as long as the eyes shift on it. Shifting, central fixation, blink. Avoid staring, squinting, effort to see clear.
Flash – two meanings:
1 = To look at, shift on a object quickly for a 'fraction of a second' and then close the eyes to avoid giving the eyes, mind a chance to use strain, effort to see. For that fraction of a second the letter is often clear and with practice the letter remains clear longer.
2 = A flash of clear vision lasting a fraction of a second or longer to minutes, hours, weeks, permanent .)

Case History

January 14, 1927

Mr. Robert C. Fager,
38 South 17th St.
Harrisburg, Pa.

Dear Sir:

In reply to your letter of the 11th concerning Dr. Bates' book "Perfect Sight Without Glasses," I would like to say that after reading this book about five years ago and practicing the methods outlined in the book, I was able to lay aside my glasses which I had been wearing more or less for twenty-one years. I have not used my glasses since that time and have noted no bad effects, in fact, I have continued to feel better and gain in weight until I am now, at forty-two years of age, better than I ever was.

I still have some slight astigmatism in my right eye, but feel that if I would really take the time and trouble to practice Dr. Bates' methods more thoroughly, I would easily overcome this difficulty.

When I used to wear glasses, I would get headaches in a few minutes time if I tried to read without them. Since learning Dr. Bates' eye exercises, I have had no trouble reading as long as I wanted to without any headaches.

If you have had no operation on your eyes, I feel sure that you can obtain normal vision if you will conscientiously practice the methods described in Dr. Bates' book.

Sincerely yours,
W. J. DANA,
Professor of Experimental Engineering,
North Carolina State College of
Agriculture and Engineering.

Questions and Answers

Q - In case of illness where one is unable to practice with the Snellen test card or stand up, what method is used?
A - Blink frequently and shift your eyes constantly from one point to another. Turn your head slightly from side to side on the pillow or close your eyes and think of something pleasant, something that you can remember perfectly and let your mind drift from one pleasant thought to another.

Q -The sun shining on the snow darkens and almost blinds my vision. What is this caused by, and how can I obtain relief?
A -This is caused by a strain and can be relieved by practicing blinking, shifting and central fixation all day long. Notice that stationary objects appear to move in the direction opposite to the movement of your head and eyes. Notice that the trees or other near objects move opposite while the horizon or distant objects move with you.
Poor nutrition, drugs, some herbs, can impair the eyes adjustment from light to dark, dark to light.

Q - Does wearing rubbers for any length of time hurt the eyes?
A - Yes, it does not give the blood an opportunity to circulate properly.

Q - It is very hard for me to think in terms of black and white. Is there some other method which is just as beneficial?
A - Yes, letting your mind drift from one pleasant memory to another will accomplish the same results.

Q - Is it necessary to practice with the Snellen test card if you follow the method otherwise?
A - Yes, it is advisable to keep up your daily practice with the test card for at least a few moments. This will improve your memory and the memory must be improved in order to have the vision improve.

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By W. H. BATES, M.D.

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By Elsbeth Friedrichs

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Review from German Newspaper, Die Leibinskunst, Leipzig.

"This work which has just appeared, is a sensation in the field of treatment of the eye and has even now found recognition far and wide. We point to an article in this number of the issue, by Mrs. Friedrichs, and express the wish that through her, all those who have had imperfect vision may be given the power to see again or will be able to discard their glasses."

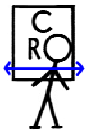
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MAY, 1927

Demonstrate

1 - That a short, swaying movement improves the vision more than a long sway.
Place the test card at a distance where only the large letter at the top of the card can be distinguished. This may be ten feet, further or nearer. Stand with the feet about one foot apart and sway the body from side to side. When the body sways to the right, look to the right of the card. When the body sways to the left, look to the left of the card. Do not look at the Snellen test card. Sway the body from side to side and look to the right of the Snellen test card, and alternately to the left of it. Note that the test card appears to be moving. Increase the length of the sway and notice that the test card seems to move a longer distance from side to side. Observe the whiteness of the card and the blackness of the letters. Now shorten the sway, which, of course, shortens the movement of the card. The card appears whiter and the letters blacker when the movement of the card is short, than when the movement of the card is long.



Stand, face the eyechart, sway side to side.
Sway right and look away to the right of the card.
Sway left and look to the left of the card. Sway and look right, left, right, left...
See the card appear to move in the opposite direction the eyes, body move, look to.
Sway, move the body, eyes longer left and right and see a longer movement of the card. Sway shorter (6 in. or 1-3 in.) side to side and see the card move shorter and the vision become clearer.
Small shifts, movements of the eyes (saccadic) and perfect central fixation on objects=clear vision.

2 – Demonstrate that when the eyes are stationary, they are under a tremendous strain.
Stand before the Snellen test card at a distance of fifteen or twenty feet. Look directly at one small area of a large letter, which can be seen clearly. Stare at that part of the letter without closing the eyes and without shifting the eyes to some other point. The vision soon becomes worse and the letter blurs. Stare continuously, and note that the longer you stare, the more difficult it is to keep the eyes focused on that one point or part of the letter. Not only does the stare become more difficult, but the eyes become tired; and by making a greater effort, the eyes pain, or a headache is produced. The stare can cause fatigue of the whole body when the effort is sufficiently strong and prolonged.



Stare at one part of the E, (dot).
Eyes immobile, not shifting-experience strain and blur.
Shift part to part on the E and experience relaxation and clear vision.
Avoid staring. Let the eyes move.

Myopia or Near-Sightedness

By W. H. Bates, M.D.

Myopia, or nearsightedness as it is commonly called, is caused by a strain to see at the distance.

In myopia, the eyes are habitually focused for a point about twelve inches or less. In high degrees of myopia, the eyes may be focused at less than twelve inches, ten inches, six inches, three inches or nearer to the eyes. Some patients can read the test card perfectly when they regard it close enough to the eyes. They may be able to read the diamond type when held two to three inches from the eyes. In low degrees of myopia, the vision may be almost as good as in the normal eye.

When the normal eye is at rest, there is no myopia. When the normal eye reads at twelve inches, with an effort or a strain, it becomes temporarily myopic. In order to produce myopia in the normal eye, it is necessary to strain or make an effort to see. In all cases, myopia is caused or is accompanied by an effort or a strain to see at the distance.

Many children, at ten years of age, may have normal eyes, which remain normal until they begin to strain and make an effort to see at the distance. Such patients are cured of their myopia when they can regard the Snellen test card or other objects without any effort or strain.

It can be demonstrated, with the aid of the retinoscope, that myopic patients do not have myopia all the time. When regarding a blank surface, where there is nothing to be seen, or when the patient makes no effort to see, the retinoscope always demonstrates the absence of myopia. When, by treatment the myopic eye does not strain nor make an effort to see at the distance, the myopia becomes less or may disappear altogether.

The quickest cures of myopia are accomplished with the help of the memory, the imagination and central fixation.

Memory and Imagination

A perfect memory and perfect imagination cures myopia under favorable conditions. Patients who have a good memory of mental pictures have no myopia when the mental pictures are remembered or imagined perfectly. There are near-sighted people who, after a course of eye education, can look at a Snellen test card at ten feet or further and remember or imagine the white part of the card perfectly white and the black letters perfectly black. When this is accomplished, the myopia improves.

When school children regard the blackboard, they often half-close their eyelids, or stare and strain to see and thus produce myopia. When they can remember a mental picture of some small letter, and remember it as well with the eyes open as with the eyes closed, normal vision and a temporary cure of their myopia is obtained.

In myopia and other phases of imperfect sight, the white centers of all letters are imagined less white than the rest of the card. When the patient becomes able to imagine the white centers with a white background to be whiter than the rest of the card, the vision is improved and there is no myopia.

Central Fixation

When the vision of myopic patients is imperfect, it can always be demonstrated that the point regarded is not seen best, and other parts of a letter may be seen equally well or better. When the patient becomes able to remember or imagine one part of a letter or an object best, the myopia is lessened and the vision improves. When the strain is prevented, by shifting from one side of the letter to another, the letter appears to move from side to side. The vision may then become normal and the myopia disappears.

Universal Swing



Finger placed 6 inches or less in front of and to the side of one eye. Eyechart 10 feet away. Move the head side to side without looking at the finger and without trying to read the eyechart. The finger appears to move in the opposite direction the head, eyes move to. The distant eyechart appears to move in the same direction the head, eyes move to. Close the eyes and imagine the finger moving and notice the hand, arm... all objects connected to the finger move with it. See the distant chart move opposite in the imagination.

The universal swing is of great value in the treatment of myopia and may be practiced as follows: Regard the Snellen test card at ten feet. Hold the forefinger of one hand about six inches to the front and to the side of one eye. The finger may be held at a nearer distance and good results obtained. Then move the head a short distance from side to side, without looking at the finger, and without trying to read the letters on the distant Snellen test card. Do not look directly at the finger, or the apparent movement becomes modified or stops. Now close the eyes and remember the finger as moving from side to side. If the hand and finger are placed in the lap, one may still be able to remember the moving finger. With the help of the imagination, one may realize that when the finger moves, the hand which is fastened to the finger also moves at the same speed and to the same extent. The same is true of the arm, the elbow, the shoulder, all moving with the finger.

The universal swing is characterized by the fact that one becomes able to imagine the eyes are moving with the finger when the eyes are closed, but when the eyes are opened, they usually move opposite to the movement of the finger.

The above sentence can be interpreted a couple ways:

+If the head is moved left and right when the eyes are closed, the minds eyes can imagine seeing the finger move opposite-the imaginary finger will move opposite the movement of the head/closed eyes.

+If the head is not moved side to side but the finger is imagined to move left and right, the minds eyes (and physical closed eyes) will move with, in the same direction as the imagined moving finger.

When the eyes are open, one can note that by moving the head from side to side, near objects move opposite to the direction of the head and eyes, while distant objects may appear to move in the same direction as the head and eyes.

When one is regarding the Snellen test card, the letters of the card move with the head and eyes, and when the letters move, one can, of course, imagine the whole card to be moving with the head and eyes. Under these conditions, the eyes become more thoroughly relaxed with a consequent improvement in the vision and lessening of the myopia. When the universal swing is practiced

correctly, the movement of the letters and the card is slow, short (about one-quarter of an inch), and easy.

One should practice the universal swing for a sufficient length of time to become able to imagine the letters of the Snellen test card moving in the same direction as do the head and eyes. **It is impossible to imagine the Snellen test card moving with the head and eyes unless some nearer object moves opposite to the movement of the head and eyes.**

Oppositional movement. Close objects appear to move opposite the direction the eyes, head, body move. Distant objects appear to move in the same direction.

A Test of the Imagination
(with Oppositional Movement)

There are a number of phenomena which always occur when the universal swing is practiced. With the back of one Snellen test card toward the patient and placed ten feet away from him, and with the face of the second towards him and placed at twelve feet, both cards can be so arranged that the patient can observe an open space between the two of about four or five inches in width.

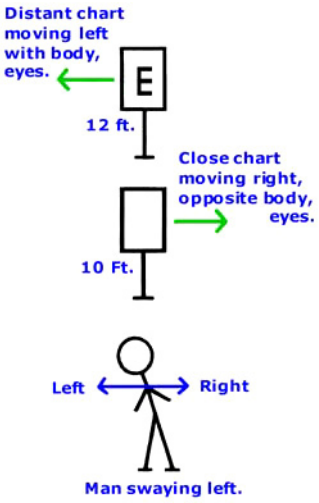
+**When the patient moves the head and eyes to the left, the space between the two cards becomes less and one can imagine the near card moving to the right, while the more distant card with its letters appears to move to the left.**

+**When the head and eyes move to the right, the near card appears to move to the left, the space becomes larger between the two cards, and the patient can imagine the face of the more distant card moving to the right.**

+When the vision is normal and the head and eyes move from side to side, the near card moves opposite, while the more distant card moves in the same direction as the head and eyes.

When the vision is imperfect and the head and eyes are moved from side to side, the near card moves opposite, while the more distant card may also move opposite to the movement of the head and eyes, or it may stop or move in an irregular, jerky manner. When one letter of the distant card is seen imperfectly or when one side or part of a letter is imagined imperfectly, consciously or unconsciously, the movement of the more distant card is modified and very irregular.

When the imagination of a small part of an unknown letter is correct, the swing of the more distant card becomes normal, the card moves from side to side in the same direction as the head and eyes and moves slowly, easily, and continuously. By repetition, one may become able to imagine a part of an unknown letter with the eyes open nearly as well as with the eyes closed, and the imagination of an unknown letter may improve until the imagination becomes as good or better than the sight. The distant card always moves in the same direction as the movement of the head and eyes, when a part of an unknown letter is imagined perfectly. The reverse is also true, that when the distant card does not move with the head and eyes, the imagination of an unknown letter is imperfect.



Sway left and right. The close chart moves in the opposite direction the head, eyes move to. The distant chart moves in the same direction. The two charts are placed apart so a space of about 4-5 in. width is seen between them. This helps the eyes see the appearance of oppositional movement.

The patient should learn to practice the universal swing not only indoors, with the help of the Snellen test card, but it should also be practiced while walking or driving. Some people can demonstrate that all objects become clearer or more distinct by imagining them to move with the head and eyes. This result, however, cannot be obtained unless nearer objects appear to move opposite to the movement of the head and eyes.

When the universal swing is practiced, it is possible for patients with myopia to improve the vision to normal, and the myopia is no longer apparent. Many patients with myopia complain that the benefit obtained from palming, swinging, central fixation and other methods is only temporary. If by continued practice of these methods, however, the flashes of improved vision do not become more frequent and last longer, the universal swing is usually beneficial.

Some patients have difficulty in practicing the universal swing successfully. They are benefited in many cases by imagining the universal swing with the eyes closed for a longer time than with them open.

A Familiar Card
(Memory and Imagination)

When patients practice reading a familiar test card a number of times daily, it is not very long before the letters become memorized. The criticism is made that patients do not see the letters, they only remember or imagine them. It is true that when the sight is perfect, the imagination as well as the memory is perfect. Practicing with the Snellen test card with the help of the memory and the imagination is a benefit. Myopia is always relieved or corrected with the aid of a perfect memory or a perfect imagination. Practicing with a familiar card is one of the quickest methods of curing myopia temporarily or permanently. The more perfectly the letters of the Snellen test card are remembered or imagined, the more completely is the myopia relieved.

Case History

A boy, eight years old, practiced with a familiar Snellen test card twice daily for six months. His mother was discouraged because she said that her son had learned the letters by heart and one could not tell whether he saw the letters correctly or just imagined them. A number of Snellen test cards which the boy had never seen before were used in testing his sight. Much to the surprise of his mother, he read the strange cards just as readily, if not more readily than he did the familiar card. This, of course, convinced his mother that his vision was normal for the strange test cards. She was very curious to know why.

With the aid of the retinoscope, she was able to see the red reflex in the pupil and to imagine a cloud moving from side to side in the same direction as the retinoscope was moved. This always occurred when the patient had normal vision with the familiar or unfamiliar card. When he imagined the letters imperfectly, his mother demonstrated that the shadow moved in the opposite direction to the movement of the retinoscope. It was not difficult to convince her then that, when his vision for the familiar card was perfect, he had no myopia.

Many patients with myopia have been tested and in all cases **when the memory was perfect, the sight was perfect.** As a rule, school children who had good memories were more readily cured than other children. In most schools young children under twelve years of age, who had myopia, were temporarily or permanently cured by the use of the familiar Snellen test card.

The Snellen Test Card

The Snellen test card, while it is of value as a test for the ability of the children to see, is of far greater usefulness as a means for improving the sight.

Acute myopia is usually cured by very simple treatment. Children under twelve years of age who have never worn glasses are usually temporarily cured by alternately reading the Snellen Test Card and resting their eyes by palming.

I have found that in schools where the Snellen Test Card is visible continuously, the vision of the pupils is always improved and that the children in the higher grades acquire more perfect sight than they had when they first entered school. Most children demonstrate that while the Snellen test card improves the vision that it is also a benefit to the nervous system. It prevents and cures headaches, lessens fatigue, encourages the children to study, and increases the mental efficiency.

STORIES FROM THE CLINIC

Cases of Myopia

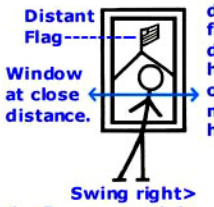
By Emily C. Lierman

A woman, forty-six years of age, who has had myopia as long as she can remember, placed herself under my care, but doubted that I could give her a permanent cure for near-sightedness.

About forty years ago, noticing that she stumbled over objects which were easily seen by others with good vision, her parents had her fitted with glasses. After having had her glasses changed about five times, she came to me for help. At the oculist's advice, she tried faithfully to wear the last pair of glasses continuously, for at least a week, and then returned to him. The glasses were much stronger than those she had previously worn and magnified everything to such an extent that it was impossible to go without them. (or impossible to wear them). Although the patient was skeptical about the Bates Method, she was desperate and willing to believe anything in order that she might be able to do without glasses. I feared that with that attitude she would not continue with the treatment, but I found that I was mistaken. She was very faithful in practicing what I directed her to do.

Now, after four months of treatment and advice, which was carried out religiously by the patient, she drives her car and reads signs, sometimes half a city block away, without glasses. This patient is not entirely cured, although for days at a time she reads 10/10 with the test card and holds her book for reading at normal distance.

In the beginning, it was hard to convince her that it was strain which produced her myopic condition. In treating myopic cases, Dr. Bates and I have proved that all cases of myopia cannot be treated in the same way. This patient's vision with the test card in December, 1926, was the same in both eyes; namely, 10/70. The 70-line letters, however, were very much blurred. Palming helped temporarily, and her vision improved to 10/40 with the aid of **blinking, swinging the body a short distance from left to right** and **flashing one letter of the test card with each sway of the body**. I realized that this was not helping her enough and that she should progress more rapidly, so I experimented with other methods of treatment.



Swing left and right in front of the window and see distant objects (mountain, flag) move in the same direction with the body, head, eyes while close objects (window) appear to move opposite the body, head, eyes. Blink.

Next: Stop swinging. Sway a short distance 1-4 inches... Place a curtain cord in the center of the window. Practice shifting on the close cord and the distant flag.

Shift on the cord. Switch to the flag and shift on it. Switch back to the cord and shift on it, then the flag, cord, flag... Practice with both eyes together and one eye at a time.



+Two small identical eyecharts.
Place one chart at 5 ft. and the other chart closer to the eyes.

+Look at the distant chart. Look at the white opening at the right of the C and the white center. Imagine it pure, bright, clear white, whiter than areas of the paper away from the C.

+Do this with the eyes open, then in the imagination with the eyes closed.

+Eyes open: Look at the C on the close chart, then distant, then close. Repeat imagining the white area pure, clear white with the eyes open, closed, open when looking at the close and distant charts.

+Then; Look at and shift part to part directly on the C and remember, imagine it dark black and clear with eyes open, closed, open on the distant and close charts.

+Then; practice on smaller letters at different distances.

One day she came to me and told me that I was improving her mental condition.

Knowing what good results Dr. Bates had had with the **universal swing**, I used that with my patient. I had her stand before a window and told her to swing from left to right, as I was doing. A decided swing of the body from left to right made distant buildings, flag-staffs and other distant objects appear to move with her body, head and eyes. I encouraged her to keep looking off at the distance while she explained to me how the things at the near point appeared to move. With great surprise in her voice she said: "The window, curtains, shade cord, and other things nearby appear to move in the opposite direction." (Oppositional Movement) I continued swinging with the patient, encouraging her to keep it up for five or ten minutes. I watched her eyes closely to be sure that she was blinking. She noticed that I was watching her and made an unusual remark, which I did not expect from her, because myopic patients usually stare without knowing it. She turned to me and said. "You are watching to see whether I blink or not. Don't worry about that, it feels more comfortable to blink while I am swinging." She also said that she noticed that her eyes felt less heavy while she kept up the swing and that the sun seemed to shine brighter than she had ordinarily noticed it at any time. All the while she was talking she kept up the swing.

When I made a test of her vision again before her first treatment was over her vision improved to 15/15. The patient was much excited and asked if this improved condition of her eyes would continue. I answered, "Yes, if you will remember every day to practice the universal swing frequently."

To vary the treatment for home practice, I gave her two small Fundamental cards with the test letters on the opposite side. She was directed to place one card on her desk as she sat or stood about five feet from the card. The same kind of a card with the same letters was to be held in her hand. She was to begin with the largest letter, which is seen by the normal eye at fifty feet. Looking at the "C" to the right of it where the small opening is, closing her eyes and remembering the small opening and imagining the opening and center of the "C" whiter than the margin of the card, then looking at the card placed on her desk and shifting from the card in her hand, to the other card, helped to improve her vision when practicing in another way failed. This practice helped her for awhile, but that which helped her most to bring about temporary normal vision was the practice of the universal swing.

The patient still reports her progress. After a short period of palming, which is practiced several times each day, she always does the universal swing and emphasizes the fact that it helps her more than anything else.

She told me that at first her husband had been afraid to ride with her after she had removed her glasses and had warned her not to attempt driving without putting them on. He was not opposed to the Bates treatment, but he feared an accident. Now he no longer doubts her ability to see better without the use of glasses, and helps to give her the **sun treatment** every day with the sun glass, which I suggested might be of benefit during the treatment.

Recently I had an unfavorable report of the condition of her eyes. There had been no sun for a few days and she was depressed. I assured her that her depression would disappear when the sun shone again. Practicing the universal swing often, whenever she had the opportunity, relieved her of tension and strain and her vision became normal again.

Encouragement helped, and I believe that she will not need much further advice or instruction from me, because she drives her car with perfect ease. She sees the center of the road coming toward her from the distance and as it comes close, she enjoys seeing it pass under the car. Instead of suffering her usual headache after driving an automobile as she did when she wore her glasses, she feels better after driving. She said that when she learned to see things moving to avoid the stare, her focus for the distance was changed and she could not wear her glasses again even if she wanted to, because they no longer suited her.



Left eye covered with eye patch.
+Eyes open - Shift on a letter on the eyechart while counting to one.
+Eyes closed - count to two.
+Eyes open - shift on the letter and count to one.
+Repeat.

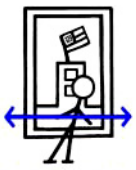
Another case, a woman age forty-eight, had worn glasses for more than fourteen years for myopia and headaches. She feared the strong light of the sun because it caused great pain in her eyes. I could not encourage her to practice the Universal Swing until I had first placed her in the sun with her eyes closed, and focused the sun's rays on her closed eyelids with the sun glass. This gave her instant relief. She complained that at all times while she kept her eyes open, they felt tightened up. This was true with her glasses on as well as off. After the use of the sun glass for more than ten minutes I placed her before a window and instructed her to look at the distant houses and other objects. She said that everything appeared blurred to her and that it made her eyes ache all the more while swinging. I knew that she was not practicing it correctly, so I had her sit in a chair and directed her to keep her eyes closed for awhile. While conversing with her, I discovered that palming caused more tension and strain, so I did not encourage it.

There are many patients who are not benefited by palming, so we change the course of treatment for such patients and they are cured by other means.

The vision of this patient was 5/200 with the right eye and 5/50 with the left. When the patient covered her left eye, she stared fully a minute with her right eye, in order to see the largest letter of the test card at five feet. **Directing her to count two with her eyes closed, then opening her right eye just long enough to count one as she looked at the test card, then closing her eyes and counting two**, the vision of her right eye improved to 5/50, the same as that of her left eye.

I then placed her in the sun again and used the sun-glass on her closed eyelids for about ten minutes. The expression of her face was entirely changed. Her forehead, which was all lines from tension, became smooth and the corners of her mouth were drawn upward instead of downward.

After the sun treatment, we started the universal swing again while standing by an open window. Off in the distance, an American flag was waving gently with the breeze. She noticed that the flagstaff moved or appeared to move with the movement of her body, head and eyes. The window, shade-cord, curtains, and a chair placed directly in front of her, all seemed to move opposite. This swinging was kept up for fifteen minutes, and immediately afterward in a bright light she read the white letters on the black test card ten feet away. Her vision improved to 10/10 reading with both eyes.



Swing left and right in front of a open window. See distant objects (flag, building) move in the same direction with the movement of the body, head, eyes and see the close object (window) move opposite the body, head, eyes.

I treated her every day for a week and when she left me on the last day, she said that she had found blinking a help and felt that she must **blink to keep the eyes relaxed**, but she believed as I did, that the **universal swing** was what really cured her.

She assured me that her friends would have to swing with her, if she noticed at any time that they caused her to strain.

Announcement

(Original Natural Eyesight Improvement Teacher Training Courses, Movies)

Because of the increased demand for the Bates Method in California, Emily C. Lierman, assistant to Dr. W. H. Bates for fourteen years and also manager of the Central Fixation Publishing Company of New York City, has opened an office at 609 South Grand Avenue, Los Angeles, California, where she is treating patients. Mrs. Lierman is also giving courses of instruction to those who desire to cure imperfect sight by the Bates method. At the completion of the course, the student receives a certificate authorizing him or her to improve defective vision by treatment without glasses.

Mrs. Lierman is delivering lectures throughout California and is showing **moving pictures** which illustrate the Bates Method of curing imperfect sight.

Hypermetropic Astigmatism

By Dr. H. M. Peppard

Last fall a young man presented himself to me for examination complaining of **headache, nervousness, insomnia** and **eyestrain**. He had previously had a **nervous breakdown** and said he felt as if he were going to have another.

This statement was apparently correct if general appearances can be considered as an indication. The eyes were bulging with a dry, glassy appearance and the upper lid markedly retracted.

The eye examination revealed a **very hard eyeball** with 1.25 diopters of **hyperopia** with 2.50 diopters of **astigmatism** with the axis 180°. Glasses had been worn but gave little relief. The visual acuity was 20/50 for both eyes and the same in each eye.

Treatment by the Bates Method was started on August fourth. **Palming, swinging, blinking, flashing** and **reading of diamond type** was used. The flashing was especially beneficial.

On August 27th, the eyes were again tested. Visual acuity was 20/15 for both eyes, 20/15 in the right, and 20/20 in the left. The hyperopia or farsightedness was not present and the astigmatism was decreased to 1.00 diopter. A few more treatments relieved the remainder of the astigmatism and the vision improved to 20/15 in each eye.

With the improvement in vision, the general symptoms cleared up. He became able to sleep, was free from headaches and was not so nervous.

The eyes felt comfortable and his entire facial expression was changed from the relaxation around the eyes. The eyes no longer were starey, but bright and moist and the blinking frequent and easy. Six months later the eyes were in perfect condition and the patient no longer feared a nervous breakdown.

Dr. Harold M. Peppard wrote the book; 'Sight Without Glasses'
Read Aldous Huxley's book: 'The Art of Seeing' along with Peppard's book. Books have a few old methods that need updating, changing but 95% of the information in the books consist effective Natural Vision Improvement treatments.

An Experiment With Simultaneous Retinoscopy

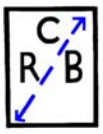
By W. H. Bates, M.D.

By simultaneous retinoscopy is meant the use of the retinoscope while the patient is using his eyes for distant or near vision.

In order to obtain accurate results by simultaneous retinoscopy, a patient was seated in a chair which was placed about ten feet from the Snellen test card. To the right, to the left, and above the Snellen test card was a blank, dark gray surface. An examination was made with the retinoscope which was held about six feet from the eyes of the patient. While the patient was looking at a blank surface without trying to see, and the retinoscope was used at the same time, it was demonstrated that there was no myopic refraction manifest. The eyes were normal and the patient was able to see with perfect sight.

When the patient moved his eyes quickly from side to side and no effort was made to see, it was demonstrated by simultaneous retinoscopy that no myopic refraction was produced. After shifting from one point to another, closing and opening the eyes and seeing the letters in flashes, the patient's vision improved. By repetition the flashes of improved vision became more frequent and lasted longer, until finally the patient became conscious of a permanent improvement.

Shifting has proved a very valuable method of improving the sight, not only in myopia, but also in all other eye troubles. When the eyes shift to the left, they are stationary for an appreciable length of time, before they can look to the right. When they are stationary, they may stare or strain sufficiently to lower the vision. In order to become myopic while shifting, it is necessary to strain sufficiently to change the shape of the eyeball.



Practice shifting
Shift on the white paper on the top right area of the card for part of a minute. Blink and relax. Then, shift rapidly down to the bottom left white area of the card, then back to the top within a second or less. Looking at the white area relaxes the mind, eyes because there is nothing to see, no effort to see=no strain, no blur. As the eyes shift on the white areas of the card the vision and letters become clear. Look at the letters and shift on them.

Circular and Elliptical Shifting Swing

Circular or elliptical shifting may be all that is necessary to prevent the eye from staring or making an effort.

When the eyes shift to the left and move in the orbit of a circle or an ellipse, the movement is continuous, and the eyes do not have time to stop before they look to the right. Two areas may be regarded alternately. One part of the background above and to the right of the test card may be regarded with normal sight. Use this area as a point of departure which may be seen for part of a minute or longer. Then shift to the lower left hand corner of the test card and quickly back again to the point of departure. This should be done in one second or less.

When regarding the plain background, the eyes are relaxed or at rest and have normal sight. Shift rapidly downwards to the lower left hand corner of the card and back again to the upper area of the background. In this way shifting may be practiced with benefit. When one can regard the point of departure with normal vision, the eyes become normal temporarily in flashes.

A benefit to the sight comes in flashes at first, although simultaneous retinoscopy indicates that the eye may be, at the same

time, continuously normal. The flashes become more and more frequent and continue for a longer time.
(When looking at a blank page, wall… the eyes are relaxed, vision clear because there is not any effort to see, no strain, not trying to see anything.

Announcement

Dr. H.M. Peppard, of 71 Park Avenue, is a representative of Dr. Bates and is qualified to improve or cure imperfect sight by the Bates method.
Office hours – 9:30 to 6:00 Telephone Caledonia 4694

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

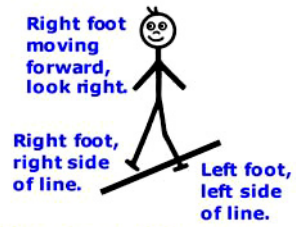
JUNE, 1927

Demonstrate
(Walking, Movement and Oppositional Movement)

That the eyes can be used correctly or incorrectly when walking.

Many people have complained that after walking a short distance slowly, easily and without any special effort, they become nervous, tired and their eyes feel the symptoms and consequences of strain. When they were taught the correct way to use their eyes while walking, the symptoms of fatigue or strain disappeared.

The facts can be demonstrated with the aid of a straight line on the floor or the seam in the carpet.



Correct method of walking and using the eyes:
+Right foot moves forward, look to the right.
+Left foot moves forward, look to the left.
+The line sways in the opposite direction the eyes and foot move to.

Wrong Way

Stand with the right foot to the right of the line and the left foot to the left of the line. Now put your right foot forward and look to the left of the line. Then put your left foot forward and look to the right of the line. When you walk forward, look to the left of the line, when your right foot moves forward. Look to the right of the line when your left foot moves forward. Note that it is difficult to do this longer than a few seconds without uncertainty, discomfort, pain, headache, dizziness or nausea.

Right Way

Now practice the right method of walking and using the eyes. When the right foot moves forward, look to the right; and when the left foot moves forward look to the left. Note that the straight line seems to sway in the direction opposite to the movement of the eyes and foot, i.e., when the eyes and foot move to the right, the line seems to move to the left. When the eyes and foot move to the left, the line seems to move to the right. Note that this is done easily, without any hesitation or discomfort.

When you walk, you can imagine that you are looking at the right foot as you step forward with that foot. When you step forward with the left foot, you can imagine that you are looking at your left foot. This can be done in a slow walk or quite rapidly while running straight ahead or in a circle.

Astigmatism

By W. H. Bates, M.D.

The study of astigmatism is important because of its frequency and because so many serious diseases of the eye are preceded by astigmatism.

Definitions

The normal eye is spherical in shape and all the meridians are of the same curvature. The curvature of the cornea is like that of a segment of a sphere; but when astigmatism is present, it is said to be lop-sided; that is, one principal meridian of the curvature is more convex than the meridian at right angles to it. With an instrument called the ophthalmometer, it is possible to measure all the meridians of the curvature of the cornea.

Astigmatism may be simple hypermetropic, simple myopic, compound hypermetropic, compound myopic, mixed or irregular.

+ In **Simple Hypermetropic Astigmatism**, one principal meridian of the cornea has a normal curvature, while the meridian at right angels to it is flatter than all the other meridians.

+In **Simple Myopic Astigmatism** one principal meridian of the cornea has a normal curvature, while the meridian at right angels to it is more convex than all the other meridians.

+In **Compound hypermetropic Astigmatism**, the two principal meridians are flatter than the meridians of the normal eyes, one being flatter than the other.

+In **Compound Myopic Astigmatism**, the two principal meridians are more convex than a normal meridian, one being more convex than the other.

+In **Mixed Astigmatism**, one of the principal meridians is flatter than a meridian of the normal eye, while the other principal meridian is more convex than a meridian of the normal eye.

+In **Irregular Astigmatism**, the meridians of the curvature of the cornea are so malformed that no glasses can correct it. This form of astigmatism is usually caused by the contraction of scar tissue, which has formed on the cornea after the healing of a corneal ulcer.

Occurrence

Astigmatism occurs frequently and is usually combined with hypermetropia or myopia.

I have investigated the facts of the occurrence of astigmatism in new-born children. For the past one hundred years or more, atropine has been used to assist in measuring the astigmatism of the eye. It dilates the pupil and is supposed to paralyze the muscles which change the focus of the eyeball. While young babies were under observation, atropine, of sufficient strength to produce a maximum dilatation of the pupil, was accordingly used. Although the pupils became widely dilated, the ability of the eye to change its focus was not prevented by the atropine. With the aid of the retinoscope, it was found that the form of the eyeball changed from hour to hour or from day to day. My observations showed that the children were born with normal eyes and had no astigmatism, but it was very commonly found to be present as early as a half-hour after birth. The degree and kind of astigmatism varied within very wide limits.

These cases were kept under observation and examined at intervals. In nearly all cases, the eyes were normal and there was no astigmatism present, when they had reached the age of about six years. After attending school a few years, astigmatism was frequently acquired. When those children, who wore glasses for the correction of astigmatism, were examined at the age of twelve years or older, it was found to be still present and increased as they grew older, necessitating stronger glasses. Those children who wore no glasses for the correction of astigmatism, did not have it when they reached the age of twelve or older, which, of course, suggested treatment. Whenever it was possible to remove the glasses of young children, the astigmatism invariably became less or disappeared altogether.

Symptoms

When a high degree of astigmatism is present, the vision is appreciably lowered. Usually when vertical lines are regarded, they may appear more distinct than horizontal lines, or the reverse may be true. This is, however, not a reliable test because patients with normal vision do not always see vertical or horizontal lines equally well.

Many patients with astigmatism complain of headaches and pain in various parts of the head and eyes. Some patients have said that when their eyes became tired or felt uncomfortable in any way, they could rest them by removing their glasses.

One elderly lady obtained a pair of glasses from an optician for the relief of astigmatism. After wearing them for a few days, she returned complaining that every morning, when she put her glasses on, the pain in her head increased very much, and that, after wearing her glasses for a few hours, the pain was occasionally only partially relieved. The optician remonstrated and told her that she needed to wear her glasses several weeks before her eyes could get used to them. The patient then told him that she had come to have glasses fitted to her eyes, and not her eyes fitted to glasses.

An optician was wearing window-pane glasses for the relief of headaches, and said that glasses were a great help to him. His wife, however, informed her friends that his headaches were much more frequent while wearing the glasses than when he did not use them.

Cause

Astigmatism is caused by a mental strain or an effort to see, either consciously or unconsciously. Patients have demonstrated that astigmatism can be produced by **staring or straining to see**.

The normal eye with normal sight, normal memory or normal imagination has no astigmatism, but **when the normal eye remembers or imagines imperfectly, the retinoscope demonstrates the presence of astigmatism.**

Pain in the eyes and head can always be produced in the normal eye by straining or making an effort to see. Such headaches disappear promptly when relaxation methods are employed.

Treatment- Astigmatism cures

Astigmatism is caused by a mental strain and can only be cured by complete relief of the strain. Glasses should not be prescribed because they increase mental strain, which is accompanied by an increase in the degree of astigmatism.

To relieve astigmatism, it is necessary for the patient to practice those methods which rest the mind and eyes. Children, when asleep, may acquire in an hour or less a high degree of astigmatism, and the muscles of the face may show a great deal of tension or strain. If this manifest tension can be relieved or corrected altogether, the retinoscope demonstrates that the astigmatism has become less or has disappeared entirely. When astigmatism is present in young babies, it can be lessened by relaxation methods. **The mother can rest the child by swinging it in her arms with a slow, short, easy swing.** In children twelve years of age, and older, astigmatism is often acquired, and can be corrected very promptly by **palming or swinging**.

Sway, Blink, Shift, Central Fixation.

Adults suffering from various forms of astigmatism are benefited by practicing **central fixation,** by **improving their memory and imagination** and by other methods which secure **relaxation**.

Favorable Conditions

For the correction of astigmatism, we should consider favorable conditions, which promote the best vision. Some patients with astigmatism, perhaps the majority, prefer the illumination to be bright. They can see better in the strong sunlight and the astigmatism becomes less than when the light is dim. Other patients with astigmatism see better, and the astigmatism becomes less or disappears, in a dim light, while it may be very much increased in a bright light.

The distance of the Snellen test card from the eyes is also important. A patient may, at twenty feet, read the card with normal vision, when the astigmatism is not so great. The same patient may read the Snellen test card at ten feet with normal vision and the astigmatism may become worse. Some of these cases are difficult to understand. One patient became worse when the eyes were tested at three feet, but when tested at fifteen feet, the patient read the last line of the Snellen test card and the astigmatism disappeared. Each individual case, in order to obtain the best results from relaxation methods should be tested at a distance which is favorable.

Central Fixation

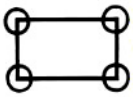
The normal eye with normal sight sees with central fixation, i.e., it sees best where it is looking and not so clearly where it is not looking. **The astigmatic eye sees with eccentric fixation, i.e., it sees best where it is not looking. It is important, therefore, that patients with astigmatism consciously practice central fixation until it becomes an unconscious habit.** (Correct Vision Habit)

For example, one may look at the notch at the top of the large letter "C" of the Snellen test card and observe that the notch is seen best, while all other parts of the letter are seen worse. When one looks at the bottom of the large letter and sees that part best, the top is not seen so clearly. With the use of the retinoscope, it can be observed that the astigmatism has become less or disappeared altogether when this is done correctly.

One may look at the lower left hand corner of a white pillow and see that corner best, while the other corners are not seen so well. The patient should then look at the upper left hand corner of the pillow and see that best and the other corners worse. By looking at each corner of the white pillow in turn, the corner regarded will be seen best while the other corners are not seen so clearly and the vision of the whole pillow will be improved. Not only is the form seen better, but the whiteness is also improved by using central fixation. With the eyes open or closed, the memory of the pillow is also improved. Shift part to part on any area of the pillow – left and right, top and bottom, corner to corner, middle…



+Shift on the notch on the top of the C. Notice that while looking at the notch it is in the center of the visual field and is seen darkest black, clearest. Other areas of the C are in the peripheral field and are less clear. +Shift to the bottom of the C. Now the bottom is in the central field and clearest and the top and other areas are less clear. Shift part to part seeing one part clearest a time.



Shift corner to corner on the pillow and see one corner clearest at a time in the center of the visual field. Shift part to part on any area of the pillow, seeing one part clearest at a time. The central field moves with the eyes from part to part. Do this with the eyes open and in the imagination with eyes closed and notice that shifting on the actual and the mental image maintains the clear visual and mental picture of the pillow.





Shift on the letter O with eyes open, closed, open and remember, imagine it clear with a pure white center. Improving the memory, imagination improves relaxation and clarity of vision.

Shifting

The normal eye with normal sight is constantly shifting from one point to another and does not hold one point longer than a second. It may shift only a short distance, a quarter of an inch or less, and then back again to the point previously regarded. Patients with astigmatism stare or make an effort to see. When a letter or other object is regarded, they attempt to see the whole letter or object at once, they may concentrate on one point for a continuous period of time, thereby increasing the astigmatism.

Memory and Imagination

The normal eye has no astigmatism when the memory and imagination are perfect. The memory of a perfect letter "O", with a white center imagined whiter than it really is, can be accomplished easily, promptly, continuously, without effort, pain, or fatigue. The memory of the same letter, with the white center covered over by a gray cloud which blurs it, requires a stare or a strain to see or to remember, and astigmatism is manifest. A letter may be remembered imperfectly for a few seconds, but this is difficult or impossible to do for an appreciable length of time. The gray blur constantly changes and always becomes worse or more blurred when the effort to see or remember increases.

A perfect memory can only be obtained when the sight is perfect. A large area of white (white area of the page) can usually be remembered perfectly because it is seen perfectly. By regarding a white area alternately with the eyes open and closed, the memory is improved and the astigmatism is lessened.

When the memory is improved, the imagination usually improves. Since we can only imagine what we remember, in order to imagine letters or other objects clearly or perfectly, a good memory is necessary.

Case Report -I

A man, aged sixty, was treated some years ago. At his first visit, he was asked to regard a white pillow resting on a table. He was told to close his eyes and remember it. When he did this, he remembered a black pillow instead of a white pillow, which surprised him very much. By having him see each corner of the pillow in turn, with his eyes open, his vision for the white pillow was improved, and when he closed his eyes he was able to remember a white pillow.



Girl reads fine microscopic print clear with shifting and central fixation. Print touching the eyelashes, eyes produce a magnifying, microscope effect.

Case Report – II



Microscopic vision for any objects close to the eyes.

A girl, eight years old, had a high degree of astigmatism in each eye. The vision of the right eye was 5/200, one fortieth of normal, while that of the left eye was only 3/200 or one sixty-sixth

of normal. The left eye habitually turned in,—internal squint. The child was very bright and seemed to realize the value of central fixation almost from the beginning. By practicing central fixation and regarding the Snellen test card first at ten feet and later at twenty feet, the vision of each eye improved, so that in about a week the vision was normal in each eye and the left eye became straight permanently.

The patient's near vision was also tested. At ten inches, the usual reading distance for the normal eye, the patient by practice became able to imagine one part best of capital letters and, later on, of smaller letters. In about two weeks, she read diamond type at six inches by central fixation. The retinoscope indicated no astigmatism and no malformation, of any kind, of the eyeball. This young child acquired what may be called **microscopic vision**. **In three weeks she became able to read very fine print with the paper in contact with the eyelashes of either eye, and very small objects were seen close to her eyes with the same clearness as they were seen with the aid of a microscope. For example, she could describe red blood corpuscles and white blood corpuscles mounted on a glass slide when held in contact with the eyelashes of either eye. The child was benefited or cured by the practice of central fixation**. Although the results were very gratifying, the child received so much attention by exhibiting her ability to see, that I was very much relieved when the family left New York for a distant city taking the prodigy along with them.

Conical Cornea

The question has often been asked if relaxation treatment benefits conical cornea with its large amount of irregular astigmatism. **The contraction of the superior and inferior oblique muscles (when tense, functioning abnormally) squeezes the eyeball and increases the length of the optic axis. As a result of this pressure, the back part of the eyeball becomes thinner and bulges backwards with the production of irregular astigmatism. The scientific name for this bulging of the back of the eye is "Posterior Staphyloma." Less frequently, the front part of the eye, the cornea, may bulge in the form of a conical mass and is accordingly termed "conical cornea."**



Oblique muscles shown in red. Tension in the Obliques places pressure on/in the eye causing lengthened eye shape, incorrect focus of light rays in the eye, unclear vision, cataracts...

Since a strain causes the bulging of the back part or the front part of the eyeball, rest or relaxation of the strain should be and is followed by relief.

Conical cornea is a very painful, complicated disease of the eyes. The vision is always lowered and usually continues to grow worse from year to year. In the beginning, simple astigmatism with a clear cornea can usually be demonstrated in these cases. The amount of the astigmatism may be two diopters or less, and the impaired vision may be improved to the normal with a weak astigmatic glass. The bulging of the cornea increases slowly or rapidly and an ulcer appears near the center of the cornea where the parts are more severely Inflamed. The astigmatism becomes the irregular type, in which glasses are not able to improve the poor vision to the normal.

A school teacher had been suffering from conical cornea in both eyes. Her vision was only 10/200 in each eye. With strong glasses for compound myopic astigmatism, her vision was improved to 10/50. For a number of years, she had worn glasses which had been made stronger from year to year. Each time that she was tested, stronger glasses were prescribed for the loss of vision during the preceding year. She suffered great pain which was not relieved by the strong glasses. By practicing **palming**, the **variable and universal swings**, the pain was completely relieved, and the vision improved to 10/40 without the use of glasses. The **relaxation treatment** improved her condition, so that she became able to see without glasses better than she had been able to see with them. It is important to realize that the relief from pain was accomplished in about half an hour of treatment and that the benefit was obtained after other methods had failed while she wore glasses.

The stare or strain to see has been demonstrated to be associated with all diseases of the eyes, and is the cause of all imperfect sight. When relaxation is obtained, the eyeball may at once become normal in form with normal sight. Anything that is done with an effort to improve the vision is wrong and always fails. The benefit is only temporary when the stare is only relieved temporarily, but it is always a permanent benefit when the eyestrain is continuously relieved.

Shifting, central fixation, relaxation causes the eye muscles to relax, the eye returns to normal shape, conical cornea, astigmatism… are removed.

Lady palms and remembers her flowers. Colors, shapes, names of flowers, shifts on the flowers part to part, flower to flower. Vision clear.



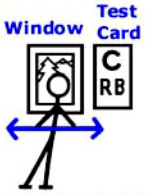
Astigmatism

By Emily C. Lierman

During the holidays, a woman came to me for treatment and brought her prescription for glasses with her. She told me frankly that she was doubtful that I could cure the mixed astigmatism with which she had been troubled for so many years and which was getting worse from day to day. She was **seventy years old and had worn glasses for reading and for distance for about twenty years.** During the past few years she had suffered considerable pain in the back of her eyes. The pain was more intense on bright, sunshiny days, and because of the pain and discomfort caused by the light, she always wore a large hat as a protection from the sun and she frequently wore dark glasses.

The copy of her prescription for glasses showed that she had hypermetropia and mixed astigmatism. The vision of her right eye was better than that of the left for the distance, namely 10/50, but all the letters of the card were blurred. The vision of her left eye was 10/70. When she looked at me, she had no wrinkles in her forehead and her eyes were open in a natural way. When she looked at the test card, there immediately appeared more than a half dozen wrinkles in her forehead and her mouth became distorted as she tried to read the letters for me.

I directed her to palm her closed eyes and, instead of telling her to remember a letter of the test card, which is something I usually direct the patient to do while the eyes are closed and covered, I asked her if she had a flower garden. She answered, "Yes." I noticed how nervous she was and promptly proceeded to make her more comfortable by giving her a **foot-stool, and a pillow to rest her elbows while palming**. She said that she could easily remember the different flowers which she



Sway left and right in front of a window and eyechart.
+Sway left and shift quickly on distant objects outside the window.
+Sway right and shift quickly on a letter on the eyechart.

had planted herself and that it was always a pleasure to spend a great deal of her time in the garden watching the flowers grow. I asked her to name the different flowers and also to mention their colors.

We spent about five minutes' time in this way. Then I removed the footstool and cushion and had her stand as I taught her the **universal swing**. **Swaying to the left, she got a glimpse of the tops of buildings from my office window. When she swayed to the right, she was told to glance at the test card on the wall ten feet away and to keep up the universal swing all the time.** Her vision improved in less than ten minutes to 10/30. By reading one line of letters and then another, as I directed her to do, **swinging and blinking with each sway of the body**, the vision of both eyes improved to 10/10. After one hour's treatment, the pain in her eyes had disappeared also.

She complained that she might not be able to do as well by herself at home, and was also doubtful whether her astigmatism could actually be cured. I then proceeded to make her sight worse by having her stare as she looked directly at one letter and then another. She soon complained that the pain in her eyes had returned. I felt sorry to think that under my direction she should be so punished. Many times I have heard Dr. Bates say, "**If you know how to make your sight worse, you will then know how to improve it".** It has always been a disagreeable task for me to have the patient demonstrate this, as I am sensitive to the pain and discomfort that the patient feels. It is only when a patient complains that she is not receiving much help or that she does not understand how her particular case can be cured, that I cause the patient to make her sight worse by doing the wrong thing.

My patient soon discovered that **staring and straining caused the pain to return and that it lowered her vision for the distance as well as for the near point.**

Oppositional Movement

I placed her by a window and directed her to swing with me as my body moved from right to left. Printed signs on the upper parts of buildings in the distance seemed blurred to her before she began to swing. By noticing that the buildings in the distance moved slightly with her, while the window and curtains up close moved rapidly opposite to the movement of her body, her pain and discomfort disappeared. She noticed also that her desire to see things better, which made her forget to blink, prevented her from improving her vision for the test card. Then she conscientiously kept up the blinking as she kept time with the sway of her body. This pleased her and she was satisfied with the treatment.

Ten days later her vision for the test card had improved to 15/10 with each eye, and the black letters on the white card were clear and distinct. I gave her a small Fundamental card to hold in her hand. Immediately, she held the card off as far as her arm would reach. It was interesting to notice how the strain disappeared from her face when she drew the card further away from her eyes. She was told to close her eyes and then draw the fine print card up to about six inches from her eyes. Then, when she opened her eyes and looked at the card, I held her hand in place so that she could not move it further away. In an instant, she drew her head as far back as she could from the card. She said that looking at the letters of the card when it was held so close caused an instant pain in back of her eyes and made her feel nauseated.



Palm. Then, look at, shift on the white spaces between sentences on the close fine print card and relax.

Next - Look at the distant eyechart and shift on the letters. No effort to see clear. Relax. If a letter remains unclear, look at/shift on a white area of the card to relax the eyes, then return to the letter. Name each letter and close the eyes and remember, imagine the letter clear and shift on it in the mind.

Look at the white spaces on the close fine print card again. Then, look at the fine print words and read them clear. Repeat.

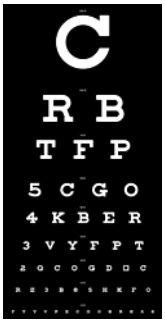
I told her to quickly close her eyes and drop the card in her lap and forget about it. In trying so hard to please me, she had produced a terrible strain which made me almost as uncomfortable as it did her. I palmed with her as she again described her garden to me. While her eyes were closed, I placed a test card which was fastened on a stand, five feet from where she was sitting. This card was black with white letters. When all else fails to improve the sight of the patient, this card is my greatest help.

I then told her to follow my finger as I pointed to the first letter of each line down to the bottom of the card. I pointed a half-inch below each letter and told her to look in the direction of my finger tip and not at the letter.

Modern teachers state to look directly at the letters to see them clear. Shift on the letters, relax, blink. Occasionally, take a break and look at, shift on the white spaces to relax the eyes, (without trying to see the letters), then look directly at the letters to see, read them. Reading each letter clearly at five feet produced no strain whatever. As she mentioned each letter, she closed her eyes and remembered it.

Following my directions in this way, she became able to look at the white spaces of the small Fundamental card which she again held in her hand at six inches from her eyes. By shifting and blinking from the small letter "o" of the test card at five feet to the white spaces of the small Fundamental card, she read straight down to the finest print of the Fundamental card, line number fifteen. The change in her face was good to see because all signs of strain had cleared away. When reading the letters on the card, look directly at them, shift, use central fixation. Look at the white area of the card only when resting the eyes, not reading the letters.

She practiced at home for several weeks and then came to me again to hear what I had to say about her good sight. She was able to do without her glasses all the time and did not use them again. She wanted to take more treatment if I thought it was necessary.



I tested her eyes and at fifteen feet she read a strange card, which has small letters to be read with the normal eye at nine feet. This card she read with each eye separately and without any effort or strain.

She told me that she had practiced faithfully every day for more than two hours altogether, and had done as I told her to, which was not to put her glasses on again. She practiced the universal swing almost an hour a day. She said that she enjoyed the universal swing so much that instead of counting to one hundred, which I told her was necessary to do in order to know that she was swinging enough for the improvement of her vision and the relief of strain, she practiced for twenty minutes at a time.

It only took me ten minutes to find out that she no longer needed help from me. I told her, however, that she could be sure of a relapse if at any time she punished her eyes by staring or by not blinking enough.

Palming and the **universal swing** helped her to rest her eyes and to see things moving all the time. **This swing, with the help of the memory of the flowers in her garden, cured my patient.**

Announcement

Dr. Bates is pleased to announce that Mrs. E. Reid and Mr. Ian Jardine of Johannesburg, South Africa, have completed a course of instruction under his personal supervision and are qualified to teach the Bates Method of improving imperfect sight without the use

of glasses. Their interest in the Bates method was originally inspired by the benefit Mr. Jardine received in his own case, which led them to travel eleven thousand miles from Johannesburg to New York to study under Dr. Bates personally in order that they might help others who have defective vision.

In the next issue of Better Eyesight will appear Mr. Jardine's account of his case.

Questions and Answers

Q – Should one practice with fine print by holding it where it can be seen best or at the normal distance?
A – Hold the print at the distance from your eyes at which you see best. Remember not to look directly at the letters, until the eyes have looked at the white spaces first, relaxed, then; look directly at the letters to read them. If done without strain, no squinting: reading fine print closer, at a blurry distance improves the sight.

Q – Is age a factor in the cure of imperfect sight without glasses?
A – Age is not a factor. I have cured hundreds of patients past sixty.

Q – What method is best to relieve the **tension in the back of the neck**?
A – The variable swing. This is described in the September, 1926, number of the Better Eyesight Magazine. See Demonstrate article paragraph 2.

Q – Is the swing apt to cause nystagmus?
A – No, the swing relieves strain, whereas nystagmus is caused by eyestrain.

Q – When taking Dr. Bates' treatment, could one wear glasses for a few hours each day for close work?
A – No, each time you put on your glasses, your progress is retarded.

Q – What causes the lids of the eyes to itch and sometimes become scaly?
A – This is due to strain. Practice relaxation methods all day long, - shifting, blinking and central fixation. Get as much sun treatment as possible.

Q- What causes my vision to improve for a day or two, and then relapse?
A – This is caused by lack of practice and by straining your eyes. When the vision is good, you are relaxed.

Q – In palming, should one close the eyes tightly?
A – No, easily, lazily and naturally at all times.

Q – Why is my vision worse on a rainy or cloudy day than in broad daylight?
A – Because you strain to see on a dark day.
Also: the pupil is larger in dimmer light – the pinhole effect of bright light is not available. If the vision is imperfect, imperfectly focused light rays in the eye and the larger pupil in dimmer light lets in more light rays; more imperfectly focused light rays are on the retina and blur is increased. Practice Natural Eyesight Improvement, Correct Vision Habits - shifting, central fixation, relaxation, switching, memory and imagination at night for clear night vision and vision will be clear in all levels of light.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JULY, 1927

Demonstrate

Demonstrate that perfect sight is accomplished when the imagination is good, and that you see only what you imagine you see.

Take a Snellen test card and hold it at a distance from your eyes at which your sight is fairly good. Look at the white center of the large "O" and compare the whiteness of the center of the "O" with the whiteness of the rest of the card. You may do it readily: but if not, use a screen, that is, a card with a small hole in it. With that card, cover over the black part of the letter "O" and note the white center of the letter which is exposed by the opening in the screen. Remove the screen and observe that there is a change in the appearance of the white, which appears to be a whiter white, when the black part of the letter is exposed. When the black part of the letter is covered with a screen, the center of the "O" is of the same whiteness as the rest of the card. It is, therefore, possible to demonstrate that you do not see the white center of the "O" whiter than the rest of the card, because you are seeing something that is not there. When you see something that is not there, you do not really see it, you only imagine it. The whiter you can imagine the center of the "O," the better becomes the vision for the letter "O," and when the vision of the letter "O" improves, the vision of all the letters on the card improves. The perfect imagination of the white center of the "O" means perfect imagination of the black, because you cannot imagine the white perfectly, without imagining the black perfectly. By practice you may become able to imagine the letter "O" much better than it really is, and when this is accomplished, you become able to actually see unknown letters.
Contrast between black and white, halos of black letters, camera effect and other functions of the eye, brain cause the appearance of the white glow, white center of a letter o appearing bright white.

The Imperfect Sight Of The Normal Eye

By W. H. Bates, M.D.

People with normal eyes do not have normal sight all the time. It is only under favorable conditions that vision is continuously good or perfect. Some individuals may have normal sight at twenty feet, but not at a nearer or more distant point. Normal sight at twenty feet does not mean normal sight at ten feet, five feet, or nearer, or at twenty-five feet or further. What may be favorable conditions for one person may not be favorable for everybody or for the same person at different times. Frequently imperfect sight may be found to a greater or lesser degree in cases of squint or strabismus, although the optic nerve, retina, and other parts of the eye may be normal. Such cases are suffering from eyestrain and are cured by relaxation treatment.

The amount blindness produced by an unconscious or conscious strain is very variable. The amount of vision lost may be one-tenth of normal sight, or it may occasionally be six-tenths, nine-tenths. I have found the vision to be lowered to no perception of light, in eyes which had no organic changes in the retina, optic nerve, choroid or other parts of the eyeball. The pupil did not react to light by direct illumination. These cases were all cured by relaxation methods.

The imperfect sight of the normal eye is similar in its manifestations to **amblyopia ex anopsia** in which no organic changes are present to account for the poor vision. Not all cases of **squint** have imperfect sight of the eye which turns in or out habitually or continuously. Usually the eye with the poor vision is turned, but there are many exceptions, for example, the eye with good vision may be the one that is turned. Sometimes the vision may alternate and would then be good in the eye that is straight and poor in the eye which turns. After relaxation treatment has improved the sight of both eyes to normal, the eyes may become permanently straight, but it is always true that the patient can produce a relapse by a conscious or an unconscious effort, and as a result, the vision in one or both eyes is always lowered.

A woman, age sixty, recently came to me for treatment. She had worn glasses for more than thirty years to improve her vision not only for the distance, but also for reading. Bifocals made her eyes feel worse and produced a greater amount of discomfort than any other glasses. Three years ago, the vision of the right eye was good and she could read a newspaper with the aid of her glasses. With the left eye she could not read, even with glasses. Her vision for distant objects was imperfect and was not improved by glasses. Sometimes the right eye had good vision, while the vision of the left eye was much less. On other occasions the vision of the left eye was good, while that of the right eye was very imperfect. She had been to see a great many eye specialists for treatment, but none had been able to fit her properly with glasses for distance or for reading. All these eye specialists admitted that they did not know the cause of her imperfect sight. She was fitted with many pairs of eyeglasses, no two of which were alike. Some doctors prescribed eye drops, others internal medicines. With the hope of giving her relief from the agony of pain which she suffered, various serums were administered. Some eye specialists treated her for cataract, others for diseases of the retina, optic nerve and other parts of the interior of the eyeball.

She was suffering from eyestrain or a mental strain, which produced many different kinds of errors of refraction. When she strained her eyes, she produced a malformation of the eyeballs which caused imperfect sight. This condition had been temporarily improved by glasses. In a few days or a week, however, the glasses had caused her great discomfort and made her sight worse.

I made a very careful ophthalmological examination, but found no disease in any part of the eye. Her eyes were normal, although the vision was imperfect.

I emphasized the fact that if she wished to be cured permanently, it was necessary for her to discard her glasses and not put them on again for any purpose whatever. This she consented to do.

The use of her memory and imagination helped to improve her vision. **She committed to memory the various letters of the Snellen test card** and with her eyes open, regarding each letter, her memory or imagination of the letters was good. When she closed her eyes, not only could she remember or imagine each letter perfectly black, but she also could remember the size of the letter, its location, its white center and the white halo which surrounded it. With her eyes closed, she could remember the whiteness of the spaces between the lines much better than she could imagine it with her eyes open. With the aid of the retinoscope, I observed that when she imagined normal vision with her eyes open, there was no myopia, hypermetropia, nor astigmatism present. When she suffered pain, however, the shape of the eyeball was changed and her vision always became worse.

This patient demonstrated that the normal eye is always normal when the memory or imagination is good. When the memory or imagination is imperfect, the vision of the normal eye is always imperfect.

A Snellen test card with a large letter "C" at the top was placed about fifteen feet in front of her. To one side was placed another Snellen test card, with a large letter "L" at the top. She was unable to distinguish the large letter "L" with either eye, but she could read all the letters on the "C" card, including the bottom line, with the aid of her memory and imagination. With a little encouragement, she became able to imagine the large "L" blacker than the large "C," although she could not distinguish the "L." In a few minutes, when she imagined the "L" blacker than the big "C," she became able to distinguish it. By the same methods she became able with the help of her memory and imagination, to imagine smaller letters on the large "L" card to be as black as letters of the same size on the "C" card. By improving the blackness of the small letters on the large "L" card, and imagining them perfectly black alternately with her eyes open and closed, the small letters became visible and she was able to distinguish them.

When this patient looked fixedly at, or centered her gaze upon one part of a large letter at six inches, she found that it was difficult, and it required an effort to keep her eyes open, and to look intently at one point. She also found that by looking at other letters and trying to see them all at once, or by making an effort to see all the letters of one word simultaneously, her vision was lowered. When she was advised to look at the white spaces between the lines, she said that it was a rest and that the white spaces seemed whiter, and the black letters then seemed blacker. When she avoided looking directly at the letters, she became able to read some of the large print.

(Modern teachers state; to look directly at the print to see/read it; central fixation. It is ok to first look at the white spaces, away from the print, to relax the eyes, mind before looking at the print.)

After she had imagined the white spaces between the lines to be whiter than they really were, it was possible for her to imagine the thin, white line. This line is imagined along the bottom of a line of letters where the black of the letters meets the white of the white space. She was not always sure that she looked at the white spaces, although she planned to do so. When she tried to read and felt pain or discomfort, she was unconsciously looking at the letters; but when she looked at the white spaces and succeeded in avoiding the letters, she felt no discomfort and she was able to read almost continuously without being conscious that she was looking at the letters. When she practiced relaxation methods, did not stare, did not strain nor try to see, her vision became normal.

Military Story

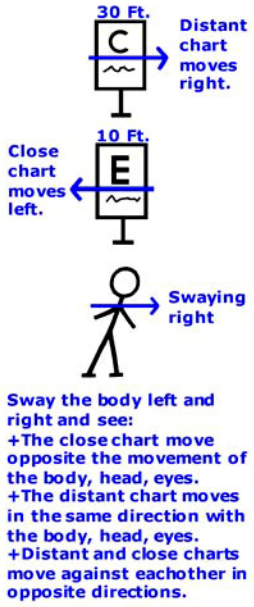
A young man, aged 18, desired to enter the **Naval Academy at Annapolis**. He had already passed a satisfactory physical and scholastic examination, but he had failed to pass the eye test. The vision of each eye was one-half of the normal. By practicing the swing, and with the aid of his memory and imagination, his vision became 15/10, or better than normal. His great difficulty was that, although he read this test card with each eye with normal vision, 20/20, the day before his eye test, he became so nervous just as soon as he met the eye doctor that he practically went blind.

The eye doctor was sorry and wished to help him as much as possible and so referred him to me. I found, with the aid of the retinoscope, that the vision of each eye was normal when he looked at a blank wall without trying to see, but just as soon as he regarded the Snellen test card at twenty feet, he began to strain, his eyes became myopic, and his vision very imperfect.

It is seldom that one sees eyes as perfect as were the eyes of this young man. When his vision was good, the weakest glasses made his sight worse. The problem seemed to be to **improve, not only his eyes but his mental strain,** so that he would not lose the control of his eyes just by glancing at the Snellen test card.

A Snellen test card was placed at thirty feet, another card was placed almost directly in line at ten feet, so that it covered the distant Snellen test card. When the patient swayed from side to side, the near card appeared to move in the direction opposite to the movement of his body, while the more distant card seemed to move with the movement of his body. When he moved to the right, the 10 line letters on the near card seemed to move opposite, while the 30 line letters on the distant card moved with the movement of his body. Later he obtained normal vision at twenty feet by the same method.

The following is a letter which I received from the patient:



June 16, 1927

Dear Dr. Bates:

I am happy to inform you that I passed my eye examination to the U. S. Naval Academy and I am now a member of the student body, a merry, meek ”plebe.”

Dr. Bates, I wish that there were some adequate way I could express my appreciation to you for your assistance and kind advice which not only has given me better eyesight, but has made possible a thing that I had long desired and which will equip me with a wonderful education and a wonderful career in life. In the absence of proper words and phrases, I will just say that you have my heartfelt thanks and the thanks and gratitude of my parents. I deeply enjoyed the work and I am now deeply enjoying my eyesight.

I have tried to apply your methods of relaxation to not only eyesight, but to every other organ of my body and to my different endeavors. The Naval Academy is perhaps as difficult a school from which to graduate as any in the United States, and it is by eliminating the unimportant and the wrong methods of doing that a fellow can stay here. I think that the difference between success and failure can be in the way an individual does his work. I have learned my lesson about the evils of concentration and strain, and I hope to apply my lesson.

If at any time it is in my power to render the least service to you, I will be very pleased to do it. Again I thank you and wish you the best of luck and success in the work you are doing.

Sincerely yours, (No name written)

The sway, oppositional movement rests, relaxes the mind, body, eyes, gets the eyes shifting, left and right brain hemispheres activated, integrated and vision clear.

Seeing objects at different distances move against each other in opposite directions when swaying helps people with very blurry vision distinguish/see objects individually and clear. Improves mind/eyes ability to look at, shift on one object at a time. Central fixation.

It is normal for the clarity of vision to fluctuate. Practice the Bates method to keep vision at better than 20/20 and temporary fluctuations will be minor, not noticed. Avoid glasses. Glasses prevent the visions natural return to clarity.

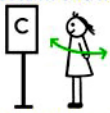
STORIES FROM THE CLINIC

Eyestrain

By Emily C. Lierman



Palm and remember things perfectly, let the mind drift from one positive thought to another, pleasant things. See objects in color, clear, details. Shift on objects in the mind.



Face the eyechart and sway left and right while shifting quickly, 'fraction of a second' on one letter at a time.
Look away after each letter to avoid effort to see, to keep relaxation.

Fine print read clear at 4 and 10 inches.



A girl who had worn glasses for more than twenty years, came to me to have her eyes tested after she had been to an oculist and had had her glasses changed. She complained of constant pain in her eyes. Her vision with each eye separately was 15/30, or one-half of normal vision. While reading the letters of the Snellen test card at fifteen feet, she did not blink, until she began to read the letters on the line that should be read at thirty feet. Then her eyes began to water and she complained that they burned like fire.

Palming

I told her to sit down and close her eyes to rest them. I made her comfortable with **a cushion for her elbows while palming,** and a **foot-stool to raise her feet from the floor**. I asked her to **remember something perfectly and then let her mind drift to something else**. She was told that it was necessary to **remember pleasant things**; that otherwise her mind would be under a strain and her vision would not improve. Like many patients, she began to question me about what the mind had to do with the eyes. She was told that **when the mind is under a strain, all other parts of the body are also under a strain. When the mind is relaxed, the eyes are also relaxed and things are seen without effort or strain. Mind strain is always associated with eye-strain. You cannot affect one without affecting the other.**

While she was palming, the patient described many colors that came to her mind. She described their combinations in making beautiful paintings and fancy draperies. After palming for more than ten minutes, I told her to remove her hands from her eyes, to stand and sway her body from left to right. By glancing at only one letter of the test card at a time and then looking away, she read 15/10 or better than normal vision in ordinary daylight.

I tested her sight for the reading of fine print, and she read it with perfect ease, first at four inches and then at ten inches.

When I saw her again, she had discarded her glasses, her pain was gone, and her eyes no longer troubled her.

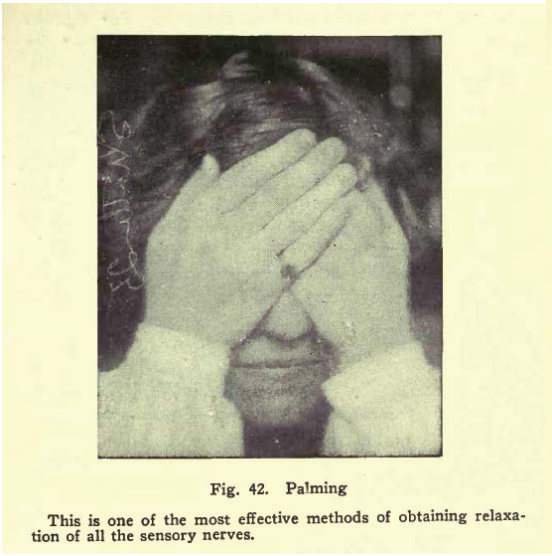


Fig. 42. Palming

This is one of the most effective methods of obtaining relaxation of all the sensory nerves.



Fig 45

Fig. 1.—Patient with absolute glaucoma of the right eye. He had suffered agonizing pain for six months and had no perception of light. He was photographed when testing the tension of his eyeball, which he found to be perfectly hard.

Fig. 2.—The patient is palming and remembering a perfectly black period. After half an hour the eyeball became soft, the pain ceased, and the patient became able to see the light. After three years there was no return of the glaucoma.

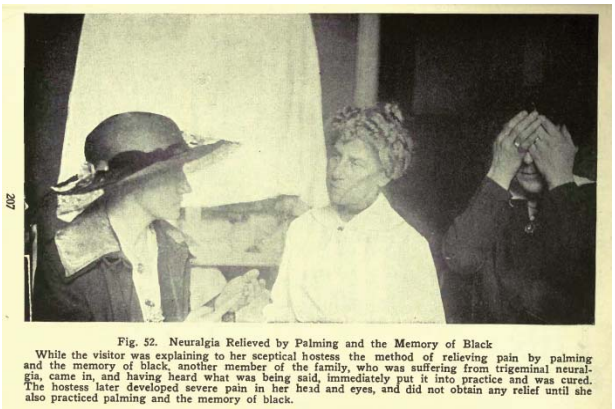


Fig. 52. Neuralgia Relieved by Palming and the Memory of Black

While the visitor was explaining to her sceptical hostess the method of relieving pain by palming and the memory of black, another member of the family, who was suffering from trigeminal neuralgia, came in, and having heard what was being said, immediately put it into practice and was cured. The hostess later developed severe pain in her head and eyes, and did not obtain any relief until she also practiced palming and the memory of black.

Fundamentals
By
W. H. Bates, M. D.

1 - Glasses discarded permanently.

2 - Central fixation is seeing best where you are looking.

3 - Favorable conditions: Light may be bright or dim. The distance of the print from the eyes, where seen best, also varies with people.

4 - Shifting: With normal sight the eyes are moving all the time.

5 - Swinging: When the eyes move slowly or rapidly from side to side, stationary objects appear to move in the opposite direction.

6 - Long swing: Stand with the feet about one foot apart, turn the body to the right—at the same time lifting the left foot. Do not move the head or eyes or pay any attention to the apparent movement of stationary objects. Now place the left heel on the floor, turn the body to the left, raising the heel of the right foot. Alternate.

7 - Drifting swing: When using this method, one pays no attention to the clearness of stationary objects, which appear to be moving. The eyes move from point to point slowly, easily, or lazily, so that the stare or strain may be avoided.

8 - Variable swing: Hold the forefinger of one hand six inches from the right eye and about the same distance to the right, look straight ahead and move the head a short distance from side to side. The finger appears to move.

9 - Stationary objects moving: By moving the head and eyes a short distance from side to side, being sure to blink, one can imagine stationary objects to be moving.

10 - Memory: Improving the memory of letters and other objects improves the vision for everything.

11 - Imagination: We see only what we think we see, or what we imagine. We can only imagine what we remember.

12 - Rest: All cases of imperfect sight are improved by closing the eyes and resting them.

13 - Palming: The closed eyes may be covered by the palm of one or both hands.

14. Blinking: The normal eye blinks, or closes or opens very frequently.

15 - Mental pictures: As long as one is awake one has all kinds of memories of mental pictures. If these pictures are remembered easily, perfectly, the vision is benefited.

#2 – Central fixation - Place the object the eyes are looking at in the center of the visual field.
#5 and 9 – Oppositional movement.
#6 – Long swing - The head, eyes do move with the body, in synchronization, at the same time, in the same direction.
#8 - This can also be done with the finger 6 inches in front of the face/nose, between the left and right eyes.
#10, 11, 15 Memory, imagination, remembering, imagining objects, mental pictures clear.
#13 – Palming and other activities, correct eye functions listed above and in this book are described with diagrams on http://www.cleareyesight.info and in the E-Book: Do it Yourself – Natural Eyesight Improvement.

Seven Truths of Normal Sight

1—Normal Sight can always be demonstrated in the normal eye, but only under favorable condition.

2—Central Fixation: The letter or part of the letter regarded is always seen best.

3—Shifting: The point regarded changes rapidly and continuously.

4—Swinging: When the shifting is slow, the letters appear to move from side to side, or in other directions, with a pendulum-like motion.

5—Memory is perfect. The color and background of the letters, or other objects seen, are remembered perfectly, instantaneously and continuously.

6—Imagination is good. One may even see the white part of letters whiter than it really is, while the black is not altered by distance, illumination, size, or form, of the letters.

7—Rest or relaxation of the eye and mind is perfect and can always be demonstrated.
When one of these seven fundamentals is perfect, all are perfect.

Glaucoma

A man, age fifty-nine, came to me recently to find out whether anything could be done to prevent blindness of his right eye. He had only perception of light in his left eye. In 1918, both eyes had been operated upon for glaucoma. The left eye had had no sight before the operation. The vision of the right eye with the test card was normal. After closing his eyes and palming for five minutes or longer, he noticed that objects about the room looked clearer. I placed him in a chair with his back to the light and gave him the booklet with **microscopic type**, a small **diamond type card** and a small **Fundamentals card for practice**. He held the booklet of microscopic type about ten inches from his eyes. Above this was placed the "Seven Truths of Normal Sight," by W. H. Bates in diamond type, and then above this the Fundamental card, exposing sentences up to paragraph four which explains shifting.

I told the patient to look at any white space of the microscopic type, to close his eyes and remember it for an instant; then to open his eyes and look at a white space of the diamond type card. He was advised to quickly close his eyes again and remember the white space for an instant, then to open his eyes and look at the type of the Fundamental card.

I encouraged him to shift, blink and remember the white spaces of the different types as he flashed them. Then, after closing his eyes for an instant, he became able to see the "F" of the word "Fundamentals" blacker than the rest of the word. I explained that this was called central fixation, and that seeing best where he was looking helped him to see the whole word more clearly. While he practiced in this way for ten or fifteen minutes, I watched him carefully so that he did not strain when looking at the fine type, and

advised him to look only at the white spaces. Look at the white spaces first, to relax the eyes, then: look directly at the letters to see/read the letters.

He read one sentence after another, stopping to mention a period, a semi-colon or a colon. I explained that it was necessary for him to notice all little details, because it would improve his memory as well as his sight. Remembering the white spaces of fine type, then of larger type, then of type a little larger than newspaper type, helped him to see type smaller than ordinary reading type. In an hour, after much encouragement, my patient read all the fifteen sentences of the Fundamental card. He became very much excited, because, while he had received help from others for distant vision, he had not been able to read such fine type for many years, even with glasses.

Practice shifting on, remembering, imagining a letter on the cards clear with the eyes open, closed, open.

Eyes open: Shift on a letter and remember, imagine it clear.

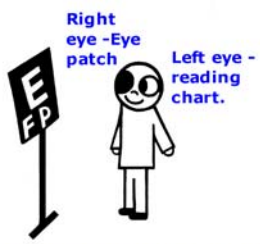
Eyes closed: Shift on the letter in the mind and remember, imagine it is clear.

Eyes open: Shift on the letter again and continue to remember, imagine it clear.

I then decided to attempt to improve the left eye in which he had no sight. One of the small Fundamental cards has white letters on a black background and is an exact copy of a larger test card. After he had palmed for some time, I told him to be sure to keep his right eye covered, so that he could not see with it. (Both eyes open and close together when wearing the Eyepatch. Do not close or open only one eye. Use the patch.)

Then asked him to open his left eye and tell me if he could see what I was holding in my hand about ten inches from his eyes. He answered: "I see everything dark with the exception of something that looks like a small white 'E' on the top of the black card." This was correct. He then became very much excited, and as a result of this strain, the vision left him.

I instructed him to practice all that he possibly could with the fine print cards and also with the distant cards and to write me in a week's time. In his report he said: "Standing with my back to the window, the sky overcast with fog or clouds, I can see the T O Z of the small test card at a distance of two feet, one letter at a time, with my left eye. I can also see the end of my thumb holding the card at the lower left corner. The sight of my left eye is almost as good at night, under a shaded lamp with an 80 watt light. You may be sure I am continuing the exercises daily, as you advised."



Man improves vision in his left eye, the eye with less clear vision.
+Shift on letters on the large distant card and close fine print card with the left eye. Blink.
+Shift on a letter with the eye open and remember, imagine it clear,
+Then: repeat in the imagination with the eye closed.
+Open, repeat.
+Look at and remember, imagine the white spaces between sentences, in and around letters pure, bright white with the eye open, closed, open.
+Then look at the black print and read it clear.
+Last: practice with the right eye, then left again, then both eyes together.

Mrs. Edith Reid and Mr. Jardine of Johannesburg, South Africa, who are qualified to improve defective vision by the Bates Method have sent in the following reports of their respective cases.

Report of Mrs. Edith Reid

I had got to a stage when I had to wear glasses for all close work. My distant vision was poor and the light worried me terribly. The glare from the sun used to give me dreadful headaches so much so that when out sketching, I always wore two pairs of glasses, blue ones over my ordinary glasses. Even then I used to get home tired out with a horrible headache. My memory was shocking. When worried or excited, I used to almost forget my own name.

I had heard of Dr. Bates' method being practiced by Ms. Quail so I thought I would try and see if anything could be done for me. When tested I could read only 10/20 on the Snellen test card, and on the small card, paragraph 2. I was not able to see that there were any letters on the last line at all. It was proved that the trouble was all caused by strain. I was taught how to **use my eyes without strain** and to **rest them by swinging** and **getting things to move everywhere.**

I discarded my glasses, and at my second treatment, I was able to read the entire test card at ten feet, 10/10. My near vision also improved. I was then taught to **sun my eyes daily** and to **rest them by palming**. Each day not only my sight but also my general health improved in every way.

One day I was traveling in the train with my husband and he came across a paragraph in the newspaper which he wanted me to read so he gave it to me saying: "Read that." I took the paper, never realizing what I was doing. When I had read about half of the paragraph, I realized that I was reading small print. I became very excited and shouted, "Goodness, I am able to read small print." I suppose people in the compartment must have thought that I was crazy, but it did not worry me. I felt only so very grateful that I wanted to tell everybody about Dr. Bates' wonderful method.

Palming, memory, imagination, mental pictures

I was taught how to perfect my memory of a letter, by looking at a letter and then remembering it with my eyes closed, and to remember something that was pleasant to me. This I found very difficult, but by this time I had absolute faith in the method, so used to try to remember mental pictures, at odd moments, all day long. After practicing this for several weeks, I found that I was able to palm and call up a picture of any place I had known and to paint a picture from memory.

Reading small print in an artificial light still bothered me, but I have been very fortunate to have been able to come to America and be treated by Dr. Bates himself. Now I am able to read diamond type and newspaper print by electric light.

I have had my glasses on only once since I was told to discard them. I was making a black velvet cushion at night and was afraid that I might strain my eyes so I put my glasses on. I found everything looked misty, so I took them off and very carefully wiped them, but things were still misty. I then washed them but things continued to look misty, and only then did I realize that my **eyes had become so well that the glasses were too strong for my improved vision.** From the time I began wearing glasses, my sight rapidly became worse, not only my near sight, but my distant vision as well. I always thought it wrong that when one reaches so called "middle age," one's sight should fail. **Now it has been proved that through this method, one can live to be one hundred years old, not wear glasses and yet have perfect sight.** It is impossible for me to express in words my deep gratitude to Dr. Bates for his discovery of the cure of Imperfect Sight Without the Use of Glasses.

Report of Mr. Ian Jardine

My dear Dr. Bates:

At the age of about eleven years I was completely blind for about five weeks during a severe illness. My vision slowly returned until about three months after, when it was apparently normal again.

A year after this, my eyes began to trouble me and glasses were prescribed. The prescription was made up wrongly, the left lens being placed before the right eye and vice versa. This was discovered only six months' later on a re-examination because of continuous headaches.

The next twelve years were a succession of examinations by the best eye specialists in South Africa, each one meaning stronger glasses with no relief of pain.

About eighteen months ago, I was assured by two prominent eye specialists in Johannesburg that I had an incurable eye disease and that nothing could possibly be done to save my sight, which they said would fail altogether in the near future. Unknown to me, my father had been told on my first examination that this disease was present in the eyes and would slowly spread, but so slowly that they did not expect blindness until the age of 50 or 60. My field of vision was so limited that I could see only what was immediately in front of me, and at night I was almost totally blind.

Faced with this cheerful outlook, I was granted a holiday during which time I heard of Dr. Bates' method of Eye Education, being practiced by Ms. Quail of Capetown.

At the first lesson my glasses were removed and I was told that they were never to be put on again. This was a great shock as all the doctors had greatly stressed the fact that the glasses were to be left off only during sleep. Then I was taught the swing, in other words to see or imagine everything moving. The pain immediately disappeared, so that I walked home in the seventh heaven of delight led by Ms. Reid who helped me a great deal during the treatment. However, a day or two later, on the persuasion of well meaning friends, I wore my glasses. The old pain immediately returned, but I put up with it thinking that perhaps my eyes had to get used to the strong lenses again. Fortunately, next day was lesson day. Ms. Quail informed me that it was to be either glasses and no cure, or no glasses and a cure. As I had in the long run, nothing to lose by leaving off the glasses, I determined never to have them near me again and to try out this new system quite fairly. **Then I was shown how to sun my eyes by letting the rays of the sun fall on the closed eyelids, while moving the head gently from side to side.** This seemed a strange thing to do, as previously I had worn blue glasses to shield the eyes from strong light.



By practicing the **universal swing**, i.e., imagining everything to be swinging gently from side to side,—noticing the movement of all things when walking,—pedestrians bobbing up and down, vehicles hurrying by, buildings and pavements gliding past as one moved forward,—**spending a good part of each day in the sun**, improved the vision so remarkably that three months after the first treatment, I was able to resume my profession,—auditing,—most times having to work under dim artificial light, but always without glasses and without discomfort.

However, I am afraid that during those three months, I suffered many weak moments, becoming rather despondent and fearful at times when the sight did not seem so good as it was the day before, or when things still looked blurred, but I can look back on those unhappy days,—real enough at the time,—with a smile and without the least doubt for the future. My eyes are now entirely free from disease and the sight is normal.

Questions And Answers

Q - a - How often should the sunglass be used?
b - How long on the closed lids before using it on the eyeballs themselves?
c - Can one use the sunglass on one's own eyes?
A - a - Daily for two or three minutes. (Two or three seconds at a time. Minutes are too long. Applying the sunglass for only a few seconds prevents burning the eye.)
b - Usually for several weeks on the closed lids before using it on the eyeballs themselves, although the length of time varies with each individual case.
c - Some people can, but it is rather difficult and awkward to do.

Q - My neck gets very cramped in the back and becomes very painful. Is there any way of relieving this?
A - Practice the long swing, variable swing and circular swing. (The directions for all these swings have appeared in previous numbers of Better Eyesight.)

Q - Since I have taken off my glasses I find it almost impossible to not half close my eyes to see better. (Squinting)
A - Partly closing your eyes brings on a strain which increases your imperfect sight. It is a bad thing to do because it injures your eyes.

Q - My vision, after practice with the test card is good, but I cannot sustain it. What means can I use to have continuous vision?
A - Acquire a continuous habit of imagining stationary objects to be moving easily, until it becomes an unconscious habit.

Q - If I blink everything becomes blurred. How can I overcome this?
A - Practice blinking, slowly, easily, without a conscious effort as much as you possibly can. Shift

Q - I have myopia and have been practicing your methods. At first, I had very good results, but I now seem to be at a standstill. How can I continue to progress?
A - There are three things which you can practice. One is blinking, one is palming, and one is the practice of the circular swing, that is, moving the head and eyes in the orbit of a circle. The modern Infinity Swing, Figure Eight is best.

Q - My eyes are so sensitive to light that it is impossible to use the sun treatment. In what way can I use it and avoid headaches and pain which it causes?

A- Sit in the sun with your eyes closed, allowing the sun to shine directly on your closed eyelids, as you move your head slowly from side to side.

Q - I have found blinking and shifting to be of great benefit to me but, although I have been practicing both for six months, it has not become a habit. I still have to practice both consciously. What means can I use to blink and shift normally?
A - Continue to consciously practice blinking and shifting until you acquire the unconscious habit. It is merely the substitution of a good habit for a bad one. Practice with the eyes open before going to sleep. Practice in the imagination with the eyes closed before drifting off to sleep. The conscious and subconscious mind will absorb the correct habits, correct eye function and activate it automatically.

Q - Can one swing objects or letters by moving just the eyes, or must one always move the head or body?
A - It is easier to move the head and body with the eyes.

SCHOOL NUMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
AUGUST, 1927

Demonstrate

That glasses lower the vision.

Stand fifteen feet from the Snellen test card and test the vision of each eye without glasses. Then test the vision of each eye with glasses on, after having worn them for half a hour or longer. Remove the glasses; test the vision again and compare the results. Note that the vision without glasses becomes better, the longer the glasses are left off.

Test the eyes of a person who is very nearsighted. Remove the glasses and test the sight of each eye at five feet, nearer or farther, until the distance is found at which the vision is best without glasses. Now test the vision for five minutes at this distance, which is the optimum distance, or the distance at which the vision is best. For example, near-sighted people see best when the print is held a foot or nearer to the eyes. If the eyes see best at six inches, the optimum distance is six inches; but if the distance at which the eyes see best is thirty to forty inches, the optimum distance is then thirty or forty inches.

In near-sightedness, glasses always lower the vision at the optimum distance. The same is true in far-sightedness or astigmatism. For example, a near-sighted person may have an optimum distance of six inches. If glasses are worn, the vision is never as good at six inches as it is without them. This demonstrates that glasses lower the vision at six inches, or the optimum distance in this case. In far-sightedness without glasses, the optimum distance, at which objects are seen best, may be ten feet or further. If glasses are worn and the sight is improved at the nearer point, the vision without glasses at the optimum distance becomes worse.

The Prevention Of Imperfect Sight In School Children

By W.H. Bates, M.D.

Eye education has been proved to be effective in preventing and improving defective vision in school children.

A negative proposition is one that cannot be proved. You cannot say that any methods, recommended for benefiting the vision of school children, prevent imperfect sight and the use of glasses, because the vision of the children might remain good if no measures were employed for their benefit. However, a positive proposition is something that can be proved to be true. For example, if the eyesight of school children is imperfect, eye education always improves the imperfect sight.

A **SNELLEN TEST CARD** was used for more than twenty years as a means of preventing and improving imperfect sight. This card was placed on the wall of the classroom. Every day, while sitting quietly in their seats, the children were encouraged to read the Snellen test card, with each eye separately, covering one eye in such a way as to avoid pressure on the eyeball. This required only a few minutes and did not interfere with the regular schoolwork. The results obtained from this simple practice were very gratifying.

In one high school, a teacher became interested in eye education and, with the consent of the principal, introduced the method into her own classes. She made it a rule not to treat a child, unless he were willing to remove his glasses permanently. Besides curing children, she cured many teachers who were wearing glasses. Each teacher, who had learned the method, surreptitiously cured all the children in her classes who had imperfect sight. In this way an endless chain was formed. After a number of years, the method became known to the parents of the children and also to a number of physicians. As a result of this publicity, the teachers were asked to stop treating the children by the use of eye education. It is difficult to understand why eye education should be condemned when voice education is encouraged and teachers are appointed to educate children for the relief of stammering. Many teachers of voice culture have found that their pupils were suffering from nerve tension, because of eyestrain. When the eyestrain was relieved, the nerve tension disappeared and the stammering was corrected.

PALMING. Resting the eyes by palming is one of the best methods we have for obtaining relaxation and improved vision.

Many children suffer from headaches, eyestrain and fatigue. When the eyes are closed and covered with the palms of both hands, it is possible to obtain rest and relaxation of the nerves of the eyes and of the body generally, provided the palming is done properly. Palming is successful when all light is excluded and no light or colors are imagined. When a child with normal eyes and normal sight enters a dark closet, where all light is excluded, no light is seen or imagined. (This sentence means: no light is seen through the fingers/hands and no colors are seen on the black field of the closed eyes. Modern teachers say that it is ok if a little light gets through the fingers. The hands must not be pressed hard against the face, and do not touch the eyes. Also; moving colors are seen sometimes when the eyes are first closed, often when the mind and/or eyes are under strain, tension or after looking at a bright light. Do not worry about the colors. Just relax, think pleasant thoughts and these colors will fade. Remembering, imagining different colors, colored objects, scenery when palming is beneficial. See the Color Breathing Relaxation Chart in the book; Do It

Yourself – Natural Eyesight Improvement. The same is true when the normal eye practices palming; no light is seen or imagined. Black is imagined easily, without strain; but any effort that is made to see black is wrong. Most children are fond of pleasant memories and when they palm, they usually think of pleasant things, which help them to palm successfully. When school children learn by experience that palming is a benefit to their sight, headaches, nervousness, or other disagreeable symptoms, they will practice palming very frequently without being encouraged to do so.

CENTRAL FIXATION. Those children, who have trouble in obtaining relaxation by palming, are benefited by practicing central fixation, which means seeing the point regarded best, and other parts not so clearly. For example, in remembering a pet dog, one child liked to think of his curly tail, then of his long silky ears, or of the black spots on his legs. When conditions are favorable, that is, when the light in a classroom is neither too bright nor too dim, eyestrain is less manifest. The children are more relaxed and become able to palm more successfully.

SWAYING. Another method used is to have the children stand with their feet about one foot apart and sway the whole body from side to side. When this is practiced, the stare, strain or effort to see is prevented and the vision is always benefited.

FINE PRINT. When school children are able to read fine print at the distance from their eyes at which they see it best, the eyestrain is relieved as fine print cannot be read with an effort. **The distance where fine print is seen best varies with people**. All children should not be encouraged to see fine print at the same distance from their eyes.
With practice, relaxation, people can see fine print up close to the eyes, even seeing it in a 'microscopic view' close to the eyelashes of one eye at a time. Bates teaches to switch back and forth, close and far, shifting on the fine print up close and a distant object with both eyes, then one eye at a time, then both together again. Switching on two fine print cards at close distances about 3 inches to 1 foot apart also improves close vision. See the 'correct vision habits card' in our other book.

SHIFTING. When the eyes are normal, they are completely at rest and when they are at rest, they are always moving, which prevents the stare or strain. When looking at an object, do not try to see all parts of that object equally well, at once. That is, when you look at the back of a chair, you see that part best, and the seat and legs not so clearly. But do not hold the point regarded longer than a second. Remember to blink, as you shift rapidly to the seat and then to the legs of the chair, seeing each part best, in turn. When the eyes stare and an effort is made to see, the vision is always lowered.



Shift part to part on the chair and see each part clear, one small part at a time.
The eyes, 'center of the visual field' my be on a part for only a fraction of second before shifting to a new part - during that fraction of a second that part is in the center of the visual field and is seen clearest.

SWINGING. When the eyes move slowly or rapidly from side to side, stationary objects, which are not regarded, appear to move in the opposite direction. Like many things, the swing can be done wrongly as well as rightly. When done wrongly, the blackness of the letters and the whiteness of the spaces, between the lines of the Snellen test card, become imperfect. When the swing is imperfect, the vision also becomes imperfect. To be able to practice the swing perfectly is a great help to the sight of school children. The teacher can direct the children to stand beside their desks while swaying from side to side. The pupils can notice that the desks in front of them, the blackboard, and the Snellen test card are all moving in the direction opposite to the movement of their bodies. When the pupils look out of the window, the curtain cord and other parts of the window will appear to move in the opposite direction, while more distant objects, buildings, trees or mountains, will appear to move in the same direction as they sway. When walking straight ahead, children can notice that the floor appears to move towards them. If the children are conscious of the movement of the floor and other objects, the stare and strain is prevented, and the vision is always improved; but if the pupils do not notice the movement of objects when they, themselves, move, they are apt to strain and the vision is always lowered.

When pupils imagine the Snellen test card to be moving from side to side, the imagination of the black letters or of the white spaces is improved. **If the head and eyes are moved an inch or less from side to side, the Snellen test card and the letters on it will also appear to move an inch or less.** With the aid of the short swing, it is possible for the pupil to remember, imagine or see each and all the letters of the Snellen test card correctly and continuously, but if the letters do not move, an effort is soon manifest. The children then find that trying to see a letter, or part of a letter, stationary, requires a strain and is difficult. It seems strange, although it is true, that to fail to have perfect sight requires an effort, and hard work. In other words, perfect sight can only come easily, and without effort; while imperfect sight is obtained with much discomfort and effort.

BLINKING. The normal eye, with normal sight blinks frequently, easily and rapidly, without effort or strain. If children do not blink frequently, but stare and try to see things with the eyes open continuously, the vision is always impaired. At first the child should be reminded to blink consciously but it soon becomes an **unconscious habit** and the vision is improved.
(Correct Vision Habit)

MEMORY AND IMAGINATION. The scholarship of children is affected by their memory of mental pictures. Measures which have been practiced by many school teachers for the preservation or the improvement of memory are quite numerous. When children learn how to remember some things perfectly, the memory of other things is improved. With a perfect memory, it is also possible to have a perfect imagination. We see only what we think we see, or what we imagine. When the imagination is perfect, the sight is perfect and when the sight is perfect, the memory is perfect. These and other clinical observations have demonstrated the truth that **sight is largely mental. Perfect sight or imperfect sight is due to the condition of the mind.** When the mind is healthy and active, perfect memory can usually be demonstrated, but when the mind has lost its efficiency, the memory becomes impaired. The memory is benefited by those methods which bring rest and relaxation. With the eyes closed, the memory is usually better than it is with the eyes open.



Look at, shift on a unclear letter on the eyechart. Close the eyes and shift on the letter in the mind and remember, imagine it clear.
Open the eyes, shift on the letter, close the eyes and repeat.
When the letter is clear, practice at farther distances.
Do the reverse for close vision improvement.

After regarding a letter which is seen imperfectly at a distance of ten feet or nearer, the student can remember the same letter more perfectly by closing his eyes. When the child can remember a perfect letter at ten feet with the eyes open, he soon becomes able to see and remember the same letter at eleven feet, and can gradually increase the distance to fifteen or twenty feet. Practicing the sway, alternately with the eyes open and with the eyes closed, is a benefit to the memory and the sight, because when the eyes are moving, a stare, strain or effort to see is more or less prevented.

When a line of letters on a Snellen test card can be read easily, it is usually possible to read some of the letters on the line below.

However, if this cannot be done, have the child come closer, until all the letters of the bottom line are seen at a distance of five or ten feet. When a child cannot read all the letters on the 10 line at ten feet, he may be able to remember or imagine all the letters of the 10 line, with the eyes closed, better than with them open. By alternately closing the eyes for part of a minute or longer, and then opening them for only a moment, the vision improves.

A child may be able to see the first letter on the bottom line of the card when he is told what the letter is. Although he may not know what the second or third letters are, he may be able to actually see them and other letters on the bottom line by improving the vision of the first letter so that it is imagined perfectly. When the memory and imagination of the first letter is quite perfect, or sufficiently perfect to be distinguished, the eye becomes normal and the other letters are really seen and not imagined.

A child, at some previous time, may have had an inflammation or disease of the eyeball, which caused his imperfect sight. For example, a scar, sufficiently thick to interfere materially with the vision, may have formed over the front part of the eyeball. A perfect memory or imagination of a letter with the eyes closed, always lessens the opacity, and the vision is always improved, at least temporarily. By repetition, the short periods of improved vision occur more frequently and last more continuously.

The imagination is very important, much more so than many of us believe. Some people think imagination is simply another word for illusion. However, it is possible to imagine correctly as well as to imagine incorrectly. Some people can imagine a truth perfectly, but react differently when they imagine things imperfectly.

A girl, twelve years of age, had unusually good vision. She was able to read the 10 line of a strange card, which she had never seen before, at fifty feet. She said that she could look directly at one letter of the 10 line and see it continuously, but when her eyes were observed while she was doing this, it was found that she shifted almost continuously.

Her memory was also unusually good. She was the only member of the party who could remember the names of the officers on the different steamers on which she had traveled to Europe. She remembered the numbers of her staterooms, as well as the numbers of the staterooms of the other members of the party. However, when she imagined all these things incorrectly, she felt decidedly uncomfortable, but when she remembered to imagined things perfectly, she felt no discomfort.

At school, her teachers considered her stupid, because she disliked some of her studies and devoted no time to those lessons. Her poor scholarship disappointed her family very much. She was very unhappy and decided to prove what she could do. About a week before the examinations, she read through her Latin textbook and remembered it perfectly. She also read her other textbooks and remembered what they contained. She asked to be examined in all her subjects and much to the surprise of the teachers, she passed the examinations with unusually high honors.

A student obtained high grades in history by creating movie pictures in his mind of every story, event he read in his history book. He stole the history book for the next school year, read it during summer vacation (without pressure from teachers to hurry and get a perfect grade). In September he entered that class and earned all A's on his history papers.

School Children

By Emily C. Lierman

Davey

Davey, eight years old, was very near-sighted, and the glasses he was wearing, made him nervous and irritable. His father had been told about the Bates Method and what could be done to restore perfect sight without wearing glasses. Davey's father brought the boy to me, although he was skeptical and his mother was even more so. I could tell by the little boy's attitude toward me that the Bates Method had been much discussed in the home circle, and that I was considered a sort of mystic worker.

The first question Davey asked me was, "What are you going to do to me?"

I answered, "I am not going to do anything to you, but I will try to do a whole lot for you. I will help you to get rid of your thick glasses that I am sure you don't like."

His answer was, "O, yes, I would like my glasses if I could see out of them. Father said that if you don't help me, he will try to find other glasses that will help."

I let the little fellow talk for a while, because I thought it would help me to understand him better. I told him I was especially interested in children and that it was always my delight to give school children better sight. I said I would not interfere with him, if glasses were what he wanted most. He said that he was afraid to play baseball or other games which might not only break his glasses, but perhaps hurt his eyes.

I tested his vision with his glasses on, and found that at ten feet from the regulation test card, he could see only black smudges on the white, but no letters. Then I placed the card six feet away. All he could see at that distance was the letter on the top of the card, seen normally at two hundred feet. I then had him take off his glasses to see what he could read without them. He could not see anything at all on the card. I asked him to follow me to the window and to look in the distance and tell me what he could see. To the right of me, about one hundred feet away, there was a sign. The letters of this sign appeared to be about three feet square. One word of the sign had four letters. The first letter was straight and the last was curved, and had an opening to the right. I explained this to Davey, as I told him to look in the direction in which I was pointing, and then to a small card with fine print that I had given him to hold. I told him to read what he could of the fine print. He read it at two inches from his eyes. Under my direction, he alternately followed my finger as I pointed to the fine print and then to the building sign. He told me he could not see anything in the distance.

Davey felt very uncomfortable because of his poor sight and became rather restless. I told him to hold the fine print card closer, and not to read the print this time, but to look only at the white spaces between the sentences, and to blink often. He shifted from the white spaces of the fine print to the sign in the distance, watching my finger as I pointed, first to the near point and then to the distance. Suddenly, he got a flash of the first letter of the first word on the sign. This practice was continued for twenty minutes, and then we had a rest period. Davey sat comfortably in a chair and palmed his eyes. Children are very apt to become bored with anything that takes time and patience, and I know that Davey had little patience with anything regarding his eyes.

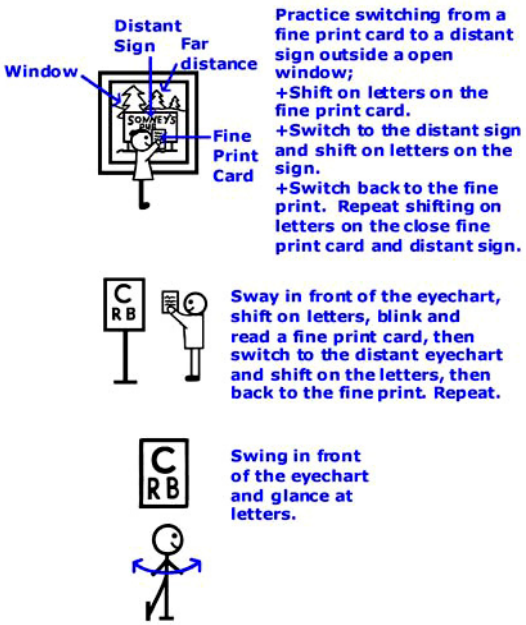
I asked him questions about his school work, and what subjects he liked best. He said he just loved arithmetic. I asked his father to give him an example to do while he palmed. The little fellow thought this was great fun, and without hesitation he gave his father the correct answer for each example. This gave Davey a rest period of fifteen minutes. His mother remarked that this was the first time she had ever noticed him sit quietly for so long a time.

Long Swing and Sway

Davey was then shown how to swing, by moving his body slowly from left to right, and getting only a glimpse of the letters on the card, at six feet. When he looked longer than an instant at the card, he leaned forward and strained to see better, but failed each time. **When he learned not to stare, but to shift and blink while he swayed, his vision improved to 6/50.** We returned to the window. I told him to shift from the white spaces of the fine print, which I held close to his eyes, then to the distant sign, and he became able to read all of the sign without any difficulty.

Much had been accomplished in one treatment and both parents were grateful. Davey was given a card with instructions for home practice. He returned three days each week for further treatment. Every time he visited me, I placed the test card one foot further away. Eight weeks after his first treatment, he read all of the test card letters at ten feet. This was accomplished by reading fine print close to his eyes, then swinging and shifting as he read one letter of the card at a time.

This boy has sent other school children to me as well as a school teacher with progressive myopia, who practiced faithfully until she was cured. Every week, she sent me a report about her eye treatment and the progress she made. Her pupils noticed that she had discarded her glasses, and after school hours she invited some of them, who had trouble with their eyes, to practice the Bates Method with her. In eight weeks' time, her vision became normal, and all her pupils, with the exception of three, are improving their vision without the use of glasses.



Esther

Esther, aged seven, first came to me in January, 1927, to be relieved of **squint**. She had worn glasses since she was three years of age for the relief of squint in the right eye. Her parents noticed, after she had worn glasses a short time, that she was more nervous than before. Later, they were much concerned because she acquired bad habits, such as holding her head to one side instead of straight, especially while studying and reading her school lessons. Her glasses were then changed. It was thought that wrong glasses had been prescribed because she still kept her head to one side as before, and her nervousness became more pronounced. The parents were told that in time the squint would be corrected if Esther wore her glasses all the time.

The squint continued to get worse instead of better, so the parents brought her to me. The vision of her right eye was 10/15, but in order to read the letters of the test card, she had to turn her head so that it almost rested on her right shoulder. Her left vision was 15/15 and she read the letters of the card in a normal position. I tested her right eye again, placing the card up close. She turned her head just as much to one side as she did when the card was placed ten feet away. I asked her mother to hold the child's head straight, and again told Esther to tell me what the letters were. I held the test card two feet away while she covered her left eye. She said everything was all dark, and she could see nothing.

It did not take me long to find out that Esther was a bright child, and that she would willingly do anything for the benefit of her poor eye. She said to me, "It is too bad that my sister should have two good eyes and that I should have only one good one." I encouraged her to follow my directions closely and I told her if she continued to do so and practiced as often as she should at home, that we would then try to correct the vision of the poor eye.

Palming, Memory, Imagination

I found her to be quite an artist. When her eyes were covered, I asked her if she could remember a drawing of some kind. "Oh, yes," she answered, "while my eyes are closed and covered I can imagine that I am drawing your picture."

I said, "All right, you keep on imagining that you are drawing my picture and later on I will let you sit at my desk and draw a picture of me." We talked about pleasant things for five or ten minutes while she had her eyes covered.

Long Swing

I then taught her to swing her body from left to right, glancing for only a second at the test card, and then looking away to her left. I purposely avoided having her swing to the right, because she had the desire, while reading or trying to see more clearly to always rest her head on the right shoulder. I drew her mother's attention to the fact that, **as she swung, both eyes moved in the same direction as her body was moving.** When she stopped blinking, which I had encouraged her to do rhythmically with the swing, her right eye turned in and her head also turned to one side.

After she had practiced swinging for a little while, I noticed that she gaped a few times, which meant that she was straining. It is good for parents to notice this, in helping the child practice for the relief of squint, and to stop all practice with the exception of closing the eyes to rest them.

When practicing the Long Swing for the first few times, for some people with squint, (wandering/crossed eyes) the eye may wander, cross. This occurs due to the Long Swings function of removing different types, multiple layers of strain from the mind, eyes, eye muscles and correcting left and right brain hemisphere function, integration and eye movement. A negative thought, emotion, experience may have initially caused the first strain, slight blur, then the person worries about the blur, starts squinting, staring and this causes a additional, different strain: worry, eye muscle, eyestrain. Blur is increased, wandering/crossed eye occurs or increases and more worry, strain, staring, squinting and trying to force the eye straight occurs=a third type of strain.

The Long swing and other Bates activities will remove all these strains and reverse the condition back to normal - straight eyes, clear vision.



Left eye covered. Using the right (squint) eye. Mom touches a familiar toy and the girl names it.

Esther palmed again for a little while and then I showed her some celluloid toy animals and asked her to name each one of them. She named each one correctly with the exception of the buffalo, so I did not use that one for her case. If a child under treatment for squint is asked to tell things in

detail, the child must be familiar with the objects. While she again covered her eyes to rest them, I placed animals on the floor five feet away from where she was sitting. I told her mother to touch each animal and have Esther name them. Out of eight animals, she named three incorrectly. They were among the last ones she tried to see. We then noticed that her head turned to one side in order to see them. All this time her left eye was covered.

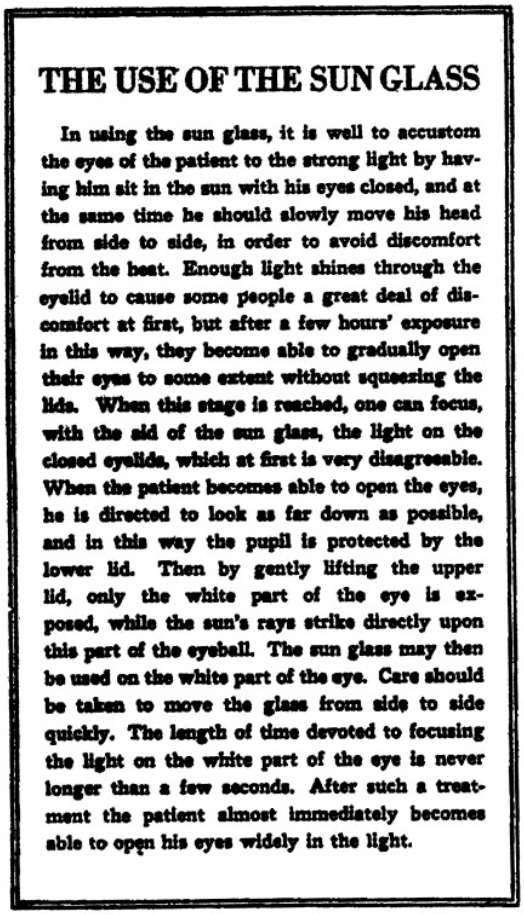
Then I had Esther sit at my desk and asked her to draw my picture. The drawing was quite well done for a little girl of her age. She kept her head straight while drawing. When strain is relieved, the symptoms of imperfect sight are relieved also. She enjoyed drawing, therefore it did not produce a strain. When she was asked to read the test card letters, she strained in order to see them and the condition of her eyes became worse.

Esther was encouraged to do something that she liked at every treatment, such as writing figures from one to ten, or drawing a line without using a ruler. At the first attempt, the lines were very crooked and the figures not straight.

Swinging and palming, practiced several times daily, soon improved the right eye to normal. At the last visit, her head remained straight and the squint had entirely disappeared.

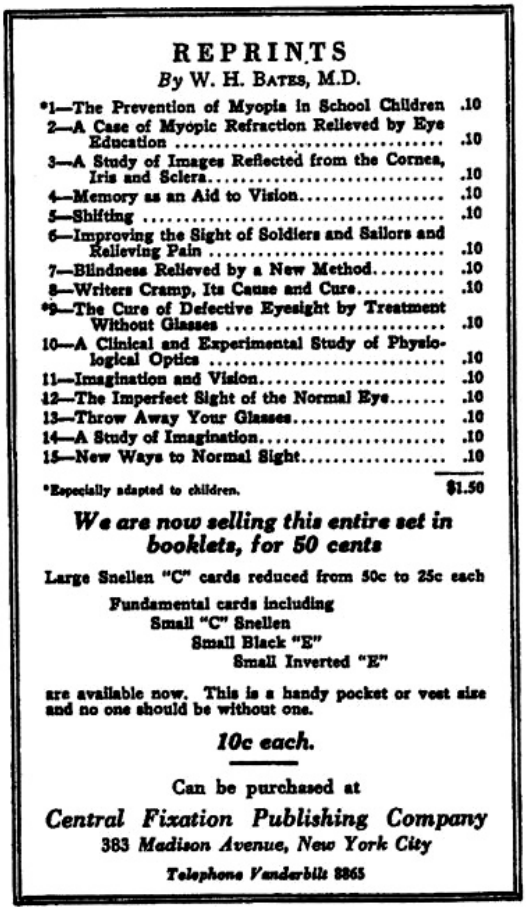
The vision of her right eye became better than normal, as far as reading the test card was concerned. She read the bottom line at twelve feet and seven inches. This line is read by the normal eye at nine feet. She did equally as well with the left eye, which, of course, had normal vision in the beginning.

To be sure that the child was entirely relieved of squint, I told her to look at my right eye, then at my left eye, then to my chin and other parts of my face as I pointed with my finger to each part. She followed me with both eyes moving and her head perfectly straight and as yet she has had no relapse.



THE USE OF THE SUN GLASS

In using the sun glass, it is well to accustom the eyes of the patient to the strong light by having him sit in the sun with his eyes closed, and at the same time he should slowly move his head from side to side, in order to avoid discomfort from the heat. Enough light shines through the eyelid to cause some people a great deal of discomfort at first, but after a few hours' exposure in this way, they become able to gradually open their eyes to some extent without squeezing the lids. When this stage is reached, one can focus, with the aid of the sun glass, the light on the closed eyelids, which at first is very disagreeable. When the patient becomes able to open the eyes, he is directed to look as far down as possible, and in this way the pupil is protected by the lower lid. Then by gently lifting the upper lid, only the white part of the eye is exposed, while the sun's rays strike directly upon this part of the eyeball. The sun glass may then be used on the white part of the eye. Care should be taken to move the glass from side to side quickly. The length of time devoted to focusing the light on the white part of the eye is never longer than a few seconds. After such a treatment the patient almost immediately becomes able to open his eyes widely in the light.



REPRINTS

By W. H. BATES, M.D.

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A School Teacher's Report

June 12, 1927

As a teacher of Speech Improvement I have found that some of the exercises that are used by Dr. Bates in the correction of poor vision are very helpful in the treatment of stammering. Those who stammer are invariably nervous, and the palming and swaying exercises calm the nerves and help the children to speak more quietly and slowly and therefore without stammering. In all cases where I have introduced the swaying in my stammering classes, the result has been a greater calmness both in reading and speaking and I believe that in this age of nerve tension, relaxation exercises are a boon even for children of school age.

Poor speech and poor sight often go together and it is a happy circumstance that Dr. Bates has devised exercises that will help both defects at the same time. An outstanding case of a child suffering both from defective speech and very poor eyesight was a little Italian boy who was in one of my stammering classes. I asked him to read a sentence from the blackboard and he immediately bent his body away over to one side and stretched his neck as far forward as he could, straining to see the letters. I directed him to cover his eyes for a few minutes and then to sway for a while. He soon found that he could see much better and that he could read without stammering. He was very backward in reading and spelling. Although in the second year of school, he did not even know

the names of all the letters of the alphabet. I believe that this was largely due to his poor vision and that the stammering came as he became aware of his inability to keep up with the rest of his class. During the short time that he was with me, his speech and sight greatly improved.

Posture is another thing that may be improved by the swaying exercise. Ordinarily, when you ask a child to stand in good posture he will place his feet close together like an Egyptian statue. In the sway, he is shown that by putting his feet apart he has a broader base for standing and more ease and comfort for moving. I hope that some day we may be able to bring all these beneficial exercises to all the children in the schools who need them.

Announcement

We wish to call to the attention of our readers, the Bound Volume of the "Better Eyesight Magazine" from July, 1926, to June, 1927. This contains articles written by W.H. Bates, M. D., on his discoveries, relative to the cure of Imperfect Sight by Treatment Without Glasses.

Each month, he discusses in detail the causes and treatment of various phases of imperfect sight. Instructions and suggestions for home treatment are also given.

Another article, demonstrating the various truths of Dr. Bates' discoveries, proves most beneficial in this treatment.

There is also a Question and Answer column in which questions submitted by subscribers and interested readers are answered by Dr. Bates.

We have only one hundred copies and advise all those who wish to keep the book as reference to send in an early order.

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BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

SEPTEMBER, 1927

Demonstrate

(Sunning and use of the Sunglass)

1 - That sun treatment is an immediate benefit to many diseases of the eye.

Before the treatment, take a record of your best vision of the Snellen test card with both eyes together and each eye separately without glasses. Then sit in the sun with your eyes closed, slowly moving your head a short distance from side to side, and allowing the sun to shine directly on your closed eyelids. Forget about your eyes; just think of something pleasant and let your mind drift from one pleasant thought to another. Before opening your eyes, palm for a few minutes. Then test your vision of the test card and note the improvement. Get as much sun treatment as you possibly can, one, two, three or more hours daily.

When the sun is not shining, substitute a strong electric light. A I,000 watt electric light is preferable, but requires special wiring. However, a 250 watt or 300 watt light can be used with benefit, and does not require special wiring. Sit about six inches from the light, or as near as you can without discomfort from the heat, allowing it to shine on your closed eyelids as in the sun treatment.

2 - That the strong light of the sun focused on the sclera, or white part of the eyeball, with the sun glass, also improves the vision.

After the eyes have become accustomed to the sunlight with the eyes closed, focus the light of the sun on the closed eyelids with the sun glass. Move the glass rapidly from side to side while doing this for a few minutes. Then have the patient open his eyes and look as far down as possible, and in this way, the pupil is protected by the lower lid. Gently lift the upper lid so that only the white part of the eye is exposed, as the sun's rays fall directly upon this part of the eyeball. The sun glass may now be used on the white part of the eye for a few seconds, moving it quickly from side to side and in various directions. Notice that after the use of the sun glass, the vision is improved.

Blindness

By W. H. Bates, M.D.

When the normal eye has normal sight, it is constantly moving. When it has imperfect sight or is partially or completely blind, it is always seeing stationary objects or letters stationary, or is making an effort to do so. These two truths suggest the prevention or cure of blindness.

When adults, school children and others are taught to imagine stationary objects to be always moving, the vision always improves.*

To do the wrong thing, namely, to imagine or try to imagine all objects stationary, very soon becomes associated with an effort or strain. Why is it a strain to have imperfect sight? Because it is impossible for the eyes or mind to concentrate. To regard a point continuously is difficult or impossible. Trying to do it, is trying to do the impossible; and trying to do the impossible is a strain.

All cases of imperfect sight or blindness are caused by a strain. When the strain is relieved or corrected by closing the eyes and resting them, the vision always improves.

It can be demonstrated that blindness from conical cornea, ulceration and inflammation of the cornea can, in all cases, be made

worse by straining or making an effort to see. This is a truth, and, therefore, has no exceptions.
*(Stationary objects appear to move when the eyes move, shift. - Oppositional movement.)
+Stare at a object – Do not shift on it – The object does not move, no oppositional movement is seen – Strain and blur results.
+Look at the object – Shift on the object part to part – The object appears to move in the opposite direction the eyes shift to: Oppositional Movement– Relaxation and clear vision.

Glaucoma

GLAUCOMA is a serious disease of the eyes. In most cases, the eyeball becomes hard and this hardness can be felt by pressing lightly on the closed eyelid with the fingers. For the relief of this hardness, various operations have been performed to promote the escape of the fluids of the eyes. These operations have not always been satisfactory. Many cases of glaucoma have been relieved for a limited period of time, but sooner or later, become totally blind. When blindness occurs, operations have usually failed to restore the sight.

CAUSE. (and symptoms) The theory that the disease is caused by a hardening of the eyeball is incorrect, because we find cases of glaucoma in which the eyeball is not increased in hardness, and there are cases of hardening of the eyeball in which there is no glaucoma. The normal eye may be hardened temporarily by conscious eyestrain. The cause of glaucoma, in all cases, is eyestrain, and may be demonstrated as follows: When the normal eye has normal sight, it is not under a strain. When a letter or an object is remembered or imagined imperfectly, the eyeball at once becomes hard. Other symptoms of glaucoma may also be observed, namely, one may see rainbow colors around the flame of a lighted candle. Another symptom is the pulsation of one or more of the retinal arteries. In most cases, severe pain has been observed.

Patients with glaucoma usually suffer not only in ways already mentioned, but also from other symptoms just as severe and more difficult to describe. Glaucoma affects the nervous system and produces not only extreme depression but disturbances in all the nerves and organs of the body.

TREATMENT. When a person is suffering from glaucoma, the memory of perfect sight produces complete relaxation with a temporary cure of the glaucoma.

Too many cases of absolute glaucoma, totally blind with no perception of light, suffering an agony of pain with great tension or hardness of the eyeball, have been enucleated. Acute, absolute glaucoma may have no manifest organic changes in the eyes. **When the eyestrain is relieved by palming, swinging and the use of a perfect memory or imagination, these cases have always obtained temporary relief at once and a permanent relief by the continuation of the relaxation treatment.**

Cataract

In **CATARACT**, the pupil instead of being black becomes a light gray or some other color, due to the opacity of the focusing lens of the eye, which is just behind the colored part of the eye, the iris. Rays of light which enter the eye pass through this lens and are focused on the back part of the eye, the retina. When the lens becomes opaque, the rays of light from different objects do not pass through the lens and the vision is consequently lowered and the patient becomes more or less blind. If one places six sheets of glass, one on top of the other, so that all are parallel, it is possible to see through them. If, however, one or more of the glasses form an angle or is not parallel with the rest, the layers of glass become cloudy, just like the layers which form the crystalline lens in cataract.

CAUSE. Cataract has been observed for many thousands of years by the people of India, Egypt, and in various countries of Europe. The theories of the cause of cataract are very numerous. The lens is composed of transparent layers. When these layers are squeezed or when the eyeball is squeezed, the layers which form the lens become cloudy or opaque. It is a very simple experiment to take the eye of some animal which has just been slaughtered and to hold it with the tips of the fingers of one hand. By pressing the eyeball, the lens at once becomes cloudy and a white mass, which can be seen twenty feet or further, usually appears in the pupil. With the cloudiness of the lens, there may occur at the same time, a cloudiness in the front part of the eye, the cornea. Just as soon as the pressure is removed from the eyeball, the area of the pupil becomes perfectly clear and the lens becomes perfectly transparent. It is such an easy thing to try and is so convincing that I wish that more ophthalmologists would study it.

Pressure of the eyeball may come from the contraction of the muscles on the outside of the eye, which are quite capable of keeping up a continuous pressure for many years, without the patient being conscious of it.

Cataract has been produced in normal eyes by the memory or the imagination of imperfect sight. The memory of imperfect sight produces a strain of the outside muscles of the eyeball, which is accompanied by a contraction of these muscles, and cataract is produced.

Almost any kind of opacity of the lens has been produced by pressure. The area of the pupil may become varicolored, due to the difference in pressure. The strain of the eye or mind which produces cataract is a different kind of strain than that which produces glaucoma. **Every symptom of eye trouble is caused by a separate strain**. The strain which produces near-sightedness is a different kind of strain than that which produces astigmatism or inflammation of the cornea or inflammation of the colored part of the eye, the iris. The strain which produces pain is not the same strain which produces squint. One may practice the strain which produces squint continuously without necessarily producing pain. The stain which produces cataract does not produce pain. Cataract is a disease of the eye which is never accompanied by pain unless the patient with cataract also strains in a way which produces pain. The strain which produces cataract never produces pain.

TREATMENT. **Palming, swinging, sun treatment, and other methods of relaxation treatment**[*1] **cures cataract because it relieves eyestrain which is the cause of cataract.**
September 1927

*1- Described in the book "Perfect Sight Without Glasses," by W.H. Bates, M. D., and previous issues of "Better Eyesight" Magazine.

Conical Cornea

In **CONICAL CORNEA**, the front part of the eye bulges forward and forms a cone-shaped body. The apex of the cone usually becomes the seat of an ulcer and sooner or later, the vision becomes very much impaired. In advanced cases, the patient suffers very much from pain. Various operations have been performed, but the results have always been unsatisfactory.

CAUSE. The cause of conical cornea is eyestrain. The fact has been demonstrated that those measures which cure eyestrain; **palming, swinging, the variable swing,** as described in paragraph 7 of the Fundamental card, and the use of the **memory and imagination,—are a benefit or a cure of conical cornea.**

Opacity Of The Cornea

The cornea, when healthy, is perfectly transparent and does not interfere with the vision of the colored part of the eye, or pupil, but when the cornea becomes opaque, the opacity may be so dense that the color of the iris cannot be distinguished, and there is no perception of light.

Cause. Opacities of the cornea are said to be caused by infections, ulcers or some general disease, but there are many cases which are caused by eyestrain, because when the eyestrain is relieved by relaxation treatment the opacity of the cornea always improves and the vision becomes normal.

Blindness Cured

Treatment. One patient, forty years of age, had been **blind from birth**. The corneas of both eyes were totally opaque, so that it was impossible to see the color of the iris. The patient was helpless on the street and required someone to lead him. **Central fixation, the use of his memory and imagination**, and other methods for the relief of eyestrain were practiced. **The Sun treatment** was especially beneficial. The patient was taught to expose his closed eyelids to the sun for many hours daily.

At the end of a few months' treatment, he became able to recognize people on the street. He was taught the alphabet and the names of the figures. When his knowledge of the letters became perfect, he was able to read the Snellen test card, 20/20. He was also able to read fine print without glasses. After thirty-five years, his friends reported that his eyes were still normal.

Another case was that of a woman, aged seventy-five, who had to be led into the office. She had suffered from inflammation of the cornea of both eyes for many years, and had frequent attacks of ulcers. From time to time, these ulcers would heal, but they always left a scar.

When the patient was first seen, a scar tissue involved the whole cornea, so that one could not distinguish the colored part of the eye. I believe that eyestrain was the only cause of the trouble, because the **sun treatment, palming and swinging**, brought about an improvement so that the cornea became perfectly clear, and the vision of the patient for distant and near objects was normal.

The Blindness Of Squint Or Amblyopia Ex Anopsia

In cases of **SQUINT**, the vision of the eye which turns either in or out is variable. In many cases, the squinting eye may have normal vision, but in the majority of cases, the vision may be very much lowered, and in rare cases, the squinting eye may be totally blind with no perception of light.

CAUSE. There have been many theories proposed to account for the blindness of squint. I have found, however, that the cause of the blindness is due to eyestrain.

TREATMENT. The vision of these cases is benefited by relaxation methods - palming, swinging and the use of the memory or the imagination. A letter may be imagined perfectly or imperfectly. When imagined imperfectly, the vision is always lowered. **When imagined perfectly, with the eyes open as well as with the eyes closed, the vision is always improved.** By remembering or imagining a letter, with the eyes closed for half a minute or longer, one becomes able to imagine a letter quite perfectly with the eyes open for a few seconds. Repeat.

CASE HISTORY. In one case, a woman, about thirty years of age, was totally blind in the right eye which turned in, although the eye itself was apparently normal. That is to say, there were no opacities in any part of the eye, and the retina and optic nerve were normal.

With both eyes open, the vision was 15/20. By practice, with the aid of her memory and imagination, the vision, with both eyes, soon became normal without glasses, 15/10. Coincident with the improvement of the vision of both eyes together, which meant an improvement in the vision of the left eye, the patient gradually became able to distinguish light in the right or blind eye. In less than two weeks, after daily treatment, the vision of the right eye became normal and the eyes straight.

It seems curious that so many articles have been published on amblyopia (dim-sightedness) ex-anopsia (from lack of education or use of eye) without going further and studying the results of the opposite of ex- anopsia, - relaxation methods of treatment.

Blindness

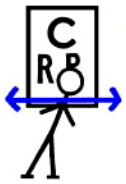
By Emily C. Lierman

On March 19, 1927, a woman came to me who was affected with temporary blindness. She was not with me longer than five minutes when I noticed that she was under an intense mental and nervous strain. When I spoke to her, tears welled up in her eyes. Every part of her body was tense and the white parts of her eyes, i.e., the sclera, were blood-shot and she had no desire to keep them open in a natural way.

She told me that she had had trouble with her eyes as long as she could remember. Blocks of blind spots were visible before her eyes at all times; blindness caused by strain. She said she always kept her glasses near her bed so that she could put them on first thing in the morning.

Her sight was better at night than in the daytime. The daylight caused her a great deal of discomfort and pain and most of the time she had a desire to keep her eyelids lowered. When she was wearing her glasses, she felt more depressed than when not wearing them. Her eyes itched and she had rubbed her eyelids until they had become soar. This caused her to be more nervous than ever. **Long periods of daily sun treatment finally cured the itching of her eyelids.**

When I tested her sight with the test card, her right vision was 15/20 but she strained very hard to see the letters, which gave her eyes the appearance of being closed. The vision of the left eye was 15/50 and it caused her pain when she read with it. I encouraged her to palm and while her eyes were closed, I asked her to talk about her loved ones at home. As she told me of some of their habits and how she loved them I noticed her smile for the first time.



Face the eyechart. Stand with the feet one foot apart, sway the body left and right, blink and flash the letters, one at a time See picture: Swaying right and flashing the letter B 'fraction of a second'.

She was taught to **stand with her feet one foot apart and sway her body from left to right; flashing the test card letters one at a time.** I reminded her many times to blink her eyes in order to stop the stare, for she stared a great deal. When she finally learned how to **blink while swaying**, her vision improved to 15/15 with each eye separately.



Sunlight shining over the shoulder onto the microscopic fine print card. Shift quickly on the white spaces of the fine print, then the white spaces of the larger print, then fine print again... When the eyes are relaxed, vision clear, look at, read the print.

I then had her sit in a chair with her back to the sunlight and gave her the Fundamental card to hold. I asked her what she could read on it. She said she could not read any of the print at all on the card. I told her to shift from the white spaces of the microscopic type, to the white spaces between the lines of the "Seven Truths of Normal Sight," which she held with the Fundamental card; flashing only the white spaces and avoiding the reading of print. This practice was kept up for almost a half-hour and I then suggested that she notice the numbers at the beginning of each sentence of the Fundamental card. Her attention was drawn to the period next to each number. She was told to notice the white spaces of the different sized type as she held it in her hand. (Then look at the period, then the letters). Before her first treatment was over, she read the sentences from number one to number five.



Sunlight and Sunning daily. +Face the sun, eyes closed. Move the head side to side. +Do the Sway, Long Swing, Figure Eight facing the sun. +Shift on the sun, eyes closed, left and right, top and bottom. +Practice Scaddic Sunning; move the open fingers of the hands up and down, left and right in front of the closed eyes and see moving light, color, shadows. This is a eye, eye muscle massage, relaxation, improves eye movement. +Eyes open; look at the bright sunny sky away from the sun. Spend time outside in the sun daily.

At the beginning of her second treatment she said that the food placed before her at the table was beginning to look like food to her before she ate it. Before, she never knew what she was eating until she tasted it.

Sun treatment was kept up regularly every day. This improved her vision for the test card and fine print to normal. I handed her a newspaper and pointed to the smallest type that I could find on the front page. The smallest print was about the size of diamond type. She read this clearly for the first time in her life. During her second treatment, when she held the card in the sunlight, her vision improved for the Fundamentals card to number eight.

After several treatments she told me that her friends were noticing how much younger she looked. The sclera of both eyes was clearing up and she was smiling most of the time. She became able to read all of the Fundamental card at reading distance, ten or twelve inches from her eyes and sometimes closer. The blind spots and black spots that had appeared before her eyes for many years, also disappeared. She was told to remain in the sun for hours at a time, keeping her eyes closed while her head moved slowly from side to side. The sway of the body was advised and she did this a hundred times in the morning and a hundred times at night before retiring.

She told me how much better she slept at night since having had her first treatment. She said it had been many years since she had had a restful night's sleep. She enjoys walking fast on the street now, noticing stationary objects moving in the opposite direction as she walks. She reads numbers in the telephone book and other print that was not clear before. Since she has been cured, she is helping others and writes about her eyes continuing to be a blessing to her. This patient has proved again that faithful practice and patience brings about the much desired result,—normal vision.



Shift part to part, small point to small point on the flag. Blink, relax.

She describes her own case in the following way: "Before I was treated by Ms. Lierman for the improvement of my sight, an American flag a short distance away looked to me like a dark piece of cloth hanging from a pole. Now I can clearly distinguish the colors; the red, the white, the blue, and I believe I could count each star if the flag would stay still long enough.

"For many years the first thing I would do on awakening in the morning would be to look for my eyeglasses. I could not see or find anything without them. At the dinner table, I could not see a small fishbone on my plate, in a poorly lighted room, much less other things that the normal eye sees without any effort. Now I can see the tiny crumbs, even though they may be as white as the color of my table cloth.

Along the street, whether I was walking or riding, I could not read signs as the normal eye does. After my second treatment all signs along the street and shop windows were easily seen by me. Before I started treatment, I could not see any objects moving at all. They all seemed to stand still. Now I can see all objects moving, that are moving, and since I have learned how relaxing the sway of the body is, I can imagine stationary objects are moving as I sway. **If I carried an umbrella or a purse on my arm, I would hold so tightly to these things that the effort caused pain in my hands and arms before I realized it. Now my**

arms and hands feel relaxed and I carry packages, an umbrella and other things without causing strain or effort. Things now come easily to me. Perhaps others who are troubled in this way would be glad to know how I was cured of this particular strain and tension caused by holding on tightly to things unnecessarily.

"Mrs. Lierman taught me how to place the palm of one hand gently, easily on the palm of the other hand. At first I did not do it gently enough for her and we practiced it together. My strain was so great, which she realized too, that I was willing to follow her in any suggestion that she made for my comfort and relief from strain. This helped me so much that I began to **uncross my knees for more relaxation and rest**. This helps more than one realizes and now since I know it does, I notice that nine out of ten people are under a tension most of the time because their knees are crossed. For years I have been under constant strain and tension, which caused greater depression than anything else. Since I have taken the treatment and followed Ms. Leirman's suggestions for home treatment, I no longer feel depressed.

"After my second treatment, I could thread a needle and I was not particular either as to the size of the eye of the needle. I believe this is worth reporting because for many years I had to have my glasses handy to thread a needle whether the eye was large or small; it made no difference.

"Since I was treated, a friend of mine drew my attention to something away off in the sky. She pointed to this object and said, "look at that balloon in the distance!" I looked and said, "No, it is a kite, I can see the tail clearly." The kite became visible to my friend and she remarked how much better my eyes were since I had discarded glasses. I have much cause to be grateful for my renewed vision!"

Perfect Sight
Without Glasses
By W. H. BATES, M.D.

The author of this book presents evidence that all errors of refraction are caused by strain —and cured by rest and relaxation.

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Questions And Answers

Q - Is memory and imagination the same? When we remember an object, do we have to visualize it?
A - The memory and imagination are not the same. It is best when you remember an object to visualize it with the help of the imagination, but it is not always necessary to visualize it. (The brain will automatically produce a mental picture of the object.)



Imagine a black football floating far out into the ocean until it looks like a small black period. Shift on the black period and see it swing, move opposite the movement of the eyes. Practice with the eyes open and closed.

Q - When I try to imagine a black period, it blurs and I get all colors but black.
A - When you fail to imagine a black period, it means that you are making an effort to see black. It may help you to think of a black football that has been thrown into the ocean and is being carried further and further from shore. As it recedes in the distance, it becomes smaller and smaller until it seems only a small black speck or period.

Q - Why is it a rest to read fine print? I should think it would be a strain.
A - Fine print can be read perfectly only when the eyes are relaxed. If any effort is made, the print immediately blurs. It is, therefore, evident that the more fine print you are able to read, the more continuously relaxed your eyes and mind are.
(Fine print activates perfect central fixation, and improves close and distant vision.)
See oppositional movement chapter 17 in the book: Do It Yourself – Natural Eyesight Improvement – Original and Modern Bates Method.

Q - I am following your method for squint. While riding in an automobile or train, is it necessary for me to palm?
A - No. It is beneficial to observe the universal swing, that is, looking in the distance and noticing that everything on the horizon, the clouds, treetops, etc., seem to move in the same direction in which you are moving. Without looking directly at near objects, you are conscious of the fact that they seem to be moving past in the opposite direction. Remember to blink frequently, as the normal eye does.

Perfect Sight

If you learn the fundamental principles of perfect sight and will consciously keep them in mind your defective vision will disappear. The following discoveries were made by W. H. Bates, M. D., and his method is based on them. With it he has cured so-called incurable cases:

I. Many blind people are curable.

II. All errors of refraction are functional, therefore curable.

III. All defective vision is due to strain in some form.
You can demonstrate to your own satisfaction that strain lowers the vision. When you stare, you strain. Look fixedly at one object for five seconds or longer. What happens? The object blurs and finally disappears. Also, your eyes are made uncomfortable by this experiment. When you rest your eyes for a few moments the vision is improved and the discomfort relieved.

IV. Strain is relieved by relaxation.

To use your eyes correctly all day long, it is necessary that you:

1. **Blink frequently. Staring is a strain and always lowers the vision.**
2. **Shift your glance constantly from one point to another, seeing the part regarded best and other parts not so clearly.**

That is, when you look at a chair, do not try to see the whole object at once; look first at the back of it, seeing that part best and other parts worse. Remember to blink as you quickly shift your glance from the back to the seat and legs, seeing each part best, in turn. This is central fixation.

3. **Your head and eyes are moving all day long. Imagine that stationary objects are moving in the direction opposite to the movement of your head and eyes. When you walk about the room or on the street, notice that the floor or pavement seems to come toward you, while objects on either side appear to move in the direction opposite to the movement of your body. (Oppositional Movement)**

Announcement

The new edition of "Perfect Sight Without Glasses," by W. H. Bates is now on sale at this address and all leading book stores. Those who were unable to procure the book while our stock was exhausted will receive prompt delivery.
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We wish to call to the attention of our readers, the Bound Volume of the "Better Eyesight Magazine" from July, 1926, to June, 1927. This contains articles written by W. H. Bates, M.D., on his discoveries, relative to the cure of Imperfect Sight by Treatment Without Glasses.

Each month, he discusses in detail the causes and treatment of various phases of imperfect sight. Instructions and suggestions for home treatment are also given.

Another article, demonstrating the various truths of Dr. Bates' discoveries, proves most beneficial in this treatment.

There is also a Question and Answer column in which questions submitted by subscribers and interested readers are answered by Dr. Bates.

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BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

OCTOBER, 1927

Demonstrate



Drifting Swing
Palm, eyes closed and imagine floating down a river in a boat. See Oppositional Movement; the trees, houses, shoreline, mountains... on the left and right sides of the river move by in the opposite direction the boat is moving to. Imagine sitting facing forward, then backward in the boat and see the shoreline, river move toward and past you and away and past you.
Shift on objects. Imagine objects clear, in color, motion. Hear, feel objects: wind blowing leaves on the ground, in the trees, river water, warmth of the sun...

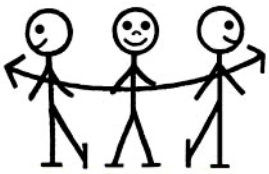
1. That the drifting swing improves the sight.

Take a record of your best vision of the Snellen test card with both eyes together and each eye separately without glasses. Now close your eyes and imagine that you are occupying a canoe which is floating down some creek, river or stream. Imagine that the trees, houses and other stationary objects on either side are moving in the direction opposite to the way in which you are moving.

Another way in which to practice the drifting swing is as follows: With the eyes closed, recall a number of familiar objects which can be remembered easily. Sometimes in the course of a few minutes, fifty or one hundred objects may be remembered quickly and then forgotten. Remember each mental picture by central fixation; that is, think of only one part at a time of the object that you are remembering. (Shift from part to part, while seeing, thinking of each part, one part at a time.) **Just let your mind drift easily from one object to another, without making any effort. Do not try to hold each object as remembered; forget it quickly. Notice that after practicing the above methods for a few minutes the vision for the test card is improved.**

2. That the long swing improves the sight, relieves pain, fatigue and many other nervous symptoms.

Take a record of your best vision of the Snellen test card with both eyes together and each eye separately without glasses.
+Stand, with the feet about one foot apart, facing a blank wall.
+Turn the body to the left, at the same time raising the heel of the right foot.
Now place the heel of the right foot on the floor in its usual position;
+Then turn the body to the right, lifting the heel of the left foot.
+The head and eyes move with the body; do not make any effort to see more distinctly stationary objects which are apparently moving. Practice this fifty to one hundred times, easily, without making any effort. Notice that after practicing, the vision for the test card improves.



The Long Swing

Squint

Treatments for crossed, wandering eyes

By W. H. Bates, M.D.

DEFINITION. When one or both eyes are habitually turned in toward the nose, the condition is called internal squint or convergent strabismus. When the eyes turn out, it is called divergent squint. Sometimes one eye may be turned up, while the other remains straight or may be turned down. This has been termed vertical squint. Some cases of squint may be a combination of several kinds of squint, vertical convergent or vertical divergent.

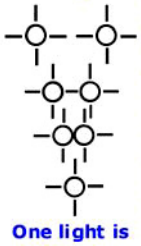
CAUSE. **The cause of squint is a mental strain.** Internal squint is produced by a different strain from the one which turns the eyes out, upward or downward. Double vision is produced by a mental strain different from that which lowers the vision or causes fatigue, pain or dizziness. Normal eyes have been taught to consciously produce all kinds of squint at will. This requires an effort which is variable in its intensity.

The facts suggest that since squint in all its manifestations can be produced at will, it should be considered curable by eye education, and this has been demonstrated in all cases. It is a well known fact that **many persons, including children, can learn how to produce squint and become able to relieve permanently all the varied symptoms of squint.** The success of the operative treatment of squint is very uncertain.

Internal Squint



Double image of light



One light is seen, eyes are straight.

Double images merged into one light, using the imagination with the eyes open and closed and by crossing and uncrossing the eyes.
Read Dr. Bates full treatment to cure internal convergent and external divergent squint.

TREATMENT. Since squint is always caused by an effort or a strain to see, mental relaxation is a fundamental part of the successful treatment. This may explain why teaching the eyes to see better is a relaxation method, which promotes the cure of the squint. If the vision of each eye is about one-half of the normal, the right or the left eye may turn in. With an improvement in the vision of each eye to the normal, the eyes may become straight.

If the good eye has a vision of 15/20 while that of the poorer eye is only 15/70, improving the vision of the good eye may also improve the vision of the eye that turns in and the eyes may become straighter.

In many cases of squint, double vision can be demonstrated. These cases are more readily cured than those cases of squint which do not see double. **This fact suggests that all cases of squint should be taught how to produce double vision.** When the patient regards a small light with both eyes open, it is possible to encourage him to see two lights with the aid of prisms, (prisms are not necessary) the blue glass over the eye with good sight, when the light seen by the good eye is very much blurred. If the person is unable to imagine two lights a short or long distance apart, palming frequently helps. By resting the eyes with the aid of palming, the separation of the two lights is changed. With the help of the swing, central fixation, the two images approach each other and may merge into one light.

Squint cases are materially benefited when they become able, by an effort, to imagine the double vision better with their eyes closed than with their eyes open. They are able to demonstrate with their eyes closed that the image seen by the right eye is to the right of the image seen by the left eye. This is called ***homonymous diplopia***. By a little training or encouragement, they become able to imagine the two images closer together by relaxation methods.

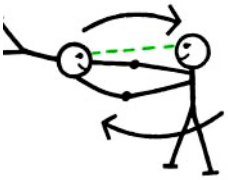
When the image seen by the right eye is to the left of the other image, it is called **crossed diplopia** and, with few exceptions, divergent squint is present. With the eyes closed, a person with internal squint may imagine double vision with the images separated or close together. Or he may become able to imagine the images crossed, or the image seen with the right eye to be to the left of the other image; in other words, he may be able to produce divergent squint with the aid of his imagination. **A number of people have been cured of internal squint by teaching them how to produce divergent squint.**

Young children, two years of age, have been cured of all forms of squint by swinging the whole body in a circular direction and swinging them strongly enough to lift their feet from the floor. While swinging, the hands of the child are held by the hands of an adult who may be swinging them. At the same time the child is encouraged to look upward as much as possible. The little patients always seem to enjoy this form of exercise. Games of all kinds have been practiced with much benefit to the squint in children.

One can obtain small toy animals of various sizes and colors. The names of the animals and their colors can be taught to the children. In the beginning they learn the names of the animals more readily when they are close, about two feet away. When the child recognizes each animal correctly at this distance, one can, by gradually placing each animal further off, improve the vision for a greater distance. The more perfectly the child becomes able to see the animals, the less is the squint.



Convergent and Divergent Squint Cure.
+Imagining double image of the light with the eyes open, then closed, then open. (As is seen if eyes were crossed.)
+Imaging images moving closer together.
+Imagining the left eye sees its image on the left side, right eye sees its image on the right side. (correct)
+Then, imagining the left eye sees its image on the right side and right eye sees its image on the left.



Swing the child in a circle counter-clockwise, clockwise... Feet leave the ground, child looks up. Straightens eyes.



Sway side to side. Body, head, eyes move together, in synchronization, at the same time, in the same direction. Sway relaxes the mind, body, eyes, prevents effort to see, strain, blur and squint.

Teaching children with squint the names of the different colors at a near or greater distance is a benefit. In the beginning, the size of the colors may need to be large to help the memory, imagination or sight. As the sight improves, the child becomes able to distinguish the colors of very small objects. One may need to spend half an hour or longer daily for some weeks in order to improve the vision for colors to the maximum. Numbers and letters of the alphabet can also be taught to the child who has squint, with benefit.

Double Vision

Not all children are conscious of seeing stationary objects multiplied. When they reach the age of six years or older, double vision, when it occurs, is usually very annoying. Adults with double vision and squint are usually more seriously disturbed than are young children.

One of the best remedies for double vision is palming for longer or shorter periods of time. It is well to remember that while double vision often requires the vision of each eye, one may have multiple images referred to each eye alone.

Any method of treatment which secures relaxation, corrects the double vision and lessens the squint. Some patients are benefited by standing with the feet about one foot apart, the arms and hands hanging loosely at the sides, while they **sway** the body slowly, continuously, easily, from side to side. The swaying of the body from side to side lessens or prevents concentration or other efforts to see. Since double vision can be demonstrated to be caused by concentration or some other effort to see, the prevention of effort by the sway naturally lessens or corrects double vision. Should this not be sufficient to cure the squint, one may practice **blinking, palming,** or the **memory or the imagination of prefect sight**.

The Snellen test card may be useful in the cure of squint. While swaying from side to side, standing a few feet from the card, all stationary objects in the field of vision may appear to be moving in the opposite direction to the sway. More distant objects, that have no background, may appear to move in the same direction as the movement of the body. When practicing with a white card with black letters, the whiteness of the card improves in whiteness, while the blackness of the letters becomes darker and the vision improves.

The Tropometer

The tropometer is an instrument invented by Dr. George T. Stevens, of New York, to measure the strength of the muscles of the outside of the eyeball. It is a very valuable instrument for some cases. For example, a patient, a young man of about twenty-three years of age, came to me suffering from an alternate squint of a very high degree. I measured the strength of the muscles which turned the eyeball in. He had the maximum strength of these muscles. A free incision was made through both muscles and the result was negative. The eyes turned in as much as they had before the operation.

In order to increase the effect of the operation, I removed a quarter of an inch of the internal rectus muscle and then measured the effect produced with the aid of the tropometer. Much to my surprise, the tropometer measured little or no diminution of the strength of the internal rectus to turn the eyeballs in. I then proceeded more or less cautiously, alternately using the tropometer to

measure what progress I was making.

When the tropometer indicated that the strength of the internal rectus was reduced to normal, functional tests demonstrated that both eyes were straight, with single vision. I exhibited the patient before the Opthalmological Section of the New York Academy of Medicine. Every ophthalmologist, and there were many prominent men present, made the statement that the eyes would turn out within a very short time. Twenty years later, a large, heavy man came up to me after I had finished a lecture on the cure of the eyes at one of the public schools of New York. Although I did not recognize him, he was the same patient. He had had no relapse during all these years.

Dr. Bates main treatment is to avoid cutting the eye muscles. Natural Bates method doctors have learned to use relaxation, shifting, central fixation, movement, left and right brain hemisphere activation, integration, (professional alignment of the neck vertebrae and skull/eye socket bones only if necessary) and other natural treatments to cure cross and wandering eyes.

Case Reports

About fifteen years ago, a southern lady came to me with her daughter, age ten. When she arrived at the office, she found a number of patients who had come to be cured of their bad eyesight without glasses. She was one of those nervous people who disliked above all things in this world to have to wait, especially in a doctor's office. When my secretary advised her not to wait, she took a firmer grip on the arms of her chair and resolved to see it through.

The child was suffering from well marked alternate internal squint. Sometimes the right eye would turn in so far that the pupil was covered over by the inner corner of the lids. At other times, the child was observed to be afflicted with internal squint of the left eye. Her mother told me that they had been to several large cities, including the capitals of Europe, where she had hoped to obtain a cure for her daughter's squint.

The child was an avid reader and had read many books. Her memory was unusually good. She also had a very good imagination. She could read the 10 line of the Snellen test card at more than twenty feet in a good light. When the light was poor and her vision was tested with the aid of a strange card, she was able to imagine correctly each of the four sides of any letter. For example, the letter "E" was the fourth letter on the fifth line of the test card. When the test card was placed thirty feet away in a poor light, she was unable to distinguish the letter as a whole.

After closing her eyes and covering them with the palms of both hands (palming), she imagined the left side of the "E" to be straight. When she imagined the left side of the "E" was curved or open, she strained. She imagined the top straight, and the bottom straight, and the right side open, which was, of course, correct. When any of the sides were imagined wrong, she always strained and was more or less uncomfortable.

She was then asked to imagine the fourth letter on the sixth line. She was still practicing palming. She was able to imagine the left side of the unknown letter to be straight, the top straight, the bottom open and the right side open. She imagined that the letter was an "F" and was correct.

She was then tested with diamond type at about ten feet from her eyes, a distance at which it was impossible for her to read the letters. She was then told to palm. While palming, she was asked to imagine the first letter of the fourth word, on the fifteenth line of the diamond type. With her eyes closed and covered, she was able, without effort, by imagining each of the four sides correctly to demonstrate a letter "M." She imagined this letter so perfectly that she was able also to imagine other letters of the same word correctly. The exercise of her imagination was continued for an hour during which time she imagined correctly a number of lines of the diamond type. The result was very gratifying, because the squint disappeared in both eyes and the relief was manifest two days later.

Imagine and see one letter clear and all letters, objects become clear.

The mother supervised the imagination of the fine print for half an hour daily for many days and weeks, with the result that at the end of six months, the child's eyes were still straight. The treatment was then discontinued, and at the end of five years, her eyes still remained straight.

A girl, age twenty-five, was afflicted with a **complicated squint of various muscles of the eyeball of each eye**. She habitually looked straight with the right eye, while the left eye turned down and out. When the right eye was covered, the left eye looked straight, and the right eye turned down and out. She had a vertical divergent squint in each eye. At times, she turned the left eye up and inward.

She was instructed to produce all forms of vertical, internal or external squint. With her eyes closed, she was directed to place her fingers lightly on the outside of the closed eyelids. With the help of her imagination, she became able to move the right eye in, while the left eye remained straight. When the left eye turned in, the right eye remained straight. She could produce every imaginable form of squint with her eyes closed, better than she could produce a squint with her eyes open. With her eyes open, she was able to do it in flashes or temporarily and later more continuously. It was interesting to observe how readily the patient could tell by the sense of touch whether the eye was looking in, out, down, up, or straight.

Practice this with the eyes open, closed, open: Remember, imagine parts of a letter correct. Remember, imagine the top of the E straight (correct) and relaxation, clear vision occur. Remember, imagine it curved (incorrect) and strain, blur occur. Shift on and see, imagine correct, one part of the letter at a time. Shift part to part seeing each part, one at a time clear.

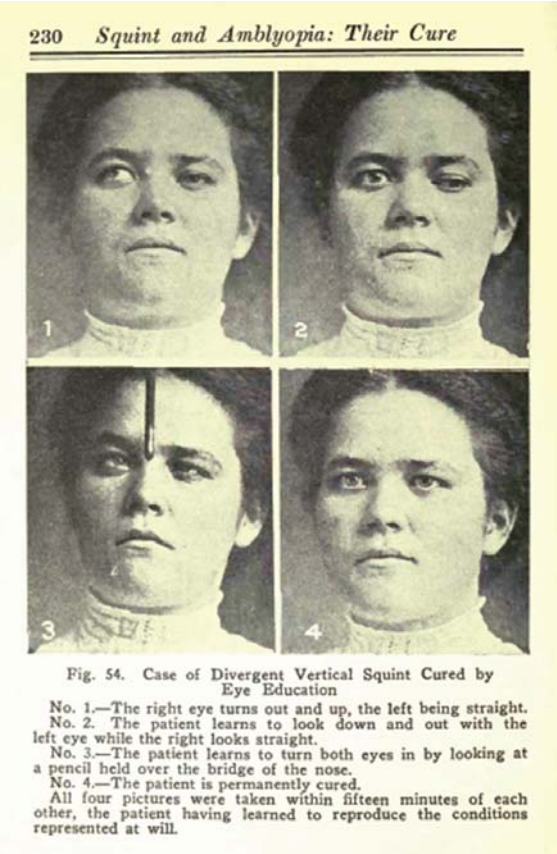


Next: practice on a small fine print letter.

M

Strabismus Cure
Look at a candle flame.
+See and imagine seeing two candle flames (as is seen when the eyes are crossed).
+Cover one eye at a time to see where each eyes image of the flame is seen in the the left and right sides of the visual field. Then: both eyes uncovered:
+Imagine and see with an effort the two flames move farther apart.
+Then, with relaxation, no effort imagine and see the flames move close together and merge into one flame. Eyes are straight, vision clear. Read Dr. Bates complete directions on the left.





230 *Squint and Amblyopia: Their Cure*

Fig. 54. Case of Divergent Vertical Squint Cured by Eye Education

No. 1.—The right eye turns out and up, the left being straight.
No. 2. The patient learns to look down and out with the left eye while the right looks straight.
No. 3.—The patient learns to turn both eyes in by looking at a pencil held over the bridge of the nose.
No. 4.—The patient is permanently cured.
All four pictures were taken within fifteen minutes of each other, the patient having learned to reproduce the conditions represented at will.

Many patients have been cured of internal squint by teaching them how to produce divergent squint, either with the eyes open or with the eyes closed. There were times when it was difficult for the patient to produce some forms of squint. With the aid of a small candle light, with the eyes open, the patient could imagine she saw two candle flames. The one seen by the right eye was to the right of the one seen by the left eye when one or both eyes turned in. By practice, she became able, with an effort, to increase the distance between the two candle flames. By lessening the effort, she became able to bring the two candle flames closer together, which was evidence that the squint required an effort and that a cure could be expected when the eyes were relaxed.

There were times when her ability to produce internal squint with her eyes open was not always easy. With her eyes closed, her imagination of the two candle flames was better. With an effort, she was able to imagine the candle flame seen by the right eye to be to the left of the candle flame seen by the left eye. In other words, the two candle flames were crossed. With her eyes closed, she could imagine the crossed images farther apart, or she could bring them closer together by relaxation until they merged into one. **Her ability to produce all kinds of squint helped her to do those things which were necessary to correct the squint. She devoted many hours to the production of vertical squint which enabled her to quickly correct divergent squint. When she became able to produce internal squint, it was not long before she was able to correct external squint.**

When the patient began treatment, she was wearing glasses for the correction of imperfect sight. After her eyes became straight by eye education, her vision became normal without glasses. Because of her wonderful control of her eye muscles, very satisfactory photographs were obtained of her eyes.
Shifting, central fixation, relaxation, no effort to see clear, no effort, strain to keep the eye straight corrects Strabismus, Squint.

(Squint/Strabismus)

STORIES FROM THE CLINIC
By Emily C. Lierman

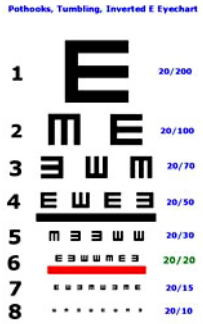
A young mother, who was much worried about the condition of her little boy's eyes, brought him to me for my candid opinion as to the cure of squint. When he was two years old, it was noticed that his left eye frequently turned in. At the age of three, when I first saw him, the right eye seemed to turn in more than the left. The mother had visited many eye specialists but none of them gave the child permanent relief.

I felt so sorry for the little fellow when he stood before me with his large rimmed spectacles. He tried to keep his head still while he looked up at me, but he could not. His head moved in a sort of semi-circle as he tried to see me more clearly, through his glasses. I pretended not to understand what he said to me, and he really had a great deal to say.

I sat down and took him on my lap. Then I asked him to remove his glasses so that I could understand him better. "Glasses don't talk, do they?" he said. "No; but they make me stare like you do, and I also think they make me a little hard of hearing," I remarked, jokingly. He looked at his mother and quietly asked her to remove his glasses so that Ms. Lierman could hear him better.

I had no desire to have him take me seriously, nor did I want him to feel that he was going to be examined as he had been heretofore. I asked him his name. "Frank," he said, and then gave his full name and address and the date of his birthday, which I thought was bright for a child so young. He had spent many hours and days during the last year being examined and having drops put in his eyes. He asked me if I were going to put those drops in his eyes and said that if I were, he would run away.

I told him that I would not even touch his eyes with my hands. His mother and father were with him, and to prove to Frank that I really meant what I said, I asked both the mother and father to hold my hands, which they did. In the meantime, Frank slid off my lap, threw himself on the floor before me, kicked his heels in the air and wept with fear. His father apologized for his behavior, but I assured him that it was not necessary to make excuses for little Frank, because it was not unusual for children with squint to act that way.



"Yes," the father answered, "I noticed that you emphasize that in your book, 'Stories from the clinic.'" Nothing could be done until the father threatened to take the boy from his position on the floor, and even then he kicked and screamed, begging at the same time to be left alone, saying that he wanted no drops and no examination of his eyes. I asked both parents to leave him entirely to me.

His mother took two packages of chewing gum from her handbag. One package she handed to me, while the other she held concealed in her hand. I never saw a child move as quickly as he did from the floor for that chewing gum. I said he could not have any of it until he stood on a chair, ten feet from a test card that I had placed on the wall opposite. This test card is the one we call the inverted "E" or the "pot hook" card, and is used for young children and patients who cannot read or write. He willingly consented to do as I wished him to, and without further fuss, he stood on the seat of the chair opposite the card.

At my suggestion, his mother stood twenty feet away from him and held a piece of wrapped gum in her hand for him to see. She

asked him what the name of the gum was. The mother had previously told me that he could mention the name on the wrapper of the gum and could tell whether it was Beechnut or Wrigley. He said immediately that it was "Beechnut." I watched his eyes as he looked at the gum and both were straight. I then told Frank to close his eyes and showed him how to palm. While his eyes were closed and covered, his mother replaced the Beechnut gum with the Wrigley.

Frank was then told to remove his hands from his eyes and look at the package his mother held up for him to see. He said, "Oh, I know that is Wrigley Spearmint gum." The mother then placed both hands behind her back and changed the gum from one hand to the other, then held up both hands for him to name the gum. He mentioned them correctly, saying that the right hand held the Wrigley and the left hand held the Beechnut. I drew his father's attention to the fact that when he shifted from her right hand to her left hand, noticing first the object which she held in one hand and then the object she held in the other hand, he blinked his eyes, and while swinging and blinking, his eyes moved in unison. The father remarked how straight both eyes were during this exercise.

After his mother had promised that he could soon have the chewing gum, I told the little fellow to palm his eyes again. When he removed his hands from his eyes, his right eye turned in decidedly. I pointed at a letter "E" on the test card for him to see, and he leaned forward, straining hard to see how the letter "E" was pointing. He rubbed both eyes with his chubby hands and complained that he could not see anything.

I explained to his parents how **unfamiliar objects seen at the distance caused the blindness of squint, while familiar objects seen at the same distance produced no tension, no strain, and therefore no blindness from squint.** The inverted "E" card was unfamiliar to him and made him strain.

His mother noticed, among other test cards, one that was familiar to him, but the letters of the card had not been memorized by the child. I placed this familiar test card fifteen feet away and pointed to the ten line of letters, or the line of letters that should be seen by the normal eye at ten feet, and he immediately strained to see them. His right eye turned in as it had before. I then placed the familiar test card ten feet away and directed Frank to close his eyes after he had seen each letter as I pointed to it. In this way, he read the ten line letters with both eyes straight.

I placed a toy on the floor and told Frank to go and pick it up. He reached for the toy but missed it by a foot. By turning his head around in a sort of semi-circle, he finally put his hand on the toy and picked it up. I spent almost a half-hour longer with him than I usually do with each patient, swinging him around as I held both his arms, and raising him slightly from the floor. He laughed with glee, enjoying every moment of the swing.

He was rather heavy for me to lift, so I asked his father to take my place. Frank thought this was a wonderful game and all the while his father swung him around from left to right, he looked up toward the ceiling and then to his father's face. All three of us noticed how straight both eyes were during this procedure. His parents were directed to practice this swing every day, always making a game of anything that was done for Frank's eyes. They were told to report to me, from time to time, how he was getting along.

Later, when I saw him again, I placed him fifteen feet from the test card. He knew the alphabet, as well as the numerals, so I used the card with unfamiliar letters. He covered his left eye and read with the right and when I pointed to a "C," he said, "That is a broken "O." I began to smile, which disturbed him somewhat, and then asked him why he called it a broken "O."

"Why," he said, "anybody would know it wasn't broken if it didn't have an opening to the right side, and maybe grownups like to call it a 'C,' but I know it is a broken 'O' ". I pointed to a 'G' and asked what it was, he said, "That is also a broken 'O,' only it's different." He read 15/10 with each eye separately, and with both eyes straight.

I had him stand by my window and asked him to look off in the distance and notice the letter signs on the tops of the buildings. In trying to see the letters correctly, he strained and both eyes turned in slightly, the right one more than the left. He demonstrated again that unfamiliar objects seen at the distance cause more strain. Every time Frank's eyes turned in as he tried to see, he would say that he could not see at all. When questioned about whether he saw black before his eyes, he answered, "No, but I just can't see." Immediately after a failure to see at the distance, and while looking at unfamiliar objects, he would have a sort of nervous spasm, which his mother said was hysterics.

It has been some time since I have seen Frank, but I believe, or hope, that his mother has continued to help the little fellow. I always think of him when I look at the "C" of the test card, which he called the "O."

Announcement

Dr. Bates wishes to announce that Mrs. E. C. Lierman, his assistant for fifteen years, has finished her work in California, and has resumed her work at his office.

Questions And Answers

Q - When doing the swing, what does one move, the head or eyes?
A - One moves the eyes in the same direction as the head is moved.

Q - Does massaging benefit the eyes?
A - No, because it does not relieve the mental strain which caused the eye trouble.

Q - Is practicing under a strong electric light as beneficial as practicing in the sun?
A - If the sun is not shining, the strong electric light can be used with benefit, although more benefit is derived from direct sun treatment.

Q – Memory - Can one remember perfectly and see imperfectly?
A - It is impossible to remember perfectly and see imperfectly at the same time. Perfect sight can only be obtained with the aid of a perfect memory. When the memory is perfect, the mind is relaxed and the vision is normal. Imperfect memory requires a strain of the eyes which produces the imperfect vision.

Q - Can one blink too quickly and too often?
A - The normal eye blinks quickly, easily and frequently.

Q - What causes a white matter to appear in the eyes after sun treatment?
A - The white matter in the corner of the eye is produced by infection and is cured by sun treatment.

Q - If bad eyesight is caused by some physical ailment, will your methods help?
A - Yes, relaxation is always a benefit, not only to the eyes, but to all the nerves of the body.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

NOVEMBER, 1927

Voluntary Production Of Eye Tension A Safeguard Against Glaucoma

It is a good thing to know how to increase the tension of the eyeball voluntarily, as this enables one to avoid not only the strain that produces glaucoma, but other kinds of strain also. To do this proceed as follows:

Put the fingers on the upper part of the eyeball while looking downward, and note its softness.
(Place the fingers on top of the upper skin of the closed eyelids, not the eye itself.)
Then do any one of the following things:
+ Try to see a letter, or other object, imperfectly, or (with the eyes either closed or open) to imagine it imperfectly.
+ Try to see a letter, or a number of letters, all alike at one time, or to imagine them in this way.
+ Try to imagine that a letter, or mental picture of a letter is stationary.
+ Try to see a letter, or other object, double, or to imagine it double.
When successful, the eyeball will become harder in proportion to the degree of the strain, but, as it is very difficult to see, imagine, or remember, things imperfectly, all may not be able at first to demonstrate the facts.

[The above article, which appeared in the December, 1920, issue of "Better Eyesight," is reprinted at the request of the editor, in connection with the other articles in this month's issue on "tension".]

Tension

By W. H. Bates, M.D.

The tension of the muscles and nerves of the human eye is a very important subject for various reasons. Perhaps the most important of all is the fact that it occurs so frequently and so universally. When a person has near-sightedness, eye tension can always be demonstrated, because when the eye tension is relieved and corrected, the near-sightedness is cured. All persons who have astigmatism have eye tension. When the eye tension is relieved, the astigmatism disappears. Patients with cataract, diseases of the optic nerve or diseases of the retina are suffering from tension. When the tension is relieved, the eye disease disappears.

In some cases, it is more difficult to relieve the tension than in others. No matter whether it is difficult or not, there can be no cure of the eye disease unless the tension is corrected. This tension, besides affecting the eyeball, is also manifest or can be demonstrated in any or in all parts of the body. **A person who has glaucoma is under, not only tension of the eyes, but a tension or an unusual contraction of the muscles of the arm, the hand, or all the muscles.**

Tension of the internal muscles is always present when a patient has a disease of the chest, and it can be demonstrated that he is also suffering from tension, not only of the chest, but also of other muscles and nerves in other parts of the body. There is a tension that contracts the bronchial tubes which interferes with the proper circulation of air into the lungs and out of the lungs. People with pneumonia, tuberculosis of the lungs, or tuberculosis of any part of the body are all suffering from eye tension, and when the eye tension is relieved, the tension in other parts of the body is also relieved. It is an interesting fact that all diseases of the eyes and all diseases of the body are generally associated with eye tension.

Opera Singers Voice Cured by Relaxation

A very remarkable case of tension was that of an opera singer who suddenly lost her ability to sing. Specialists on the throat examined her very carefully and they were united in the statement that she had paralysis of the muscles on the left side of her larynx. In connection with this paralysis there was a tumor grown on the left vocal cord. Her symptoms of paralysis were caused by tension, because when the tension was relieved, the paralysis of the vocal cord was also relieved and cured. The tumor which had grown on the left vocal cord disappeared.

There are two things about this case which can be discussed; one is that the paralysis was caused by tension and the other that the tumor of the vocal cord was also caused by tension. When we analyze her case and try to give an explanation of what the tension accomplished, we will probably say a good many things which are not so. It is exceedingly difficult, as I have said a great many times, to answer the question, "Why?"

We may have cases of eye diseases in which it is difficult to relieve the tension, but it may be **easy to relieve the tension in the muscles of the stomach or in the various groups of muscles in the arm, or hand, neck and when such tension is relieved, that of the eye muscles is relieved, and in this way, the disease of the eye, no matter what it may, be can always be relieved or cured. This is a very important fact, because when understood and practiced, some very severe forms of diseases of the eyes can thus be cured, and in no other way so well.**

Chronic neck muscle tension, limited movement (often caused by computer use, eyeglasses) cause eye muscle tension, impaired movement, blood flow to head, eyes, unclear vision, impaired eye health.
Relax the muscles in the body, chest, arms, shoulders, neck = the eye muscles relax, eye moves freely, eye returns to normal shape, no tension in the eye, circulation improves, eyes are healthy, vision is clear.

The question that comes up more prominently than any other is: What can the patient do to bring about relaxation of any group of muscles? A man, by the name of **F.M. Alexander, of London, England** has accomplished a great deal in the cure of all kinds of diseases. He says that all diseases of the body are caused by tension. They can all be cured by the relaxation of the tension. He has offered many methods of bringing about relaxation in the most interesting, although seemingly incredible way and the most successful is to bring about relaxation by having the patient state that it is desired. (Alexander Method)

For example, a patient sitting in a chair or lying down on the floor, whichever is easier, says: **"I desire relaxation of the muscles of my neck, so that my head can be lifted forwards and upwards." This is sometimes repeated one hundred to a thousand times.** Mr. Alexander has always succeeded in having the patient bring about relaxation of the muscles of the neck by this method.

Mr. Alexander goes further and brings about relaxation of the muscles of the chest, both outside and inside, by having the patient say: "I wish my shoulder to relax and to move downwards and backwards. I wish my chest to relax and to move backwards. I wish my whole body to relax and move backwards. I wish my foot to move backwards without effort, without strain of any muscles of the body." Relaxation of the body, back, chest, shoulders, neck results in easy movement, relaxation of the eye muscles, eyes, and clear vision.

It has been a great shock to many orthodox physicians to observe the cures that Alexander has made. Epilepsy, considered by the medical profession to be incurable, has been cured by relaxation, without the use of any other form of treatment. Of course, rheumatism responds perhaps more quickly to relaxation than a great many other diseases, but there are cases of so-called rheumatism affecting the shoulder in which all parts of the joint become immovable.

One patient was afflicted with Parkinson's disease; all the joints of the body became so fastened together, so immovable, that the patient was unable to produce any voluntary movement of the hand or the arm. As time passed, the voluntary and the involuntary muscles gradually became useless from tension. Mr. Alexander had the patient relax those muscles which she could relax most readily. When this was done, the more difficult muscles became relaxed, until finally she was cured completely by the relaxation of tension.

(The Alexander Method and other body movement exercises) continues to be popular today, 2010; original and modern Natural Eyesight Improvement teachers apply body, neck relaxation, movement as a main eyesight improvement treatment.)

Bier's Congestive Treatment
The Coal Miner

We may say that tension is a very important factor in the cause of most diseases of the body. A very instructive case was the following: About twenty years ago I came into my clinic and found there a coal heaver whose face and hands and all parts of his body were covered with soot, or black particles of coal. His right eye was suffering from an ulcer of the front part. The case interested me very much and I took him in to see the surgeon in our department, a man who believed very strongly that an abscess in any part of the body is caused by germs, and when there is a collection of pus, it is the physician's duty to drain it and get rid of it. I said to him:

"Would you drain that pus?"

He answered: "Certainly, a man would be crazy not to drain it."

I then said: "Doctor, do you know that some patients in this condition, who have had the pus drained have lost an eye, and oftentimes both eyes from sympathetic ophthalmia?"

"I don't care, it ought to be drained," he said.

"Just watch me, I said.

Without cleansing the patient's face or eyes, a pressure bandage was placed over his eye and tied so tightly that his face became much swollen. I told him that in two days, his eye would be cured. The surgeon said:

"Impossible."

I said, "Take a good look at him so that you will recognize him if you ever see him again."

At the end of two days, the man came back, very much annoyed with me. He said that the bandage nearly killed him.

"Take it off," I said.

He took it off and the pus had disappeared. The surgeon who saw it said that I had not cured him, that the man did not have an abscess to start with, that he had a perfectly healthy eye, and that anybody who said that the eye was full of pus two days before was wrong.

Strange as it may seem, the pressure bandage relieved the tension in the eye to a considerable degree, with a result that the pus in the anterior chamber was entirely absorbed. The eye recovered its health in forty-eight hours and the eyeball became very soft, because the tension was relieved. Working in a dark coal mine, lack of sunlight impairs the health of the eyes. Mules working in the mines developed cataracts and other eye problems, blindness.



Remember, imagine the letter O incorrect - a gray blurry center, the black ink a light black/gray color smearing onto the white page. The eyes, mind tire, strain and vision is unclear. Remember, imagine the O clear, dark black, the white center pure white- relaxation and clear vision occur.

It is well to demonstrate the results produced by tension. When the letter "O," for instance, is remembered imperfectly, the white center becomes a shade of gray and the black part of the letter becomes less black and often covered with a gray cloud. To remember an imperfect letter "O" requires an effort. The effort tires the eyes and mind. The memory of imperfect sight lowers the vision of other letters. When the effort becomes sufficiently great to blur the letter "O" more completely, the tension becomes increased, the eyes feel uncomfortable and may suffer considerable pain. **This pain may be felt in the head, back of the neck, in the arms and in other parts of the body.**

The memory of perfect sight does not produce fatigue, pain or any other form of discomfort. The memory of perfect sight can only be accomplished easily. Any effort, strain or tension spoils it.

Eyes, clarity of vision, memory, imagination function together, are integrated. Improve one and all improve. Practice improving every function and all are greatly improved.

When the sight is perfect, it is possible for the memory to be perfect, because we can only remember what we have seen; when the memory is perfect, the imagination is perfect, because we can only imagine what we remember. When the imagination is perfect, the sight is perfect, because we can only see perfectly what we imagine perfectly. The demonstrations of these facts have repeatedly appeared in this magazine and should have suggested methods of treatment of the greatest value.

Many writers have stated that imperfect sight can be obtained without any difficulty. Usually, the contrary is the truth. Recently a girl was treated for nearsightedness. With some instruction, she became able to demonstrate that to see a letter "O" imperfectly for any length of time was difficult or impossible. She imagined the left hand side of the letter "O" to be straight. I asked her how it felt. She answered: "It hurts."

Then I asked her to imagine that the right-hand side was open. She quickly said: "It hurts."

Then I asked her what she meant by saying, "It hurts."

"Well," she replied, "when I imagine a part of a letter wrong, my eyes feel uncomfortable and I don't like the feeling."

I then said to her: "Can you imagine what this letter might be?"

"Yes, I can imagine what it might be, but it hurts."

Then I said, "Suppose you imagine it is an 'O,' what happens?"

She smiled and said: "That doesn't hurt. It is an 'O'."

I then pointed to a letter which came after the "O" and asked her if she could imagine what it was. She said: "Don't ask me, because it hurts."

I then asked her to close her eyes and remember the letter "O." She was able to do this without any discomfort. The next step was to have her look at the letter "O" on the card, remember it as well as she could, with her eyes closed, and then imagine that she could see it. The memory and the imagination were repeated a number of times until she told me that the letter which came after the "O" was a "K." I said to her:

"Are you sure?"

She answered, "No."

"Why not?"

"Because it hurts."

"Can you imagine that the left hand side is straight?"

She answered: "Yes, and it doesn't hurt."

"Can you imagine the top is straight?"

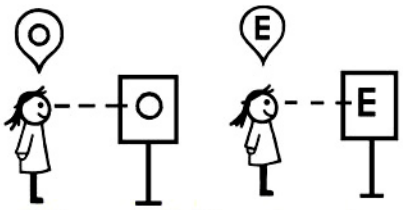
"Yes," she answered, "and it doesn't hurt."

"Can you imagine the bottom is straight?"

She said, "Yes and it doesn't hurt?"

"What is the letter?" I asked her.

"The letter is 'E'," she said, "I am sure. Yes, I am positive that it is a letter 'E' because it doesn't hurt."



Shift on parts of a letter and remember, imagine the parts/letter clear, correct. Practice this with the eyes open, then in the imagination with eyes closed, then eyes open again. When the letter, its parts are remembered, imagined correct: relaxation occurs and vision is clear.

During this treatment, the patient's friends and relatives became interested. She had them all practice it and all of them were able to demonstrate that when they imagined the letters or parts of the letters correctly, there was no pain, and when a letter or part of a letter was imagined incorrectly, decided pain and symptoms of tension were produced.

Remember, imagine a letter correct with the eyes open, closed, open and the mind, eyes relax, the letter is seen clear.

STORIES FROM THE CLINIC

Tension in Myopia

By Emily C. Lierman

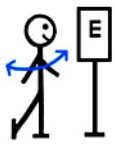
MISS HILDRETH LENNOX, aged twenty-eight, came to me as a patient on May 2, 1927. She informed me that she had read, "Perfect Sight Without Glasses," and had studied it for about a year before coming to me. During that time she had discarded her glasses entirely after having worn them for fourteen years. Her vision was R.V. 15/200-blurred. L.V. 15/200-blurred.



Palm and remember, imagine pleasant things, objects that were seen easy, without effort, strain. Lady likes to remember her music notes, playing piano, traveling the cities, towns from Canada to Palo Alto, California. She remembers, imagines objects she saw in the past clear. This improves her vision.

When she read the card with both eyes, she could just about make out the 70-line, and the letters were more blurred than the 200-line letters. She enjoyed palming, so while she had her eyes covered, I asked her to remember anything that she could remember having seen, without effort or strain and if possible, to remember only pleasant things. She understood very readily that memory of unpleasant things caused more strain. Being a musician, she could remember her notes very well and also compositions that she enjoyed playing on the piano. She described to me, while her eyes were closed, how she had worked her way from Canada to Palo Alto, California, by giving concerts on the way. Her home is in Canada, but she is now staying with her aunt, Mrs. Tucker, in Palo Alto.

After she had palmed for a while, I taught her the universal swing. This she did gracefully. She remembered to blink each time she swayed to the right. I have noticed that the myopic patient makes a hard task of blinking. A strain is produced then, and the vision does not improve except for an instant. Then I notice that the patient squints and squeezes the eyes almost shut. To avoid this, I have them swing just a little faster than usual.



Long Swing, blink and shift for a 'fraction of a second' on a letter on the eyechart when the body, head, eyes swing to one side. Don't stop, continue swinging. The sway can also be done by facing the chart and rocking left and right and flashing the letters.

I find that the patient likes to blink in unison with the sway in one direction only, and not to the right and then to the left.

I test the sight of the patient with the white test card first—the one with the red and green lines. After the patient has palmed and has practiced the universal swing for a period of ten minutes or a little longer, I again test the sight of both eyes at fifteen feet.

I did this in Ms. Lennox's case and the vision improved to the 30-line, but all the letters of this line were seen double. The patient was again asked to palm and to describe to me what she remembered having seen from the train window on her way to the Coast. This helped her to relax so that when her test was made again—this time with the black test card with white letters—she read all of the black card at ten feet, as she covered her eyes for a part of a minute after flashing each letter. When she was told that she could not possibly stare if she covered her eyes after seeing one letter of the test card at a time, she never stopped smiling as she

read one letter and then another of the test card in this way.

I did not have another patient until more than two hours later, so I spent more time with Ms. Lennox than I usually do with any patient. She did so well for me that I encouraged her to go right on regardless of the time. Again she covered her closed eyes and explained her **mental pictures**, and when she removed her hands from her eyes and then **swayed her body, blinking as she swayed to the right, she flashed 10/10 of the black card and each letter was seen clearly.**

To the right of her, also ten feet away, I had placed a test card on the wall. I directed her to blink as she moved her body to the right, and to flash a letter of the card that she could see without making an effort of any kind. I explained that the letter could be seen best by looking a little above or below it, or a little to the left or the right of it. She said that she could see the letter more clearly when she followed my suggestion. She said that the letters almost disappeared, or became double, when she looked directly at the letter as she flashed it.

Modern teachers state to look directly at the letter;
The letter can be seen clear, looking directly at it, (central fixation) when the eyes shift on the letter, even if for only a split second as the eyes flash the letter.

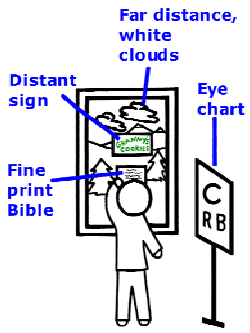
The memory of each of the letters seen helped her to read the black test card more easily. After she had finished reading the last letter of the 10-line, I was amazed to have her ask this question:

"Mrs. Lierman, I have not seen this card before, so I am not sure, but I see a figure 10 over the 10-line letters very plainly. Am I right?"

I became excited myself and answered, "Why, yes, but according to most of the eye specialists, it is impossible for you to see that figure 10 at ten feet. You should see that figure only at five feet with the normal eye, not at ten feet."

Switching Back and Forth, Near and Far

I find that myopic patients improve their sight and are cured more quickly by having them **stand near a window and look off in the distance at large signs about a block away**, or perhaps not quite so far. When the patient is able to **see the large letters of the signs by blinking and shifting to a smaller sized letter of the test card, they soon become able to distinguish sign letters which they did not know were there at all when they were first asked to read the signs within their line of vision.** Ms. Lennox could only see the large letter of a sign about half a city block away from my window. The smaller letters were blurred to her and she was not encouraged to try to read them.



+Blink and shift on a letter on a distant sign through a open window,
+Then shift on a letter on the close eyechart. Repeat.
+Blink and shift upon (for a fraction of a second 'flash') a distant cloud, then shift on the letter on the distant sign. Repeat.
+Shift on the white spaces on the Fine Print Bible at 6 in. from the eyes and imagine them pure, glowing white with the eyes open, then closed for part of a minute.
+Then, open the eyes and read, see clear the words on the distant sign for a fraction of a second.
+Repeat looking to the distant sign, clouds... and then looking at the white spaces on the fine print, then, look directly at and read the fine print.

On May 3, her second treatment, we stood at the window before test-card practice, shifting to a large letter of a sign she had seen the day before. She became able, by blinking and shifting to the skyline, flashing a white cloud in a blue sky and then back to the sign letters, to read a sign which had letters, I should imagine, about a foot high. This sign was more than three city blocks away. The patient never stopped smiling and I was encouraged to help her more in this way.

The little blue booklet with Bible type was given to her. We used the page that has Psalm 119 on it, and which has more white spaces than either the Beatitudes or Psalm 23. Holding the fine type about six inches from her eyes, she was told not to read the type, but to look at the white spaces and remember them with the eyes closed. Alternately closing her eyes for a part of a minute and then opening them for a second, she read the small sign letters at more than three blocks away.

When she looked at the fine print, which she did often, she asked me if she could read a sentence or two. At first she read the fine print, which was easy for her to do, at a little more than four inches from her eyes. I wanted to see how far off she could hold the type and still read it. At six inches the print was not clear and the white spaces were less white-they seemed gray to her.

I told her to look at the white clouds as they moved very slowly and gracefully in the beautiful blue sky above us. She said she could easily remember the cloud being very white and the sky a beautiful blue as she alternately opened and then closed her eyes. Each time she remarked that the white clouds could be remembered whiter and the blue sky bluer while her eyes were closed. While she was practicing this, I took hold of her right hand, which held the Bible print. I drew it twelve inches from her eyes. When I told her to look at the white spaces and not worry about the type at that distance, she smiled and remarked, "Why, I can read this fine print just as well at this distance." Memory, improved by imagining white clouds and a blue sky as well with her eyes open as with them closed, improved her myopia. Then we started the test-card practice. She read a strange white test card with the black letters at 15/15 with each eye separately.

On May 4, when my patient came again, I noticed that her eyes looked tired. She said she feared that she had practiced too hard, or had made too great an effort to improve her imperfect vision. I told her she had no cause for worry and to just forget about it. We again practiced with **microscopic print**, **shifting to the distant building signs** more than three city blocks away, **then back to reading a sentence of the microscopic typ**e by looking at the white spaces instead of the print. (Then when the eyes are relaxed; look at, shift on, read the microscopic print.) She read smaller letters of the signs far away and her eyes were wide open. She also read another test card that she had not seen before, and at the normal distance, 15/15.

On May 5 she was all smiles and both eyes were wide open. She informed me that she had made a discovery. She said, "Do you know that I don't dare to stop blinking, because if I do, my eyes feel like hornets' nests. They sting. I can get relief only by blinking. I make it a habit now, to read smaller letters of words and signs on the housetops. I shift from the white line of my fine print booklet to distant signs that I see as I walk along the street or while riding in the trolley cars. **Shifting from the near point to the distance always improves my eye-strain and relieves any tightness that comes for an instant when I stop doing the right thing. The moment that my eyes feel uncomfortable, I find out, to my sorrow, that I have been unconsciously staring.** I have learned that by **shifting** and **blinking**, I see all words move the least bit when I read, and I can now read book print for hours without any discomfort.

"I notice that when I sit at my piano and read my music, I can sit perfectly straight instead of leaning forward to see my notes. I feel proud that I can see just as well without leaning forward. I now read my notes easily at the right distance. I feared becoming round-shouldered from leaning over to see the notes. I noticed, too, that when I do not see things moving, my eyelids seem to close and I feel tired quickly."

On May 6 Miss. Lennox read Number 15, which is diamond sized type, with the Fundamental truths by Dr. W. H. Bates on the

opposite side, at three feet, ten inches. I produced the small test card with the inverted "E's," and held it at a further distance from where she was standing. She began the universal swing, blinking always, and read the bottom line of the card at four feet, ten inches.

The normal eye can tell the direction in which the letters of the bottom line of the inverted "E's" are pointing, at two feet-not at four feet, ten inches-so her vision had improved to more than normal in five days. I saw the patient a week later and her vision was still the same. On her last visit she told me that she had been warned by an eye specialist in Canada never to leave off her glasses again or she would go blind.

She said, "you know how well I appreciate what you have done for me. I can now see my friends across the room better without my glasses than I could with them. Before I came to you for treatment, my friends at a tea found fault with me because I did not return their smiles when I looked at them from the other end of an ordinary-sized room. It was not so long ago that I could not read the 'Specials' on the menu card in a restaurant without my glasses. Now I can read clearly the print on my menu card that would be best for me not to read, such as French fried potatoes and other things that I enjoy, but which are not good for me."

Case Report

The following is a report of a case treated by Miss Anne Woessner, West Nyack, N. Y. Ms. Woessner is one of Dr Bates' representatives.



Beginning of treatment, this lady had very blurry vision, had to feel her way up the path to Dr. Bates office. After treatment with Bates method, she could see and walk with ease.

Ada, aged 24, from childhood has had hypermetropia combined with partial paralysis. Very strong glasses had been prescribed for her by a New York specialist. These glasses were shaped like two miniature searchlights, which, together with the nosepiece and shafts, resembled some fantastic bug.

Last February, the first time she came to me, she had left off her glasses. It was indeed pitiful to see her walk up the short path from the gate to the porch steps. Without her glasses she could only see a dim, blurred outline of people or objects two feet away.

Upon test the four and one-half inch high "C" appeared a gray smudge at two feet. When handed a card printed with regulation reading type she saw only a blank.

After **palming** one half hour, she became able to read the 70-line at four feet. I then explained the importance of **blinking**, **shifting** and **swinging**, which she practiced for twenty minutes. This resulted in the reading of the 20-line at four feet, but blurred and gray in color.

She practiced faithfully at home the following week and started the next lesson with 4/40 quite clear. From this time on she improved steadily. The **sun treatments** became so soothing that she often dozed, much to our mutual amusement.

Her phenomenal memory greatly helped her to relax. She could relate many incidents which had happened in her childhood. Often I would read a story while she palmed and while still palming, she would repeat the story almost verbatim. This always helped. The large letters became clearer and the small type on the "Fundamental" card seem to be very clear to her in spots.

With the practice of **central fixation**, **memory of period** and **two to three hours of sunlight daily**, she is now able to read newspaper type slowly and the diamond type on the back of Dr. Bates' professional card. The change in her appearance is as remarkable as that of her sight. She is now a true sunshine girl with large eyes of blue, cheeks and hair touched by the sun, and is smiling always. She fairly flies around her home. She phoned me specially one night recently to say that she had read the clock clear across the room.

There is still much to be done, however. She has had just fourteen treatments to date and if she continues to practice so conscientiously she surely will be rewarded eventually with normal sight.

In closing I wish to state that I am still holding her glasses which she handed me upon her second visit. "Don't ever want to see them again."

ANNOUNCEMENT

During the month of November, the following back numbers of "Better Eyesight" are selling at ten cents per copy:

July 1919 Central Fixation	Apr. 1922 Perfect Sight Without Glasses
Sept 1919 Flashing Cure	
Nov. 1919 Memory Cure	July 1926 Myopia May 1927
Dec. 1919 Shifting and Swinging Dec. 1921	Nov. 1920 Squint Oct. 1922
Mar. 1920 Progressive Myopia	Aug. 1920 School Nos. Aug. 1921
Dec. 1920 Glaucoma June 1926 Oct. 1922	Aug. 1927 Oct. 1920 Imperfect Sight Dec. 1924

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

DECEMBER, 1927

Favorable Conditions

The vision of the human eye is modified in many ways when the conditions are unfavorable to good sight. Unfavorable conditions may prevail when the light is not agreeable to the patient. Some patients require a very bright light and others get along much better in a poor light. Many cases are hypersensitive to the light and suffer from an intolerance for light which has been called **photophobia.**

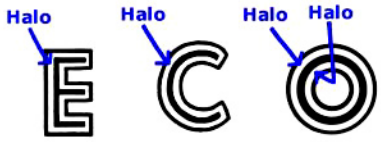
While intolerance of light may be manifest in most cases from some diseases of the eyes, there are many cases in which the eye is apparently healthy and in which the photophobia may be extreme. **(The cure for this condition is to have the patient sit in the sun with his eyes closed, allowing the sun to shine on his closed eyelids as he moves his head from side to side.)**

There are patients with good sight whose vision is materially improved when used in a bright light, as well as those with good sight whose vision improves when the eyes are used in a dim light. **The patient should practice with the test card in a bright as well as a dim light to accustom his eyes to all conditions.**

Reading in sunlight and in dim light improves the clarity of vision when relaxation is applied and effort, strain, squinting are avoided. A boy improved his vision by reading comic books at night by flashlight under the covers in his bed. The fact that he enjoyed the comics, and that the print and pictures kept his eyes moving, shifting and improved use of his memory, imagination, all which induced relaxation resulted in clear vision.

Halos – The white Glow

The ability to perceive **halos**, or an increased whiteness, around letters is a favorable condition. By using a screen or a fenestrated card, it is possible for many patients to see an increased whiteness around a letter, which improves their vision for the letter. When a screen is not used, one may be able to **imagine a white halo around the inner or outer edge of the black part of the "O."** When a screen covers the black part of the letter "O," for instance, the white center becomes of the same whiteness as the rest of the white page, which proves that **it is the contrast between the black and the white which enables one to imagine the white halos. The presence of the black improves the white; the presence of the white improves the black.**



The Halo appears as a bright, pure, glowing white on the white paper around and inside black letters. The halo is brightest, whitest on the white page closest to the edge of the blank ink. Halos can also be seen around other colored letters, objects.

Routine Treatment

By W. H. Bates, M.D.

Many doctors do not think well of treatment which has become continuously the same. I believe, however, that when routine treatment benefits a large number of patients, one is justified in practicing it in most cases. In the beginning, the writer very soon became impressed with the fact that there was something about routine treatment which had advantages over other forms of treatment. The particular advantage was speed; that is to say that by routine treatment it was often possible to cure many cases at the first visit. However, to obtain the best results, I have found it necessary to modify the routine from time to time, or to make certain changes whenever improved methods of treatment were discovered. If a patient does not respond readily to a regular routine, it is evidence that this treatment is not for him and that he requires a different form of relaxation treatment.

When a person presents himself for treatment, a record is made of his name, address, date of birth, et cetera. (If the patient is over fifty years of age, one should be prepared to treat presbyopia; all persons over fifty years of age are usually unable to read fine print at six inches without glasses.)

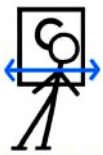
(Bates discovered that many people over 50 years old can see fine print clear. Presbyopia is curable, can be prevented.)

The next procedure is to have the patient remove his glasses, if he is wearing them, and test the vision of each eye with the aid of the Snellen test card at fifteen or twenty feet. If none of the letters can be seen at this distance, the card is placed at eight feet, five feet or nearer and the vision tested at that distance. The eyes are then examined with the ophthalmoscope or retinoscope. **(The ophthalmoscope is valuable in diagnosing cataract, opacities of the cornea and diseases of the interior of the eyeball. The retinoscope is used in diagnosing near-sightedness, far-sightedness and astigmatism.)**

REST: The patient is then directed to either close his eyes or palm for half an hour, whichever is more comfortable for him. In **palming**, the patient closes both eyes and covers them with the palms of both hands, in such a way as to exclude all light. To palm successfully, he should make no effort to remember, imagine or see black. If black cannot be seen perfectly, the patient is told to let the mind drift from one pleasant thought to another.



Palm and remember black or any pleasant objects, thoughts, scenery.



Sway side to side in front of the test card and see it move in the opposite direction. Shift on letters.

THE SWAY: After the patient has rested his eyes or palmed for half an hour, he is directed to stand before the Snellen test card, with his feet about one foot apart and then to open both eyes. He is then told to sway his body gently from side to side, while his vision is again tested with the card. While swaying from side to side, he is told how to imagine the Snellen test card to be moving. His attention is called to the fact that when his body, head and eyes move to the right, the Snellen test card moves to the left, and when he moves to the left, the Snellen test card appears to move to the right. (Oppositional Movement)

The patient then is called upon to demonstrate that when his eyes move from side to side, that not only does the Snellen test card move from side to side, but that all the letters or figures on the Snellen test card move with the card. It is well to have the patient demonstrate also that when an effort is made to stop the movement of the letters, the letters become blurred or cannot be seen. The sway is beneficial in many ways because it lessens or prevents the stare, tension and strain.

BLINKING: It can always be demonstrated that when a patient with imperfect sight looks intently at one point, keeping the eyes open constantly, or trying to do so, a strain of the eyes and all the nerves of the body is usually felt, and the vision becomes imperfect. It is impossible to keep the eyes open continuously without blinking. Each time the eyes blink, a certain amount of rest is obtained and the vision is benefited. For this reason, the patient is instructed to **blink frequently while swaying before the card, and at all other times.**



Blinking rests the eyes, activates shifting-eye movement, tear production, coats the eyes, cornea with tears that clean, nourish, protect the eye/cornea, prevent dry eyes and act as a natural contact lens increasing the clarify of vision. Blinking prevents over-exposure of the eyes to strong light.

CENTRAL FIXATION: Central fixation is seeing best where one is looking and worst at all other points. When the patient is swaying before the card, he is told to see one part of a letter which he is regarding at a time and to see that part better than any other part, then to quickly shift his glance to another part, seeing that part best and other parts of the letter worse. The letter is seen much more readily in this way. The patient is reminded that the normal eye uses central fixation at all times.

IMAGINATION: Another method is to improve the vision by a perfect imagination. If the patient is unable to see the letters on a certain line, he is told what the first letter is and is directed to close his eyes and imagine that letter as perfectly as he can, and then alternate by imagining it as perfectly as he can with his eyes open. When the letter is imagined perfectly enough, other letters on that line when regarded are seen and not imagined.

It is very evident that one cannot imagine unknown letters. Therefore, if the vision improves by the use of the imagination, unknown letters when regarded are seen and not imagined. It has been repeatedly demonstrated that an **opacity of the cornea** which may be so dense that the pupil or iris are not seen, will **clear up in some cases after the alternate imagination of a known letter or a known object is practiced with the eyes open and closed**. When opacity of the lens is examined with the aid of the ophthalmoscope, the opacity becomes increased when the patient remembers imperfect sight. The memory of imperfect sight causes a contraction of the muscles on the outside of the eyeball, which in turn produces imperfect sight, cataract, cornea scar…



Shift dot to dot on the E seeing one dot clearest at a time in the center of the visual field.

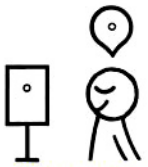


The bird is seen clear by placing it in the center of the visual field. The eyes are looking at the middle of the bird, placing it in the exact center of the visual field. (See dot=exact center.) The dot (center) moves with the eyes as the eyes shift part to part, point to point on the bird seeing one part (actually one small point) clearest at a time.

MEMORY: The pupil is told to remember a small letter "o" with a white center which is whiter than other letters on the Snellen test card. A small letter may be imagined much better than large letters of the Snellen test card. When the facts are analyzed, it is discovered that the reason small letters are imagined better than large ones is because a small letter has not so much of an area to be seen. It is easier for the eye to remember or imagine a small object than a large one. A perfect letter "O" can only be remembered when no effort is made; an imperfect letter "O," on the contrary, is difficult to remember. When a letter "O" is remembered very black with a very white center, the vision is benefited because no effort is made.

A great many near-sighted patients believe that they can remember or imagine an imperfect letter "O" much easier than a perfect letter "O." These people are encouraged to remember or imagine an imperfect letter "O," which helps them to understand and realize as thoroughly as possible that the memory or the imagination of imperfect sight is very difficult and requires a good deal of hard work, whereas **the memory of perfect sight can only be accomplished easily without effort.**

THE PERIOD: With the help of the imagination, alternating with the eyes open and closed, it is possible for many patients to remember or imagine they see a small black period. It may not necessarily be a black period but may have any color of the spectrum and be of any shape—round, square, triangular or irregular. It is impossible to remember or imagine a period that is stationary. It must always be remembered by central fixation and be moving. Some patients can imagine a period as small as it is printed in the newspaper. Unfortunately, it is difficult or impossible to teach all patients how to remember a period perfectly. **The great value of the period is that when it is remembered perfectly, many serious diseases, such as opacities of the cornea, opacities of the lens, diseases of the retina and choroid, diseases of the optic nerve and blindness can all be relieved promptly.**



Shift on a known letter and imagine it clear with eyes open, closed, open. All letters become clear.



Remember, imagine and shift left and right, top and bottom… on a small black period. See it move in the opposite direction the eyes shift to. Practice with the eyes open and in the imagination with eyes closed.

SUN TREATMENT (with Memory, Imagination and Palming) **:** An important part of the routine treatment is the use of the direct sunlight. The patient is told to sit in the sun with his eyes closed, moving his head a short distance from side to side, and allowing the sun to shine directly on his closed eyelids. He is instructed to forget about his eyes, to think of something pleasant and let his mind drift from one pheasant thought to another. Before opening his eyes, he palms for a few minutes. When the sun is not shining, a strong electric light (I000 watts) is substituted. The patient sits about six inches from the light, or as near as he can without discomfort from the heat, allowing it to shine on his closed eyelids as in the sun treatment.



Sun Treatment, Sunning.



Fine Print 6 inches and closer.

Read Fine Print daily.
+Look at and imagine the white spaces between sentences pure, bright white.
+Then, repeat this in the imagination with the eyes closed.
+Eyes open: See the Thin White Line under the sentences.
Next; Look directly at the print and see, read the letters clear.

FINE PRINT: If the patient has presbyopia, he is directed to practice with the fine print in the Fundamental card in the following way: The card is held at first at the distance from his eyes at which he sees best. He is told not to look directly at the letters, but just at the white spaces between the lines and imagine that they are perfectly white - whiter than the margin. He is asked if he can imagine that there is a **thin, white line beneath each line of letters, and that it is whiter than the rest of the white spaces between the lines.**

When this line is imagined perfectly white, the eyes then shift to, look directly at the letters and the letters are read without effort or strain. If the patient cannot imagine the white line easily, he is told to close his eyes and think of a series of white objects; he may recall a white-washed fence, a snow drift, several pieces of white starch, or a pot of white paint. He is then directed to open his eyes again and look at the white spaces, imagining them to be as white as the white objects he remembered. He is told to close his eyes again and imagine that he has a pot of white paint and a fine pen and that he is drawing a thin, white line beneath a line of print, then to open his eyes and imagine that he is drawing a thin white line beneath each line of letters on the Fundamental card, as he moves his head from side to side. He is told to blink as he shifts from one end of the line to the other, to occasionally look away and to close his eyes frequently for half a minute or so to rest them. Imagining the white spaces and white line perfectly white causes the mind, eyes to remove the 'grey blur' and other incorrect images from the white page in and around the black letters, words. The brain imagines the page the way it truly appears; clear and white. This causes the letters to be seen dark black, distinct, and clear.

By practicing in this way, letters which could not be seen before appear black and distinct. As one's ability to read is improved, the card is brought closer and the patient is instructed to practice in this way, until the entire card can be read at six inches from his eyes. If it is impossible for him to do this during his treatment at the office, he is directed to practice in this way every day at home. **The patient is told that fine print cannot be read when an effort is made see it and that it can only be read when the eyes are relaxed. For this reason, the reading of fine print is helpful in producing relaxation.**

Take a break anytime and look at the white spaces, thin white line to relax the eyes, mind. Shift on them. Avoid staring, eye immobility.

Use the soft end of a white imaginary feather (nosefeather) to imagine painting the white spaces and thin white line with bright, glowing, pure white paint.

INSTRUCTIONS FOR HOME TREATMENT

The most important fact is to impress upon the patient the necessity of discarding his glasses. He is told that when glasses are used temporarily a relapse always follows and the patient loses for a short time, at least, everything that has been gained. If it is impossible or unnecessary for the patient to return at regular intervals for further treatment and supervision, he is given instructions for home practice to suit his individual case, and is asked to report his progress or difficulties at frequent intervals.

The importance of practicing certain parts of the routine treatment at all times, such as blinking, central fixation, (shifting, relaxation) and imagining stationary objects to be moving opposite to the movement of his head and eyes, is stressed. **The normal eye does these things unconsciously, and the imperfect eye must at first practice them consciously until it becomes an unconscious habit. An automatic, correct vision habit.**

Pansy Land

By Emily C. Lierman

[Editor's note – Mrs. Lierman regrets that she has no Christmas story this year, but she has written a fairy story instead, which she hopes the children will enjoy.]



Once upon a time in a town near the Pacific Coast there lived a boy named George who suffered intensely from poor eyesight. One day he met a girl named Christine. The little boy had heard that Christine knew the great secret of good eyesight and begged her to tell him what he could do to cure his eyes. It did not take Christine long to teach George how to use his eyes right and keep from straining them. Christine soon found that George was not lonely like she was, for one day he brought Amy with him, the girl who made many children happy with her stories. She was beautiful to look at and had many friends. George and Amy were constant pals, and helped to make Christine happy. Amy's eyes also became wonderfully bright through Christine's guidance and help, and everyone in Pansy Land wanted to know how this came about.

One day these three friends of Better Eyesight took a trip to the land of pansies. Before they were allowed to enter the gate, they had to seek admission from the door keeper. They waited until he went to see whether or not the pansies had gone to bed, as it was near closing time. He soon came back to them and told them to enter, that the pansies still had their eyes open and would welcome them. They walked a great distance and found that with the exception of narrow paths, everything was covered with miles and miles of pansies. There were yellow pansies with eyes as blue as the skies, brown and tan pansies with rose-colored eyes, and others dressed in all the colors of the rainbow. All of them were swaying with the gentle breeze and they were most beautiful to see.

Suddenly, a jolly gnome appeared before them. They noticed that his eyes were shining brightly and that he had the kindliest face of anybody they had ever seen. George knew him right away. He said, "This is Horatio the Great. It is he who first discovered how to cure people without glasses and help those who had pain and other troubles with their eyes." George also remarked that he had the biggest heart that anybody ever had, and was the best friend of poor children all over the world. Horatio the Great stood by, listening to these kind remarks but was too modest to make any reply. He just listened.

After George got through talking, the kindly gnome invited them to sit in his parlor, which was made of the loveliest pink mushrooms imaginable. He told them to place their palms over their eyes and not to think of anything bad or wrong and then to make a wish. They wished that they could be two very little girls and a very little boy again.

All of a sudden, there was a rumbling sound like thunder, and George, Amy, and Christine became very much frightened. The good gnome knew what had happened. He said, "Take down your hands and let me see how badly you have been frightened, when there was nothing at all to be frightened about." He looked into their eyes and said, "Because you were frightened, you began to strain and your eyesight is now bad. You must be calm like I am, no matter how much trouble or worry you might have or how frightened you become. Don't you know that fear always affects good eyes and makes them bad?"

He then told them to again cover their eyes with the palms of their hands and he would tell them what caused their fright. He said, "You know I have many helpers in Pansy Land; some of them are my good gnomes. It was the good gnomes that you heard when they returned to their places on the roof of my palace. Don't be alarmed."

After this remark, there was no more fear and no more eyestrain. He then told them to remove their hands from their eyes. When they opened their eyes again he held in his hand a shining light, which was really a star on the end of a wand. With this he touched their eyelids and they were little children again.

When he touched the lonely little girl he said, "Now your name is Crystal, because you will use the crystal glass with the help of the warm sunshine. You will cure children and grown ups all over the world in time to come. You are ordered to finish your work here on the West Coast of this great big world where many people want you. You must be strong in your mind and heart and know that when your enemies want to hurt you, the good gnome, Horatio the Great, will always be standing by you and will keep you from harm. You must never be afraid."

Amy and George stood by listening with their eyes wide open, but blinking all the time to be sure that they would not strain and displease Horatio the Great.

The good gnome then touched little Amy with the shining star and said, "you will do greater things than you have ever done, now that you have better eyesight and no longer need glasses. You will go to many boys and girls and give them the sunlight with your sun glass. You will take away all pain and sorrow from those who suffer with eye trouble. Sometimes you will go alone, but most of the time little George will take you in his chariot so that you will not be weary in well doing." This pleased little George because he did not ever want to be separated from Amy, who had always made happiness and joy for him. Little Crystal knew in her heart how much they loved each other and this made her very happy.

The kindly gnome, Horatio the Great, then placed his wand with the shining star on the head of little George and said, "My book which tells you how to take care of people's eyes will help you to understand the work that you have to do. What you must enjoy is helping people with bad tummies and relieving eyestrain. I give you my special blessing because of the good work you have already done. You will take Crystal and Amy to your beautiful home in Marston Hills."

This made George very happy. His beautiful home has a frog pond in a lovely garden. In the pond lives one large frog. He has many friends who live near him all the time. Their names are Climbing Rose, American Beauty, Geranium, Calla Lily, Honey Suckle, and many others that would take much time to name.

This kindly frog is never thirsty and is ever ready to share with you the sparkling water that flows from his mouth. Even the frog has his work to do. In the pond directly under the throne on which the frog sits during the day, there lives a family by the name of Goldfish. Not so long ago the family increased in great numbers. They are lively and hungry all the time and Amy and George always feed them. All of the goldfish have perfect eyesight. The frog will tell you that at no time is eyestrain allowed in his kingdom. He has for his kindly assistant, Mary, who looks after things not only in the garden, but in the house that George built.

Horatio the Great led the procession to a little woodland which belonged to the pansies. Little Crystal noticed that a beautiful palm had been crushed on one side and many leaves were scattered on the grassy carpet. The two little girls and the little boy closed their eyes while the gnome told them the story of the crushed palm, and what had happened on that day. He told how the Queen of the fairies had been honored by all the fairies of Pansy Land. No disorder is ever allowed, because it causes much work and strain to those who are the caretakers, but on this special occasion when the Queen of the fairies that live all over the world had been given a reception, he made excuses for the fairies because of the disorder of the place.

From there he led them away to the center of the pansy bed that had the most colors. He told them to palm again and remember the color of any pansy they saw. While their eyes were closed and covered, the good gnome passed his wand with the shining star over the heads of the pansies. When Crystal, Amy and Georgie opened their eyes, low and behold, there was a beautiful fairy on the top of every pansy, right before their eyes. What a beautiful sight it was and how happy these children were. The sun never shone more brightly; never in their lives did they smell more wonderful perfume. Immediately, there was a beautiful fairy dance and the more the children blinked, the more wonderful the fairies danced.

All good things must come to an end, for a little time at least, and soon the kindly gnome remarked that it was bed time for the fairies and the pansies. Horatio the Great, with his kindly manner, led the way to the gate and gently bowed before the two little girls and the little boy, who honored him with their smiles and good wishes and said good bye for awhile.

George remembered what he had promised the gnome, and placing little Amy and Crystal in his chariot, drove on to his home in the hills to the frog pond and the flowers.

Because of their happiness, the good gnome did not wish to change them into grown ups again, so they will always be children and live happily ever after.

Questions And Answers

Q - Why is it a rest to read fine print? I should think it would be more of a strain.
A - Fine print is a relaxation, large print a menace. The December, 1919, issue of this magazine explains this in detail. Large print is also seen clear by reading with relaxation, shifting, central fixation.
Q - Must the body be a rest before the eyes can be cured?
A - When the eyes are relaxed, the whole body is relaxed.

Q - Which is more beneficial, the short or the long swing?
A - The short swing, if you can imagine it. – Shift on small letters and see Oppositional Movement – The Short Swing: The letter moves in the opposite direction the eyes shift to.

Q - Are "movies" harmful?
A - No. Quite the contrary. Send for the magazine on this subject.

Q - Trying to make things move gives me a headache. Palming gives me more relief. Why?
A - Making an effort to do a thing will not help you. When you are walking along the street, the street should appear to go in the opposite direction without effort on your part. Some people get more relief from palming, while swinging helps others more.

Q - Why do "movies" hurt my eyes when they should benefit them?
A - Unconscious strain. Do not stare at the pictures, but allow the eyes to roam over the whole picture, seeing one part best at a

time and shift part to part, on objects and from object to object. Also keep things swinging.

Q - Why do some people see better by partly closing the eyes? (Squinting)
A - People with poor sight can see better by partly closing their eyes, but this increases vision impairment and when they have perfect sight, squinting makes it worse. This is a good test for the vision of ordinary objects.
(Squinting is a main cause of eye muscle tension, eyestrain and unclear vision.)

Q - Is a hemorrhage on the outside of the eyeball fatal?
A - Rarely.

Q - Is central choroiditis curable and does it require much treatment?
A - Yes, choroiditis is curable but requires a great deal of treatment in some cases.

Q - My trouble is cataract. Shall I cover up the good eye while practicing?
A – Practice with both eyes together until your vision is normal. Then, cover the good eye and improve the vision of the poor one.

Q - Is it necessary to practice with the Snellen test card if you follow the method otherwise?
A - Yes, it is advisable to keep up your daily practice with the test card for at least a few moments. This will improve your memory and the memory must be improved to have the vision improve.
Practicing with both eyes and one eye at a time with the card also keeps perfect, equally clear, balanced vision in the left and right eyes. The Snellen card is also a familiar object. Looking at a familiar object relaxes the mind, eyes and keeps vision clear.

Announcement

For the benefit of school teachers and school children, the Numeral and F cards, regularly listing at 50 cents will be sold at 25 cents during the months of December and January; fundamental cards regularly listing at 10 cents will be sold at 5 cents. We also wish to call our readers' attention that the following back numbers of "Better Eyesight" will still be sold at 10 cents per copy during the months of December and January.

Here Dr. Bates lists back issues.
The issues are included in this book.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JANUARY, 1928

Eyestrain During Sleep

Many people complain that when they awaken in the morning, they are suffering from pain in their eyes or head. They often feel as weary as though they had been working hard all night long. Many of them do not recover from the pain and fatigue until after they have been up for an hour or longer. Their vision also may be found to be reduced to a very considerable degree. Some complain that they see illusions which are occasionally very slow in disappearing. One patient complained that the tiled floor of a bathroom had a very strange appearance; although the tiles were white, to him they appeared blue and red alternately.
A feeling of strain was always present and did not subside until the illusion had disappeared. It seemed as though the eyes were under a strain during sleep, because when the eyes were examined with the ophthalmoscope while the patient was asleep, a strain could readily be observed.

Sometimes, as in the case of many children, other parts of the body may be under a strain during sleep.
By an unconscious effort, the muscles of the face, arms and limbs may be distorted as may be muscles of different parts of the eyeball. In some cases, the strain produces accommodation or myopia, while in other cases, hypermetropia or astigmatism are produced by this unconscious effort. These eyes frequently were found to be normal during the day.

The treatment to prevent eyestrain during sleep is not always successful. Some patients obtain most relief by practicing the **long swing one hundred times or more just before retiring and the same number of times in the morning immediately after awakening.** Other patients find that **palming for twenty minutes before retiring** is a help, and frequently the palms are left in place with benefit after the patients have lost consciousness.

Glaucoma

By W. H. Bates, M.D.

Glaucoma is a serious disease of the eyes which some years ago was considered incurable when chronic. In most cases, the eyeball was usually too hard and this is the symptom which more than any other was the strongest evidence we had that the eye was suffering from glaucoma. The field of vision was contracted on the nasal side and the pupil was usually more or less dilated; the cornea was not as sensitive as the normal eye. Sometimes the anasthesia, or that condition in which the cornea is not sensitive to the touch of a blunt pointed instrument, was quite marked. One characteristic symptom was the apparent appearance of colors around the flame of a candle or some other similar light.

Glaucoma is a disease of adult life and seldom occurs in children. Its uncertainty is unusual. For example, a person with normal eyes and normal sight may retire feeling perfectly comfortable. Sometime in the middle of the night, he may be awakened by a very intense pain, with total permanent blindness in both eyes from glaucoma. In a limited number of cases, pain may be absent, although the vision may be partially lowered. The sudden onset may not occur, but one or both eyes may slowly, without pain, after a long time, a year or longer, become totally blind.

In the American Encyclopedia of Ophthalmology, the article on glaucoma consists of 170 pages of solid type, describing facts connected with the symptoms, cause and treatment of glaucoma. These facts are so numerous that the writer did not have to repeat himself. He emphasized how little ophthalmologists actually knew about glaucoma. It is evident that many theories cannot all be true.

One authority claimed that the cause of glaucoma was connected with a loss of the iris angle (that part of the eye which is located at the outer part of the iris), when a formation of new tissue, resembling scar tissue, formed in the iris angle and acted as a sort of plug preventing the proper circulation of fluids of the eyeball, when there was less fluid in the front part of the eyeball than is found in the front part of the normal eye. Many cases were benefited by an iredectome, an operation in which a portion of the iris is removed. This theory went the way of some of the others when numerous exceptions were observed.

Another authority claimed that dilation of the pupil was an important factor in the cause of glaucoma. However, many cases were found in which the pupil was contracted as much, and in many cases more, than in the normal eye.

The results of the various methods of treatment which were suggested and practiced have been so disappointing, that we hesitate to foretell what may happen after any of them have been practiced.

It was a very welcome discovery made by my assistant, Ms. Lierman, that the relief of eyestrain always lessens tension, relieves pain and improves the vision. **The discovery that relaxation methods cured glaucoma suggested that the cause was due to eyestrain.** Experimental work proved this to be true. **All methods of treatment which promote relaxation always benefit glaucoma.** When the vision is good, a stare or strain or an effort made to see, brings on an attack of glaucoma. It is a difficult thing consciously to produce glaucoma by an effort to see. It is much easier to relax and benefit glaucoma. The writer has always felt great satisfaction in convincing patients that in order to have glaucoma and blindness, they had to go to a lot of trouble, work hard, and strain in order to produce it, but to benefit glaucoma was easy and required no effort whatever.

Treatment

By seeing one part of a letter best and all the rest of the letter not so well (central fixation), the letters of the Snellen test card appear improved to the maximum. Sometimes one has trouble in imagining central fixation of all the letters. On a card at fifteen feet, a patient with glaucoma could not imagine the letter "F" by central fixation, but the figure "6" of the same size and at the same distance was imagined by central fixation quite readily. The patient became able to imagine a period on the top of the figure "6" and the rest of the letter appeared worse. Usually, however, when looking at the letter "F," a period could not be imagined on any part of it. Sometimes, however, after the figure "6" was seen by central fixation, the patient could, by alternately shifting from the "6" to the "F," imagine the letter also, by central fixation. I might say that there were times when the figure "6" was an optimum and the letter "F" a pessimum. Then, there were other occasions when the figure "6" was not an optimum and the symptoms of glaucoma were variable, changing, increasing, and diminishing. It is well to remember this truth, because when the patient found which letter was an optimum, or could be seen by central fixation, he was enabled to improve his vision for other letters, together with simultaneous improvement in the glaucoma.

Some of the **best methods of producing relaxation are the practice of the long swing, the variable swing, the sway, palming and sun treatment.** There are some people who cannot practice a certain swing correctly until after weeks of instruction. They are full of excuses and are quite ready to find fault with the method rather than with their own lack of practicing properly. (The above mentioned methods have been described from time to time in previous issues of the magazine.)

Glaucoma may be produced solely by the memory of imperfect sight. If a person with normal eyes and normal vision presses lightly on the eyeballs through the closed eyelids and remembers or imagines a letter "O" with a gray, blurred outline very imperfect, the eyeball can be felt to increase in hardness. When the patient remembers a letter "O" perfectly, the hardness of the eyeball disappears and the eyes become normal as they were before. **These experiments are offered as proof that the memory of imperfect sight is a strain which may produce glaucoma, and the memory of perfect sight a relaxation, which will relieve glaucoma.** When the eye shifts, moves and uses central fixation the eye has normal softness and pressure.



Close the eyes and lightly touch the eye through the upper eyelid.
+Imagine a letter O imperfect, blurred and feel the eye increase it's hardness.
+Imagine the O perfect, clear and feel the eye return to normal softness and pressure.

One patient with acute glaucoma together with cataract could not distinguish 10/200, or the large "C" at the top of the Snellen test card. By looking at a light off to one side and flashing 10/200 alternately, the vision improved almost immediately to 10/30. She was able to remember the light when regarding the Snellen test card for a few seconds only. By alternately looking at the light and regarding the Snellen test card, her memory for the light improved, while her memory for the letters of the Snellen test card also improved.

She seemed to need supervision, because when practicing by herself, she did not flash the letters or look at them for a moment only. She stared at the light and the Snellen test card and instead of her vision improving, it became worse and it required encouragement to induce the patient to flash letters or other objects.

The memory was also improved by the practice of central fixation. When she looked at the first letter of a line of letters (placed in the center of the visual field) on the Snellen test card, she saw the other letters on the same line (in the peripheral field) not so well; the memory of letters and other objects seen by central fixation became very much better in a short time. The patient's memory was also improved by the imagination of the **halos**, that is, when she regarded a white center of a letter "O" and imagined that she saw it whiter than the rest of the card, her memory and the halos also improved.

Case Reports

CASE ONE

A woman, fifty years of age, was suffering from **retinitis pigmentosa, incipient cataract** and **chronic glaucoma**. After daily treatment for six months, the vision was improved from 10/200 to normal. **Palming, shifting** and **swinging** gave the best results. She acquired the habit of imagining stationary objects to be constantly moving. The objects in her rooms, the furniture, window shades, the rugs, the ceiling, in fact all stationary objects seen could be imagined to be moving whenever she moved her head and eyes. Alternately l**ooking at the sun** and stationary objects in the house improved her sight. When she was out of doors, she imagined the sidewalk to be coming towards her, or if she looked to one side, that the buildings or other objects were moving in the opposite direction. (Oppositional Movement)

Another method which helped her was to stand before a window and imagine the curtain cord to be moving in the opposite direction as she **swayed her body from side to side, while a building in the distance appeared to be moving in the same direction as the movement of her body.** Oppositional Movement = When moving the eyes, head, body left, right, up, down, any direction: close objects appear to move in the opposite direction, distant objects appear to move in the same direction the eyes, head, body move to and close and distant objects appear to move against eachother in opposite directions.
Distant objects actually appear to move opposite but move so slow in the opposite direction that they appear to move in the same direction the eyes, head, body are moving to. The function of oppositional movement helps the brain determine depth, distance, placement, space of objects at different distances, dimension, 3-D vision, binocular vision, fusion, ability to calculate the time it takes to travel to, from a object… and other functions of the brain, body, visual system.

It was very interesting to observe that the pigment spots of the retinitis pigmentosa were disappearing from view; the symptoms of glaucoma also disappeared gradually. **When she remembered perfect sight, one could, with the ophthalmoscope, see the cataract immediately becoming less. When she remembered imperfect sight, the cataract became very opaque.** Besides obtaining normal sight for the distance, she became able to read diamond type at six inches without glasses.

In the beginning of the treatment, the left eye was the better eye. However, the left eye was treated for more than six months before normal vision was obtained, while the vision of the right eye improved from 10/200 to 20/20 after only one week of treatment.

This patient was very grateful for the benefit she received and could not understand why many of the ophthalmologists whom she had consulted previously did not refer her to me. Her constant question was: "If these other doctors could not cure me, why did they not send me to the doctor who could?"

CASE TWO

A physician had been in the habit of attending a gymnasium and after he had finished with his exercises he usually bathed in the pool. The exercise and the bathing seemed to agree with him perfectly and although he had been taking these baths almost daily, no injury to his eyes could be detected. One night he was awakened by a severe pain in both eyes, which stopped only after the use of morphine. In the morning he was practically blind.

The doctor whom he consulted said that he was suffering from **glaucoma** and **iritis**. The iris was inflamed and the pupil opaque from the presence of inflammatory exudation. The eyeballs were very hard. This severe inflammation continued for more than six months. Accidentally, he heard of my method and came to see me, very hopeful. He told me, after relating the above, that he had had my book read to him and that he had felt decidedly encouraged.

Upon examining him, I found the eyeballs very hard, his field of vision contracted more on the nasal side than elsewhere; the pupils of both eyes contracted and his sight reduced to 1/200. He asked me if I thought that his eyes had been infected or if he had injured his eyes by striking the water when he dove into it. I told him that I did not believe that had anything to do with it, and that his trouble was brought on by mental strain.

The patient was advised to practice at home those measures which had already improved his sight while he was at my office, **palming, swinging** and **sun treatment**. At his second visit, a few days later, he was further encouraged. The redness of the white part of the eyes had entirely disappeared. The pupil was no longer contracted, but was dilated to the same extent as is found in most normal eyes.

He was much pleased that the **sun treatment** had been of marked benefit. He said that he had read in many eye books that persons suffering from iritis should protect their eyes from the injurious effects of the light by wearing dark glasses. He also said that he was convinced that the sunlight and other forms of light were a benefit to his iritis and not an injury.

His condition continued to improve, and in a few days he was able to read the large type of a newspaper without discomfort. I said to him: "why don't you read the small type?" He answered that he was afraid he would strain his eyes. My answer to this was to hand him a card on which was printed some sentences of **diamond type**. He was able, much to his surprise, to read the diamond type at about six inches. This amused him so much that one could hear him laughing almost a block away. He compared his ability to read fine type with his ability to read the large type of a newspaper and found that the diamond type was easier. He said: "Why is it that I see the diamond type easier than I do the large print?" I replied that it was because **in order to read the diamond type, his mind had to be relaxed. If he strained, he could not read it.** If he could not read it, he strained. He was advised to read as much diamond type as he had time for.

The patient was encouraged to keep up the treatment until a complete cure was obtained.

A Case Of Absolute Glaucoma

By Emily C. Lierman

This article contains descriptions, directions for a variety of Bates Treatments

A man, aged 68, with absolute glaucoma was brought to me by his physician, who was quite sure that the Bates Method could do nothing to restore his sight. This man had had three operations on both eyes; the first operation was performed in the year 1924. He had no perception of light in the right eye and could see but very little with his left eye, not more than 1/200. The doctor who brought him was the most skeptical person I have ever come in contact with. His manner in regard to the method was almost insulting, and I resented his attitude very much. I had a conversation with him over the telephone previous to the appointment which was made with his patient. He was to give me an hour with this man, and if at the end of that time I could improve the patient's sight, even a particle, he would believe that Dr. Bates was right when he claimed that glaucoma was curable by his method.

I never felt more determined in my life to do the best that was in me for this patient. Before the hour of his appointment, I sent him my book, "Stories from the Clinic" by special messenger to him and asked him to read what I had written about the relief of strain in glaucoma.

When the doctor entered my office with his patient, one could see by his face that he was ready to prove that his patient would receive no benefit in his sight. I was in a fighting mood myself and my eyes, I feel sure, told him of my determination to prove that he was wrong and I was right. I informed the doctor immediately that even though his patient was a wealthy man, I would not accept a fee at this time, but if the patient received further treatment from me or from Dr. Bates, he would have to pay a bonus in advance besides the regular fee, for the hard work which would be before us. As I look back upon that day and hour which I spent with his patient, I realize how hard I worked.

The right eye, as I have said, had no sight at all because the retina was almost destroyed and there were other complications caused by the operations. Because of this, it was not necessary for my patient to cover his right eye while the left eye was being tested.

I produced the **white test card with black letters**, as the patient sat by a window with the **sunlight shining on the whole card.** I watched to see what effect the strong light reflected on the card would produce. Immediately the patient drew back, as if the strong light hurt his sight. I was pleased to note this, as I knew then that the patient was sensitive to the strong light which, of course, was in my favor, because **sun treatment would overcome this sensitiveness and probably improve the vision**. The doctor made no comment. At one foot from his eyes, the patient could **flash the 2 (200 line) letter "C" as he moved the card slowly from left to right before his eyes.** More than that, he could not see without causing a great deal of effort. Then I changed the card and replaced it with the **black test card with white letters**, placing the card in his hand as I had the white card. I directed the patient to **keep the card moving slowly from side to side and to blink as he moved the card.** By doing this, **he flashed the 100 line letters, one at a time.** Occasionally, I glanced at the doctor's face to see whether he was pleased or not. He might have been a sphinx for the lack of interest which he showed.

My next plan was to have the patient **palm**, which I told him how to do, and while he was palming, I asked him to **tell me what interests he had in life.** He said he was a banker, so I advised him to **remember figures on bank notes as well as he could; also to remember other things in regard to the work which he is most interested in.** I avoided any unpleasant conversation regarding his eye trouble, which he unconsciously referred to from time to time.

I explained to him that his poor sight worried him more than he realized, but if he believed in what I was trying to do for him, he would not feel so hopeless in time to come. Jokingly, and half in earnest, I remarked, "You must have a better attitude of mind than your doctor has at the present time," which brought for the first time a smile to the face of the doctor. The patient said he was willing to believe that I could help him and I know that he meant it.

While the patient was palming, **I placed the large black test card with white letters upon a test-card stand, which I arranged five feet from where the patient was sitting,** and in an ordinary light. Again I looked at the doctor, but he made no sign of being in doubt or otherwise. This would have been discouraging, I know, to most of our students, but I have had so much experience with people like him, that I paid no more attention to him than if he were not in the room. It was the only way for me to keep from either weeping or gnashing my teeth.

After the patient had palmed for more than ten minutes and had removed his hands from his eyes, I asked him to stand. As I held both his arms at the elbow, I asked him to **sway from side to side** with me. Of his own accord the patient remarked, with a smile, how relaxing it was to sway his body, and that he enjoyed doing it. At first he did not recognize the card where I had placed it, and I myself did not mention to him what I had done while he was palming. I told him that he was to **keep up the swing of his body until he discovered the test card and was able to read some of the letters.** I also informed him that he was **not to try hard to see any letter, but to keep up the sway.**

Anyone interested in our work can imagine how happy I was to hear him say, "I think the middle letter of the third line is an 'O'." Before I allowed him to go any further, I told him to **sit down again and palm**. I felt that the palming had had as much to do with the improvement in his sight as did the swinging of his body. While the patient was **palming,** I told him to **remember anything which was pleasant**, that it did not matter much what it was. Some patients enjoy remembering a **sunset,** or a **white cloud in a blue sky**. I reminded him of these things and also told him it was necessary for him to **shift from one thing to another and not to concentrate on any one thing.**

While he palmed, he said that he had had a bad habit for years of concentrating or trying to concentrate, which he thought was beneficial, but now realized that this produced more strain and discomfort. It was nice to hear the patient explain these little things to me, because it proved to the doctor who brought him that he was anxious to help me in what I was trying to do for him. This time the patient **palmed for about fifteen minutes** and then we started the **standing sway of the body**, having him **blink regularly** as he did before. This time, **he read every letter of the 5 line** (also called 50 line on other eyecharts), **seeing one letter at a time and looking away quickly to avoid staring**. A great feeling of satisfaction came over me as I saw that the doctor was watching the patient closely. Nothing was said, however, because we both felt the need of silence at this time.

The patient began to strain unconsciously to read the next line of letters, but I avoided having him read any further until he had **again rested his eyes by palming.** This time it was not necessary for me to again remind him to **use his memory**, for he **immediately mentioned how white the letters looked on the black background when he did not look at the card longer than a fraction of a second**: **I said that it was a good thing for him to alternately remember the black margin of the card and then remember the white letters as he saw them,** or if he possibly could, **without an effort, to imagine the letters whiter than he really saw them**. After he had rested his eyes in this way for ten minutes or longer, I placed him in the **sun**, and with my **sun-glass** I focused the strong rays on his closed eyelids. Some patients draw away when they first receive the

sun treatment, but this patient enjoyed the strong light of the sun from the start, which made it easier for me to treat him.

After the sun treatment, he again read the test card at the same distance, and this time, he read all of the 3 line. (30 line) The patient turned to me and thanked me for my efforts and for what I had done for him. He also told me that he would **try to do without the strong magnifying glass which he had been using for a few years to help him in his work. I explained how dangerous it was for him to continue the use of the magnifying glass even though it helped him to see things better at the time.** As this patient had never heard of the Bates Method before, I am not sure that he realized the importance of what I explained to him. I really helped him and improved his vision from 1/200 to 1/6 of normal in one hour's time under unfavorable conditions, for which he was grateful.

As the time for the treatment was over, I had to let the patient go, but I had satisfied the skeptical doctor who not only fought me with his mind, but also tried to prove to me that Dr. Bates' statements were false when he claimed to relieve tension in glaucoma and also improve the sight when other methods had failed.

I never saw this patient again, because he lived a great distance from my office, but I feel sure that the doctor is no longer skeptical, but is at this time helping others in the cure of imperfect sight without glasses.

Questions And Answers

Q - I have a high degree of myopia. Approximately how long will it take to obtain a cure by your method?
A. - It is impossible to say, as people vary so in their response to the treatment.
Few minutes, hour, day, week, month, year - depending on the individuals type/amount of strain, understanding and correct use of the Bates Method.

Q - How often should one with imperfect sight palm during the day and for how long?
A - Palming should be done as often as possible during the day, ten times at least, for five, ten, fifteen, minutes or longer at a time. Some people obtain more benefit from short periods than from longer periods.

Q - Am forty-nine years of age and have had to wear glasses for five years, due to gradual weakening of the eyes. Is this curable?
A - Old-age sight is curable, and you can discard your glasses by following the methods as outlined in the book, "Perfect Sight Without Glasses."
Q - If one's arms become tired while palming, will a black silk handkerchief covering the eyes produce the same amount of relaxation one gets from palming?
A - No. Palming is the best method for relaxation and improvement in vision. When tired of palming, the hands can be removed and the eyes kept closed until one feels relaxed.

Q - Can the vision be improved without glasses after the lens has been removed for cataract?
A - Yes.

Q - Can squint (crossed, wandering eyes) be cured by treatment without glasses after an eye muscle operation proved unsuccessful? Does age make any difference?
A - Yes. Age does not make a difference.

Q - Will it still be necessary to continue practicing the method of swinging and shifting after my eyes are cured?
A – No. When you are cured of eyestrain you will not be conscious of your eyes. However, if you strain them, you will know what to do to relieve the strain.

Q – Is it a strain to the eyes to read while riding on a train?
A – No, if there is no discomfort. It is a good thing to look out of the window and see the scenery moving in the opposite direction to that in which you are going, and then continue to read. (Oppositional movement)

Q – What causes and cures abnormal watering of the eyes?
A – Strain produces watering of the eye. Relaxation obtained by palming and swinging will cure this trouble.
Avoid sunglasses, tinted, colored, UV blocking lenses, eyeglasses, contact lenses.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

FEBRUARY, 1928

The Thumb Movement



Move the thumb on the stationary finger tip in a 1/4 inch circle. Move clockwise for a while, then counter-clockwise. Move the thumb left and right, up and down... against the finger. Practice with left and right hands.

Rest the hand against an immovable surface. Place the ball of the thumb lightly in contact with the forefinger. Now move the end of the thumb in a circle of about one-quarter of an inch in diameter. When the thumb moves in one direction, the forefinger should appear to move in the opposite direction, although in reality it is stationary. In the practice of the universal swing, everything is imagined to be moving in the same direction, except the eyes. With the aid of the thumb movement, however, one can imagine the spine and the head moving opposite to the direction of motion of the thumb, while the eyes, being fastened to the head, also move with the head and hand.

While watching the movement of the thumb, remember imperfect sight. At once, the thumb movement becomes irregular or may stop altogether. Demonstrate that any effort, no matter how slight, to see, remember or imagine, interferes with the movement of the thumb. The thumb is so sensitive to an effort or strain that the slightest effort is at once recorded by the motion.

While watching the movement of the thumb, remember perfect sight. Notice that the movement of the thumb is slow, short, continuous, and restful - with relaxation of all parts of the body.

Many patients have been successfully treated for pain, fatigue, and dizziness with the help of the thumb movement, after other treatment had failed. Some patients with severe pain complain that when they forget to practice the movement of the thumb, the pain comes back.

Not only have patients suffering from pain and symptoms of fatigue been relieved, but an equal number have been relieved of imperfect sight by the correct practice of the thumb movement.

Thumb movement done in various directions and with the left and right hands also activates, integrates the left and right brain hemispheres and eye movement, shifting.

Fact And Fancy

By W. H. Bates, M.D.

The attention of the editor was called to a copy of the "British Medical Journal" of October 8th, 1927, page 641, in which my discoveries on the cure of imperfect sight without glasses were adversely criticized. The following is the article in question:

"There are some who deny that the world is round, and some who still believe in the mystery of Joanna Southcott's boxes, so that it is not altogether a matter of surprise that there are others who deny the facts of physiology and of experience. There is a book before us, written by one W. H. Bates, M.D., which for boldness of denial and strangeness of assertion rivals the others. The title of the book is 'The Cure of Imperfect Sight by Treatment Without Glasses." but that on the cover is 'Perfect Sight Without Glasses.' The author would have us throw away our useful glasses, and beguile ourselves into the belief that we see better without them. Trail shows that we do not and that his alleged treatment is no more than a beguilement that does not stand the test of experience. To practice judgment of what is seen is one thing, to see that same thing better is another. To 'palm' the eyes-otherwise make use of familiar and refreshing massage - is one thing; to alter anatomical defect another. But then this author denies anatomical facts and alleges that all errors of refraction are merely functional. Strangely enough, he admits the use of glasses for patients who have no lenses as the result of cataract operation but denies the use of the lens in accommodation, despite the evidence of Purkinje's figures, which he has heard of, for he reproduces the classical picture in his pages. His cult extends to the assertion of the value of small print, even that which is so small that it cannot be read: 'those who cannot read such type may be benefited simply by looking at it.' Excessive light, he alleges, is not injurious, but actually beneficial; therefore look open eyed at the sun. Reading in bed is 'beneficial rather than injurious'- perhaps when the print is not seen! But, strangely, black has its virtues: 'It is possible to perform surgical operation without anesthetics when the patient is able to remember black perfectly.' Perhaps the author got somewhere near a truth in a sentence in the last paragraph of this book: 'The fact is that, except in rare cases, man is not a reasoning being.'

"We met one of this cult recently; a parent had been summoned to attend a certain place owing to his persistent refusal to provide his child with glasses for school use. The child had myopia of 3 D; without glasses vision was 1/60, with glasses 6/6. The child appreciated the value of the glasses, but the father would not allow them to be worn, alleging other treatment. But the recalcitrant parent wore glasses himself for an equal degree of myopia. It seems a pity good paper should be wasted on such a book, or that our columns should give space to its notice. But there have been inquiries and so this review."

"There are some who deny that the world is round" and we hold such misguided ignorant people more or less in contempt, because they appear to ignore the learning of other people who are very highly respected for their scientific knowledge. It so happened that an ignorant man said to me: "Doctor, do you know that they found out that the world was not round?" I answered, "No, I had always believed that it was round." "Well," he said, "my boy came home from school one day and told me that the earth was flattened at the poles," and then he showed me his son's geography. The book stated very clearly that the shape of the earth is not a perfect sphere, but because it is flattened at the poles, it is an oblate spheroid. Since then I have not learned that the man was persecuted who called the earth an oblate spheroid and published the facts in a book which was used as a text by school children all over the world.

Reference has been made to Joanna Southcott by my worthy critic, and he probably suggests that I am no better than she. I looked up the history of Joanna Southcott and found that she was a domestic servant born in Devonshire, England. She joined the Methodist Church in 1790 and in 1792 announced herself a prophetess giving forth revelations. At one time she sold 6,400 sealed packages or boxes warranted to secure salvation to the purchasers. She prophesied that she would give birth to Shilo or the Prince of Peace on a certain day, but failed to do so.

I deny that I ever attempted to beguile anybody into an error. When a patient comes to me wearing glasses, I usually test his

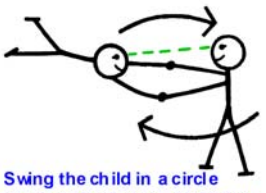
vision without glasses and tell him that the treatment consists of eye education for the purpose of improving his sight so that he can, without glasses, see as well as, or better than he can with them. It never occurred to me that any of my patients would call this beguilement. The word, however, is a good one and may be useful in the future as a substitute for the word imagination. My practice is built up by the recommendation of patients whom I have cured without glasses.



If my critic had read the chapter on palming more carefully, he would not have made the mistake of calling it massage.

I have been criticized for denying an anatomical fact. I do not deny that in myopia, the eyeball as well as the optic axis is elongated; that in hypermetropia it is lessened; that in astigmatism its form may be modified, or that in presbyopia, glasses improve the vision. Eyeglasses for presbyopia, close vision quickly increase vision impairment at all distances resulting in stronger and stronger eyeglass lenses. My book describes how errors of refraction are curable and have been cured by eye education. The cause is an effort or strain. When this effort or strain is corrected, all errors of refraction disappear and the patient becomes able to see as well, if not better, without glasses than he formerly did with them.

When a patient with normal eyes and normal sight regards a blank surface and makes an effort to see, an error of refraction can always be produced and demonstrated with the aid of a retinoscope. When a patient with imperfect sight looks at a blank surface without trying to see, the retinoscope demonstrates that the error of refraction has disappeared temporarily or more permanently. It is a fact that it is possible to teach patients, who have progressive myopia of 16 diopters, how to cure their myopia by relaxation. What is true of myopia is also true of hypermetropia, astigmatism and presbyopia.



Swing the child in a circle counter-clockwise, clockwise... to correct squint.

Although some years ago I usually prescribed glasses for the benefit of the sight after cataract extraction, I do not do so at the present time. With the aid of eye education, such patients become able to read diamond type without glasses at six inches or nearer to their eyes or eighteen inches or further. These facts are offered as evidence that the lens is not a factor in accommodation, because the eye can change its focus within wide limits after the lens has been removed.

In my investigations, the figures of Purkinje were studied. For some years, I tried to obtain a perfect image, reflected from the front part of the lens, which was sufficiently clear and distinct to be photographed or measured accurately. The pictures I obtained were very much blurred and one could draw wrong conclusions from their behavior during accommodation, as well as imaginary ones which "proved" a great many theories. In short, one may say that as a result of studying these blurred Purkinje figures, almost any explanation of how accommodation was brought about might be imagined erroneously. Helmholtz was not satisfied with the pictures he obtained by photography, and his illustrations of the behavior of the images of Purkinje were usually in the form of diagrams, which I do not consider good evidence of the truth of his conclusions. My book has described the work of Helmholtz in this field and I would respectfully offer that to the reader's consideration for criticism.



Rock the baby gently, with love, side to side, up and down...

About a year ago, a friend living in England attended a meeting of one of the optometric societies. The speaker of the evening considered the cause of accommodation. He obtained photographs of the reflection of the image from the front part of the lens before and after accommodation. I was very glad to receive these photographs, but was very much disappointed when some experts who were taking moving pictures for me pointed out that the photographs of the optometrists were retouched.



Rocking Cradle- sideways

While working in a physiological laboratory, the director suggested that I repeat the experiments of Helmholtz on accommodation, with the end in view of finding out how he made his mistakes. This seemed a very difficult problem to solve. After some years of hard work I became able to obtain photographs of images reflected from the front part of the lens both before and after accommodation. These images were clear and distinct and furthermore I learned how to arrange an apparatus by which an observer could see a clear image reflected from the cornea, iris, the front part of the lens, the front part of the sclera and from the different parts of the outside of the eyeball. There was no change in the image reflected from the front part of the lens during accommodation.



Rocking cradle - forward

The director of the laboratory was able to demonstrate with his own eyes, with the aid of this apparatus, the truth that the lens is not a factor in accommodation.

Helmholtz Theory

The great trouble with the physiology of the eye is that most of us feel that after a man like Helmholtz finishes a job, that it is not possible that he has made any mistakes. I believe that he has made a monumental blunder and I do not hesitate to say so. Helmholtz was a great man and he helped things along very well, but his "Physiological Optics" has almost spoiled everything else that he wrote. Someone has said that the pupils of Helmholtz were thoroughly convinced that the lens is the only factor in accommodation, while he himself was more conservative. **In short, he published a statement to the effect that he did *not* prove that the lens was the only factor in accommodation.**



Baby rocks his own way!

Movement keeps the body, mind healthy, eyes relaxed and vision clear.



Kids love action, movement, adventure! Sliding in the snow is a form of the Swing.

My critic says; "His cult extends to the assertion of the value of small print, even that which is so small that it cannot be read, 'those who cannot read such type may be benefited simply by looking at it'." People with imperfect sight are benefited by looking at fine print, provided no effort or strain is made. I recommend this treatment to my critic if he is suffering from presbyopia.

"Excessive light, he alleges, is not injurious, but actually beneficial, therefore look open-eyed at the sun." It is very wonderful how much the vision may be improved by sunlight, also by some forms of electric light. It does not naturally follow that I believe looking directly at the sun is indicated. People with normal eyes are able to look directly at the sun without discomfort, whatever, provided that no effort is made, while others with imperfect vision are made worse temporarily. Shift, move the eyes (do not stare) when looking at/near the sun.

"Reading in bed is beneficial, rather than injurious." Reading in bed without effort is a benefit. If one makes an effort while reading, it is an injury.

It is a fact that it is possible to perform a surgical operation without anesthetics when the patient is able to remember black. I have repeatedly operated on the eyes and other parts of the body painlessly when black was remembered perfectly.

The patient whom my critic mentioned who wore glasses for myopia and denied the same practice to his son is certainly open to criticism.

I do not see why my critic has published so much against me without a proper scientific investigation, and without conclusive evidence that I am wrong. If John Doe says that myopia is incurable, before accepting this as true, we would like to know what his evidence might be. In my book are published many facts which are of sufficient importance, I believe, to be investigated. My critic has said very little about the evidence which has been offered there by me to prove that my statements of the truth are correct.

Just today a patient came to me with a diagnosis of **chronic glaucoma** and told me that the best doctors in this country had advised an operation at once. In my experience, chronic glaucoma does not respond favorably to any operation. This patient was treated by relaxation or rest and obtained normal vision, without glasses, for the distance and became able to read fine print, diamond type (Jaeger No.1) at six inches. She was very grateful for the relaxation obtained and was overjoyed to find that an operation was unnecessary. This case is suggestive and the temporary or permanent cure which she obtained in one visit was a fact that no amount of contradiction can modify or lessen.

Children less than three years of age, too young to learn the letters of the alphabet, have been **cured of squint by practicing the swing. Let the mother or father or some member of the family with whom the child associates give the child confidence. They should take hold of both hands of the patient and swing him around and around until his feet are lifted from the floor. The child enjoys this immensely after he has practiced it for a few times. Frequent swinging of the child for a few minutes during the day usually cures squint, divergent, convergent, or vertical - at first temporarily and later on more continuously or permanently.** It does not require an ophthalmologist to observe the benefit.

Children less than a year old who are suffering from tension with many forms of eye disease, are relieved of their tension by rocking them in the arms of the mother and by the use of an old fashioned cradle. I believe that the eyes of children are more frequently diseased at the present time than they were when the cradle was used. It should be emphasized that **motion is a benefit, not only to children but also to adults.** Adults can use a rocking chair, swing…

All through my book are reports of cases in which patients have been blind from one or more of the numerous diseases of the eyes. They were all benefited by the relaxation treatment. When they recovered and became able to see without glasses, no amount of criticism without facts could shake these persons' faith in my methods.

Individual Treatment

By Emily C. Lierman

During my year's experience treating patients in the West, I came in contact with a number of patients who were treated, but not benefited, by those who did not properly understand the method. I finally stopped counting the number of patients who came to me for the relief of presbyopia, cataract, glaucoma and other troubles. I shall try to describe the worst case among all these patients who appealed to me for the relief of pain, so that the readers of our magazine and others will know the truth about things.

One or two so-called doctors or specialists were directly responsible for the pitiful condition of this patient. There was so much wrong with this man that I hardly knew where to begin. This was his story, related before I tested his vision with the test card:

Up to the time he was twenty-five years old (he was now 51) he had good sight for the near point as well as for the distance, but soon after that he found difficulty in reading ordinary type, unless he used a strong light. He decided to wear glasses for reading only and got along with them for a short time. Then his eyes began to smart and pain when he was out in the sun and his sight for the distance became very blurred. He suffered with headaches almost every day for a while and finally was advised to have his glasses changed. Two pairs of glasses were prescribed for him by one eye specialist, one pair for reading and the other for his distant vision.

He said he was faithful to the doctors who from time to time had given him eyeglasses, as he wore them constantly every day for some years. He finally discarded glasses altogether because he found no relief from pain. After obtaining Dr. Bates' book, "Perfect Sight Without Glasses" and receiving some benefit from what he practiced, he decided to try the complete treatment. He went to a doctor whom he understood gave the Bates treatment, although at this time he was not informed so by the doctor. He had to pay a sum of money in advance for a course of treatment which ended in the spring of the year. By that time his condition was worse than it was in the beginning.

He was told that if he would take another course of treatment, he would surely be cured, and as an inducement he was told of special summer rates of which he ought to take advantage. What a tale for the ears of Dr. Bates!

The patient, however, submitted to another course of treatment, hoping to be benefited. After another month of this treatment, with his condition of health getting worse every day, he found out for the first time that the treatment was not the Bates Method. He questioned the assistants who helped in the treatment if Dr. Bates used all the apparatus and eye muscle exercises that were given him there and he was told by the doctor that the treatment was his own discovery and not the Bates Method. What a pity that he had not been informed of this in the beginning!

On the 20th of July of the same year this patient came to me and the nervous twitch of his shoulders as he talked made me nervous too. It took just one hour for the patient to explain to me just what I have written about him. He not only stuttered but some words were so long drawn out that it took considerable time. He did not blink, but stared all the while he was talking. However, when he finally did blink consciously or unconsciously, I noticed that the nervous twitch of his shoulders subsided.

The patient emphasized the fact that as far as seeing ordinarily, his vision was not bad. The treatment which he had previously received was not a benefit but an injury to his nervous condition. The daily electric treatment, with osteopathy, colored lights and hypotherapy, whatever that might be, was the cause of his nervous symptoms. When he explained the treatment to his friends who had known him for many years, they were convinced, as he was, that the treatment had made him worse instead of better. He told me that other patients as they came to this practitioner for daily treatment were more or less thrilled and impressed because so much was given them for their money. Those who came to me later were shocked to think that so little was given them in the way of treatment for their money and it seemed difficult for them to believe that they could be benefited.

Before I tested his sight with the test card, I made him promise to help me, because at that time I did not know whether or not I could do anything for him. His vision with the test card was normal, 15/10 with the right eye and 15/15 with the left, but the letters were a little blurred. I directed him to **palm**, which he knew how to do, but I noticed while he was palming that his shoulders twitched continuously all the while he had his eyes covered. After palming for about ten minutes or a little less, the 15-line of letters still looked blurred to him with the left eye, showing that the palming had not benefited him.

Long Swing and Sway with Eyechart, using eye with less clear vision.



Swing or Sway with the eyepatch on the right eye and 'flash' 'shift for a fraction of a second' on a letter on the eyechart with the left, less clear vision eye without stopping the swing. Notice opposite movement of the chart.

I told him to **stand and sway his body from side to side and to observe that the Snellen test card and other distant objects were moving opposite to the sway. While swinging with his right eye covered, he again read the 15-line and then the 10-line letters without any blurring.**

I then tested his vision at the near point with the fine print on the Fundamental card. At first, he held the card about six inches from his eyes, as I directed him, but drew his head back some distance as though he had been struck. This happens very often while testing a patient for the reading of fine print. I paid no attention to it, but directed the patient to hold the card twelve inches away instead. He was able to read Number 3, or the third sentence from the top of the card, which has good sized type. He said that the words were blurred. As he tried to read the fourth sentence on the card, his shoulders began to twitch again, as they did while he palmed, so I did not encourage him to go any further.

I saw from the beginning that I would have a problem to solve, so I decided to study his case until the next time I treated him. The directions I gave him for home practice were very simple. He was glad to know that what he was called upon to do by himself was simple; he was directed to **stand, with his feet one foot apart, and to sway his body with a long, slow, easy swing, not noticing anything that came in his line of vision.** He was told **not to worry about what line of letters he was able to read on the test card, but to be sure not to try to improve his vision by making any sort of an effort.**

He was to remember to glance only at the white spaces dividing each letter on the card and to place himself at least a foot further away from the card each day. Modern teachers state that it is alright to "flash" glance at the letters, shift easy, relaxed on the letters. No effort to see=clear vision. While walking in the street, he was to hold his chin up and look ahead instead of looking down at the pavement, which had been his habit for many years. He was to imagine in this way that he saw the pavement coming towards him as he walked. Automobiles and other vehicles which were not moving but were against the curb were to be imagined to be moving opposite as he looked to the right or left while walking.

Eight days later he came for a second treatment. I used a large card which he had not seen before and placed him eighteen feet away from it. As he swayed, shifting from the test card to a picture on the wall and then back again to the test card, he was able to tell me which way the inverted E's were pointing on the line, which is usually seen by the normal eye at ten feet. The letters were quite clear to him.

I find that with difficult cases it is good to introduce palming in some way or another. When this patient closed his eyes and placed his one hand or both hands over his eyes, the twitch was very noticeable. If I asked him a question while his eyes were covered, he stuttered even more than he did when he was staring at me. This surely was a problem for me to solve and I will say that I worried a great deal about him. I did not want to fail him as others had. The thing for me to do was to undo the harm that was done to him.

The sun was shining brightly in the window of my office, so I placed him in a comfortable chair and arranged his head so that the sun shone directly on his closed eyelids. The sun is much brighter in the West than it is here in the East and it also has a great deal of healing power. Of course, I expected that the sun would be a great factor in the cure of this patient. **I kept him in the sun fully a half hour and then when I placed him in the shade afterward, I told him still to keep his eyes closed for a little while.** I did this purposely to get him accustomed to the darkness as well as the bright light while his eyes were closed.

I placed myself in a chair directly opposite him and held the small test card, black with white letters, in my hand. Then I told him to **open his eyes and to read one letter at a time and immediately afterward to close his eyes to rest them**. While he did this, his shoulders were perfectly still and he mentioned each letter without dragging his words as he did before. He flashed the letters on the line which is marked 5 as I was sitting about five feet away from him. I considered that very good.

I told him to sit in the sun again and with his chin raised and eyes closed, he sat perfectly still for another ten minutes. After that he was able to read the line of letters of the small black card which is marked 4 and each letter was clear to him as he read, with his body perfectly still and relaxed.

Then I spoke to him about palming. I explained that it was not necessary for him to keep his hands over his eyes any length of time, but to try what I have called "instant palming." He was to hold his hand cupped about a foot away from his eyes and as he drew it toward his face he was to gradually close his eyes and keep them closed as the cupped hand touched his forehead. This worked splendidly. As he kept his hand over his eyes only for a part of a minute, he did not cause any strain as he did before, and he enjoyed doing this because as he explained it, he felt free from strain and tension. It was good to see the patient smile and to listen to his speech of gratitude which I enjoyed and understood very well.

After the treatment was over, I told him not to try palming at all by himself until I saw him again. Sun treatment was advised and he was to get as much of it as he possibly could, always allowing the sun to shine on his closed eyelids, which was best for him. He was told again to imagine stationary objects moving when he moved his body and to remember to blink frequently. I also explained to him that the thumb movement (see page 2 of this issue), which Dr Bates discovered some time ago, was a benefit in cases where it was difficult to have a patient relax while trying to improve his sight.

One week later he came again for another treatment. He had a tale of woe for me; the sum and substance of his failure in home treatment was that he tried too hard. To begin with, **he blinked too fast, which is as bad as not blinking at all. When patients acquire the habit of blinking too fast, they are very apt to stare while they blink**. Some of my work with him had to be done over again, because he had tried too hard by himself. He had forgotten something that I had asked him to do and that was to telephone me every day and let me know how he was getting along. It only takes a few minutes to write a short letter or go

to a telephone booth and explain the failures or the success in home practice. Because this patient failed to do as he was told, much of what I had already told him had to be repeated over and over.

This case proves again that all patients cannot be treated in a similar way. Each one has to have individual treatment.

I made the next treatment as simple as possible and he spent most of the hour shifting to the white spaces of the large test card and then to the white spaces of the small test card that he held in his hand. Shifting from the near point, where letters were easily seen, to the distant card, brought about a relaxed state of mind and body and we proceeded once more with other things which were to help him permanently. In order to avoid blinking too fast, I told him to again place his hand "cup fashion" about a foot from his eyes. This time he was not to touch his face with his hand but to draw the hand in as though he were going to touch his face. As the hand moved toward him, he was to close his eyelids gently and in this way as he again drew his hand away, he opened and closed his eyes, keeping time with the hand as he moved it backward and forwards. As the hand was drawn away from his face he opened his eyes easily and not too quickly.

I had emphasized that he must not snap his eyes shut or open them too quickly. He practiced this until he became tired, which was more than ten minutes each time and then he would sway as a diversion. This new way of teaching him to blink without blinking too fast helped him to keep his eyes open for part of a minute, while closing them took only part of a second. This helped him to blink one blink at a time instead of blinking rapidly, with a nervous twitch which caused more strain. In order to improve his vision and lessen his strain and tension, I had to give him treatment just opposite to the usual way in which patients are benefited.

He came again one week later for his last treatment, at which time he read the whole of the Fundamental card, reading Number 15, which is fine diamond type, at less than twelve inches, holding the card in the shade. In the sun he was able to read it at less than eight inches. He no longer dragged his words as he had in the beginning when I first treated him, and only at rare intervals did I notice his shoulders move with a twitch when he forgot to blink as he was talking to me.

On July 20, 1927, he came to me for his first treatment in a pathetic condition. On August 25th, about a month later, he was a different man entirely, having no more discomfort or pain in his eyes.

Announcement

The editor has just received a circular letter from a correspondent in the West, who claims to have invented a new apparatus for improving the sight. I should like to caution readers of this magazine about this apparatus, because there have been others of a similar nature which were a disappointment.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MARCH, 1928

First Visit Cures

The word "cures" is used advisedly. It is a fact that some people have been cured of myopia in one visit, after relaxation of the nerves of the eyes and other parts of the body was obtained.

Suppose the patient is near-sighted and can only see the big letter "C" at fifteen feet, a vision of 15/200. Let the patient walk up close to the card until he can read the bottom line. The distance may be three feet, five feet or farther. The first letter on the bottom line may be the letter "F." With the eyes open, it is possible for the patient to imagine the letter "F" quite perfectly, but with the eyes closed, he is more easily able to remember and imagine he sees the letter "F" much better.

Palming is a great help when remembering or imagining the letter "F" with the eyes closed. **By alternately imagining the letter "F" with the eyes open, and remembering or imagining it better with the eyes closed, the memory, the imagination and finally the vision for the letter "F" is very much improved.**

If the patient becomes able to see the letter "F" at three feet, or to imagine he sees it quite perfectly, he should be encouraged to walk back and increase the distance between the eyes and the letter "F" about one foot. When the patient becomes able to imagine the letter "F" at four feet, he should go back another foot, alternately imagining it with his eyes open and remembering it much better with his eyes closed. By gradually increasing the distance of the eyes from the letter "F,' all patients who practiced this method obtained normal vision temporarily at the first visit.

The length of time required to obtain a permanent cure is variable. Some patients with not more than one or two diopters of myopia may require many weeks or months of daily treatment before they are permanently cured, while others with a higher degree of myopia sometimes obtain a cure in a much shorter time.

The Period

By W. H. Bates, M.D.

Of all the methods employed in obtaining normal vision, the memory and the imagination of the small black, white or any color period is among the best. The period may be an optimum for some persons who can obtain relaxation with its aid after other methods fail.

When the period is seen perfectly, it is not stationary but moves in various directions with a slow, short, easy swing. It is a fundamental fact that a period is seen best when it appears to move a distance of about its own diameter. When the period has a slow, short, easy swing, the eye is at rest and when it is at rest it is always moving to prevent concentration, trying to see and other efforts to improve the vision. The eyes shift point to point (small part to small part) on the period, causing it to show oppositional movement.

It has been demonstrated that when the vision is good, any effort, no matter how slight, always impairs or lowers it. When this truth is demonstrated, it follows that normal vision cannot be obtained when an effort is employed. When a period is seen, remembered or imagined perfectly, central fixation is manifest or the period is not seen in all parts equally well. When the eyes of the patient move a short distance to the right of the period, the period should appear to the left of where he is looking. When he looks to the left of a period, it should appear to be to the right of where he is looking, and the left side of the period is seen best while all other parts are seen worse.

Many patients complain that they find it difficult or impossible to remember a mental picture of a period. They say that the period is blurred or indistinguishable. To them the larger letters are apparently clearer than small print or a period. It is difficult to make some patients understand that the large letters may have blurred outlines of a fraction of an inch or more, if an effort is made, and the letter may still be distinguishable, whereas any effort to remember the period perfectly will cause a blur which is sufficient to make the small period indistinguishable. With perfect sight, no blur is seen, and the eyes are at rest.

When a patient has perfect sight, it is usually continuous. One may see a large letter quite perfectly and by covering over one half of it, the uncovered half is just as black as the whole and may be remembered, imagined or seen as black as the whole letter. Then if a small area is blocked off, with the help of a screen, one quarter, one eighth, one tenth-any part in fact-is just as black as the entire letter.



Shift point to point on a small black (or any color) period and remember, imagine and see it clear, moving. Do this with the eyes open, and in the imagination with eyes closed.
Think of the period any time during the day to relax, clear the mind, relax the eyes, activate eye shifting and clear vision.



Variable Swing
Finger in front of the face, move the head side to side and see the finger move in the opposite direction.

If the patient holds his forefinger six inches in front of his face and moves his head and eyes from side go side, it is possible, without looking at the finger, to easily imagine that the finger is moving in the opposite direction to the movement of the head and eyes. This is called the **variable swing**, because the amplitude of the swing varies within wide limits. At six inches from the face, the amplitude may be three or four inches, while a similar object held at five feet or further will have a very short swing-so short that it is not always apparent. A small period, likewise, at six inches may appear to move within an amplitude of several inches, while at ten feet it may appear to move less than one half of its diameter. At times, the movement may be so short that it cannot be distinguished at ten feet, although it is present. Since a **short swing improves the vision more than a long swing, the benefit of the short swing of the period at the distance is manifest.**

The vision of a perfectly black period may be used to improve the vision of large letters or other objects. By practice, one becomes able to remember or imagine a perfect period at all times and in all places when desired. An imaginary period, when placed on the top or some other part of a large letter, improves the vision of the letter. Imagine a black letter is composed of hundreds of small black periods. Shift continually, easy from one period to another. Use central fixation – see one period (small part, tiny point) at a time darkest black and clearest in the center of the visual field and shift/move the center of the visual field from period to period (point to point).

The memory of a perfect period is a benefit to other conditions than the sight. When the eyes are tired, the perfect memory of a period at once brings a feeling of perfect rest. **Symptoms of various diseases of the eye have been relieved at once by the memory of a perfect period.**

It has been published more or less frequently that the memory of a period brings quick relief to pain. A man may have a broken arm which is ordinarily very painful, but the perfect memory of a period always relieves the pain, so that he is not conscious of the broken arm. One may suffer considerable discomfort or pain in a dentist's chair. The memory of a perfect period brings instant relief. It is impossible for a patient to suffer pain while his teeth are being treated, provided he is able, in spite of his surroundings, to remember a perfectly black period. A severe cough is usually relieved very promptly by the memory of a perfectly black period after other methods have failed.

There are many diseases which cause a great deal of suffering in which the memory of a perfectly black period has brought relief. A most interesting case was that of a nervous woman who complained that she suffered from a variety of symptoms. She could not imagine the cause which produced the symptoms of her trouble.

She said to me: "Doctor, I am a great sufferer with pain, fever, loss of appetite and from one thing in particular which I am unable to describe."

I remonstrated with her and said: "How can you expect me to treat you unless I know what is the matter with you?"

She answered: "That is what many other doctors tell me."

This case interested me very much and I said to her: "Your unknown disease is causing you much suffering, but I can promise you complete relief, provided you are able to remember a period which is perfectly black."

She said that she didn't think that she could do so because her memory was not good, and so I spent a great deal of time with her trying to improve her memory and imagination of black, white, blue and other colors. I had her look at a black letter and imagine one part best and the rest of the letter worse.

Under my instruction she became able to see quite perfectly a letter "O" which was about one quarter of an inch in diameter, and to see it quite perfectly if it were near enough to her eyes. With the aid of a screen, she became able to see one half of the "O" as well as the whole of it. By further use of the screen, the part of the "O" which she saw best became very small, until it was reduced to the size of a small period. This seemed to help.

Then I gave her a rubber ball and told her to go down to the seashore, near which she lived, when the tide was going out, throw the ball in the water and watch it recede from the shore. She was also directed to note that the ball appeared smaller as it gradually

floated out to sea.

When the relief came, she at once telegraphed the glad tidings to me. At once I telegraphed back to her to practice with a rubber ball in the same way each day until her memory of the ball floating out to sea and appearing to be the size of a small black period was perfect. After her memory of the rubber ball becoming the size of a period became perfect, she found that she could obtain a mental picture of the small black period without using a rubber ball. She believed that she had been cured of her unknown malady.

Opera Singers Voice Cured by Dr. Bates

About twenty years ago I had been walking through Central Park and decided to sit down on a bench to rest. A well dressed man and woman came along and sat down on the same bench. The woman was very much excited and talked very rapidly in Italian to the man. Finally the man turned to me and said:

"Do you know Dr. Bates? We are looking for his office, because it is very important that my brother sing tonight in the opera. My brother's voice failed and we at once consulted a doctor on the throat who said that my brother's throat was paralyzed and that nothing could be done. We have just heard that Dr. Bates helped another opera singer by giving him instant relief after his voice had failed."

I asked the man where his brother was. He replied that he was at his hotel. I then confessed to him that I was Dr. Bates and said that I would be very glad to help his brother.
I told him that I was well acquainted with the people at the opera house, having been the attending physician there for several years and that they would vouch for me.

Shift on the tiny black dot to relax the mind.



Music

The man at once called a cab. I asked him if he were going to the opera house first, but he replied that it was not necessary, that he believed that I was Dr. Bates. When we reached the hotel, we went to the singer's room at once. The man spoke a few words in Italian to the singer who was lying on a bed. He smiled and opened his mouth wide so that I could see his throat, which seemed to be very large. I requested the man to tell him that it was not necessary for him to keep his mouth open.

There was a piano in the room with a great deal of music lying around. I had the patient sit down at the piano while I examined some of the music. One sheet that I picked up was full of complicated music. I asked the lady to let me have her breast pin for a moment and with the aid of the pointed pin, I touched a small black dot which came after one of the notes. Then I turned to the man and asked him to have the singer sing that note.

The singer looked at the note and laughed. I walked up to him and pounded him on the back and said with a laugh: "It's funny, isn't it?" He replied: "Yes, it's very funny." I said, "Sing it."

He did sing it. They were all very much overcome and could not express their gratitude enough. They thought that it was the blow on the back which I had given the singer which had restored his voice, or that my finger had a magic touch when I pointed out that particular note of music. They did not know, and I never told them, that he was suffering from **paralysis of one or both vocal cords due to mental strain.** When he looked at the music and saw the little black dot perfectly black, his mental strain was relieved and his voice came back.

The Story Of Jacqueline Sherman and How She Was Benefited

By Emily C. Lierman

The story of Jacqueline and how she was benefited in a very short time is well worth writing about. She came to me with her mother in January, 1927, at the age of seven, and was recommended by a **colonel of the United States Army**. After he had cured himself of presbyopia and pain caused by eyestrain, he sent many patients to Dr. Bates and to me.

Because of the great distance from Dr. Bates' office, the Colonel was unable to visit the Doctor personally and therefore obtained his knowledge of the method from the Doctor's book. Being an Army officer, it was necessary for him to have good sight and as glasses were objectionable to him, he had to do something to improve his defective vision. After practicing the methods described in "Perfect Sight Without Glasses," he became able to read book type and also newspaper type without the use of glasses, and then he began to boast about it. Jacqueline's father, also an Army officer, became interested in the Bates Method through him.

Jacqueline was wearing very heavy glasses, which she had worn for more than six months. She had difficulty to keep from staring or squinting through them in order to see any distance at all. At fifteen feet, her vision was 15/30 with glasses, proving that glasses did not improve her sight very much, if at all. Without them, her vision with the right eye was 15/200 blurred, and with the left eye 15/50 blurred.

Although she read up to the 50 line with her left eye, while her right eye was covered, she strained hard to read and twisted her head from left to right in such a way that her mother called her attention to it and asked her to keep her head still, if possible. I was glad to have her mother present, in order to see this, because I felt that she would be of help to Jacqueline in her treatment at home. Her mother told me that she saw the child but once a week, as she attended a school some distance from her home. For this reason, she needed her mother's encouragement as well as mine to practice enough to keep up her interest in the method for bettering her eyesight after she had left my office.

Jacqueline had a wonderful memory and it was not hard for me to help her while her eyes were closed, which I had her do, after the test. She palmed for more than five minutes while I was talking to her mother, and as I noticed her becoming uneasy or restless, I encouraged her to keep her eyes closed and covered while I asked her a few questions. I asked her if she could imagine that she was writing her name with pen and ink on a sheet of white paper. She said she could do that quite easily. I directed her to spell her whole name and then imagine each letter, and to place an imaginary period at the end of her name. I asked her next to forget about her name and remember the period, which she was able to do, and then she remarked, "The period seems to move, it doesn't stand still." Immediately after that I told her to open her eyes and to read the card with each eye separately. Her vision in that short time improved to 15/30 and she remarked how clear the letters were.

She was asked to palm again and to describe things which she had seen while her eyes were closed. She told me the different colors of dresses which she had worn recently, and she very readily described each one in detail. This time she palmed for about ten minutes or longer and when she again read the card, her vision with each eye separately had improved to 15/10. Her mother and I noticed that the squinting had stopped and that her eyes were open in a natural way. I gave her test cards and other material

necessary for her to practice with and explained to the mother that it was necessary for her to supervise the practice at school and at home if the child wished to be relieved of her eyestrain.

Jacqueline could not come to see me for some time after that and it was on July 19th of the same year that I saw her again. She had a great deal to tell me and it was good to listen to her explain how the one treatment I had given her had benefited her sufficiently to forget that she had ever put on glasses. It was only when she became excited while explaining things or telling something of great interest to her that she forgot to blink. Then something happened which frightened the mother but which caused me no concern whatever, because this happens very often to children. When she was excited or talked fast and forgot to blink, the pupils of both eyes became very large. This, however, had no effect upon her vision whatever, as her mother soon found out.

I asked the child if she had been faithful in the directions I had given her, which included the reading of microscopic print which is much finer than diamond type. She immediately produced some of the fine type I had given her at her first visit and placed herself by a window with her back to the sun. In this way the sun shone directly on the card and she read the fine type without any effort at six inches. She said that she never forgot to practice with fine print almost every day since I had seen her.

I then placed an unfamiliar test card fifteen feet from where she was sitting and asked her to read the card for me. She read every letter on that card with each eye separately and without squinting or straining. Her mother wanted to be sure that her vision for further distances had improved so I placed her by my window and told her to look off at a distance at a sign which was about 400 feet away. From the window, the letters on this sign seemed to be about the same size as the letters on the last line of the card she had just read. She held the card with microscopic type in her hand, and as she shifted from the white spaces of this type, holding it close to her eyes, to the distant sign, she read every word of the sign without a mistake. Her mother exclaimed that such a thing would have been impossible before she had had her first treatment.

We chose another sign at less than 400 feet away. To prove to her mother and to Jacqueline herself that staring and straining always lowered the vision, I told her to stop blinking for a fraction of a second and to look at the print instead of the white spaces and then to look off at the distant sign we had picked out for her to read. She immediately turned away with a strained expression on her face, and with a great deal of squinting. She objected strongly to doing the wrong thing, as she explained it. (Shift on the print when looking at it and strain is avoided.)

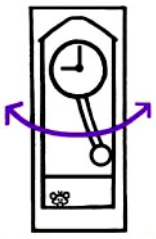
I gave her a little sun treatment with her eyes closed, using my sun glass steadily for about five minutes. I next directed her again to shift from the white spaces of the nearby fine type to this sign less than 400 feet away, and to frequently shift from the near-by white spaces to the spaces between the letters of the sign; she read every part of the sign perfectly. Modern teachers state to look directly at, shift on the print – shifting and central fixation. Look at the white spaces to relax the eyes, mind when not reading the print.

It does not require a great deal of intelligence to do what Jacqueline did, nor does it mean that the patient has to be young to accomplish as much as she did. She merely followed my directions and asked no questions as to whether the vision would continue to improve. She accepted everything I said or directed her to do as a positive means of benefiting her sight. Her mother's silence during the treatment helped me greatly in benefiting the child. It so often happens during a treatment that the parent or guardian will interfere or ask questions regarding the progress that the child is making, and this, of course, does not help the child nor me.

At the time I was treating Jacqueline, I also had a boy under treatment for myopia. He was twelve years of age, almost twice as old as the little girl. Every time the boy came, his mother worried me all through the hour of treatment and because of the mother's interference it took me twice the length of time to cure him. I am not speaking against this mother; I am only stating a fact. Both mothers were equally fond of their children, but mothers often make the mistake of fussing when it is quite unnecessary.

Jacqueline was again brought to me by her mother four days later as a sort of a checkup. I repeated to her over and over again that staring lowered the vision and that blinking always improved her ability to see without out tension or strain. Every card that I had for testing was used, so that her mother could see for herself that her child had really improved. She did well with the memory of the period whenever it was introduced during each treatment, so I decided that it would be a good plan to teach her mother how to apply the treatment at any time in the future when it seemed necessary.

The mother was directed to tell her to palm and imagine that a sheet of white writing paper was placed in her lap; then to imagine that she was making a small black period, just large enough so that she could imagine it as a small black spot. She did this without any difficulty. Her mother reminded her that she must imagine that the period was moving, so we spoke of **the pendulum of a large clock, which moves slowly from side to side, and I instructed the child to imagine that her body was moving just that way.** She kept up this movement as she sat perfectly relaxed in her chair and then she was asked to imagine that the period was moving opposite to the movement of her body. Jacqueline enjoyed this very much.



Objects that swing side to side (and in other directions) such as the pendulum in a grandfather clock... relax the mind, eyes, keeps the eyes in natural shifting movement and vision clear. Place interesting, colorful gadgets that contain movement in the home. A globe with colored moving sparkles, colored waterfall, pictures with shiny colored sparkles that flash as the eyes move across the picture, toy train set, hanging objects that move about in various directions...

Before she opened her eyes, I placed myself six feet away from her and held in my hand the small Fundamentals test card with the inverted "E's." The bottom line of this card is seen with the normal eye at two feet. In the presence of the mother who wanted to be doubly sure that her child was not memorizing instead of actually reading, I placed this small card upside down. In this way, the letters pointed directly opposite from the way in which they point when right side up.

When the girl opened her eyes after the period practice, she said that the "E's" looked perfectly clear to her up to the fourth from the top line, which, of course, would be the fourth from the bottom line when the card was right side up. She could see the separation between each letter "E" on the other lines but not very clearly. Purposely, I had my hand over the three upper lines, but suddenly I removed my hand. Jacqueline leaned forward in her chair unconsciously, and as she did so, she began to squint her eyes. Her mother checked her before I had a chance to do so, which pleased me.

She closed her eyes for an instant, remembering the swinging period and then opened her eyes and looked toward the card held in my hand. Immediately she exclaimed: "If I remember the swinging period as I look at the card, I can imagine that the first letter "E" on the bottom line is turned the right way." Her mother came close to the card to see whether the child had made a mistake; she had not. Her mother asked if it were possible that the child could see so small a letter at such a distance when less than a year ago, she had been so terribly myopic. By alternately closing her eyes and opening them, looking at the white spaces between each letter "E," she could tell in which direction each letter on the top line was pointing. When she closed her eyes for a fraction of a second, she had relaxed enough with the memory of the moving period to see each letter "E" perfectly without tension or strain. Look directly at the E, shift on it part to part, blink, relax and the E will be seen clear.

At her last visit to me the final test was made. This was on August 1, I927. As I stood ten feet away from her, I held in my hand a popular magazine with ordinary sized type. She did not know the name of the magazine, nor did she have any idea of what I was going to do. I was standing in a good light and her mother was sitting where she could watch us both. I placed my finger at the beginning of a sentence at the top of a certain page. I told her to watch my finger as I passed it below the sentence and told her not to pay any attention to my finger, but to see the thin white line which separated this sentence from the one below. This was done in a flash and then she closed her eyes again.

I asked her to imagine what the second word of that sentence might be. While her eyes were still closed, she said that it appeared to be a word with three letters and that the first letter appeared to be straight. She said that she could imagine that the word might be "was," which was correct. Her mother said that it was almost impossible for her to see that word so far away, but when she again mentioned words correctly as I passed my finger along the page of that magazine, her mother was convinced that Jacqueline's vision had really improved to more than normal average vision.

Jacqueline was what I call an unusual case, but I feel that any child of her age can do as much if not more than she did. This case recalled to my mind something which I had heard Dr. Bates say many times: "There is no limit to vision."

Case Report

Editor's Note: We believe that the following letter recently received by Mrs. Lierman will interest our readers. It is from W. B. MacCracken, M.D., Berkeley Bank Building, Berkeley, Calif., who has been very successful in applying the Bates Method to his patients. We would recommend him to anyone living in his vicinity who desires treatment by this method.

February 24, 1928.

Dear Ms. Lierman:

Perhaps you have once or twice wondered why I have not written you anything about the Bates work that I am doing here. I trust you have. There are several reasons why so many long weeks have elapsed and I have not made any report. Tonight I am going to have a little talk with you. And I feel sure I will get to the ear of Doctor Bates himself through you.

First, to put it briefly, I can do some of this work very well. I know this because I have had some very fine success. The reverse side is that nobody wants to have their eyes cured this way. This does not mean that I am discouraged in the least. The ripples are getting a little larger. Last Monday night I had four beginners-two who were about to put on glasses, and two who have worn them for several years. (The following sentence may or may not be a misprint. It is printed here exactly as in the original magazine.) I started them all with a twenty minute talk, and if twenty-five per cent last to the tape I will not feel ugly. It is very encouraging to see evidence accumulating to prove that this little small whisper is beginning to be heard in the din of this wilderness of eyesight moderns.

Referring to the case of little Edith—. She was a very sweet little girl, but at ten years, after eight years of effort and failure, she hated the thought of eye work, and her parents were likewise tired on the last lap. They were very good, but had not the least control over her. When a child tells you that she is determined not to learn how to swim, and then refuses to go through the motions – well, at the end of three months' work, I had won her confidence and was just beginning to get results, and right there they decided not to give me another month, even though I insisted it was to be free of any charge. I had charged $50.00 a month, and saw her at the house six times a week, although it took me an hour to drive there and back. They paid me $150.00, and one Sunday morning three drunken Mexicans smashed my car on the way there; it cost me $240.00, and they didn't have two hundred and forty cents. "Sacrifice is the law of progress." The girl's parents and I parted the very best of friends. I even hope that someday I will feel competent to take up that case again, when she is a little older.

On January 9th, a Mr. S. came to me, 66 years old, with a **cataract** in each eye. One had been operated on several months before, and that eye was distinctly worse. He had spent $300.00 in two years. His last experience was $47.00 for a pair of glasses that were useless. He came on Monday morning, and could not read his watch without glasses, nor see the "C" of the small card, and on Saturday morning of that week he read the bottom line of Fundamentals - so much was his "vision benefited" in one week. In one month he had read in one day, without glasses, five pages of the Sunday newspaper, and another day twenty-one pages of a book, and could read big signs two hundred feet away. At the house of a patient of mine he read half a column of a newspaper.

A few days after that, he simply broke an appointment and went off and bought another pair of glasses. A Mrs. Chandler, an old graduate nurse, who is helping me with this work found out from his wife that he decided it would take too long by this method to see without glasses. I believe he got into a mental complex, the crisis of his last few years of misery, and could not realize that another four weeks would probably have had him back at work. Of course, glasses cannot help him, and I will not be surprised if I hear some of these days that I ruined the poor man's eyes, and that is the reason the new glasses won't work.

On Saturday last, a Mrs. Kinley came ten miles to me. **She is eighty-four and has a cataract in each eye**. When I took her glasses off, she could not walk around freely, and could not read the "C." In a little while, she read four lines. **Palming and the sun glass**. On Thursday, five days later, she came again on the trolley, and reported that she had not put her glasses on since I placed them in her bag myself, and that she had done all her housework and her marketing and her sight was very much improved. She is a keen, strong woman at eighty-four, and I am hopeful that her earnestness and courage are going to make a better ending than I had with Mr. S. who was only 66.

You once suggested that I get some clinical work. This was actually promised me, in the City Clinic.

I am always mentioning the work to my patients and my friends, and I am more determined than ever to go to New York for a proper training as soon as it is possible. In the meantime, I am learning much here alone, and I trust that Doctor Bates and you yourself will not lose patience with me or my work. Sometimes I feel like the man in the middle of the stream getting things thrown at him from both sides, but as nothing is hitting me, I am really getting some relish out of that side of it, too.

You may be very sure that I will be more than pleased to hear from you at any time, and I hope that when I write again it will be to tell you that I can set the date when I can start for New York.

With kindest personal regards for Doctor Bates, as well as for yourself. Yours most sincerely,

W. B. MacCracken, M.D.

Dr. MacCracken was instructed, certified in the Bates Method by Dr. Bates, cured many patients' eye problems and wrote two books on Natural Eyesight Improvement; Use your own eyes and Normal Sight Without Glasses. Free at: www.cleareyesight.info. and in the Book; Do It Yourself – Natural Eyesight Improvement – Original and Modern Bates Method.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

APRIL, 1928

Brain Tension

Tension, Strain, Relaxation
Nerves, Cells in Brain, Body, Eyes, Retina

The brain has many nerves. Part of these nerves are called ganglion cells and originate in some particular part of the brain. Each has a function of its own. They are connected with other ganglion cells and with the aid of nerve fibers are connected with others located in various parts of the brain as well as in the spinal cord, the eye, the ear, the nerves of smell, taste, and the nerves of touch. The function of each ganglion cell of the brain is different from that of all others. When the ganglion cells are healthy, they function in a normal manner.

The retina of the eye contains numerous ganglion cells which regulate special things such as normal vision, normal memory, normal imagination and they do this with a control more or less accurate of other ganglion cells of the whole body. **The retina has a similar structure to parts of the brain.** It is connected to the brain by the optic nerve. The eyes are a extension of the brain.

Many nerves from the ganglion cells of the retina carry conscious and unconscious control of other ganglion cells which are connected to other parts of the body. The state of the eyes affects the body and the state of the body affects the eyes.

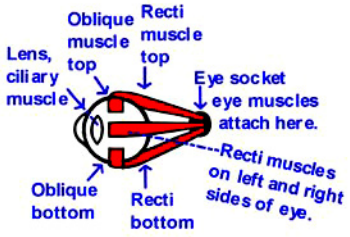
When the ganglion cells are diseased or at fault, the functions of all parts of the body are not normally maintained. In all cases of imperfect sight, it has been repeatedly demonstrated that the ganglion cells and nerves of the brain are under a strain. When this strain is corrected by treatment, the functions of the ganglion and other cells become normal. The importance of the mental treatment cannot be over-estimated. Relaxation of mind, body, eyes = healthy eyes, nerves, cells, clear vision.

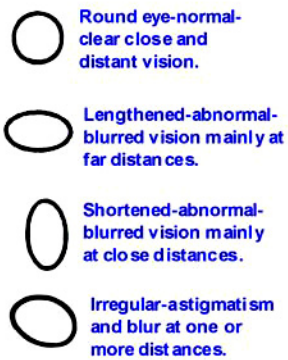
A study of the facts has demonstrated that a disease of some ganglion in any part of the body occurs in a similar ganglion in the brain.

Brain tension of one or more nerves always means disease of these nerve ganglia. Treatment of the mind with the aid of the sight, memory and imagination has cured many cases of imperfect sight without other treatment.

Cataract

By W. H. Bates, M.D.





Some years ago a professor of anatomy was exhibiting the effect of pressure on the enucleated eyeballs of a dead cow and some other animals. At a distance of about twenty feet from the eye, the audience observed that the pupil was perfectly clear. Immediately after the eyeball was squeezed by the fingers of the professor, the area of the pupil became at once completely opaque, from the production of a cataract. Then when the pressure on the eyeball was lessened, the cataract at once disappeared and the eyeball became normal. Again squeezing the eyeball, a cataract was produced as before. And again, the cataract disappeared when the pressure was lessened. The experiment was repeated a number of times with the result that the pressure on the eyeball always produced a cataract, which was relieved by reducing the pressure.

There are two oblique and four straight or recti muscles on the outside of the eyeball.

The superior and inferior oblique pressing on the eyeball at the same time have always been followed by lengthening of the eyeball. The four straight muscles on the outside of the eyeball shorten the globe or eyeball by their contraction. In animals the eyeball has been shortened experimentally by operations on each of the four straight muscles, which increased the pressure temporarily. These operations were performed after death. Similar operations on the two oblique muscles at the same time produced pressure and increased hardness of the eyeball with cataract following.

Patients suffering from cataract have increased the hardness of the eyeball, at the same time increasing the density of the cataract. While the cataract is being observed with the aid of the ophthalmoscope, it can be seen to change in size or density when the patient consciously or voluntarily increases or diminishes the hardness of the eyeball with the aid of the memory or the imagination.

When a word, a letter, part of a letter, or other object is remembered perfectly with the eyes closed or open, the cataract can be seen by the observer to become less. But if memory of letters, colors or other objects is imperfect, the cataract always is seen by the observer to become worse. A great many cases of senile and other forms of cataract have been temporarily improved and this improvement has become more complete and more permanent by the practice of a perfect memory.

A perfect memory usually becomes manifest when the patient practices the optical swing. However, the cataract always becomes worse when the optical swing or the perfect memory is not practiced. To keep the eyeball hard by practicing an imperfect memory is difficult and requires effort. The practice of an imperfect memory is tiresome and requires constant attention of the patient. In

others it can be demonstrated that the formation of cataract in elderly people requires hard work and is exceedingly difficult. (Some of) these patients are difficult to treat because they cannot control the functions of the mind.
(The function of the mind can be improved at any age, along with the vision. Improving vision improves function of the mind. Improving the mind, improves the vision. Stay active; mentally and physically. See left and right brain hemisphere activation, integration exercises.)

A perfect memory is easy. It is quick, continuous and beneficial. Patients with a perfect memory have consciously or unconsciously a perfect optical swing. They are able to remember, to imagine letters, colors and other objects continuously without any strain or fatigue. These cases are favorable and recover from cataract after they demonstrate that a perfect memory is beneficial.

The study of **cataract** has occupied the attention of eye doctors for many hundreds of years. **It occurs very frequently in India, China, Japan** and among people of the highest intelligence, as well as among those whose intelligence is of the lowest order. Some cases appear without apparent cause. It may increase rapidly or slowly and continuously, until the vision is completely lost.

Of all organic diseases of the eye which have received medical attention, measures of relief by operation or by the use of eyedrops have usually, in a large number of cases, been unsatisfactory. Cases have been operated upon in which a temporary cure was obtained. However, in too many of these cases the good vision obtained soon after the operation did not remain good. In some of these cases and without apparent cause, inflammation of the interior parts of the eye developed and was followed by serious loss of vision.

Some cases of cataract are found in the eyes of children soon after birth, sometimes in one eye, less frequently in both. The cataract which occurs in children is softer than in the eyes of adults and is more readily benefited by operation than in the eyes of adults. In some cases of cataract in children, the front part of the lens becomes opaque. Such a cataract is called an anterior polar cataract. Often, after the lens has been punctured, it becomes absorbed and good vision is obtained. In other cases an opacity forms on the back part of the lens which increases until the lens becomes entirely opaque. Here again repeated puncturing of the lens is followed by a total opacity of the lens, and its complete absorption. In a third variety of cataract in children, an opacity of the lens forms in one or more layers of the lens, which is usually absorbed after repeated punctures of the lens are made with a sharp needle. This operation has been called "needling of the lens."
Birth trauma, forceps used on the baby's head, neck, suction delivery, falls, head, neck injury can misalign the neck vertebrae, bones of the skull, eye socket (where the eye muscles are attached, nerves, blood vessels pass through and the eyes rest), resulting in: pressure, tension on/in the eye, lens, retina, eye muscles, abnormal eye muscle/eye function, movement, abnormal eye shape, incorrect focus of light rays, pressure, tension on the nerves, blood, lymph vessels in the neck, head, eye muscles, eyes, retina causing unclear vision, cataracts, astigmatism, crossed, wandering eyes and other abnormal conditions.
Chiropractic and Cranial Sacral treatment to align the neck vertebrae and bones of the skull/eye socket and the Bates Method removes the pressure, tension from the eyes, lens, retina, muscles, nerves… the eye returns to normal health, shape, function – cataract and other eye problems are reversed, cured without surgery, vision is clear.

When cataract occurs in adults of forty years or older it is called senile cataract. In adults, the operation of needling the lens is not so successful in being followed by absorption of the lens. In some cases, if not in a large number, better results are obtained by removing the whole lens by one or more operations. There are many diseases of the eyes such as inflammations of the iris and choroid which are believed to produce cataract. The removal of the lens is usually very difficult without injuring the iris, choroid and retina.

In cataract the crystalline lens becomes opaque and being opaque it interferes very seriously with the vision. To obtain good vision, eye doctors were usually able to improve the sight by the removal of the opaque lens. After the lens was removed, the vision was materially improved by the use of strong glasses, which rarely improved the sight to normal.

I have studied the physiology of the eye and I have repeatedly published the fact that it is much better to cure the opacity of the lens so that the patient could have normal vision with a normal eye rather than to relieve the blindness by the removal of the lens. Curing rheumatism of the hand by an operation which removes the hand is not the best treatment. Likewise rheumatism of the big toe is not considered a proper case for amputation. Medical or simple treatment without an operation will usually result in a cure.

I do believe in operations when necessary or where medical treatment fails to correct the trouble. However, removing the lens from the eye does not cure cataract of the lens nor does it prevent cataract from forming in the other eye.

Since cataract or opacity of the lens is caused by tension, relaxation should cure or prevent the trouble. If relaxation fails to cure cataract we should consider this fact an evidence that tension is not the cause of cataract. Relaxation can be obtained with the aid of memory, imagination and sight. If the eye of a child is injured by a blow and a cataract forms early or late in life it has always been demonstrated that the eye with cataract is under a tension.

Treatment which brings about relaxation always cures the cataract after a considerable amount of treatment which may require several months or longer. Among the many methods of treatment, the amount of **relaxation necessary** to be followed by a cure is a **perfect memory, perfect imagination** and the benefit obtained by **sun treatment**. **Central fixation** has in some cases cured all forms of cataract - senile cataract, soft cataract in children, **cataract caused by sugar in the blood and other poisons.**

It is found that when patients sit **facing the sun with both eyes closed and move the head a short distance from side to side,** they can stand the strong light of the sun for longer periods of time than they can with the eyes open. When the sun is not shining, a strong electric light is a good substitute.

Much quicker improvement in the sight can be obtained with the proper use of the **sunglass**. The patient is directed to look down while facing the sun and to do this continuously without effort or strain. The operator lifts the upper lid with the thumb of one hand. When the white part or sclera of the eyeball is exposed to view he quickly concentrates or focuses the strong light of the sun on the sclera, moving it continuously and only for an instant at a time.

A Case Of Cataract

By Emily C. Lierman

There was a time when I thought that all cases of cataract could be treated and benefited by one and the same method. I know now that this cannot be done for many reasons. Age has nothing to do with treatment for the cure of cataract, because I have had patients over eighty years of age who responded much quicker and became well much sooner than younger patients who were troubled the same way.

I was treating a woman with cataract who was seventy-seven years old, at the same time that I was treating another woman, age sixty-two. Both women had the same amount of vision with the test card, and neither one could read newspaper or book type. Yet, the elder of the two was benefited and the cataract of both eyes had entirely disappeared, while I was still working hard with the younger patient who was becoming irritable, rebellious and most discouraged, because of the increased length of time required to benefit her.

Neither of us was at fault as far as my good judgment goes, because she was faithful in what I directed her to do when I was not with her. While I was treating her, I had to remember constantly that there was a man named Job who was severely tried, according to the Old Testament of the Bible. However, my dear patient did not know of my endurance because I kept smiling always. She was very nervous and had cause to be. Money was no object to her but a great disappointment had come into her life. So great was it in fact, that all who knew her thought she was losing her mind. For this reason, my heart went out to this patient who suffered mentally because of her wayward son. Extreme mental, emotional strain=strain, tension in the body, mind, eye muscles, eyes=cataract, unclear vision.

During the hour, or I should say two hours of her treatment, because I could never accomplish anything much in less time, she would mention the name of her boy who, although he was of age and married, was still her little boy. Her room, which was cheerful and sunny, had pictures of him all over the walls. Some of them were baby pictures and there were others taken at the ages of sixteen and twenty-one and when he graduated from college. I noticed particularly that when she looked at his baby pictures her face would show signs of tenderness and relaxation. But when she looked at the pictures of his later years she would close her eyes and her face would become wrinkled with age and tension.

For days after I had noticed this, I studied her case and planned a different way of treating her. All my spare moments were spent in thinking out the best way to relieve her strain which prevented a permanent benefit.

Weeks grew into months before I finally conquered the wrong, or really helped her to overcome her disappointment and nervousness. **In seven months' time with treatment several times every week, never less than three treatments each week, she finally became able to read every test card, even to the ten line letters, at fifteen feet.**

She had been a great reader, and could read a whole book in less than two hours when she was much younger. Therefore it was a terrible disappointment to her when her sight failed and she had to forego that pleasure. Occasionally, a neighbor or a friend would visit her and read her favorite books aloud to her. Now at the end of seven months' treatment of her eyes she was convinced that I had told her the truth; that she would become able to read again without the aid of glasses.

Neighbors and friends were invited to call so that they could see with their own eyes what she was able to do. These friends knew how she had doubted me. They doubted me too, except one who was at one time a patient of Dr. Bates. This friend had not called because she was too far away, but she had written to my patient. What she wrote gave my patient enough faith and confidence in me to start the treatment, although she doubted me. She told me so in plain English. She was not the only patient who doubted me at the beginning of the treatment and who later on believed in me completely.

When the vision of this patient became normal for distant sight, she soon was able to read the finest print readily without glasses. I had not tested her ability to read fine print because I feared the bad effect of disappointment if she failed to read it. My experience with other and similar patients encouraged me to believe that if I could improve her distant vision to the normal that she would soon become able to read the fine print, "diamond type," without the aid of glasses.

I felt that it was useless for me to test her ability to read fine print from our usual test cards, so I asked her if she had some book in her possession containing small print, and she answered me by pointing to a large dictionary fastened to a stand in a sunny corner of her room.

Before I asked her to go near the dictionary, I said, "I have had patients with your trouble who became able to read the small print of the dictionary by placing a small card with much finer print in the neighborhood of the small letters of the dictionary." As I watched her closely while saying this and noticed her frown, I said quickly, "Of course, I do not expect you to do this just now."

This remark worked something like a magnet, for she at once hurried to the dictionary and with the aid of the small card which she received from me and which contained fine print or diamond type, she read occasional words of the dictionary, much to her delight.

There were times during the months which followed, when she had relapses which caused depression, but after she had removed some of the pictures of her son from the walls of her room, the conversation while I was with her was more about herself and the improvement in her eyes. In the beginning, her distant vision with the test card was 10/30 with the right eye and 10/50 with the left. At the end of her treatment her sight was better in each eye than the average normal eye.

During the last treatment, I spent the day with her, and she read for me a large part of a book in which the print was very small. She announced with a great deal of pleasure that for years she had been unable to read this book, with or without her glasses. The cataract in both eyes was very materially improved. Only the lower inner part of the pupil had a trace of the cataract in each eye.

The principal part of the treatment given this woman was the sun treatment. While I was with her, I applied the sun glass. When I was not with her she was able to use the sun glass with benefit or just the same as I used it. Because she was of a nervous temperament, I always **focused the sunlight on the outside of her closed eyelids.**

Questions And Answers

Q - Is it all right to palm while lying down? Is it better to sit or stand while doing so? If the arms get tired is it all right to rest the elbows on a desk or something like that while palming? Or is it best to hold the elbows up free from all support?
A - It is all right to palm while lying down. Palming should not be done while one is standing. The elbows should rest on a desk or table or on a cushion placed in the lap. One should be in as comfortable a position as possible while palming, in order to obtain the most benefit.

Q - My left eye turned in and was corrected by operation. Now it turns out. What method will cure this?
A – You need more than one method. Complete relaxation will relieve the strain and correct the squint.

Q – Is a great amount of floating specks indicative of cataract? When I am weary these look like a flock of bees crossing my eyeballs.
A – No. Your particular strain produces floating specks. A different strain produces cataract.

Q – Would the reading of fine print at four inches be helpful?
A – The reading of fine print at four inches is usually helpful.

Q – How long is it necessary to read the test card before obtaining benefit?
Q – Some patients by palming and resting their eyes have obtained benefit in a few minutes.

Q - I notice that my squint eye does straighten after palming, but reverts when I stop. How can I tell when and how I strain?
A – Avoid staring after palming and blink all the time. You can demonstrate that staring is a strain by consciously doing it for a few seconds.

Q – Please explain what you mean when you say "imperfect sight, imperfect memory."
A – If you see an object imperfectly, blurred or gray instead of black, you cannot remember it perfectly. You will remember it as you see it. The blurred mental image causes the object to continue to be seen unclear because the memory, imagination, brain is creating, storing a unclear image, picture of the object. Remembering, imagining the object clear, shifting on it causes the brain to store a clear picture of the object in the memory. The object becomes clear, the eyes then see the object correct, clear and send a perfect clear picture to the brain. The brain stores a perfect clear picture of the object in the memory. The next time the object is seen, the eyes, brain use the clear memory picture to activate correct eye function, perfect shifting on the object - the eyes see the object clear.

Q - My hands become tired when I palm. Can I sit in a dark room instead of palming? Can I cover my eyes with a dark cloth?
A - No. I have found this to be a strain.

Q – Why is fine print beneficial?
A – Fine print is beneficial because it cannot be read by a strain or effort. The eyes must be relaxed.

Q – How can one overcome the stare if it is unconscious?
A – Blink consciously, whenever possible, especially when reading. Never look at an object for more than a few seconds at a time. Shift your gaze. Shift from part to part, object to object. Blink, relax.

Q – I have attained normal vision, but after reading for a while, my eyes feel strained. Would you still consider I had normal sight?
A – If your eyes feel strained, you are not reading with normal vision. Check your posture, relaxation, positive state of mind, stay interested in the subject being read. Blink. Avoid staring, squinting, effort to see, worrying, thinking about the eyes, clarity of vision. Look to the distance occasionally.

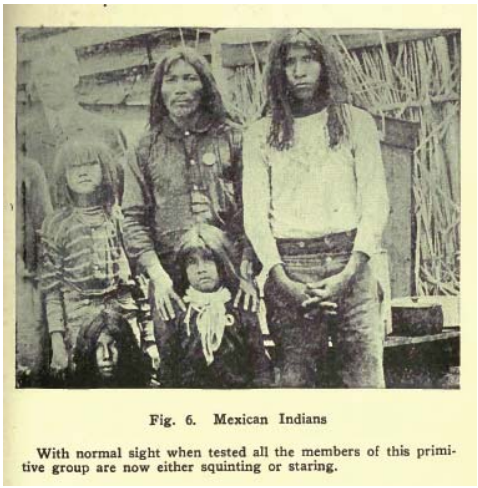


Fig. 6. Mexican Indians

With normal sight when tested all the members of this primitive group are now either squinting or staring.

Q – If type can be seen more distinctly with the eyes partly closed, (squinting) is it advisable to read that way?
A – No, it is not advisable to read that way because it is a strain, and alters the shape of the eyeball.

Q – Seeing stationary objects moving appears to me to be merely self-hypnotism. I can't do it.
A – When riding in a train the stationary telephone poles appear to move in the opposite direction. Of course this is an illusion, but it is a benefit to the eyes to imagine all stationary objects moving.

Q – I am always conscious of eyestrain in church.
A – Eyestrain is caused by a stare or an effort to see. Close your eyes frequently and rest them. Shift, blink when looking at the priest, alter, windows… If you are bored with the sermon because you have heard it many times before, let the mind daydream to something pleasant.

Q – Is there any power in the lens of dark sunglasses? Are they harmful?
A – Yes. Dark glasses are very injurious to the eyes. Sunglasses, tinted, colored, UV blocking and even plain eyeglass lenses prevent healthy full spectrum sunlight from entering the eyes and causes harmful unbalanced, partial spectrum light to enter the eyes, brain, body, lowers tolerance to sunlight and all light, adjustment to light/dark, causes watering eyes, impairs mood, sleep cycle, functions of the brain, memory, imagination…, impairs health and function of the retina, lens, cornea, eye muscles, iris, resulting in unclear vision, astigmatism, cataracts, macula degeneration, conical cornea and other eye problems.



Fig. 7. Ainus, the Aboriginal Inhabitants of Japan
All show signs of temporary imperfect sight

Q – By blinking do you mean shutting and opening the eyes quickly, or is it dome slowly like a wink?
A – Blinking is done quickly, and not slowly link a wink. Watch someone with perfect sight do this unconsciously, and follow his example.

Q – I have noticed that when I palm, my eyeballs hurt from the pressure. When I loosen this tension the light filters in.
A – Palming is done correctly with the fingers closed and laid gently over each eye, using the palms like a cup. If this is done properly there is no pressure and the light

is shut out. Its ok if a little light shines through.

Q – I have improved my sight by palming, but when I read for any length of time the pain returns.
A – When you read and your eyes pain you, it means that you are straining your eyes. More frequent palming may help you more continuously.



The same boy making himself myopic voluntarily by partly closing the eyelids and making a conscious effort to read the test card at ten feet.



Fig. 37. Myopic Astigmatism comes and Goes According as the Subject Looks at Distant Objects With or Without Strain

No. 1.—Patient regarding the Snellen test card at ten feet without effort and reading the bottom line with normal vision.

No. 2.—The same patient making an effort to see a picture at twenty feet. The retinoscope indicated compound myopic astigmatism.

Squinting – To squeeze the eyelids close together, narrowing the space between the eyelids. This reduces the unfocused light rays in abnormally functioning eyes (the pinhole effect) and brings temporary clearer vision while squinting but leads to eye muscle tension, strain, muscle tension in the face, neck... and increased blur. Avoid squinting.
Shift part to part on a object to see it clear, maintain clear eyesight and healthy eyes.

Case Report

By Edith Reid

The following is a report of a case treated by Mrs. Edith Reid, one of Dr. Bates' representatives, who is now practicing in Johannesburg, South Africa.

Many times I have been asked: "Is it really possible to cure cataract by Dr. Bates' method without an operation?" I can prove that it is. One morning in January during our very hot weather a lady called to see me. Upon being told that as I was leaving town very shortly I could not see her, she became very much upset and declared that she would go blind, as she had cataract. As soon as I heard it was cataract, I had her shown into the room, knowing that if she was not taught the Bates Method she would become worse if left until I returned some months later. This lady made her living by teaching singing.

When tested, she read the fifty line at ten feet from the test card; then her vision blurred as she began to strain terribly. She was taught to palm and rest her eyes. Hers was a bright, sunny nature and she was very happy at finding such an easy simple way of resting her poor tired eyes.

She was told to discard her glasses, but declared that would be very difficult as she had worn them for thirty seven years. However, she said that she would be plucky and try. She was asked to come again the following day, which she did. She was all smiles and said that she was sure she was better as her eyes felt moist and so rested.

She was taught the swing and was told to swing and palm all day long if possible. She had a journey of about two hours on the train every morning to come into the city to teach, so she was told to look out of the windows and see everything moving, and when talking to friends to be sure to close her eyes often, so as to keep herself from staring.

Every morning for the next eight days she came to my rooms to get the sun glass treatment and rest for at least an hour before starting her teaching. She was always bright and cheerful and came every day saying how much better she was.

On the ninth morning she was tested and she was able to read the test card 15/10 and diamond type print at twelve inches. She became very much excited and told of how she had been told by an eye specialist that she had cataract and that she would go totally blind and then they would operate. She was also told never to take off her glasses. When asked how she found time to practice, she answered: "I work with my eyes all day long. When I play the accompaniments for my pupils, I swing and then when I speak to them I close my eyes."

She is now able to read the newspapers and any small print with perfect comfort. She says her friends come to see her teach as they had never known her without glasses. She is most grateful to Dr. Bates.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MAY, 1928

Color Blindness

Some people are unable to distinguish red from blue or other colors. Many doctors explain color blindness to be due to something wrong with the retina, optic nerve or brain. They believe that organic changes in the retina are the principal cause. But this is not always true because, in some cases, cures occur without any apparent change in the retina.

I have found that color blindness occurs in a great many cases in an eye apparently normal. There are, however, a number of

individuals who can be demonstrated to have color blindness as a result of a disease of the retina caused by mental strain. These cases cannot be cured, however, until the disease of the retina is cured.

Some patients with color blindness are sensitive to a bright light. On the other hand, there are patients with color blindness who are more comfortable in a bright light. **These patients are usually relieved by the practice of sun treatment, central fixation, palming, the long swing, or any other method which brings about relaxation.**

One patient had a normal perception for colors at three feet and at ten feet. But at a nearer point than three feet she was color blind, the blindness being most marked at three inches. At a distance greater than ten feet the color blindness was evident. After her eyestrain was relieved by relaxation her color blindness disappeared.

People who have been born color blind as well as those who have acquired color blindness have all been cured by the practice of relaxation methods.

The Stare

By W. H. Bates, M.D.

Much can be written about the stare. In the first place, when a patient stares, an effort is always made to hold the eyes still without moving them. It is impossible to hold the eyes perfectly still. Trying to do the impossible always requires a strain. This strain can be demonstrated to be a **mental strain which affects all the nerves of the body as well as the eye. With a mental strain, the memory and imagination become imperfect and imperfect sight results. Pain, fatigue or dizziness, are acquired or made worse.** With relaxation of all the nerves, the sense of touch is improved, but with the stare or other efforts to see the sense of touch is lost while the sense of pain is increased. Staring=not moving/shifting the eyes. Keeping the eyes, visual attention on only one part of a object without shifting on the part, without shifting to a new part, or trying to see all parts of a object or all objects in the central and peripheral field clear at the same time without shifting part to part, object to object. This is diffusion, eccentric fixation. These two types of staring result in strain and unclear vision.

Glaucoma, acute or chronic, has been consciously produced by the stare. The fundamental symptoms of glaucoma may be present with or without increased hardness of the eyeball, contraction of the nasal field, or glaucomatus excavation of the optic nerve. In glaucoma the blood vessels of the retina appear to be arranged in the form of a right angle just as they dip down into the nerve. The whole papilla where the optic nerve enters the back part of the eye is all white instead of pink. Changes which are seen in the optic nerve are organic. The contracted field may be considered to be functional because there are many cases which recover and the field becomes clear.

This suggested that in glaucoma the patient be recommended to alternately stare and relax. When he is staring and trying to improve the vision by an effort, all the symptoms of glaucoma may be increased. If the stare is the cause of glaucoma, relaxation should always lessen the severity of the symptoms.

There are some patients who have been using the stare to improve their vision for a sufficient length of time to acquire the habit without being conscious that an effort was being made. Each individual case may require individual treatment in order that the patient may become, by practice, conscious of the stare when the vision is lowered. Of course, if the stare increases the glaucoma, by stopping the stare we would expect the eye to improve. If it does not improve, the patient is still staring, whether he knows it or not. Sometimes by increasing the distance of the test card from the eyes while the patient is staring, he often becomes able to demonstrate that the stare is present when the vision becomes worse.

Many adults past middle life unconsciously stare and produce glaucoma. By practice they become conscious of the stare. While the stare, when it is strong enough and sufficiently prolonged, usually increases the hardness of the eyeball, in the matter of treatment the great problem is to suggest measures which will enable the patient to demonstrate that the stare is the cause of increased tension of the eyeball in glaucoma.

Absolute glaucoma is a serious disease and the stare can become so great that a large amount of pain and total blindness will be produced. The pain may be so severe that many ophthalmologists feel justified in removing the eyeball to bring relief. While many cases of absolute glaucoma obtained much relief from pain after the removal of the eyeball, there were too many cases which still had severe trouble, even after such an operation. A strain which produces absolute glaucoma is really a mental strain and not a local one entirely.

Trigeminal neuralgia is also a very serious eye trouble. Many operations have been performed for its relief, most of which were failures. Some patients have had nearly all of the fifth nerve with its branches removed in order to relieve the pain. There are many patients who have not obtained permanent relief from pain after various methods of orthodox treatment were employed. In the severest cases the branches of the fifth nerve at their origin in the gasserian ganglion in the brain have been removed, as well as the ganglia, without any permanent benefit whatever. I have discovered that the stare was the cause of the brain tension and that when the stare was relieved, all the symptoms of trigeminal neuralgia were relieved or cured and the vision became normal.



Variable Swing with finger to side of face. Move the head left and right and see the finger move opposite.

Conical cornea has for many years been considered incurable. A great many operations have been performed in which a small part of the cornea was removed with the expectation that when it healed the conical shape of the cornea would be corrected and the vision would thereby be improved. These operations were usually a disappointment. Conical cornea has been treated by relaxation methods and with great success.

When the forefinger of one hand is held about six inches to one side of the face and about six inches straight ahead, the patient, by moving the head and eyes from side to side slowly or rapidly, can imagine the movement of the finger from side to side. This movement of the finger is called the <u>variable swing</u> and is specific for the benefit of all cases of conical cornea. It owes its value to the fact that when the finger appears to move, the injurious stare is prevented. The length of time necessary to improve the vision with the help of the variable swing usually is not very long.



Variable Swing with finger in front, center of face, between the eyes, eye level.

Iritis occurs quite frequently. The cause has heretofore been ascribed to syphilis, rheumatism, or some other constitutional disease. Chronic cases are seldom cured until after months of persistent treatment. Pain in acute iritis may be very severe and the vision is usually lowered. While treating patients in one of the out-patient departments of a city hospital, one of them applied for treatment of iritis which had produced so much blindness that he required an attendant to help him. The eyeball was very red, the pupil contracted, and the vision very imperfect. He suffered very much from

photophobia or sensitiveness to light and kept his eyes covered most of the time.

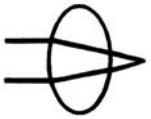
I turned him over to my assistant with directions to **obtain relaxation by palming, swinging or the memory of perfect sight.** One-half hour later the patient disturbed the Clinic by laughing frequently, because the symptoms of iritis had almost entirely disappeared. He walked about the place, telling anyone who would listen to him about his prompt recovery. **This patient was able to increase the symptoms of iritis by the stare and lessen them by relaxation.**

Surgeon Creates Corneal Astigmatism

It may not be generally known that **the stare is the cause of corneal astigmatism.** With the aid of the ophthalmometer, most cases of corneal astigmatism can be diagnosed and measured. The ability of some people to produce corneal astigmatism is interesting. Some years ago a house surgeon in one of our largest hospitals acquired considerable notoriety or fame by his ability to produce temporarily a considerable amount of corneal astigmatism by staring at the opening tube of the ophthalmometer. He spent many hours experimenting on his eyes and he had become able not only to produce astigmatism at an angle of 90 degrees but also at an angle of 180 degrees. It required many months of constant practice before he became able, with the aid of the stare, to produce astigmatism with an oblique axis. Although he enjoyed the experimental work, which had for its object the cure of corneal astigmatism, so many doctors criticized him adversely that he stopped.



Nearsight-Myopia
Unclear distant vision.



Farsight-Hypermetropia
unclear close vision.

It was believed at one time by many physicians that **myopia** was caused by straining to see at the near point. Experiments to produce near-sightedness by an effort to see at the near point were failures. All the men, and there were many, who tried to produce near-sightedness or to lengthen the eyeball by efforts to see at the near point and so produce myopia, found instead the opposite condition, hypermetropia, (unclear close vision) with a shortening of the eyeball. The stare can produce a different kind of strain in each case and therefore cause a different eye defect or disease.

Some years ago a friend of mine called to see me and to learn about my experiments. I said to him: "Doctor, would you like to see **a case of cataract produced and cured**'?" I took him into a dark room where one of my patients, a woman about seventy years of age was seated. After he had seen her he recognized her as one of his former patients. He told me in a low voice that arrangements had been made for taking her into a hospital and operating upon her eye.

I gave him an ophthalmoscope with a plus 18 convex glass which produced a very much enlarged image of the cataract. I asked the doctor if he could see the cataract, and he replied that the area of the pupil was completely filled with the cataract, and that there was no red reflex. He said that he believed that one would be justified in operating for its removal.

"Before we do that," I said, "suppose we look at the lens again." So we looked at the lens again with the ophthalmoscope and again he showed me that it was a proper case for operation.

"Well," I said, "suppose we keep looking at the cataract for a few minutes." I asked the patient if she had a good memory for flowers. She replied that she had. I asked her what flower she could remember best. She answered: "I believe I can remember a yellow chrysanthemum better than any other flower." I then said to the doctor: "how is the cataract?" "Why," he said, "it has disappeared." He was evidently very much puzzled.

I then asked the patient if she could remember my first name. She answered: "No." I said. "Suppose you try." She immediately began to stare and the upper part of the lens became opaque and all the muscles of her face were under a strain.

We investigated this case for half an hour or longer and came to the conclusion that **the memory of perfect sight was a cure for cataract and the memory of imperfect sight, which is usually associated with a stare, the cause of cataract.**

The relief of eyestrain or the stare has benefited so many heretofore considered incurable cases that the conclusions made should be investigated. If it is true that the stare can cause so much pain or suffering it is a breach of medical ethics for any doctor to deprive a man or women of relief by the use of such simple successful methods of treatment.

Staring Relieved By Treatment

By Emily C. Lierman

A woman who had been suffering from **pain and imperfect sight** was sent to me for treatment. She suffered more at business than at any other time, and glasses did not help her much. Having charge of a tea room she was continually greeting patrons and placing them at tables. At times she seemed to have no trouble at all with her eyes and was able to read any part of the menu to patrons who asked her to do so, without using her glasses, which she wore most of the time. She had worn glasses off and on for four years and disliked them exceedingly, because they did not become her. Shortly before coming to me, she was told by an eye specialist that she would have to wear bi-focals. She was ready then to try most anything rather than wear them.



Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear.

Her vision for the test card was 15/20 in both eyes, but with fine print and ordinary type she did not do so well. I began treating her by having her palm and while her eyes were closed and covered, I explained that some patients were not helped by palming, but if that were so in her case, we would try something else. She had a good memory for objects and people's faces, but her memory for names was not so good.

I asked her to describe to me all the sections of the tea room that she could remember. In this way, her memory and imagination would improve for other things which were not remembered or imagined so well. She described in detail how the tables were arranged and the design of the table silver. She could not remember the pattern of the tablecloths and napkins, although when she purchased the table linens, she purposely selected a certain pattern because it appealed to her. This worried her, but I explained that after she had learned how to relax under unfavorable conditions, she would be able to remember such details. I directed her to keep her eyes closed for more than half an hour, at times keeping perfectly still without speaking to me.

(I watch patients very closely while they are **palming** to see whether they are in a comfortable position and if not I try to arrange it so. I find that when the knees are crossed, the position soon brings on an unconscious strain; therefore I direct the patient to **keep the knees uncrossed.** Then I arrange the **feet so that they are comfortably placed either on the floor or on a footstool or hassock**. The patient is usually most comfortable in

an armchair and if the arms of the chair are not upholstered, **I place a cushion under one elbow in such a way that the patient is most comfortable.** This brings the patient in a position leaning over to the right side or to the left, so I try to have the patient change the position while relaxing by reversing the cushion to the opposite arm of the chair. With children I manage a little differently, especially when not tall enough to rest their feet on a footstool.)

It is best to place the cushion on the lap or a table for both left and right elbows to rest upon. This keeps good posture, evenly aligned and relaxed body, shoulders, neck, head.

The test card which I used for this patient had an extra line of letters smaller than the 10-line letters, which are read by the normal eye at ten feet. After this woman had palmed sufficiently, I removed the foot stool and while her eyes were still closed I told her to stand up and to start swaying her body slowly with an easy sway of the body from left to right. Then I told her to open her eyes and look from one edge of the Snellen test card to the other and to tell me what the letters were as I pointed toward them. She read every letter of the test card with each eye separately without any difficulty whatever.

The patient was so excited over her sudden improvement in sight and the relaxation which she felt of her whole body, that she thought one lesson was all that would be necessary for her. I thought that the improvement during her first treatment was only temporary and told her so. However, I was willing to give the patient the benefit of the doubt and told her that if her vision remained normal and she felt no more strain or discomfort, that it surely would not be necessary for her to take another lesson.

Early the next morning my telephone rang and it was she, explaining her discomfort and strain and begging me to see her again. I was surprised that the change came so soon. I thought that she would have at least a few days of relaxation and freedom from strain, but she had been at a bridge party after seeing me and something had happened to her during the course of the evening which brought her quickly to me the next day.

I feared that it would worry her if she could not do so well during her second treatment with the large Snellen test card, so we worked together with another part of the method. This time we used fine print. I sat directly in front of her as she looked at the little card with fine print, but it was pitiful to see her staring at it, trying to read.

Staring is such a common thing and most people stare unconsciously at times. A great many people stare unconsciously most of the time and cause much or all of the discomfort which soon brings on chronic trouble with the eyes and sometimes causes blindness. If school teachers were instructed to remind pupils at intervals during the daily sessions of the permanent punishment to their eyes as the result of staring, it would be avoided in time and less eye glasses would be prescribed for school children.

People do not wait until they are physically tired out before they sit or lie down to rest, but most people do not know what to do e about their eyes when they are mentally tired. **In some cases just closing the eyes frequently for a second or two is all that is necessary to retain good vision for life.** This I know to be true because my grandmother who lived until she was 79 years of age did not wear glasses at all until she was over 70 years of age and then they were not fitted by an oculist, but were purchased at the price of ten cents from a solicitor who came to her door. She used them only when threading a fine needle. Without glasses, she could see fine stitches while sewing, whether the thread was black or white. What I particularly remember was that she blinked her eyes often, which I thought at the time was a mistake or an affliction, but since I have become Dr. Bates' assistant, I know that she was doing the natural thing.

If all mothers would watch their babies as they begin to notice things and avoid any possible stare by just attracting the baby's attention to various things instead of just one thing, I believe that a great deal of squint could be avoided, as well as other eye troubles. Of course there are squint cases which have been brought on through illness or injury of some kind, but even these cases can be eventually cured by teaching the patient how to shift and blink and avoid the stare.

I informed this patient that her principal trouble was staring and that I noticed it more on her second visit than I did at the first. She was told to close her eyes and while they were closed to remember a white cloud or a piece of white cloth, such as her handkerchief, which was in her lap at the time, then to open her eyes and instead of looking directly at the fine black print she was to look at the white spaces, and then close her eyes again and imagine them as white as her handkerchief.

She said she could remember a white cloud much better while her eyes were closed. While looking at her handkerchief she could see it perfectly white, but when she closed her eyes the memory of the white handkerchief was not so good. She said the whiteness became sort of gray or a soiled white, which made her uncomfortable while her eyes were closed. This proves again that Dr. Bates is right in saying that an imperfect memory of anything brings on strain and imperfect sight.

At first she could not do so well with the white spaces of fine print as she held the card six or eight inches from her eyes. We tried the other extreme then by placing the card close to her forehead, too close for her to read the fine print, even if she had no trouble with her eyes. **She was directed to move the card slowly, slightly touching her forehead over the bridge of her nose and opening her eyes with the slow movement of the card and closing them again. In this way she got flashes of the white spaces, and as she closed her eyes the memory of the white spaces improved so that when she drew the card away finally after practicing this method for ten or fifteen minutes she could read the fine print at six inches as well as she could at twelve inches.** Again she became excited as she did the day before and felt that at last she had grasped the idea of avoiding the stare and that she would not need to come again.

Two days later she telephoned me for another treatment, saying that she could not retain the good sight that she had while practicing with me. When she came for her third treatment, I tested her sight with the large test card, using various cards that I had. She did very well with the two cards she had read at her first visit, but with the strange cards her vision was the same as it was during her first visit, 15/20.

I decided to try a different method of treatment by having her imagine that my room was her tea room. A desk and small table with a few chairs were imagined to be tables at which she was to place imaginary patrons who were coming toward her. She told me that it was customary for her to have a napkin in her hand which served sometimes to wipe the top of a glass or to re-arrange a plate on the table. I gave her a towel to hold which served as a napkin and told her to shift from the napkin to the imaginary table, and in this way she learned how to shift and blink as she would have to do to retain her relaxation while at work in the tea room. She remembered this lesson very well and did her work in the tea room better for a few days.

When I saw her again, which was in less than a week's time, she said that she got along splendidly in the mornings, but in the afternoon after she had been busy for part of the day, she felt a strain coming on as usual, which caused a great deal of tension at the back of her head.

The method that we used that day at her fourth visit was used again at her last visit, the fifth treatment, when she did so well that I thought it unnecessary for her to come again. There were several pictures hanging on the wall of my room distributed in different places. I told her to imagine that she was in her stockroom where canned goods were stored. She explained how there were rows of canned tomatoes, which had the picture of a red tomato on the label. Then there were other shelves arranged with

cans of peas, which, of course, were green. There were shelves in another section of the room with canned vegetables, with various colored labels.

I told her to stand in the center of the room and to sway her body from left to right, blinking as she swayed and shifted from the canned peas to the canned tomatoes and other canned goods with various colored labels. She remarked that if she could keep up that good feeling of relaxation and freedom from tension and strain while she was practicing in the stockroom of her establishment, she would be amply repaid for the time she spent with me.

Her report over the telephone a few days later was favorable. She said that she had taken her car with friends and had driven many miles over a mountain trail, and if it had not been for her ability to blink and shift, she could not possibly have avoided an accident which would have thrown her car over the cliffs. I had told her to occasionally shift from the speedometer to the center of the road ahead and vice versa. I told her to remind herself continuously that it was not necessary to hold on very tight to the steering wheel, but to hold it loosely, which meant relaxation.

She said that her storeroom, she believed, was responsible for the absence of strain and tension late in the afternoon, when before she had seen me there was not a day that she was free from **pain in the back of her head**. She wore a fancy white apron during business hours, but always in the little pocket of her apron rested the small test card and a small fine print card which she would use when she had the opportunity to do so, practicing shifting from the white spaces of the fine type to sections of the room, which helped her to see things clearly and without strain. Carry a small rock or piece of jewelry, any colorful, shiny object with a lot of fine details. Shift on the details, colors, sparkles. Relax, blink, let the head, neck, shoulders relax, think something happy. This keeps close and distant vision clear.

I hope this article will be of benefit to those who do close work in offices, as well as people who do similar work to that of my patient.

Case Report

As is generally known, **fevers** of all kinds are apt, if not treated with the utmost care, to result in **defective eyesight, hearing** and many other troubles, and it was at the age of six years, **after severe scarlet fever, that my eyes became weak, and subsequently developed a convergent squint.** In order to check this defect, it was found necessary to harness me to a pair of huge unsightly spectacles, with the usual thick corrective lenses. As a result of this drastic treatment my eyes weakened still more, becoming **myopic and astigmatic**, although the squint had certainly improved, but only at the cost of producing the other complications, for exceptionally strong lenses were used to this end.

I continued to pay periodic visits to the best available eye specialists in Johannesburg and Capetown, South Africa, all of whom at first encouraged me into the belief that eventually I would be able to discard them. Latterly, however, I received no such encouragement, but instead was warned that blindness could result if I went without them at any time. I reached the age of 26 years without having received any benefit from the wearing of glasses. In fact even more technical terms were introduced into the condition of my eyes, and I had come to the conclusion that nothing could be done for them, and that I would always wear glasses, and that continuous **headaches** were my lot. Such a dreadful state of mind for any one to get into!

Imagine my joy when at a tea party (they have their uses after all) I heard Dr. W. H. Bates' name and methods of treatment mentioned for the first time; that was in 1926, and of course anything to do with the eyes attracted my attention at once. At that time a Ms. Reid and Mr. Jardine, both students of Dr. Bates, had been carrying out exceptionally good work with the Bates Method. I immediately consulted with them, overlooking entirely the fact that at that time I had a great deal of work to do which would require the use of my eyes. The first thing I was told to do was to remove my glasses, and not to wear them again, and my implicit obedience in this regard surprised even myself, for since then I have never returned to my glasses. To Mrs. Reid and Mr. Jardine I am forever grateful for what they did.

I think what caused me to put such faith in Dr. Bates and his methods was the fact that I had been going to eye specialists for some twenty years, and instead of my eyes being benefited, they became steadily worse, which fact coincided with one of his observations.

I carried out the various exercises prescribed, under somewhat difficult circumstances, my entire day being consumed with office work. However, this did not deter me, for I did the **modified sway while sitting at the typewriter**, got into the **habit of blinking**, and **snatched a peep at the sun** as many times a day as time permitted, morning and evening. I **palmed** my eyes in between, for, understand, at this time my eyes were being called upon to do work which they had never done before. It was indeed a hard and uncomfortable period through which I was passing. In addition to all the **relaxation exercises**, I did **physical exercises** to keep me generally fit, and this helped greatly.

After three weeks, quite by accident, one day, I began to realize the value of relaxation, for up till then I was undergoing too much of a strain; from this time on I steadily improved. Of course I realized that after having worn glasses for twenty years I couldn't expect to be cured immediately and that it would be only by hard work and patience that eventually my eyes would be normal.

I became absorbed in this treatment, and felt that a great deal could still be learned. The fact that my own eyes were not yet normal, urged me to learn more of the methods of treatment by this wonderful system. When in London, I received more benefit from Mr. Price, another student of Dr. Bates, to whom I am very grateful.

I feel that if all the followers of Dr. Bates, and there are many, would co-operate, and perhaps pool the knowledge acquired by experience, we could help this treatment to spread throughout the world. What a benefit this would be to humanity at large!

Helen Kupferburger.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JUNE, 1928

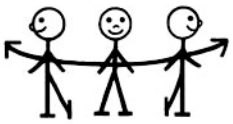
Subjective Conjunctivitis

By subjective conjunctivitis is meant that the conjunctiva is inflamed without the evidence of disease. Many people with subjective conjunctivitis will complain of a foreign body in the eye and yet careful search with the use of a good light and a strong magnifying glass will reveal no foreign body present. Some people with subjective conjunctivitis complain that they have granulated lids and that they suffer from time to time from the presence of little pimples on the inside of the eyelids and the pain that they suffer is out of proportion to the cause that they give to it. Among the many symptoms of subjective conjunctivitis may be a flow of tears from very slight irritants. However, the tear ducts, with the aid of which the tears are drained from the eye, are usually open in these cases and they are sufficiently open to receive a solution of boracic acid which may be injected through the tear duct into the nose. This shows that the tear duct is open normally, and therefore can drain the tears from the eyes.

Dr. C. R. Agnew, at one time professor of ophthalmology at Columbia University, gave many lectures on subjective conjunctivitis in 1885 and 1886. The treatment which he advocated was dry massage of the whole body and I can testify that it was an excellent remedy. However, the treatment which I found was the greatest benefit was the aqueous extract of the suprarenal capsule, or adrenalin, the properties of which I discovered, using one drop in each eye three times a day.

Many cases were benefited by the sun treatment, by central fixation and by the practice of the universal swing.

Modern prescription and non-prescription nose/sinus sprays contain toxic chemicals that travel from the nose into the eyes, ears, brain, body resulting in health impairment of body, brain, ears, eyes and unclear vision.
Eye-drops are addictive and destroy the eyes natural tear structure and production.



Long Swing

Swing the body left and right.
Head/face, eyes, body move together, at the same time, in the same direction.
See oppositional movement; objects in the visual field appear to move 'swing by' in the opposite direction.
Do not stop to look at the objects. Keep swinging, relax and let them move.

Swinging

By W. H. Bates, M.D.

The muscles on the outside of the normal eye are at rest when the sight is normal. Any contraction of one or more of these muscles by pressure, by operation or by electrical stimulation always produces an error of refraction. The removal of the crystalline lens may be done without changing the form of the eyeball.

The normal eye has normal sight when it is at rest. It is at rest, or relaxed, when it is moving to prevent the stare, strain, or effort to see. When the patient becomes aware that his eye troubles are always caused by one of these three, all of which are difficult, he becomes able easily to maintain the swinging of all objects. (Oppositional Movement)

Shifting or moving the eyes from side to side with a similar movement of the head improves the sight when done properly. It can be done wrong when the eyes move in a different direction to the movement of the head. In some cases, when turning the head to the right, the eyes may turn in the opposite direction, for example, at the same time. Cases have been observed where one or both eyes appear stationary while the head may be moving.

One patient complained that when he planned to move his eyes with the movement of his head that he was not conscious that his eyes were moving as desired or that the eyes were moving and not stationary.

In some cases the eyes would move irregularly and unconsciously a longer or a shorter distance than the movements of the head. When one or more of the patient's fingers were pressed lightly on the closed eyelids, the eyes could be felt to move rapidly, slowly, or in any direction.

The eyes may move to the right while the head moves opposite, or to the left. Swaying the head and body a long distance to the right or left may be accompanied by an apparent movement of stationary objects in the opposite or in the same direction. Stationary objects with a prominent background move opposite, while objects partly covered may appear to move in the same direction.

Some people have difficulty in practicing the swing successfully. They cannot imagine any stationary object to be moving no matter how much swinging is practiced. They usually complain that they cannot imagine stationary letters or other objects to be moving when they move their head or eyes. They feel absolutely certain that the stationary object is always stationary and cannot be expected to move when the body sways from side to side in a long or short movement.

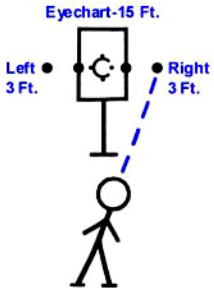
It is absolutely necessary that all persons with imperfect sight should become able to imagine stationary objects to be moving. When an effort is made to imagine stationary objects to be stationary, the eyes become fixed or stare at the letter or other object and make an effort which always fails. A very successful method of teaching nervous people how to imagine stationary objects to be moving is as follows;

The Snellen test card is fastened to a support about fifteen feet away from the patient. When the patient looks at a point about three feet to the right of the test card, the card is to the left of the point regarded, and advances farther to the left when the point regarded is moved to the right. When the patient is directed to regard a point to the left of the Snellen test card, the card moves to the right side of the point regarded.

The greater the shift from one point to another, the wider becomes the swing. By repetition, the patient becomes able to realize that whenever a point regarded is to the right of the card that the card and all other objects are to the left of the point regarded. When the eyes move to one



Sway/rock left and right.



+Look 3 Feet to the right of the eyechart. Then, look 3 feet to the left of the eyechart.
+Notice the chart moves in the opposite direction the eyes, head, body move to.
+Shift long, left and right on the sides of the chart and see a long, wide oppositional movement. (see dots, shift dot to dot)
+Then shift shorter, left and right on the edges of the chart and see a shorter opposite movement. (see dots)
+Then shift shorter, smaller- left and right, top and bottom on the letter C and see a short, small opposite movement. (see dots)
+Shift point to point on a small part of the C and see a tiny opposite movement.
Small eye shifts on a object bring clearer, more fine detailed vision. Central Fixation. Practice at far and close distances.

side of the card, the card moves to the opposite side and this movement of the card can always be demonstrated by insisting that the patient imagine the Snellen test card moves to the left every time the eyes move to a point to the right. (The original sentence was; …insisting that the patient cannot imagine the Snellen test card moves…) The word cannot is thought to be a misprint and has been taken out.)

This method is always a truth without any exceptions because no matter how much the patient may insist that he is right, he has to acknowledge that when he looks to the right, the Snellen test card moves to the left, and this movement is so decided that it very soon becomes impossible for the patient to fail to imagine stationary objects to be moving whenever the eyes move from right to left, from left to right, or in any other direction. This demonstration may be made very convincing with a little time and patience. There are so many of these patients who have difficulty in imagining stationary objects to be moving when the eyes move from side to side or in other directions that the swing should be practiced.

Long Swing: The patient stands with the feet about one foot apart and turns the body to the right - at the same time lifting the heel of the left foot. The head and eyes move with the body, synchronized: eyes, head, body move together, same time, same direction. One should not pay any attention to the apparent movement of stationary objects. Do not look at the objects that are showing oppositional movement. Relax, swing and let the objects 'swing', pass by in the opposite direction. The left heel is then placed on the floor; the body is turned to the left as the patient raises the heel of the right foot. I usually advise patients to practice this right and left swing one hundred times morning and night, counting one to the right, two to the left, and so on.

Variable swing: The patients holds the forefinger of one hand six inches from the right eye and about the same distance to the right, as he moves the head a short distance from side to side. The finger should appear to move in the opposite direction to the movement of the head. This can also be done with the finger held between the left and right eyes, at eye level.



Variable Swing with finger to side of face. Move the head left and right and see the finger move opposite.

Universal Swing: The Patient stands and sways the body from side to side. While the body is moving, the eyes are moving, and stationary objects nearby (close objects) which have a background (distant object beyond close object) appear to move in the opposite direction to the movement of the head and eyes. Objects located at more distant points which have no background always appear to move in the same direction as the movement of the body.

If the finger is held before the eyes while the head is moved from side to side, one may, by practice, become able to imagine that everything connected with the finger, either directly or indirectly, is moving in the opposite direction, while the back ground is moving in the same direction. **The universal swing is very beneficial and usually prevents and cures pain, dizziness, and other nervous symptoms.**



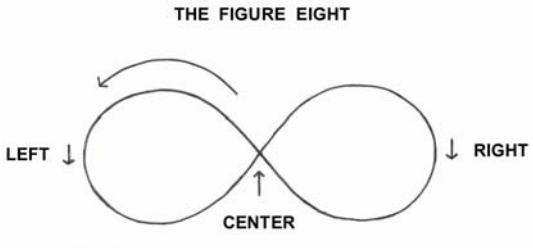
Variable Swing with finger in front, center of face, between the eyes, eye level.

Circular Swing: There is one objection to the universal swing and that is that at the end of the count to the right or left, the patient in some cases stares. This stoppage of the swing may be corrected by the practice of the circular swing, when all objects are imagined to move continuously in a circular direction. The circular swing may be remembered with the eyes closed and **differs from the other swings in that the finger, Snellen test card, or other objects appear to move in a circular direction.**
In the circular swing, the head and eyes are moved in a circular direction.



Sway/rock left and right.

Square Swing: In the square swing, the head and eyes are moved in a horizontal line from one side to the other and then downward, across, upward, and across, without a stop being made in any part of the swing. Many patients can practice a square swing when they find it difficult or impossible to practice a circular swing. Either the circular or square swing may be practiced with the eyes open or closed.
(The Figure Eight – Infinity Swing is an improved, modern version of the circular and square swings. See last page this book.) There are more examples of different swings throughout this book. See index or use word search in Adobe.



Not all persons can practice any particular kind of a swing successfully with the eyes open, but with the eyes closed, with the help of the memory and the imagination, almost any swing can be practiced with benefit. It is interesting to observe that swinging the head and eyes a long distance from side to side is more easily accomplished than a short movement, although a short swing when practiced properly is more beneficial.
Practice the swings with the eyes open, closed, open and remember, imagine and see oppositional movement of objects.

Case Reports

Some years ago, a patient came to me suffering from **progressive myopia** with well marked imperfect sight. The patient was unable to practice central fixation, to remember, imagine, or see perfectly. The square swing, with the relaxation that it brought about, corrected all this patient's troubles.

A patient who was born blind was treated several years ago. He had the symptoms of chronic **glaucoma, partial atrophy of the optic nerve and progressive myopia.** He was unable to imagine stationary objects to be moving when he moved his head and eyes from side to side or in other directions. He had great difficulty in consciously controlling the movements of his eyes. When he desired to look to the right both eyes would at once look to the left and the movement was very irregular.

He was also troubled with **nystagmus**. Sometimes the nystagmus was very irregular, but usually both eyes moved jerkily from side to side. He was unable to hold either eye stationary. The eyes appeared very small because the margins of the upper and lower lids were close together; it seemed as though the **lids were partially paralyzed**.

When he was asked to move his eyes consciously, he soon became frightened and found it difficult and at times impossible to

move his eyes at all. When pressing down his upper lid, while I was determining the hardness of the eyeball, I was surprised to notice that the pressure of the forefinger on the eyeball stopped the nystagmus and enabled him to move his eyes in various directions, which he had not been able to do before. (May help crossed/wandering eyes; lightly touching the top of the closed eyes on the eyelids and imagine shifting on objects and feel the eyes move correct.)

When the right eye looked twenty feet to the right of the Snellen test card, the card appeared to be to the left of where he was looking. When he looked as far to the left, the Snellen test card was about twenty feet to the right of where he was looking. By practicing the long swing alternately, he acquired, after a few weeks, a great deal of conscious control of the movement of the eyes. Later, after the movement of his eyes became more easy and continuous without effort or strain, the eyes seemed to become more widely open. By continued practice his other symptoms gradually disappeared.



Long Swing
Swing left and right in front of the eyechart and see it move in the opposite direction the eyes, head, body move to.

A girl, aged ten years, came to my office with her father. He desired that I examine the child and find out if her sight was normal or not. I tested her sight and she read the bottom line at ten feet. When I asked her if the last letter on the bottom line could be a letter "O," she answered that it could not be a letter "O," because it was a figure "6."

I said: "All right, is the figure '6' stationary or does it move?" She breathed deeply, because it was a new experience for her to imagine stationary objects to be moving.

After a while she said: "Yes, the figure '6' moves about its own diameter from side to side." I said to her: "Can you stop the swing?" Almost before I asked the question, she looked away from the card. "Why did you do that?" I asked.

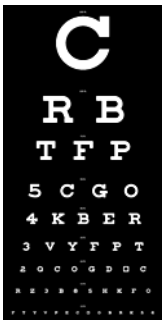
She replied: "When I tried to stop the swing, it gave me a headache; I lost the figure '6,' the whole card was blurred and I didn't like it." Thus I demonstrated that normal sight cannot be maintained without a continuous, slow, short, easy swing of all stationary objects regarded. To stop the short swing requires a conscious or an unconscious effort, which in turn may produce discomfort and pain in the eyes or head.

One patient was suffering from **chronic glaucoma, cataract, progressive myopia and chronic iritis. One eye was totally blind** and was unable to locate a strong light in any part of the field. The other eye had vision from one side only, the temporal field. This patient received most benefit from the long swing; other methods of treatment seemed to be of no benefit.

One of the most difficult patients to relieve was a patient who had been **injured in one eye**, so that **sympathetic ophthalmia** appeared after some years. The vision in the right eye was perception of light only; the left eye had been enucleated, but the operation had not been performed sufficiently early to be of much benefit. The eyeball was soft, like mush, showing that the ciliary body had been very much diseased. This patient learned the universal swing at the first visit. With the help of this swing, the hardness of the eyeball increased and his vision became better. The benefit which he received from this particular swing was the only benefit that amounted to anything.

Myopia and Presbyopia Relieved By Treatment
Floating Specks Relieved

By Emily C. Lierman



A woman, aged 51, whose vision had been impaired for a good many years, thought that she would try the Bates treatment and see if she could in time discard her undesirable glasses. When I tested her eyes, her vision was 15/70 with the right eye and 15/200 with the left. When I first meet a person I have an unconscious habit of looking at the eyes and I noticed particularly that this woman **seldom blinked**. She had worn glasses for twenty years, but recently she had worn them only at the theater, movies and in places where the light was dim.

She complained of **floating specks** which at times seemed to her like miniature airplanes or tiny round white circles with gray centers. She boasted about being able to multiply these imaginary things floating before her eyes and to see them just as clearly with her eyes closed as she could with them open. It is hard to even imagine how terribly she strained in order to bring about such a condition.

She told me that previous to her coming to me she had visited an eye specialist who examined her eyes thoroughly and who told her that he could see no condition of her eyes that would cause floating specks, and that the retinas of her eyes were perfectly clear. He diagnosed her case as progressive myopia and then gave her a stronger pair of glasses than she had been accustomed to wearing. It was because of these stronger lenses and the discomfort that she experienced in trying to get accustomed to the wearing of them that prompted her to come to me.



Look at the white spaces between sentences of fine print at a close distance to relax the mind, eyes and then look at, shift t on letters on a distant eyechart and see the letters clear.
Read fine print close to the eyes, in the sunlight daily or a few times a week for clear close and distant vision.

The black card with white letters was used in testing the sight of my patient. While she was resting her eyes by palming, I placed the test card ten feet from her eyes instead of fifteen, just to see how much more she could read at a nearer distance. After a short period of palming, I asked her to read the card again and her vision had improved to 10/50. I was glad to see this improvement even though it was slight. However, I thought that it might have been her right eye which was reading the 50 line, even though she was reading the card with both eyes.

I wanted to be sure that improvement had been made, so I asked her to cover her right eye and read the card again with the left. She read up to the 50 line just the same, which I thought was a good improvement in so short a time. I told her how other patients had improved by practicing many times a day at home and that if she would follow my directions, and come to see me for a few lessons that she would make steady progress.

A few days later she came again and I noticed that she had acquired the **habit of blinking**. This was encouraging, because it is not often that patients who have only had one treatment can remember to keep up this **good habit** (correct vision habit) which is done unconsciously by people who have no trouble with their eyes. I did not mention this to the patient because I was afraid to make her conscious of the fact and again

unconsciously get into her bad habit of staring. However, I made note of this in my record and the last time I saw her I drew her attention to it, which pleased her.

During her first treatment I did not make any special effort to relieve her trouble with the floating specks, nor did either one of us mention it. Before I tested her sight at her second treatment, she said she had something to tell me. She noticed for the first time that in trying to increase the number of floating specks which she formerly was able to do, she had produced a terrific pain in both eyes and so she stopped doing it.

At my patient's second treatment I used the black test card and I gave her a card with diamond type to hold near her eyes. I gave her the usual advice, saying that she was not to try to read the print but only to look at the white spaces between the lines of fine type. Closing the eyes often and remembering the white spaces helped her to see the letters of the distant card, seeing one letter at a time and then looking to the white spaces of the fine type. She read 10/40 with each eye separately, seeing each letter clear and white. She remarked that the whiter the letters appeared to her, the more black became the background of the card.

At her first treatment I noticed that the sclera or white parts of both her eyes were bloodshot and looked as though she did not get enough sleep. I wrote this in my record of her case, but I said nothing about it to her. At this, her second visit, I noticed that the patient's eyes looked clear and the white parts were as white as my own eyes.



Sunlight Treatments

Sunning - Face the sun, eyes closed and move the head slowly side to side.



Sunglass - Eyes closed. Head still. Sunglass with sunlight shining through the glass is moved quickly, 1-2 seconds on the eyelids.



Sunglass with eyes open - Head still. Eyes looking down, pupil under eyelid, away from the suns light. Sunglass moves the sunlight quickly, 1-2 seconds on the sclera, upper white area of the eye.

Sunglass is used only in cases of blindness, by an experienced ophthalmologist, only when other methods have not helped restore the vision.

I placed her before a mirror and told her to blink and to look at her right eye and then at her left. This helped her to see that her eyes were moving while she blinked. It was then that she remarked how white the white parts of her eyes were. I enjoy treating a patient like her because there is a great deal of satisfaction in having the patient know that there has been an improvement in so short a time. She told me that her husband had read to her for one whole hour while she was palming or just keeping her eyes closed and resting her arms on her lap or on the arms of her chair.

I gave her more advice about what she was to practice at home and then two days later I saw her again. This time I asked her to hold the fine print as close as she could read it and to read what she saw on the little card. During her first treatment, I did not ask her to read the fine print because I thought she would have no trouble in reading it. I was much surprised to hear her say that she could not read it.

I was out-of-town treating patients at this time and as I was away from Dr. Bates, I was not allowed by the medical authorities to use a retinoscope or an ophthalmoscope, or to do any examining of the eyes of any kind. I was perfectly willing to abide by the law and was told particularly by Dr. Bates himself to do so. Therefore, I could not determine just what was wrong and why, when she was myopic, she could not read fine type as most myopic patients can. However, that did not worry me in the least because all the articles comprising my book were reports of cases treated by me during more than nine years when I did not at any time use any apparatus in the treatment or in the cure of these cases. I did, however, use a sun glass.

This patient was sitting near a window with her back to the sun. I asked her to stand up while I turned the chair the opposite way and told her to keep her eyes closed as she sat in the sun, while I used the sun glass on her closed eyelids. I timed this treatment and gave her exactly eight minutes of the sun, focusing the sun glass on the closed eyelids, at the same time advising the patient not to open her eyes even for a second. Then I pulled down the shade to shut out the sunlight and immediately after opening her eyes she became able to read all of the fine print. And this with just that one treatment with the sunlight. After that she gave her eyes sun treatment many times a day and remained in the sunshine as much as possible, discarding her parasol which she usually carried with her and also leaving off her hat whenever it was possible.



Sun Treatment

Pull the upper eyelid up, look down, pupil away from sun, let the sun shine directly on the upper white area of the eye. Then, release the upper lid, look up, head back and pull the lower lid down and let the sun shine on the lower white area of eye.

All patients do not have the advantages which this patient had, I know. Yet patients are cured who have no chance to take sun treatment during the day except at their lunch hour. Patients who have found it impossible to get any sun treatment during the day have been successfully treated and cured of their imperfect sight by the use of a strong electric light.

While I was away from Dr. Bates, doing his work at the seashore and in other places, it was astounding to see so many people wearing dark glasses called **"sun glasses"** to protect their eyes from the glare of the sun. What a mistake it is to wear these glasses, even though so many specialists advise such a procedure! One cannot always wear them; therefore it is best for the human eye to get accustomed to all kinds of light without protection of any kind.

During the time I was treating this patient, while she was rapidly improving at each lesson, I had the great pleasure of meeting a noted criminologist who was very near-sighted. He had difficulty in seeing things clearly while driving his car and doing other necessary things which required good sight, unless he wore his strong glasses. This man mentioned the case of his brother, who had read Dr. Bates' book, "Perfect Sight Without Glasses" and practiced the methods advised.



Sunning

Face the sun, eyes closed, move the head side to side moving the sunlight over the entire retina.

Sunning

He said that every day he practiced in the hot sun in the desert where all he could see was sand, distant mountains and the sky; he would close his eyes and allow the sun to shine on his closed eyelids, then open his eyes and look off at the distant mountains, alternately shifting from the saddle of his horse to the distant mountains. He was not only cured of his imperfect sight, but also became able to look at the sun by shifting and blinking without any tearing of the eyes or any discomfort whatever. **He also noticed, being an expert in the different breeds of horses, that those which had blinders put on them acquired cataract, or could not see as well as horses who were free from any incumberance as far as their eyes were concerned.** After reading Dr. Bates' book he wrote to his brother and said that if the strong light of the sun was not injurious to an animal, why should it be injurious to the human eye? He was convinced that imperfect sight was caused by strain or an injury and if there were any sight at all that it could be improved by natural methods and not by the use of glasses.

To go back to my patient. She came for four days in succession for treatments, being encouraged at the progress she had made.

At each treatment she improved, reading another line of the test card, by first reading the fine print as close as she could get it to her eyes. Shifting from a blank wall to the test card while she was standing and swaying her body slowly from side to side also helped in the improvement of her sight for the distance.

Switch Visual Attention at Close and Far Distances

Each day I varied the treatment. One day I placed her by a window and had her shift from the fine print up close to her eyes to the distant signs which I called to her attention, and to tops of houses and other buildings. An American flag waved in the distance and shifting from the flag to the flagstaff helped her to see the staff more clearly and by keeping up the constant sway of the body, blinking easily, but steadily all the while, she became able to see the harbor in the distance and also the boats which were moored near the shore. She told me that this was the first time in her life that she could ever see at such a distance.

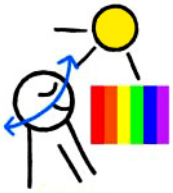
She was the means of changing the mind of a skeptical husband who thought that the Bates treatment was a myth or something like it. However, he decided that if palming and swinging was a good thing for his wife and could make her so much more contented in her home duties than she was before, that perhaps it would help him to be a more agreeable person in his office as well as in his home. With just a few suggestions from me, my patient treated him successfully at home, and her last report was that he was reading his newspaper and book type without the use of his glasses.

I realized more and more that if Dr. Bates could live until the end of time that it would be his cured patients who would advertise him in the right and only way. Times without number there have been magazine and newspaper writers, as well as authors of books who were cured after being treated by Dr. Bates who offered to advertise him in the way that they thought best.

Many years ago, without realizing that it would harm him, Dr. Bates allowed these grateful patients to advertise him in their own way. They unintentionally caused him much worry and concern with the medical profession. The only way to make Dr. Bates' work known to the world is to have his cured patients talk about the benefit they received and in that way help others who are suffering from defective vision. (Optical Industry Trying to Hide Bates Method From the Public.)

During the last treatment I gave my patient she read the various test cards, 15/15, with the exception of the black card with white letters, which she was able to read 15/10. Also, the **floating specks had entirely disappeared after her third treatment.** This case was very interesting, because it is seldom that one has **presbyopia and myopia simultaneously.**

To carry out treatment successfully, I try to be careful to vary the method of treatment at each lesson. I find it true also that if I try out things by myself, without the help of Dr. Bates, or his suggestions in the matter, that I fail sooner or later. Our students will benefit greatly by doing the same thing always. If the student is in doubt as to whether he or she can cure a difficult case, it is always best to write or come directly to headquarters and find out what is wrong. It is Dr. Bates' desire *always* to help the students to cure any case which may be difficult.



Sunning
+Face the sun, eyes closed, move the head side to side, up and down, circular... Do the Sway.
+Open the eyes and look away from the sun to the bright sky, clouds, tree tops.
+Go outside in the sunlight daily.
Full spectrum sunlight contains all wave lengths, frequencies, colors, mixtures of colors of the light spectrum.
Full spectrum sunlight, not filtered through eyeglasses, contacts, sunglasses, windows keeps the eyes, brain, body healthy and vision clear.

Questions And Answers

Q - Can hemorrhage of the retina be cured by Dr. Bates' method of treatment?
A - Cases of hemorrhage of the retina have been cured by Dr. Bates' method.

Q- Can a patient while practicing the Bates method carry on his daily work just the same?
A - Yes, most patients continue their work just the same without the use of their glasses even though they find it difficult at the start.

Q - Can the vision be improved without glasses after the lens has been removed for cataract?
A - Yes.

Q - Does Dr. Bates approve of dark glasses to protect the eyes from the glare of the sun at the seashore?
A - No. Dark glasses are injurious to the eyes. The strong light of the sun is beneficial to the eyes, although it may be temporarily painful and blinding.

Q - What causes styes?
A- Infection, which is always associated with eyestrain.

Q- I am practicing the methods in Dr. Bates' book to cure myopia and astigmatism. Sometimes, for short periods, I see perfectly: then things fade away. Can you explain this?
A- This is what we call getting flashes of perfect sight. With continued practice these flashes will come more frequently and eventually will become permanent. Then you are cured.
It is normal for the clarity of vision to fluctuate: clear, less clear, back to clear. Even persons with perfect sight experience times of less clear vision. When glasses are avoided, the vision returns to perfect clarity.

Q- If ones arms become tried while palming will a black silk handkerchief covering the eyes produce the same amount of relaxation one gets from palming?
A- No. Palming is the best method for relaxation and improvement in vision. When tired of palming, the hands can be removed and the eyes kept closed until one feels relaxed.

Q- My little daughter has temporary perfect sight while palming, but her eyes turn in when she plays excitedly or strenuously. I thought play was relaxing?

A – Play may be relaxing and should be beneficial, but like other things, it can be done wrong, necessitating great effort, and without benefit.

Q- I enjoy palming, but it makes me drowsy after ten or fifteen minutes. Is this helpful?
A – When palming is done properly it does not make you drowsy. It can be so relaxing that the person falls asleep if desired.

Q- I am presbyopic. How can I improve my vision?
A- By reading fine print and alternately remembering the whiteness of snow for a second while looking at the white spaces between the lines of print. Then close your eyes and remember or imagine the same white more continuously, better and more easily. By alternating, you may be become able to remember the white as well when flashing the card as you can with your eyes closed, and your vision will be improved. Then, look at, see, read the letters clear.

Announcements

Several back numbers of "Better eyesight," from 1919 to 1925, ordinarily listing at 30 cents per copy have been reduced to ten cents per copy. These numbers contain articles on cataract, glaucoma, myopia, hypermetropia, astigmatism, presbyopia, (old age sight), ect.

Those who wish to have their magazines from July, 1927, to June, 1928, inclusive, bound may have this done by sending in their magazines by July 15th. Any missing numbers will be supplied at 30 cents per copy. The charge for binding is $1.00.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JULY, 1928

Dark Glasses Are Injurious

He was a very intelligent chauffeur, and very polite and popular with most people. I enjoyed listening to his experiences in driving various types of cars. Nothing seemed to give him so much pleasure as to get into a "jam" and get out without suffering any injury to his own car or without tearing the "enemy" apart. The "enemy," as he explained, were the numerous other cars which were driven by chauffeurs who did not understand their business very well and who enjoyed teasing the inexperienced drivers.

One day we were driving to the seashore. The sun was very bright and the reflection of the light from the sun on the water was very strong and made most of the occupants of the car very uncomfortable. Personally I enjoyed the strong light of the sun. The chauffeur did not wear glasses for the protection of his eyes from the sun or dust and I asked him if he had ever worn them. He very promptly answered me by saying that he had worn them at one time, but discontinued wearing them because he found that after wearing them for a few days, his eyes became more sensitive to the light than they were before. He said he could not understand why it was that when he wore glasses to protect his eyes from the dust he accumulated more foreign bodies in his eyes than ever before. This seemed strange to the people in the car and they asked him to explain. It was decided that when the dust got into the eyes, the glasses prevented the dust from going out.

The eyes need the light of the sun. When the sun's rays are excluded from the eyes by dark glasses, the eyes become very sensitive to the sun when the glasses are removed.

Eye doctors sell sunglasses knowing it will lead to unclear vision, prescriptions for eyeglasses, eye surgery. Lack of sunlight causes cataracts and other eye problems.

Fundamentals

By W. H. Bates, M.D.

GLASSES DISCARDED PERMANTELY: Glasses should be discarded permanently because it is impossible to cure people by treatment without glasses when glasses are worn for long or short intervals of time. All cases of myopia (and presbyopia) are increased by the wearing of glasses. **If glasses are not worn, the vision of most people improves without other treatment.** Just removing glasses causes the eye muscles/eyes, brain to function natural, correct, return to clear vision - on their own, without knowledge and practice of Natural Eyesight Improvement.
(Modern teachers allow reduced/weaker eyeglass lenses if necessary for driving… they are worn as little as possible and discontinued when vision is clear enough to drive… safely. Vision improves much easier, faster when glasses are not worn.)

CENTRAL FIXATION: When the vision is best where the eyes are looking, and worse where the eyes are not looking, central fixation is evident. Central fixation when properly used is a relaxation and a benefit. It is interesting to observe that one cannot have perfect sight without central fixation. One should not strain and make an effort to obtain central fixation of a letter or any object, as by so doing, imperfect sight is very soon apparent. The normal eye shifts unconsciously from one part of an object to another, seeing the part regarded best and other parts worse, and the eye with imperfect sight must acquire this habit by practicing it consciously until it becomes an unconscious habit.

FAVORABLE CONDITIONS: There are many ways in which the vision may be improved by having the conditions or the environment favorable. There are many facts to be considered when discussing the most favorable conditions for the improvement of the sight without glasses. Some people see better in a bright light, while others see better in a dim light. The distance of print

from the eyes where seen best also varies with different people.

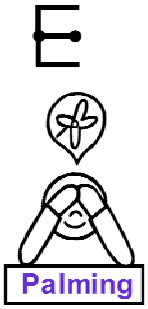
It is natural to suppose that to secure relaxation or rest the hours of sleep should be increased. While this may be perfectly true, it is difficult to harmonize the fact that increasing the hours of sleep does not always promote relaxation or rest of the eyes. Many people will retire with their eyes feeling perfectly comfortable, yet they may be awakened during the night by severe pain in their eyes. During sleep, eyestrain may be so severe or continuous that no rest is obtained for the nerves of the eyes or other parts of the body. (As I have stated in previous issues of this magazine, I have examined the eyes of patients with a retinoscope while they were asleep and have found the eyes to be under a great strain. Sleep, therefore, is not always a favorable condition for the improvement of the eyesight.)

The optimum distance or the distance at which the vision is at its best is widely variable. Some people may have normal vision at twenty feet but not at fifteen feet. Others are able to read fine print better at twelve inches than at six inches. By practice one can improve the vision so that it will be normal under all conditions.

SHIFTING AND SWINGING: When shifting is done properly, it is practiced easily, without effort or strain. When one shifts from a point to the left to a point to the right, the swing produced is continuous, regular, and promotes relaxation. It is possible to shift with the eyes closed with as much benefit as with the eyes open. There are some people who cannot shift with the eyes open without a strain and yet they can shift or swing or imagine perfect sight with the eyes closed.

Whenever the head and eyes are moved from side to side, one should imagine that stationary objects are moving in the opposite direction. This should be practiced at all times until the habit is obtained. (The various swings are described in the June and other issues of this magazine.)

Shift left and right on the E and see it move in the opposite direction.
+Shift to the dot on the left, The E moves right.
+Shift to the dot on the right, the E moves left.



Palming

Palm and imagine black or any pleasant object, scene... Think happy thoughts. Shift on objects in the mind, see them clear, in color, motion.

MEMORY AND IMAGINATION: A perfect memory is a great benefit in obtaining perfect relaxation of the eyes as well as all the nerves of the body. One cannot remember a letter or other object perfectly unless it has been seen perfectly. When the memory is perfect, the imagination may also be perfect. Some people with a good imagination find it easier to imagine a letter or other object perfectly when they do not expend an effort in trying to see it. Knowing what the letter is, with the aid of the imagination, one becomes able to imagine that it is seen perfectly. (Familiar objects, Eyechart)

It is well to keep in mind that many patients believe that they see large letters perfectly when they do not and they can be tested by bringing the card up close to the eyes. The vision should be just as good at fifteen feet as it is at one foot. By improving the memory and imagination one improves the vision.

REST: Rest or relaxation of the nerves of the eyes, mind and all other parts of the body is necessary before perfect vision can be obtained. When the nerves of the body are at rest, it is possible to remember, imagine or see all letters or other objects perfectly. It is not possible to remember, imagine, or see anything without perfect relaxation. Perfect relaxation or rest comes without effort. When the mind is at rest, any effort to improve the memory, imagination or sight is wrong. (Use the memory, imagination in a easy, relaxed manner.) When the eye is at rest, it is perfectly passive. The eye at rest is never stationary: it is always moving. This seems a contradictory statement to make, but it is a fact which does not permit of any explanation.

PALMING: One of the best methods of obtaining relaxation is by palming. There is more than one way of palming. One very good way, however, is to cup both hands, press the sides of the palms together, and place the two hands over the closed eyes and in front of the nose. When done properly, all light is excluded, one sees black perfectly and relaxation is obtained.

BLINKING: When the normal eye is at rest, the eyelids are continually closing and opening. Blinking may be done so rapidly that it does not become conspicuous. Moving pictures (movies) have demonstrated that the normal eye may open and close, or blink, five times or more in one second. The habit of blinking may be acquired by remembering to blink at frequent intervals. All patients with 15 diopters or more of myopia may blink five times or more in one second when the eye becomes normal and myopic alternately five times in one second. There are no exceptions to this truth.

MENTAL PICTURES: The mind is capable of imagining all kinds of mental pictures. When the mind is at rest and the memory and imagination are perfect, all kinds of mental pictures are produced. When the mind is under a strain, the memory and imagination are imperfect and mental pictures are indistinct and cannot be remembered for any length of time. Central fixation when properly imagined is very helpful. With its aid a perfect mental picture may be obtained easily. When a mental picture is remembered easily and perfectly, the vision is benefited. Shift on the mental pictures. Imagine them as a movie, a motion, active picture in the mind.

It is a fundamental truth that when one letter of the Snellen test card is seen perfectly, all the letters of the Snellen test card can be seen perfectly. When the sight is perfect, a letter is remembered, imagined or seen as well with the eyes open as when the eyes are closed. The vision of one letter of the Snellen test card can be improved with the eyes open by practicing the memory or the perfect imagination of the same letter alternately with the eyes closed. Whatever is done to improve the memory of one letter is a great benefit, because all the other letters are improved at the same time. This truth can be demonstrated in all cases. There are no exceptions.

One patient who visited me recently was a girl of about fifteen years or age who announced that she would have to be cured that day because her parents would not allow her to spend any more time. By teaching her the fundamentals, this girl became able to improve her memory, imagination, and sight until she could read all the letters on the test card perfectly. **By remembering the first letter of each line perfectly, by imagining it perfectly, she became able to see it perfectly,** because with the help of the retinoscope she demonstrated that when she imagined the first letter on each line perfectly that her near-sightedness was cured temporarily. When the first letter of each line was seen perfectly, not only was the letter seen without any error of refraction, but she was able to read all the strange letters on each line with normal sight. She did not imagine the other letters; she actually saw them.

Usually when persons have become able to read a familiar Snellen test card with normal vision and to read it continuously, they are able to read a strange card, and to read it just as perfectly as the familiar card.

A knowledge of the fundamentals which can be demonstrated during the process of the formation of **cataract** has suggested successful treatment. The most important fundamental to consider is that cataract always disappears when the memory or imagination are perfect.

Many cases if **opacity of the cornea** which have been preceded by diseases or ulceration are benefited or cured by an intelligent use of the fundamentals. The law of fundamentals has proved the fact that an imperfect memory will cause an opacity of the cornea. It is not too much to believe that conical cornea is caused by eyestrain. If this were true we would naturally expect that when the eyestrain was relieved that the conical cornea would be benefited. It is a good thing to know that "this is the truth."

Acute or chronic **glaucoma** in which increased tension is present has always been relieved by practicing the fundamentals as described above.

In the normal eye the tension of the eyeball is always normal. Tension can be produced by an imperfect memory and the tension can be lessened or corrected completely by the practice of a perfect memory, perfect imagination, and a perfect optical swing.

The encouraging thing about the fundamentals is that they are always true without any exceptions, that they always suggest successful treatment and that they always explain the cause of imperfect sight.
See Fundamentals, Better Eyesight Magazine July, 1927.

An Artist Suffering From Presbyopia

By Emily C. Lierman

An artist, aged 61, who had for many years painted portraits of people who are well known in the West, suddenly became unable to go on with a painting which was almost completed.
Before I tested his vision with the test card or asked him any questions at all, he told me his story. As a boy, he began to paint landscapes and ships of all description and when his parents found that he was especially interested in painting, they encouraged him to make it a special study in school. Before he was twenty years of age he painted heads of young children, and the expressions of the faces as he painted them were so life-like that older and more experienced artists were anxious to have him do work for them. Later in life he came from England to California and there he has become well known because of his work.

I became acquainted with him through a cured patient of Dr. Bates who had some painting done by this artist. She had noticed that he was straining his eyes to see at the near point and that at times the work was not satisfactory to himself. He got into the bad habit of using a magnifying glass for the fine details of a certain painting he was doing. He told me that he had been seriously thinking about giving up the work that he loved so much, but his wife objected strongly to this because it made him melancholy and despondent.

He had worn glasses for twenty years and the four latter years he had tried bi-focals which were unsatisfactory. His oculist failed to help his double vision which interfered greatly with his work; he would see two brushes instead of one, and two objects where there was but one. Having become well known among the artists in the colony where he lived, it was not easy for him to decide what was best for him to do.

His eye test was, Right vision 15/40, Left Vision 15/20. When he read the letters of the test card with his right eye, all of the letters appeared double – the large letters appeared double as well as the smaller ones. When he read with his left eye all the letters were clear.

I began treating him by improving the vision of both eyes together until he became able to read 15/15. Then we began to **work with the right eye while the left eye was covered with a black patch. Palming** helped him a great deal, so while he was under treatment he was encouraged to keep his eyes closed and covered with the palms of his hands for half an hour or longer each time. I again tested his right eye with the test card. The double vision still continued, even though the vision had improved in that eye.

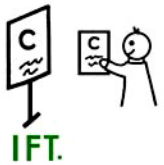
I directed him to palm for a longer time and to get a **mental picture of a painting** he had been working on recently. I improved his vision during his first treatment to 15/10 with the right eye as well as with the left and the double vision temporarily disappeared. Mental pictures of the work that he loved to do relaxed his mind and he himself realized that it was the strain that produced the double vision and that **he had been using his right eye more than the left.**

How many people are there in this world who know that they are really using their eyes correctly? I fear that there are many who do the same as my patient did in **unconsciously using one eye more than the other**; that is to say, **he strained more with one eye than he did with the other.**
See 'switching close and far, both eyes, one eye at a time, both eyes together again' for perfect, equally clear, balanced vision in the left and right eyes at all distances in the Book: Do It yourself – Natural Eyesight Improvement. If I can make myself more clear to those who are interested in this article by explaining how double vision can be produced consciously, as well as unconsciously, I should like to do so as follows: If one will press the lower lid of the eye with the forefinger, while both eyes are open, one can immediately produce two objects where there is only one. The harder the pressure against the lower lid, the further away the one object moves from the other. One is real and the other is, of course, an illusion.

I believe that it is a good thing to practice this consciously where one is troubled with double vision. When the double vision becomes worse consciously, one is very apt to become able to cure this error sooner than is expected. One can imagine how my patient must have strained his right eye in order to produce the double vision constantly, not only while he was at work but at all times while he was awake. (Tense outer eye muscle placing pressure on the eye.)

Practice shifting, central fixation, switching close and far, memory, imagination... with both eyes, then one eye at a time (eye not in use covered by patch).
Practice a little more with the eye that needs vision, movement improvement.
End by practicing with both eyes together again.





Switch the visual attention back and forth on two identical eyecharts placed at two distances.
+Shift on a letter on the close card in the hand.
+Then shift on the identical letter on the chart at 1 foot.
+Shift on the letter on the close card again. Repeat.
+Practice on other and smaller letters.
+Practice with the distant card at other distances.
+Practice with both eyes together, then one eye at time, (spend extra time with the eye that needs vision improvement. Last; practice with both eyes together again.

I had a pair of discarded glasses in my office which were left by a cured patient who gave them to me as a souvenir. I used a paper to cover the lens of the left eye and removed the glass entirely from the right. In this way my patient was able to practice for a length of time with the right eye without having to use his hand to keep the other eye covered.
(Holding the hand up leads to tension in the arm, shoulder, neck, back, eye muscles. Use a eye-patch.)

I placed a large test card on the back of a chair which I located about a foot away from the patient's eyes. I then gave him a small test card to hold in his hand. (The letters of the small test card were similar to those on the card which was on the chair.) The patient was directed to look at a letter of the test card in his hand and then shift to the same letter on the card a foot away. By doing this he avoided staring. When shifting is done correctly, not only is the vision improved, but one is relieved of strain in all other parts of the body. The patient practiced the above for more than half an hour with the result that during the next half hour we were able to improve his distant vision and he did not see double.

I was not so sure about the patient being able to continue the treatment at home by himself, so I advised him to come again a week later. When I saw him again, he said that he had noticed a decided improvement in distant objects while driving his car, and also for near work such as reading his correspondence, but when he tried to do a little painting, he did not find the shifting so easy, and because of that he could not avoid the double vision at that time. I was pleased to hear that he had improved to some extent and that it was only left for me to solve his problem of avoiding double vision while at his work.

During this lesson I described a way to shift from a letter that he was writing to a small test card which was placed on the desk to the left of him. He glanced at any letter that came within his line of vision, remembered the letter, and looking back to his pen and paper he was able to continue writing for a while without knowing that he had eyes. But going back to the work which meant fine details and getting them accurate had caused the same kind of strain which produced double vision.

I had him try the following: I tore a test card in half and by making a hole in it made it similar to a palette. He held the card in his hand blank side up and on it were placed letters and numerals in different places. He was told to imagine that the numeral which was placed in the upper right-hand corner of the card was a certain color to be used for the painting. He was to place the right hand under the numeral and then point to the card with his right hand. Then again he placed his finger on a letter which was placed on the lower left-hand corner of the card and then shifted to a card about a foot away, always pointing to the duplicate of the letter on the card in his hand.

While practicing in the above way he did not once complain of double vision, so he was advised to try this method at home and to write me within a few days, giving me a report of the progress he was making. He could not wait a few days, so he wired the next day telling me that he was successful in shifting from the palette and paint that he was using to the canvas and to do it in an easy way, without effort or strain and by doing so, for the first time in a long while he did not see double while at work.

I helped him a great deal by advising him by mail. For a while I did not hear from him and finally one day, I received a telephone message from him. He was at the home of one of the subjects whose portrait he was painting. This man was seated in a wing chair with his one arm placed over the side of the chair. My patient stated that his vision blurred as he tried to finish the details of this painting. The harder he tried to relax and to remember some of the things I had told him to do, the worse his vision became.

I asked him to start swaying his body slightly from side to side and to imagine that the telephone was moving in the opposite direction to the way in which his body was moving. He said that he could do that very well and that when he blinked while he was swaying it was restful. I told him to keep this up for about five minutes or longer and then to go back to his subject, and imagine that he was moving his body from side to side as he did while he was talking to me over the telephone.

I told him that I would be in my office for the rest of the day, but the arrangement was made that if he had no more trouble in completing this painting that I would not hear from him again that day. He did not call again. Sometime later he wrote me a letter, telling me that for the first time he had noticed that some of our test cards had imperfections which he explained to me in detail. Dr. Bates and I had noticed the mistakes in the printing of some of the cards, but it was seldom that the patients had noticed these small defects. It pleased me very much that his sight should improve to such an extent that he was able to detect these mistakes.

Another method which I used during his treatment has also helped others in their particular line of work. I gave him a small test card with the Fundamentals on the reverse side and asked him to hold it where he could see the print best. He said that he could not see it well at any distance, but if he held the card at arm's length, he could read the Fundamentals up to Number 6, without the sentence appearing double to him. He thought he had made a fine discovery when he found that he could read to sentence Number 3 by squeezing his eyelids together. I gave him a hand mirror and asked him to look at himself while he squeezed his lids together, and asked him if he thought it would look well for him to go through life reading in that way.

The strange part of it was that he did not squint very long while he was looking in the hand mirror, because, he said, he did not like the expression of his face.

I placed him at my desk with the hand mirror in front of him, about two feet away. I gave him the Fundamental card to hold and told him to shift from the white spaces of the type to the mirror and to look at his eyes each time he looked in that direction. He said that shifting from the narrow white spaces of the Fundamental card to the mirror helped to avoid the double vision at that time, so I told him to practice it. By alternately palming and shifting from the microscopic type to the Fundamental card type, he became able to read the finest print on the card at six inches without double vision.

Questions And Answers

Q – Some days I can read the Snellen test card to the 15 line, while at other times only to the 30 or 20. Why?
A – When the eyestrain is less the vision is always better.
Q – While palming is it necessary to close the eyes?
A – Yes.

Q - Are floating specks serious? Sometimes they just flood my eyes like clouds of dust and greatly frighten me.
A - Floating specks are not serious. They are always imagined and never seen.

Q - By following instructions in the book, can cataract be benefited without consulting a physician?
A – Cataract has been benefited by following the instructions in my book without consulting a physician.

Q – I find conscious blinking a strain, because I close my eyes temporarily and seem to hold the eyeball stationary. If I shut my eyes for a longer period would that be blinking?
A – No; the normal eye blinks consciously or unconsciously without effort, without strain, and does it quickly.

Q – If the sun and light are beneficial, why do you advocate the shutting out of these two by palming?
A – To obtain relaxation. The sun strengthens the eyes and palming rests them.

Q – Why, after palming for ten minutes or longer and my eyes are rested, do I feel sleepy?
A – The palming is not perfect. Try imagining stationary objects to be moving when you palm.

Q – When I read and blink consciously, I lose my place. Why?
Q - This is caused by strain, which prevents one from remembering the location of letters.

Q – Explain what you mean when you say "imperfect sight, imperfect memory."
A – If you see an object imperfectly, blurred or gray instead of black, you cannot remember it perfectly. You will remember it as you see it.

Q – If there a possibility of palming wrong? I can obtain some benefit, but later I feel strained.
Q – Palming may be done properly or it may be done wrong. I would suggest that you read the chapter on palming in my book.

Q – I get nervous if I palm for any longer than ten minutes at a time. Can I obtain as much benefit by palming for short periods at more frequent intervals?
A – Yes.
Q - What is the circular swing and how is it practiced?
A – The circular swing is described in the June number of "Better Eyesight."

Announcement

Several back numbers of "Better Eyesight" from 1919 to 1925, ordinarily listing at 30 cents per copy have been reduced to 10 cents per copy. These numbers contain articles on cataract, glaucoma, myopia, hypermetropia, astigmatism, presbyopia (old age sight), ect.

SCHOOL NUMBER

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

AUGUST, 1928

Suggestions

It is recommended by the editor of this magazine that every family should obtain a Snellen test card and place it on the wall of some room where it can be seen and read every day by all the members of the family. Not only does the daily reading of the card help the sight of children, but it is a benefit to the eyes of adults as well.

Presbyopia Cure

It is a well known fact that when most people arrive at the age of forty or fifty years, they find that their vision for reading or sewing is lowered. These people believe that they must put on glasses to prevent eyestrain, cataract, glaucoma, et cetera. Daily practice with the Snellen test card, together with the reading of fine print close to the eyes will overcome their difficulty. Reading fine print close to the eyes, contrary to the belief of many ophthalmologists, is a benefit to the eyes of both children and adults.

It had been repeatedly demonstrated, however, that fine print cannot be read clearly or easily when an effort is made.
The following paragraph refers to a person with blurred vision making a effort, strain to see black letters;

When the eyes look directly at the letters, an (unnecessary) effort is required (made), while looking at the white spaces between the lines is a rest, (because there is nothing there to see, so the person avoids effort, strain.) and by practice in this way, one can become able to see the letters clearly, without looking directly at them. When a patient looks at the white spaces between the lines of ordinary book type, (occasionally to rest the eyes) he can (then, look at the black print) read for hours and no fatigue, pain or discomfort is felt.
When discomfort and pain in the eyes is felt while reading, it is because the patient is looking directly at the letters: (with an effort, without central fixation, without movement/shifting, blinking, relaxation).

The above paragraph is an old technique containing some steps that are no longer used. The blue print is added by Clark Night to clarify this.
Looking at the white spaces does relax the eyes, produces clear vision, but, trying to see the black print while looking at the white spaces causes the mind/eyes to attempt to think about/see two different things, the central and peripheral fields at the same time. This is diffusion, eccentric fixation, prevents central fixation, leads to strain, tension, blur.
It is ok to look at the white spaces to relax the eyes, mind, to remember, imagine the white spaces pure, bright white to improve the memory, imagination, clarity of the space, but; when reading, look directly at the print, shift/move the eyes along the sentence. Read through the 'center of the words' or, just let the eyes shift about the letters, words as the eyes move on/along the sentence.
Looking directly at the letters will not cause strain, effort if relaxation, central fixation, movement/shifting are applied.
The eyes can look directly at the letters, relax and see them clear.
Looking at the white spaces also relaxes the eyes, and when the person then moves/shifts from the white spaces to the black print, relaxation continues and the print is seen/read clear.
Always read the print by looking at the print, not the white spaces.
When looking at the white spaces – avoid staring: shift on the spaces to prevent staring and to produce relaxation, clear vision.

School Children

By W. H. Bates, M.D.

About fifteen years ago, before the medical society of Greater New York, I read a paper on the prevention and cure of imperfect sight in school children, illustrated with stereoptican pictures. Physicians who attended were very much interested in what I had to say. In the course of my reading I mentioned that most books on ophthalmology have published the statement that near-sightedness was made worse by an effort or strain to read at less than six inches or to read in a dim light. I went on to say that a careful study of the facts demonstrated that much reading in a dim light at the near point will not produce near-sightedness in school children, but will produce the opposite condition far-sightedness. (far-sightedness occurs only if strain, effort is allowed when reading the print) A great many members rose up immediately to disprove this statement. They were unable favorably to impress those present because not one of them had investigated the subject. They admitted that they condemned such statements because most German physicians and many French, Italian and others had, like them, condemned the methods employed from hearsay and not from actual investigation or experience.

It was a rule of the society that every paper should not require more than twenty inches for its reading. After more than half an hour had passed I asked the president of the society how much more time I could have for finishing my paper. He answered that as much time would be allowed for finishing the paper as was necessary. The answer was so encouraging that nearly two hours elapsed before I was finished. The meeting was then thrown open for discussion and many of the ophthalmologists present publicly stated that near-sightedness, far-sightedness, astigmatism, cataract, glaucoma and many other eye diseases could not be cured by operation or by the use of drops or other local eye treatment.

Those present asked many questions and the answers satisfied some and annoyed others. One question was asked which would have required some hours before it could be answered intelligently. It was as follows: "What percentage of cases of myopia in school children can be cured or prevented without treatment?" I answered that statistics were misleading. Someone has said that one can prove anything by statistics, but I disagree with him.

About midnight, the janitor appeared on the scene and whispered in the ear of the president a message which must have been annoying from the way the president acted when he received it. The president then said that the paper was so valuable that its discussion must not be curtailed, and if the janitor expected the society to adjourn, the members would go downstairs to one of the large rooms which was not occupied. It seemed to me as though all the members passed on to the new room.

A few weeks later another paper on myopia was read by invitation before the medical society of the County of New York. Among other things, I said that if it could be demonstrated that one child of the Public Schools of the City of New York did not produce or acquire myopia by an effort to see at the distance that I was wrong about the whole matter. The Board of Education heard of this statement and became interested. They sent for me to appear before them. I visited the Board of Education and told them about my investigations and offered to introduce the method in the schools for the prevention of myopia in school children. Some of the members of the Board themselves demonstrated that when they made an effort to see at the distance that the sight became less from the production of myopia, and that rest lessened the myopia. Much to my surprise it was voted that my methods should be given a trial in the public schools of the City of New York.

Soon afterwards I called on the principal of one of the schools and asked for an opportunity to prove that I was right. The principal listened to my story and when I had finished said to me: "Come with me and we will try to prove whether you are right or wrong."

She invited me to one of the school rooms where a number of the children were suffering from eyestrain or were wearing glasses. When their glassed were removed their vision was imperfect. While their glasses were removed they were asked to sit with their eyes closed. At the end of fifteen minutes the sight was tested and all were found to have improved sight. Some had even obtained normal vision. The principal then said to me: "Remain here, doctor, until I return."

She then went to one of the other classrooms. In a little while she returned smiling. She said: "Doctor, you are right; rest of the eyes does improve the imperfect sight of myopia. I am pleased to inform you that I was able to cure about a dozen children just by having them close their eyes and resting them for some minutes. I would like to have you meet some of my teachers and explain your method to them for their benefit." I found out later that she treated these children privately herself so that she could be sure that magic was not used.

Memory, Imagination, Relaxation and Vision Function Together

In the beginning it was demonstrated that the memory played an important part on the cause, prevention and cure of imperfect sight in school children. It was also observed that improving the imagination enabled the children to improve their sight. They soon learned that they could only see what they imagined and that they could **imagine what they remembered, and remember only what they saw.**

A number of children were found wearing glasses who were backward in their studies and complained of attacks of headache and pain in their eyes; they were restless and took very little interest in their studies. After eye education was practiced, not only did the vision improve, but the mentality as well.

Teachers in other cities also used my method of eye education in their classrooms. A teacher in the West devoted considerable time to teaching children how to remember, how to imagine, and how to see by using their eyes without effort or strain. She taught them how to palm until their eyes were rested. She had the whole class stand up and sway from side to side and imagine stationary objects to be moving.

Her efforts to improve the imagination of the children were most interesting. One method was to have the child close the eyes and draw some fantastic and unusual figures of people, animals and other objects while the eyes were closed. Some of these drawings were so valuable and interesting that they were used by older patients to improve their imagination. Many weary hours of work were relieved by having the children practice relaxation methods. In time the children enjoyed these relaxation methods and practiced them at recess. **One child who was able to improve his sight very promptly enjoyed teaching other children how to improve their sight.**

Children are Often the Best, Perfectly Natural Vision Improvement Teachers

The Superintendent of the Public Schools in North Bergen, N. J., published in this magazine in August 1925, a report of the result of the adoption of my methods in his schools. In many of the schools were children 16 years of age in the same class as other children much younger. One very important result of the practice of relaxation methods in his schools was that children suffering

from retardation were materially benefited or cured so that their teachers were able to place them in the classes in which they belonged according to their years.

After my methods were practiced in the Public Schools of New York for several years with great benefit, some physicians interested in eye work believed that the eyes of the children were not benefited by eye education and through their recommendation the practice of my method was stopped. I cannot understand why the Board of Education was willing to abandon methods which were practiced by teachers who were much pleased with the results obtained, in favor of methods which had failed to bring about any material benefit. (Optical industry hiding Bates Method from the public.)

School Children

By Emily C. Lierman

Squint and Blur

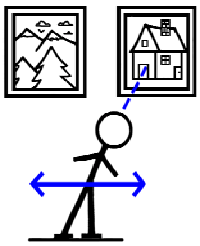
During the spring of last year I had a class of boys under treatment. There were twelve in this group and each one had to be treated individually in order to improve his vision permanently. Two of them were brothers. The younger of the two, age nine, had normal vision in the right eye or 10/10 and he read all the various test cards I had without effort or strain. The vision in his left eye was also 10/10 but while reading the cards, while his right eye was covered, he held his head to one side and strained to see each letter. When he read the letters with both eyes together his left eye turned in considerably. His mother, who had been treated by me, was much concerned about the possibility of this condition becoming worse.

While he kept his right eye covered, I placed him fifteen feet from the cards and at this distance, with some effort, he read 15/30 and he complained that the letters were blurred. Palming seemed to help and I noticed that while his eyes were closed he sat quietly in his chair. At other times he was nervous and never still for a moment.

While he was palming, I talked about animals and their habits, how they moved about without any effort on their part—especially how the deer, cow, and even the bulky elephant could move about without any effort. Blinking their eyes was something they knew nothing about, yet they blinked all the time which helped them to keep relaxed always. The deer only strained and showed signs of fear when danger was near. The cow not only blinks but chews a cud and this keeps her busy and at the same time relaxed.

The elephant sways his body when he is quiet and relaxed. Even when he walks his head and body move up and down. (The sway, the Long Swing) Elephants live many years longer as a rule than any human being and I sometimes wonder if they would live so long if they suffered eyestrain like human beings.

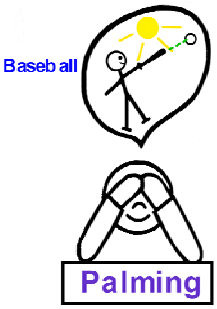
My boy patient listened as I explained all this to him and it certainly helped. I only saw him four times and during his last treatment his left eye remained straight just like the right and his vision with each eye improved to 20/10. He practiced faithfully every day for more than two hours, alternately swinging, palming, and consciously blinking his eyes as he looked from the first letter to the last letter of a line on his test card. At other times while swaying his body from left to right he would look at a picture on the wall to the right and then to another on the left wall, always blinking, keeping time with the swaying of his body.



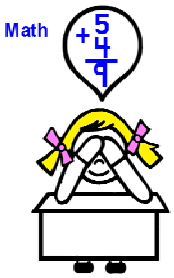
Sway left and right. Blink.
Sway right and look at a picture on the wall, to the right.
Sway left, look at a picture on the wall to the left.
Shift relaxed, easy on objects in the pictures without trying to see clear, without stopping the sway.



Sunning - Face the sun with eyes closed. Move the head side to side. Do the sway. Relax the neck, head, eyes, body.
Go outside daily in the sunlight without eyeglasses, contacts sunglasses and look at objects at ground level, then tree tops, clouds... (Do not stare into the sun. Look at the bright sky.)
Seek shade under a tree as needed to avoid sunburn.



The Boy palms and remembers, imagines playing baseball, his favorite sport. Imagines shifting on the ball, seeing its size, color, motion, sees it clear, imagines pitching, hitting the ball, running the bases.
Remembering, imagining a favorite subject, hobby, objects relaxes the mind, body, eyes and improves the vision.



A girl likes arithmetic. She palms and relaxes her mind, eyes by imagining, remembering numbers, easily seeing numbers clear in the mind and adding the numbers correctly. The mind relaxes, the memory, mental pictures improve when thinking about a favorite, happy subject. This prevents mental, visual strain and improves the vision.
Mental strain, imperfect memory, worry, thinking unhappy, boring thoughts causes strain, tension in the mind, body, eyes, eye muscles and unclear vision.

Eyes Sensitive to Sunlight and Sunlight Treatment

His elder brother had no trouble in reading his books or seeing letters or figures on the blackboard at school, but when he joined his schoolmates at baseball, basketball or any other game, including golf, his eyes pained him so much that he had to squint his eyes continuously while he was in the sun and he sometimes became blinded by the sun for a half hour or longer. This of course, alarmed his parents.

This boy needed sun treatment and as I was teaching this class of boys in the evening, I used electric light for the treatment instead. A 350-watt electric light was adjusted to a floor lamp which was arranged without a shade so that with the sun glass I could focus the light directly on his closed eyelids. Previous to placing the bulb in position I had directed the boy to keep his eyes closed so that he would not know what I was going to do next. If he had watched me adjusting the light he would have strained as he faced it. I explained to him that if he would keep his eyes closed I would give him some light treatment, which would be of benefit not only to his eyes but in other ways. (Artificial light is partial spectrum, not as healthy as full spectrum sunlight but is better than no light.)

Before I gave him the light treatment he told me how difficult it was for him to read in the sunlight or with an ordinary electric light without squinting and wrinkling his forehead and distorting his face. I placed a book near him, which was given to him after the light treatment, and we had good results instantaneously. There were others in the room besides my class of boys who were interested in this particular case. They watched closely as the boy held the book eight inches from his eyes and read distinctly without any signs of effort or strain.

The boy's mother made an appointment with me for the next day and an hour's treatment was given him in the bright sunlight. Two treatments were all that were necessary to give him permanent relief and he had no more discomfort or signs of strain or tension while he played basketball or baseball with the rest of the boys.

Another one of this group had i**rritated eyelids,** the appearance of which was worse than the discomfort or pain that the boy experienced. He blinked more rapidly than the normal eye does unconsciously. Sun treatment was given to him also. When the mother saw that he had obtained a noticeable amount of relief from the first treatment, she purchased a **sunglass** and under my supervision she learned how to **use the glass on his closed eyelids** and in this way all he needed was the one treatment.

The rest of the boys in my class were soon relieved of their eyestrain, which was due to straining while reading at the near point and trying hard to see objects at the distance. By shifting from the white space between two lines of microscope type and looking at a test card placed ten feet from where they were sitting and then at a test card placed twenty feet away, they were relieved during the one treatment. It was not easy to make them understand that it was not a game that I was playing, but I became as one of them because it is the only way that I can be successful in my work. It is always good while treating boys of their age to be interested in their work or in those things which interest them especially.

As I explained in previous articles it does not take long for a boy who is interested in baseball to obtain normal vision if it is only near-sightedness or far-sightedness which troubles him. While they are palming they can always imagine the size of a baseball and the color of it. They can always imagine that they are pitching the ball and that they are running to first, second and third base. In this way **their minds become relaxed during the palming** period or while their eyes are closed without being covered with the palms of their hands. This method always improves their vision for the test card and for big type.

With girls who are of school age, I find out, while they have their eyes closed and covered, what special study they like best. If it is arithmetic, for example, I have them give me an example and purposely I make a mistake in answering, which they correct. In their minds they are doing the example correctly and **their minds become relaxed because there is no cause for strain**. I have tried having a child do an example when arithmetic is not a favorite study with her, and I have not at any time found such a child who could get the answer correctly within a reasonable length of time because I produced mind strain, which in turn produced eyestrain and imperfect vision. This demonstrates that Dr. Bates is again right in saying that when the mind is under a strain, the eyes cannot have normal vision.

+Mind strain = imperfect memory, imagination, eye muscles tense – abnormal eye shape – incorrect focus of light rays in the eye – brain not function correct with light, eyes, retina, eye muscles, nerves = unclear vision.

+Mind relaxed = memory and imagination perfect, eye muscles relaxed, function correct – normal eye shape – correct focus of light rays on retina, brain functions correct with incoming light, eyes, retina, eye muscles, nerves = clear vision.

Case Report

Military Story

Man Experiences Blindness - How He Returned to Clear Vision

By Joseph Ouimet

So many are the testimonial letters from satisfied clients that are published by manufacturers of specifics in newspapers and magazines, who pay so much per line for their insertion, that this means for expressing one's appreciation has been abused and discredited to such an extent that when a client desires to show his gratitude for a certain and specific cure, he is in danger of being disbelieved.

Nevertheless, at such a risk, I shall relate my own experience during a period of utter darkness, during which time the light did not penetrate into my eyes. In my soul reposed uncertainty, due to the assurance of a doctor that I would never recover my eyesight. Those were times of sorrow very difficult to forget, and now that light once again penetrates into my eyes, showing me the greatness of a world full of colors and infinite harmony, it is my desire to express in these few lines my appreciation to the man who brought me out of the world of darkness. I also wish that my experience may serve as a guide to all those who are endeavoring in vain, through erroneous means, to regain their eyesight or who have resigned themselves to live in a world of total darkness, after tiring of trying out experiments without results.

To begin my story, it is necessary that we go back to the year I9I7. At this time, from all cities of the United States, men in the prime of life were leaving for Europe, some never to return but to remain on the battlefields of France as a testimony of the heroism and sacrifice of a nation who willingly sent millions of soldiers to fight for a principle.

I was one of the many who, from the shadows of night to daylight, was converted from a peaceful citizen to a war soldier and who received the baptism of fire on French soil. There I slept in muddy trenches, suffered hunger and cold, fought in defense of my life. One afternoon while repelling a counter-attack, I was enveloped in a cloud of poison gases. Tears came to my eyes, which were inflamed to such an extent that I was unable to distinguish the objects which were located two feet in front of me. In despair I rubbed my eyes with my hands and almost crazy with pain I started to run without knowing where, until I stumbled and fell, a blow mercifully relieving me of all pain and making me lose consciousness.

Upon regaining my senses, I found myself in a hospital bed, where started many tedious and ineffective treatments designed to bring me out of the world of darkness to which the poison gases had doomed me. Days like a long endless night passed in the hospital, during which my eyes endeavored to form images and visions of things that in former times were so pleasing to my eyes. Only within my soul and as memories, such images took shape as though it were a new irony of life looking with delight at my loneliness and showing me the treasures that I had lost.

One day the doctor under whose care I was, being tired of making trials and seeing that his efforts were in vain, gave me up as incurable. When I was so informed, when the doctor's words shattered the only rays of hope that I still had, it seemed as though the world was sinking from under my feet. It seemed as though the world had come to an end as far as I was concerned. I had no further hopes or ambitions, but resigned myself to my fate and to wait for death to visit me as soon as possible so that I might take my trip to the infinite.

I thus returned to my native land, discouraged at heart, without being able to see anything, not even the ocean that was murmuring under me, nor the sun that shone upon my body, nor the faces of my comrades who happily commented about the proximity to their happy homes. When the boat sirens, the jubilant screams of my comrades; when the distant voices of the multitude who were anxiously awaiting the arrival of the steamer, made me aware of our arrival at the port of debarkation, I

experienced the most bitter moments of my life, especially when, at the dock, with eyes filled with tears I embraced my dear beloved ones, holding them strongly in my arms, so as to behold with my sense of feeling those whom my eyes could not see.

Then, little by little, by resigning to my fate I was able to drive out bitterness from my soul, until one day I was told about the Clinic of Dr. W. H. Bates, which I visited for the purpose of simply trying out one more cure but without having hopes of any kind. A few days after visiting the clinic and without receiving any other treatment but **sun baths** and **relaxation treatment** under the electric light, I observed a rare change. It seemed to me as though the darkness were becoming less dense and at times it seemed to me that I could see small objects which would appear from time to time, to disappear again rapidly, until one day a miracle took place.

A ray of light penetrated my eyes; it was like a shadow which I could distinguish vaguely in the shape of a bundle, without being able to determine exactly what it was. Although I could see so very little, my soul was filled with joy. From then on I dismissed from my mind all lack of confidence, and practicing faithfully the methods recommended, the bundles that my eyes vaguely could make out, gradually took a shape of reality until I was able to distinguish objects in their true form. Once again a return to life after having been for several years in the worst of all human jails and now that my sufferings have come to an end almost entirely, I am in a very good position to appreciate this treasure that God has given us so that we may behold the infinite wonders of his creation.

I wish that my knowledge were more extensive so as to describe in detail the methods that Doctor Bates employs in his clinic so as to bring about similar miracles, details which although very simple, inasmuch as the methods are not tedious nor difficult, involve certain technicalities which only through the lips of a man of science can be made sufficiently clear for the layman to understand in all its details. It is not the technician who is writing these few lines but a grateful person who desires to pay with the only available means for a good service.

The results in my case I do not hesitate to call miraculous, in view of the fact that I had been considered as incurable by other doctors who, by using antiquated methods, made me lose time and money, and endure years of suffering. In view of these circumstances, any praise that I may give Dr. Bates, will not be enough and if I have refrained from using more appealing terms in my narrative, it is because I would not want my sincerity and good faith to be doubted in any way. Should it be necessary, I have not only one witness but several, as well as friends, acquaintances and persons of reliability who have known me for a long time and who would not hesitate to corroborate every word of my statement.

Today my satisfaction is complete on account of being almost entirely cured, and I think that in this world there must be many unfortunate ones who, not being as fortunate as I, have been unable to obtain relief from such a terrible malady. How much would I like to have this message reach their hands! Were I one of the sons of fortune who from birth has been showered with wealth, I would be glad to devote part of my money so that everyone who may have any eye affliction may receive these good tidings, but inasmuch as my limited resources do not permit me this pleasure, I hope that these few lines will serve as a sincere testimony of one who is very thankful for the services obtained in the Clinic of Doctor Bates.

There is a movie telling the true story of a man blind since childhood from cataract and retinitis pigmentosa. When he was a adult he had a cataract operation and regained his sight. After about one year he became blind again. None of the doctors treated him with the Bates method which could have cured the cataract and retinitis pigmentosa without operation. They did not teach him how to use the memory and imagination to learn to identify objects and get his eyes working with the brain. His eyes, brain had not seen anything for years, he had very few mental pictures so all objects when first seen were unfamiliar. This was very frightening, confusing for him. Imagine never seeing a car, street, house…
If the Bates Method would have been applied the man may have obtained clear vision naturally and maintained the vision.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

SEPTEMBER, 1928

Eyestrain

The eyes of all people with imperfect sight are under a strain. This is a truth. Most people believe that during sleep the eyes are at rest and that it is impossible to strain the eyes while sound asleep. This, however, is not true. Persons who have good sight in the daytime under favorable conditions may strain their eyes during sleep. Many people awake in the morning suffering pain in the eyes or head, neck. Often the eyes are very much fatigued and have a feeling of discomfort.

There may be also a feeling of nervous tension from the eyestrain, or there may be a feeling as of sand in the eyes. At times all parts of the eye may be suffering from inflammation. The vision is sometimes lowered for several hours whereupon it begins to improve until it becomes as good as it was before the person retired the night before. Many people become alarmed and seek the services of some eye doctor. Usually the doctor or doctors consulted prescribe glasses which very rarely give more than imperfect or temporary relief.

There are various methods of correcting eyestrain occurring during sleep. **Palming** is very helpful even when practiced for a short time. A half an hour is often sufficient to relieve most if not all of the symptoms. In some cases the **long swing**, practiced before retiring, is sufficient to bring about temporary or permanent benefit. **Blinking** and **shifting** are also helpful. Good results have been obtained by practicing a **perfect memory or imagination of one small letter of the Snellen test card alternately with the eyes open and closed.** A number of patients were benefited and usually cured by **remembering pleasant things perfectly.**

Aviators' Eyes

By W. H. Bates, M.D.

Military, Pilots

AVIATION is becoming more popular than ever before. The writer has treated many aviators who had, within a few months, acquired trouble with their eyes which made it dangerous for them to continue to fly. During the war a Major, an Aviator in the Army, consulted me about his eyes. His principle trouble was **dizziness**. He was wearing glasses for the correction of a slight **astigmatism**. The glasses did not relieve the dizziness. At this time a large number of aviators had been killed by falls.

The history of this aviator was very interesting and valuable. He was positive that a number of years previously when he began to practice flying that his sight was normal - 20/20 with each eye or with both. After a few years he noticed that his sight was impaired and that he had attacks of dizziness which did not last long in the beginning. These attacks of dizziness would come without warning while he was flying about one thousand or more feet above the ground. While he was conscious of the dizziness, he noted that his machine (plane) started to fall and continued falling until the dizziness stopped. It was some months before he realized that with every attack of dizziness the machine fell a greater distance, and he feared that these spells would ultimately cause his death.

Like most Army and Navy men, the Major did as he was told and was cured by me. This is the way it was done. I tested his eyes with the ophthalmoscope and retinoscope and found no disease of his eyes. The retinoscope revealed a small amount of astigmatism in each eye. His vision for the test card was 20/30. When he closed his eyes and rested them, the astigmatism became less and his sight for the test card became normal - 20/20. This was accomplished in about an hour. The improvement was only temporary, however, and he was given advice for treatment at home. A large test card was given him with directions to read it with each eye separately at twenty feet. He was directed to rest his eyes often by closing them. It was suggested to him that he look at one letter which he remembered better with his eyes closed than he imagined or saw it with his eyes open. By repetition, his vision for the known letter improved and his sight for unknown letters and other objects improved until his vision became 25/10. He was under treatment for about a month and he was seen at irregular intervals during that time. Since that time I have not heard from him personally.

Other aviators have been benefited by the same treatment. There is a right way and there is a wrong way to use the eyes when controlling a flying machine. The time required to do the wrong thing is just as long as the time required to do the right thing. The aviator can also demonstrate that an imperfect memory, imagination or sight is more difficult than a perfect memory, imagination or sight.

For example, a small letter "o" can be remembered imperfectly on one of the lines of small letters of the Snellen test card, (this will cause strain, blur) but a stare or strain to see it with a white center as white as snow may require much effort, time and trouble. (this will also cause strain, blur) The imperfect whiteness of the letter soon disappears while its blackness turns to a shade of dark or light gray, all covered by a blurred cloud. The concentration, the effort to see, brings on discomfort, fatigue, pain, dizziness and other nervous symptoms which are all difficult to remember, imagine or feel. **The memory, imagination or sight can only be demonstrated easily when exercised without strain**. The successful pilot when at his best is always doing the right thing.

When riding in a fast moving train, the telegraph poles, although fastened to the ground, appear to move in the opposite direction. But any effort to stop this movement brings on a strain which may cause much pain, dizziness, fatigue or other nervous discomfort. The Major, who recognized the bad effects of dizziness from imperfect sight, believed that the dizziness, if sufficient, could cause fatal accidents when flying. He became able consciously to produce dizziness by eyestrain or by an effort to improve his vision.



He was taught to imagine the floor to be moving when he walked about his rooms. Swaying his head and eyes from side to side enabled him to imagine the floor to be always moving. When he steered his plane to the right, all objects seen appeared to move to the left. When he moved to the left all objects seen appeared to move to the right. He was able to lengthen the apparent movement of stationary objects. The wider the movement, the less was the sight improved, while a shorter movement of the eyes or head was followed by a greater improvement.

It was difficult for him to demonstrate that perfect sight can only be obtained by rest and prevented by an effort. But when he had learned that it was a truth without an exception he soon became able to demonstrate the facts. He was encouraged to improve his vision by using various or all parts of his machine as objects for testing and improving his sight. The more successful he was in improving his memory for objects, the better was the vision. **We can only remember perfectly what we see perfectly; we can only imagine perfectly what we remember perfectly; we can only see perfectly what we imagine perfectly.**



The time required for a cure varies with individuals. The eyes of some aviators may be under a greater strain than that of others.

The aviator should demonstrate that shifting the eyes or moving the eyes from one small part of his plane to other objects is restful and that his sight is always improved by resting his eyes. Blinking or closing the eyes and opening them quickly is also a rest. He should also demonstrate that closing the eyes for a few seconds or longer and then opening them for a shorter time is a benefit to the sight. Palming or covering the closed eyes with the palm of one or both hands when done right always improves the vision. **Blinking, shifting, or palming can be practiced before entering the plane and so accidents may often be avoided.**

While attacks of dizziness are a frequent cause of accidents, many of them fatal, there are numerous other causes which are just as serious or important. Many fliers of airplanes seldom have accidents. What is the secret of their success? It is due to their control at all times in all places.

Control of what?

The answer is: Control of the mind, control of the eyes and of all the nerves generally.

When the efficiency of the mind is at its maximum, it is at rest. Nothing is done consciously or unconsciously. It was a shock to the writer to discover with the aid of the retinoscope that the greatest strain of the body occurred during sleep. Strain is always accompanied by a loss of mental control when things go wrong. Accidents, fatal accidents, always mean a loss of mental control. The fact should be demonstrated. It should also be demonstrated that it is more difficult to fail than to succeed.

"Lindy" **(Charles Lindbergh – Pilot – See pictures on right)** could not have crossed the Atlantic Ocean, a 3,000 mile journey, by making a constant effort to obtain nervous control. The effort would have caused fatigue, and no man can have control of his nerves by using some form of effort. Dizziness is caused by prolonged effort and no man could fly very far when dizzy.

The eyesight of even the best of us would become imperfect in a few minutes or less. Now let me ask how many of the best aviators could be efficient if their sight should become imperfect?

Control is necessary.

How can it be obtained? Very easily. First demonstrate that doing the wrong thing - like staring, straining or making an effort to remember, imagine or see - requires an effort, while resting the eyes or mind is easy and requires no effort.

It is a common experience for many people to fail to remember a person's name. An effort to remember it always fails but if they rest their minds by thinking of something else the name comes to them without their volition. A perfect memory can be obtained by practice. Perfect mental control comes or is manifest when the memory is perfect. Practice is important and very necessary. One may see and remember familiar or well known objects with the eyes open but better with the eyes closed. By alternating, the memory with the eyes open improves until it becomes as good as with the eyes closed. This means mental control of the mind, eyes, and all the nerves of the body.

The imagination can also be improved by practice. For example, if a well known or familiar letter of a sign or print on a card can be imagined more clearly than it really is, the vision of all parts of the letter is improved as well as the vision for other objects which were not seen before. Imagining the letter alternately with the eyes open and closed is a benefit to the imagination and the memory as well as to the sight. The aviator can improve his control by improving his memory, imagination, and sight, while flying. It is not necessary for him to practice on letters or other objects several miles away. He can practice successfully, more or less continuously, on the face of his compass or some other part of his machine. Finally he should remember that perfect control can only be obtained by rest and not by any effort whatever.

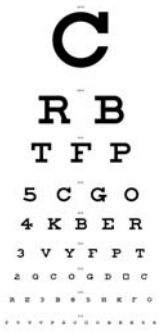


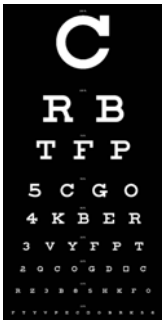






Amelia Earhart - Pilot

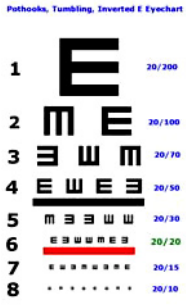




Test Card Practice

By Emily C. Lierman

My experience with school children and with people who are advanced in years has proved to me that daily test card practice is the quickest way completely to relieve eyestrain and imperfect sight. It is the custom always to give a patient a large test card with a small pocket size test card for home practice. Patients are encouraged to write for more help if needed further to improve their vision if they no longer come to the office for treatment. There is not a day goes by but that a patient will report that he did not have time to practice reading the test card for the improvement of his sight.



This is a natural thing, because most of us have more plans made for the day than we have time to carry out. For that reason we find the miniature test card very valuable. The card is just large enough to be placed in a dress or coat pocket. It is not necessary to spend any extra time at home in practicing with this card if the patient has a journey before him in going to or from business. Riding in trains, taxicabs, the subway or surface cars will give the patient time enough to improve the vision by practicing with the little card, even if it is only for ten minutes at a time.

If one is riding in the subway, either sitting or standing, one can use the small test card by holding it about six or eight inches away and shifting from a letter of the card to a sign directly opposite. If the print of a sign looks blurred, the print will soon clear up if one practices shifting and blinking from the letter of the card up close to the letter of the sign.

Many people whom I have helped in this way have enjoyed practicing with the signs and small test card because by the time they arrived at their destination their eyestrain was entirely relieved. It is so much easier then to use the memory for objects seen without effort or strain. One can remember part of the sign which was seen in the subway and if during the course of

the day there should be a strong desire on the patient's part to put on glasses again, all he has to do is to close his eyes for part of a minute and remember that sign. Instantaneous relief sometimes follows and this encourages the patient to practice. These small test cards are always available at the Central Fixation offices for a very small sum and there is always someone there to explain how the card can be used successfully.

Children like the small test card with numerals. The numbers are distributed so that wherever the eye glances there is always some number which can be seen perfectly within a normal distance from the eyes. Children, as a rule, are not satisfied until the card can be read normally with each eye separately. Over each line of numerals there is a small number indicating at which distance the normal eye should read it. School children who have never been to the office or seen Dr. Bates or myself have been able to improve their imperfect sight to normal by the daily use of this small card.

Sometimes children do need encouragement from their parents or from their school teachers, because they forget just as grown folks do when a thing should be done for their benefit. I have been asked this question many times: "How about younger children who cannot read or write?" For them we have a card called the "pothook" card which contains inverted "E's." It does not take long for a two-year-old to be taught how to say which way the "E's" are pointing. Children soon learn how to say whether the "E's" are pointing up, down, left or right. By shifting from one "E" to the other, they notice the white spaces between the lines of "E's." Unconsciously they notice that the black letter "E's" become blacker or appear to, which is a good thing for the sight.

The "pot hook" test card is also used for sailors who have difficulty in reading flag signals at sea. Many mid-shipmen from Annapolis are at the present time using this card for the benefit of their sight.

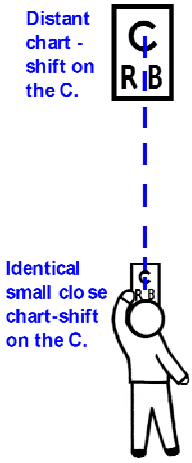
There is a small black card with white letters for those who are partially blind, which is of great benefit to them. Such a patient is placed with his back to the sunlight and while the sun is shining on the black card, the white letters appear more clear and white and by closing the eyes often, avoiding the stare, the vision is not only improved, but if there is any pain or discomfort it soon disappears. The patient is advised to hold the card up close to the eyes and while the card is moved slightly from side to side about an inch or two, relief soon comes. The patient is then advised to hold the card a little further away day by day.

Patients to whom the large test card beginning with the letter "C" is given at the first visit find the pocket size test card, which is a duplicate of the large one, a great help. They shift from the small card, which is held in the hand, to the large card which is placed ten, fifteen, or twenty feet away. **The patient looks at a letter of the small card, closes the eyes to rest them for part of a minute and then looks at the card in the distance and sees the same letter on the same line,** (Switching close and far on identical familiar objects) which in most cases becomes clear and easy to see without strain.

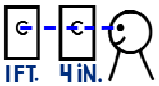
For those who do close work, more than one small test card is used. During work hours two cards can be placed on the desk, for instance, or near to their work. One is placed to the left and the other to the right at an even distance of about two or three feet, or a little closer. The shifting, which is done rapidly and only takes a second to do, is done by first shifting from the work to the card at the left, back to the work, over to the card on the right and back to the work.

The patient soon notices that the small letters which were not seen clearly appear distinct. There are times when patients become discouraged because the sight does not appear to improve as rapidly as they expect. Sometimes the vision even becomes lower, which is discouraging. If those patients who have been to Doctor Bates can get in touch with him and explain just where the difficulty lies, the advice that will be given is sometimes all that is necessary.

I hesitate to mention my book to the subscribers of our magazine, but I always mention it to my patients. In it I have described as carefully as I could how important it is for patients to continue practicing after they have seen the Doctor. It is written so that everyone with eye trouble will find an article which will apply to his case. Those who have Dr. Bates' book find my book of additional help, and it is because of this that I mention it at this time. At the time the articles for my book were written, I had some blind and partially blind patients, an account of whose cases can be found in my book. Since the book has been written I have had further experience in treating difficult cases, which I try to explain in each number of the magazine.



Shift on letters on two identical eyecharts placed at close and far distances. Use the memory, imagination; Shift on and remember, imagine the letters clear with the eyes open, closed, open.



Shift on letters on two identical eyecharts placed at two different close distances to improve: accommodation, un-accommodation, convergence, divergence and clarity of vision at all close distances.

I have found that **practice with microscopic type is most helpful in near-sightedness.** The patient holds the fine print as close as he can, looking at the white spaces between the black lines of type while blinking and then looking out of a window, for example, or at a distant corner of the room. Then looking at, shifting on the black fine print, remembering, imagining and seeing the fine print dark black and clear, then looking to the distant object and remembering, imagining, seeing it clear. Practice shifting on, remembering, imagining the fine print, then distant object, then fine print again, then distant object again… clear with the eyes: open, closed, open. Practice with both eyes together, then one eye at a time, then both together again. If vision is less clear in one eye, practice extra time with that eye to bring the vision equal, perfect in both eyes. Patch the eye not in use.

As I have said in this magazine before, all cases cannot be treated alike. There may be in one room at the same time ten or more cases of myopia, cataract, glaucoma or any other disease of the eye, and yet perhaps only one of the group would respond to one kind of treatment. For that reason, all cases have to be studied by the doctor or teacher and if one method of treatment does not help, another method must be applied immediately, so that the patient does not become discouraged. It takes just as much time in a great many cases to cure a simple case of imperfect sight as it does a more serious eye trouble, and yet it does not require a college education to be able to be cured of imperfect sight by the Bates Method.

Switching, shifting on letters on two – three identical eyecharts (or 2-3 identical fine print cards) at two-three different close distances improves close vision and reading distance.

Questions And Answers

Q – (1) How long should one palm and how often?
(2) How young a patient can you treat by this method, and up to what age can you expect results?
(3) Is astigmatism curable by this method?
A – (1) As often and as long as long as possible.
(2) Age is not a factor in the cure of imperfect sight without glasses. Patients as old as eighty-two have been relieved. Children can be treated as soon as they are able to talk. Babies, children can be rocked, swung in their mothers arms, cradle…, different objects moved in front of the eyes to prevent staring, to get the eyes shifting, activate relaxation.
(3) Yes.

Q – How long has the method been known?
A – Its evolution began thirty-five years ago. It has improved as experience has been gained and is still improving.
The Modern Bates Method consists of many new, improved versions of the original treatments and new methods; Left and right Brain Hemisphere activation, integration, color treatment, Infinity swing, posture, movement, positive thoughts/emotions are a few examples.
Q – Why is it a rest to read fine print? I should think it would be more of a strain.
A – Fine print is a relaxation, large print a menace. The December, 1919, issue of this magazine explains this in detail.
Fine print activates perfect central fixation, tiny shifting eye movements, short swing, fine tuned detailed vision. The mind, eyes become perfectly relaxed when reading fine print because that is the only way it can be read.
Q – Must the body be at rest before the eyes can be cured?
A – When the eyes are relaxed, the whole body is relaxed.

Q – Which is more beneficial, the short or the long swing?
A – The short swing, if you can maintain it.
Short Swing Example: Shift on a small fine print letter or period and see it show oppositional movement.

Q - Trying to make things move (oppositional movement) gives me a headache. Palming gives me more relief. Why?
A – Making an effort to do a thing will not help you. When you are walking on the street, the street should go in the opposite direction without effort on your part. Some people get more relief from palming, while swinging helps others more.

Q – Are the "movies" harmful?
A – No. Quite the contrary. Send for the magazine on this subject.

Q – Why do "movies" hurt my eyes when they should benefit them?
A - Unconscious strain. Do not stare at the pictures, but allow the eyes to roam over the whole picture, seeing one part best. Also keep things swinging.

Q – Is a hemorrhage on the outside of the eyeball fatal?
A – Rarely.

Q – Is central choroiditis curable and does it require much treatment?
A – Yes, choroiditis is curable. It requires a great deal of treatment in some cases.

Q - Should one imagine a thin white line along the top of a word or sentence or just at the bottom?
A - If you can imagine it at the top as easily as you can at the bottom, do so, otherwise imagine it only at the bottom.

Q - If the lens is not a factor in accommodation, what is its purpose?
A - The lens is for protective purposes, just as fat is a protection to the bones of the body.
The lens also bends/refracts light rays, focuses the rays onto the retina. The cornea also refracts/focuses light rays. The cornea and lens also control the amount of light that enters the eye. Most eye professionals state the lens also changes shape to produce accommodation, adjust light rays from close objects to focus on the retina.
Light rays from close objects diverge; this is why the lens/eye must change shape to bring the rays onto the retina for clear close vision.
Light rays from distant objects are basically parallel, focus perfectly on the retina so the lens/eye do not need to change shape to focus light rays from distant objects onto the retina. The round eye shape is set perfect for focus of parallel light rays.
Dr. Bates stated that the lens does not produce accommodation. He states that the outer eye muscles (oblique) slightly lengthen the eye (as a camera works) to focus on close objects.
Q - If strain is the cause of imperfect sight, why are not all affected in the same way? Why is it that some have myopia, others astigmatism, etc.?
A - **Different people react in different ways to strain. Some have mind strain, some nerve strain, some physical strain, etc. All these tend to cause various ailments. One's temperament also has a great deal to do with it.**
One strain can lead to secondary, and third…strain, all which increase each other. Example: A persons uses incorrect posture and experiences neck tension which results in some eye muscle tension and slight blur. This is the first type of strain. Then the person squints, stares, uses effort to see. This causes a new secondary type of strain and increased blur. The person begins to worry about the blur, eyestrain and a new third strain (worry) occurs, and more blur. The person starts wearing eyeglasses which is a forth strain and greatly increases all four strains. Four different types of strain are now in the visual system, mind.
The Natural Eyesight Improvement teacher shows the student how to identify and remove all types of strain.
Left and right brain hemisphere imbalance, dominance, suppression, negative thoughts, emotions, using effort to see at close and far distances, squinting, staring can cause different types of strain, unclear vision at certain distances, other abnormal eye conditions.

Q – When doing the swing, what does one move, the head or eyes?
A – The eyes are moved in the same direction as the head is moved.

Q – Does massaging benefit the eyes?
A – No, because it does not relieve the mental strain which caused the eye trouble.
Modern teachers know that; Body, shoulder, neck, face acupressure point activation and muscle massage does improve the sight, health of the eyes by relaxing the eye muscles, improving eye movement, blood, oxygen, lymph, nerve flow/circulation to the brain, eyes. Joint, vertebrae alignment, muscle massage, relaxation in many different areas of the body has a direct affect on the eyes and improves the clarity of vision.
Improving the state of the body, its relaxation helps remove mental, visual strain.
Appling Bates method also removes strain in the mind, eyes, body, muscles, nerves.

Q – Is practicing under a strong electric light as beneficial as practicing in the sun?
A - If the sun is not shining, the strong electric light can be used with benefit, although more benefit is derived from direct sun treatment.

Q – Can one remember perfectly and see imperfectly?
A – It is impossible to remember perfectly and see imperfectly at the same time. Perfect sight can only be obtained with the aid of a perfect memory. When the memory is perfect, the mind is relaxed and the vision is normal. Imperfect memory requires a strain of the eye which produces imperfect vision.

Q - Can one blink too quickly and too often?
A - The normal eye blinks quickly, easily and frequently. Blinking can be done correctly or incorrectly. Some people, when they are told to blink, squeeze their eyes shut, or close them too slowly and then open them spasmodically, which is wrong. When the normal eye blinks, things are seen continuously.

Announcement

Dr. Bates wishes to announce to his patients that he is moving his offices from 383 Madison Avenue, New York City, to 18 East 48th Street and will be treating patients at the new offices after October 1st.
The Central Fixation Publishing Company will also be located in the same building, 18 East 48 Street, New York City.

BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
OCTOBER, 1928

No Glasses For Quick Results

The first and best thing that all patients should do after their first treatment, or before, is to discard their glasses. It is not always an easy thing to do but it is best for the patient and for the teacher. It is true that at one time I did not encourage patients to learn the treatment unless they discarded their glasses permanently. But since I have studied more about my method and have encouraged some of my clinic patients to wear their glasses at times while under treatment, I find that **some of them obtained a cure but it required double the amount of time that was required to cure those who discarded their glasses permanently**. During the treatment when the glasses are worn temporarily, even for a short time, the vision sometimes becomes worse and in most cases a relapse is produced. It is much more difficult to regain the lost ground than ever before, and sometimes causes much discomfort.

Glasses for the correction of myopia do not fit the eyes all the time. To obtain good vision with glasses an effort is required to make the eyes change their focus to have the same error of refraction as the glasses correct. When the vision is benefited most perfectly by glasses it is necessary for the eyes to change frequently. To learn the amount of myopia in the eyes by trying different glasses to find the glass which continuously improves the vision best is usually difficult because the amount of the myopia changes so frequently. To change the amount of myopia requires an effort. Some people complain that no glasses fit their eyes permanently. These cases are benefited by discarding their glasses for a longer or a shorter period while being treated. Patients who require good sight to earn a living and find it difficult to discard their glasses while under treatment, have been able to make slow or rapid progress in the cure of their imperfect sight by wearing their glasses only when it was absolutely necessary.
Modern teachers allow the use of reduced, weaker, 20/40 eyeglass lenses if necessary for driving, safety until the Bates Method brings the vision to a level of clarity where eyeglasses are not needed. The strength of the lenses are repeatedly reduced as the vision passes through clearer and clearer levels of clarity. Reduced lenses do block natural eye function, produce strain, eye muscle tension, slow vision improvement but not as much as 20/20 and stronger eyeglass lenses. Reduced lenses allow the eyes, vision to improve, reverse back to a normal state. The lenses are worn as little as possible and a further reduced pair is kept ready since the Bates Method can bring a sudden, sometimes unexpected increase in vision improvement. As vision improves, stronger lenses will not provide adequate clarity.

Nystagmus

By W. H. Bates, M.D.

When the eyes move conspicuously from side to side, regularly or continuously, the condition is called nystagmus. These movements occur so frequently in connection with serious diseases of the eyes that the presence of this symptom is an indication that the cure of the eye disease will usually require much time and attention. So seldom are eye diseases with nystagmus cured that many physicians believe that most cases with nystagmus are incurable. I have found that many of these so-called incurable cases

will recover by treatment.

We have observed that many eyes with imperfect sight do not have nystagmus but acquire it at almost any age. It has been produced repeatedly by a conscious stare or effort to see. **It has been relieved by conscious relaxation with the aid of palming.** When the patient is reminded that the stare or an effort to see is injurious, he becomes better able to lessen or relieve the eyestrain which is usually very harmful. Patients with nystagmus have less control of the movements of their eyes and for this reason require more supervision and help before they become able to use their eyes properly without strain.

All patients with nystagmus cannot be treated in the same way because I have not found two alike. The treatment which is helpful in one case may not be of any benefit to any other.

One patient, a woman aged twenty-five, who was born with a very bad case of **nystagmus** and who also had **mixed astigmatism,** with **retinitis pigmentosa**, was under my observation at different times for a number of years. In the beginning her vision without glasses was 10/200 in each eye. She obtained a vision of 10/70 in each eye with the aid of the glasses which corrected her mixed astigmatism. Without glasses her vision improved to the normal temporarily with the aid of **palming, shifting, and swinging**. She also became able to read without glasses. The nystagmus was also benefited at the same time. The patient was encouraged and practiced the relaxation exercises more continuously.

In her case, palming was the most beneficial treatment of her eyes, both for the nystagmus and vision. This may have been due to the fact that when she palmed with both eyes closed, she was able to remember black letters on a white card more perfectly with her eyes closed than with her eyes open. She was also able to remember or imagine white letters on a black card better with her eyes closed than with her eyes open. **When she remembered letters perfectly, her eyes became relaxed and her vision for trees, flowers, the colors of the spectrum, red, green and blue as well as other objects and other colors was perfect** without any effort or strain whatever. Her memory seemed perfect to her because she could remember letters and other objects as well at twenty feet or farther as she could at two feet or nearer. **Palming helped her to remember things better. The longer she palmed the better became her memory. With an improved memory her sight became much improved and the nystagmus became less.** The palming improved her memory of the notes of her music. Many of the black notes had a white center which she remembered better by the aid of palming.

It is important to mention that the **sun treatment** also lessened the nystagmus and improved the sight because the eyes became relaxed. This improved her sight and lessened the nystagmus. In the beginning the sun treatment was not so beneficial as it became later, after palming. **The sun treatment was employed with the aid of a strong magnifying glass which focused the light of the sun on the outside of the upper lids, the glass being moved rapidly from side to side for short periods of time.** For several weeks this treatment was given daily whenever there was sun, and the nystagmus and vision decidedly improved.

(There have been cases of nystagmus treated which failed to improve by the sun treatment. Other methods were then employed.)

With the improvement of the nystagmus, this patient's vision for distant objects and her ability to read also improved. The inflammation of the retina at the same time improved remarkably. In the beginning of her treatment a large part of the retina of both eyes was covered with black pigment spots. The ophthalmoscope was used each time she came. **It was noted that these black specks became less numerous and finally disappeared. The fields of each eye were improved and the night blindness from which she suffered became less.**

Her visits to the office were very irregular and uncertain, with the result that the improvement which she obtained during this time was not continuous. She earned her living as a music teacher. When she neglected to practice the treatment which I recommended to correct the tension, stare, and strain, her vision became worse and she lost her occupation. Having to depend upon her family for support was embarrassing to her. She came again for treatment after an absence of over a year. She told me that she was ready to come at regular intervals whenever I advised her to come.

While she was away she had a relapse but did not lose all the improvement that she had gained; there was an improvement in the nystagmus, but it was not rapid or conspicuous. This patient was examined with the aid of a moving picture camera. She was able to lessen the movement of her eyes and was able to show on the screen how it was done. When these pictures were taken by an expert, the doctors who were invited to be present testified that when the nystagmus became less or disappeared and the vision improved it was because the stare, strain, or effort to see was corrected. What I have been unable to prove in my publications, the moving picture (movie) screen proves.

My patient gradually and steadily improved until she became able to see well enough to resume her work. Her vision for distant and near objects improved so that she could see better without glasses than she had formerly seen with them.

While the moving picture work was in progress, this patient offered her services to show how the nystagmus could be produced by an effort. The condition of her eyes was so much improved that I doubted that she had the ability or the courage to strain or produce the amount of tension necessary to show her nystagmus condition on the screen. While the camera was running I was amazed to see the nystagmus return. I thought that I had met my Waterloo. Now that I had improved a case that I had at one time deemed impossible to help, I feared that in order for her to strain sufficiently to cause the nystagmus to return would be a calamity. My fears were relieved when the camera again registered a picture of her while she remembered perfect sight by reciting for me all the letters of the Snellen test card which she had committed to memory.

This picture showed plainly no evidence of effort or strain and the nystagmus had stopped. Later the patient told me about the pain and discomfort she suffered in order to produce the nystagmus for the picture. Her sacrifice was worthwhile because others since then have been benefited.

Some patients with nystagmus do not know that they have it. **The first step in their cure is to teach them to feel the eyes move when the closed upper lids are lightly touched with the finger tips.**

Boy creates and cures nystagmus

One day some years ago a boy about twelve years of age came to my office. He was ushered in by his mother, a middle aged woman who just pointed to his eyes, and then sat down and waited. The patient had nystagmus. His vision was about one-half of the normal. With the ophthalmoscope no disease of the retina, optic nerve or any other part of the eyes could be found. The nystagmus was variable. He was able to lessen it until his vision improved very much and even became normal, 20/20 for short periods of time. By straining to see, the nystagmus became worse and his vision less. His mother became more interested. Her eyes were full of questions but she remained silent.

I asked the boy; "Can you move your eyes more rapidly?" "Yes," he answered. Then he was asked: "How is your sight?" "Very poor," he replied, "and growing worse." "Can you stop the movement of your eyes?" He answered: "Yes." "How do you do it?" "I

do not know," was the reply.

He was told to palm or to cover his closed eyes with the palms of his hands. He said this felt restful and when he opened his eyes his vision was improved and the nystagmus had stopped. For some minutes he was able to demonstrate that he could stop the nystagmus and that his sight for a short time was better. He was also able to produce or increase the nystagmus by making an effort to try to see. All this time his mother watched the proceedings. By the way she acted one could read her mind. The nodding of her head, the frequent moistening of her lips, the satisfied look in her face showed that she believed that the **boy produced the nystagmus consciously for his own amusement,** which was the truth. It was not necessary for me to explain. She now understood what was the matter with him and she also knew what to do. After thanking me she grabbed the boy's arm none too gently and disappeared from my office quicker than she came in.

There is another story of a child that created crossed, wandering eyes as a joke. The child's eyes normally did not cross, wander. Dr. Bates cured many cases of crossed, wandering eyes by teaching the person how to create it. Once the person knows how it is produced (using strain, tension, incorrect eye function), the person can prevent, cure it by avoiding the strain… and by appling relaxation, shifting, central fixation… Nystagmus can also be caused by a medical condition in the body, brain. Check with a medical doctor for more treatments.

Case Reports

By Emily A. Bates

Emily C. Lierman married Dr. William H. Bates. Her name is now written as: Emily A. Bates

It is encouraging to meet people who have become able to discard their glasses by the benefit they obtained just from reading Dr. Bates' book. There are those also who write to us and complain that they have not received any benefit whatever after reading it. But the latter are in the minority.

Sometimes I feel that I would have been one of the complaining kind if I had not been fortunate enough to meet Dr. Bates before his book was written. I agree with some people that parts of his book are too technical for the layman to understand. But the principal part of his book is not technical and is so carefully written that even school children have been benefited and cured by practicing the methods recommended. While I was in California I met a number of children who came to see me for one visit only and brought Dr. Bates' book with them. Dr. Bates' himself would have felt honored if he could have seen so many of his books so worn out that the pages had to be pasted together again, while others were very much soiled from handling.

These children wanted to be sure that their relief from eyestrain was complete. I appointed the oldest one to test the sight of each eye of all the pupils. According to the tests made, the vision of all the pupils was normal with the Snellen test card and other objects. They all read correctly the captions on the moving picture screen, thirty feet away. A question was asked as to whether the moving pictures (movies) caused more or less eyestrain and I replied that the facts were quite the contrary, but that one must become accustomed to the strong light of the sun. Most children out West are accustomed to the sun and for that reason there are fewer children wearing glasses than the children of city schools here in the East. Doctors and instructors from various schools came to learn the Bates Method so that they could teach others how to use their eyes correctly.

A young woman came to me for the relief of her eyestrain. While visiting in New York, one of the professors of the University of Southern California had been treated and cured of presbyopia by Dr. Bates. This woman was one of the professor's students at the University and he recommended her to come to me for treatment. She had myopia, or shortsight, (nearsighted) and at times suffered a great deal of pain, especially at night after her studies were over. It was impossible for her to read at night no matter how strong an electric light was used. The stronger the light was, the more discomfort she had in her eyes. This made her unhappy because she was a lover of books. The temptation was very strong to obtain suitable glasses so that she could enjoy reading her books at night, when the instructor advised her to try the Bates Method for the relief of her eyestrain.



I began treating her by placing her fifteen feet from the test card which was fastened to a stand. With much straining on her part she read the seventy line with her right eye and only saw the largest letter on the card, which is called the two hundred line letter, with her left eye. I immediately decided to draw the test card up to ten feet, where she would not strain so hard to see. Again she read the letters, reading with the right eye and then with the left. Her facial expression became more natural, less strained, and without her telling me so, I knew that she felt more like going on with the treatment.

Her disposition was directly opposite to that of her friend and classmate who came with her. Her friend was so determined not to wear glasses that there was no doubt at all in her mind about receiving some benefit from me. But not so with my patient. She was willing enough to have me try to help her but she did not have much faith in me. I was not Dr. Bates and that made a difference with her. She felt that I could not possibly understand her case. She told me later that I had read her mind correctly but was glad that she tried and won out.

At ten feet she read the forty line with her right eye with the evidence of strain decidedly less. With her left eye she read one letter correctly of the one hundred line, or the second line from the top of the card, which is an "R." The other letter on that line is a "B" which she thought was an "R" also. I did not correct her but told her to close her eyes and forget about the test. I asked her about the subject she was most interested in at college and she seemed eager to tell me about it. She was studying art and the correct combination of colors for interior decorating. Some patients, when asked to close their eyes and remember something perfectly cannot do so without help from the doctor or instructor. This patient did so immediately. She did not have her eyes closed for more than ten minutes when she became able to read the whole test card as well with the right eye as with the left, at ten feet.

The memory of colors, describing them to me while her eyes were closed, was all she needed to give her relaxation of mind and body, and temporarily improve her sight to normal. I told her to close her eyes again and describe her ideas of colors for different rooms of a home she had in mind. While she was doing this I

again placed the test card fifteen feet away and with both eyes she read 15/20. She complained of a sharp pain over both eyes, the pain being more over the left eye.

I placed her chair in the sun and while her eyes were closed I used the sun glass very rapidly for five minutes on her closed eyelids. This not only relieved her pain but it improved her sight to 15/10. She read microscopic type just as well in an ordinary light as she did in the sunlight. Because she had been nearsighted it was not difficult for her to read it. She was told to read the fine type several times every day after sitting in the sun with her eyes closed.

Having worn a green shield over her eyes while in her classroom every day for two years, it was not easy for her to take the sun treatment. However, the results she obtained during her first treatment encouraged her to continue the practice. She purchased a sun glass and I taught her friend how to use it on her eyes. My patient in turn also learned how to give the sun treatment which not only benefited her friend but also others at the University. My patient returned for two more treatments a month apart and after that she reported over the telephone to me that she had had no relapse to imperfect sight.

Questions And Answers

Q – Will it still be necessary to continue practicing the methods of swinging and shifting after my eyes are cured?
A – No, when you are cured of eyestrain you will not be conscious of your eyes. However, if you strain them you will know what to do to relieve the strain.

Q – If one's arms become tired while palming, will a black silk handkerchief covering the eyes produce the same amount of relaxation one gets from palming?
A – No. Palming is the best method for relaxation and improvement in vision. When tired of palming, the hands can be removed and the eyes kept closed until one feels relaxed.

Q – How can one look at the sun without injury?
A - While looking toward the sun it is best to **blink the eyes and to look to the right and to the left of the sun**. (shift) This will help you to look directly at the sun without discomfort or pain. One cannot look directly at the sun without normal vision.

Q – If I improve the vision of the poor eye will there not be a confusion of images?
A – Not necessarily.

Q – Is it possible to cure a three-year old child of squint without an operation?
A – Yes. I have had many such cases that were cured by my method of treatment.

Q – When the pupils become dilated, is that an indication of eyestrain?
A - No. A great many people who have dilated pupils have no trouble at all with their eyes.

Q – I am practicing the methods in your book to cure myopia and astigmatism. Sometimes for short periods, I see perfectly, then things fade away. Can you explain this?
A – This is what we call getting flashes of perfect sight. With continued practice these flashes will come more frequently and eventually will become permanent. Then you are cured.

Q – Can the vision be improved without glasses after the lens has been removed for cataract?
A – Yes.

Q – Does Dr. Bates approve of dark glasses to protect the eyes from the glare of the sun at the seashore?
A – No. Dark glasses are injurious to the eyes. The strong light of the sun is beneficial to the eyes, although it may be temporarily painful and blinding.

Q – By following instructions in the book, can cataract be benefited without consulting a physician?
A – Yes.

Q – Are memory and imagination the same? When we remember an object do we have to visualize it?
A- A perfect memory cannot be obtained unless you are able to imagine that you see or visualize what you remember.

Q – When I try to imagine a black period, it blurs and I get all colors but black.
A – When you fail to remember a period with your eyes closed, open your eyes and see it, then close your eyes and remember it as well as you can for a moment. Alternate.
Shift on the period with eyes and mind and a clear mental, visual image will be seen and imagined.

Q – I enjoy palming, but it makes me drowsy after ten or fifteen minutes. Is this helpful?
A- When palming is done properly it does not make you drowsy.

Q – I find conscious blinking a strain because I close my eyes temporarily and seem to hold the eyeball stationary. If I shut my eyes for a longer period would that be blinking? Stationary eyes=muscle tension, strain, blur.
A – No. The normal eye blinks consciously or unconsciously without effort, without strain, and quickly.

Q – My little daughter has temporary perfect sight while palming, but her eyes turn in when she plays excitedly or strenuously. I thought play was relaxing.
A – Play may be relaxing and should be beneficial but like other things, it can be done wrong with a great effort without benefit.

Q – While palming, is it necessary to close the eyes?
A- Yes.

Q – How long is it necessary to read the test card before obtaining benefit?
A- Some patients, by palming and resting their eyes, have obtained benefit in a few minutes.

Q - What is most helpful when one is dreadfully nearsighted and finds it almost impossible to see without glasses?
A- Practice palming as frequently as possible every day. Keeping the eyes closed whenever convenient for five minutes, ten times a day, is also helpful.

Q – Why is fine print beneficial?
A- Fine print is beneficial because it cannot be read by a strain or effort. The eyes must be relaxed.
Fine print also activates perfect central fixation, with eye movement/shifting, including tiny shifts.
When the mind, eyes are relaxed, vision is clear.
Perfect relaxation must occur for fine print to be seen. Reading fine print brings the mind, body, eyes to perfect relaxation.

Q – I have noticed when I palm that my eyeballs hurt from the pressure. When I loosen this tension the light filters in.
A - Palming is done correctly with the fingers closed and laid gently over each eye, using the palms like a cup. If this is done properly there is no pressure and the light is shut out.
It is ok if a little light shines thorough.
The hands must stay relaxed. No pressure on the eyeballs, eyes.

Q – Are floating specks serious? Sometimes they just flood my eyes like clouds of dust and greatly frighten me.
A- Floating specks are not serious. They are always imagined and never seen.

Q – I have improved my sight by palming, but when I read for any length of time the pain returns.
A – When you read and your eyes pain you, it means that you are straining your eyes. More frequent palming may help you to read more continuously.

Q – If type can be seen more distinctly with the eyes partly closed, (squinting) is it advisable to read that way?
A - No, it is not advisable to read that way because it is a strain, causes eye muscle tension and alters the shape of the eyeball and leads to increased blur.

Q – I have attained normal vision, but after reading for a while, my eyes feel strained. Would you still consider I had normal sight?
A – If your eyes feel strained you are not reading with normal vision.

Q – When I look at an object and blink, it appears to jump with each blink. Would this be considered the short swing?
A – Yes. You unconsciously look from one side to the other of the object when blinking. (Oppositional Movement)

Q – Some days, I can read the Snellen card to the 15 line, others only to the 30 or 20.
A- When the eyestrain is less the vision is always better.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

NOVEMBER, 1928

Practice Time

A large number of people have bought the book "Perfect Sight Without Glasses" but do not derive as much benefit from it as they should because they do not know how long they should practice.

Rest: The eyes are rested in various ways. One of the best methods is to close the eyes for half an hour after testing the sight. This usually improves the vision.

Palming: With the eyes closed and covered with the palms of both hands the vision is usually benefited. The patient should do this five minutes hourly.

Shifting: The patient looks from one side of the room to the other, alternately resting the eyes. This may be done three times daily for half an hour at a time. The head should move with the eyes and the patient should blink. Shift relaxed, easy, continually from object to object and part to part on objects.

Swinging: When the shifting is slow, stationary objects appear to move from side to side. This should be observed whenever the head and eyes move. A faster shift produces faster oppositional movement.

Long Swing: Nearly all persons should practice the long swing one hundred times daily.

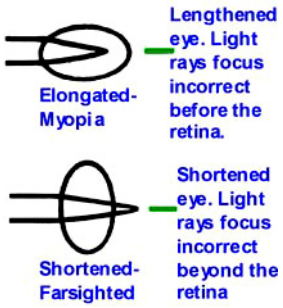
Memory: When the vision is perfect, it is impossible for the memory to be imperfect. One can improve the memory by alternately remembering a letter with the eyes open and closed. This should be practiced for half an hour twice daily.

Imagination: It has been frequently demonstrated and published in this magazine that the vision is only what we imagine it to be. Imagination should be practiced whenever the vision is tested. Imagine a known letter with the eyes open and with the eyes closed. This should be practiced for ten minutes twice daily.

Repetition: When one method is found which improves the vision more than any other method, it should be practiced until the vision is continuously improved.

Hypermetropia

By W. H. Bates, M.D.



NEAR-SIGHT or myopia (unclear distant vision) is acquired in schools. The statistics of many observers show that myopia may increase in frequency. This increase may be slight or it may be considerable.

HYPERMETROPIA (farsight, unclear close vision) is the opposite of myopia. The optic axis is shortened instead of being elongated as in myopia.

Most writers attach very little importance to hypermetropia. They publish that the hypermetropia eye is usually congenital and not acquired. Risley examined many eyes with hypermetropia. He believed that hypermetropia caused headache, pain, fatigue, dizziness and other symptoms to a greater degree than did myopia. Many statistics showed that in the eyes of school children about 80 percent had hypermetropia, about 10 percent had myopia, and about 10 percent had good eyes. It is well that the objections to hypermetropia should be studied and published. It is more necessary to relieve the symptoms of hypermetropia than those of myopia if for no other reason than the fact that hypermetropia is more injurious to the eyes.

The old methods recommended for hypermetropic eyes are insufficient to obtain the best vision, and to relieve or cure pain, fatigue, dizziness, double vision or other nervous troubles. Hypermetropia of low degree is quite often as difficult to improve without glasses as many cases of hypermetropia of a high degree.

What are the limits of improved or cured vision in most cases of hypermetropia? There is no limit. A hypermetropia of 15 D.00 or 30 D.00 can obtain as good sight by relaxation treatment as a hypermetropia of 1 D.00 or less. Such claims are open to criticism. They can all be demonstrated by different operations on different cases.

What is the percentage of cured cases or what is the percentage of failures? A physician in charge of a physiological laboratory many years ago requested a report on the production or cure of hypermetropia in animals or in human beings. The report submitted to him stated that 100 percent of all rabbits, dogs, turtles, cats, fish, and other animals acquired hypermetropia after the recti were advanced or strengthened, while the obliques were divided or weakened.

The director of the laboratory asked: "Why do you not publish the facts?'' The answer was: "Because no failures have been observed.'' He then added that he felt that when successful results occurred in 60 percent of his cases he should publish the results because they were of scientific value.

A failure was desired before a correct conclusion could be stated, that is, a case in which hypermetropia was not produced by some form of operation but could be obtained by another operation. In order to produce nearsightedness in a cat it is necessary to strengthen the oblique muscles with the aid of sutures or silk thread.
Now when the recti muscles on the outside of the eyeball are strengthened by the advancement of these muscles, hypermetropia is produced.

In the early days of scientific medicine the facts connected with the changes that might take place in the hypermetropic eye were studied and they might have been a benefit if the facts were understood, but these men did not realize the importance of many truths which they demonstrated. In those days, as in our own, science was not governed by ordinary rules. For example, Donders published in his book the claims of some ophthalmologists that hypermetropia was not curable because they had never seen any such cases cured. Yet most eye doctors in the early days reported the truth correctly.

After extraction of cataract, the amount of hypermetropia is about 10 D.00. In most cases they admitted that the hypermetropia became less without any treatment, and that the eye, after extraction of cataract, had been observed to become normal without any hypermetropia, when the patients were able to not only obtain perfect sight for the distance but also were able to read fine print or diamond type at six inches from their eyes without any difficulty.

One doctor stated the changes which took place in eyes which had considerable hypermetropia. It is difficult to understand why it is that this doctor published that an effort to see always increased the amount of hypermetropia and for that reason no treatment could be expected to help these cases. One physician, whose scientific attainments were unusual, published statements like this: "I have never cured hypermetropia and because I have never cured hypermetropia nobody else can." Another so-called authority, after testing results obtained from massage of the muscles of the eyelids, could see no benefit from this treatment. He was asked by a friend: "Are you still using massage?" He answered: "Yes." Then his friend said: "Does it do any good?" The doctor answered "No." "Why do you do it then?" "Because there is nothing else to do."

An effort always increased the hypermetropia and makes the sight worse. This is a fact so universally true that it is unfortunate that the physicians who found that a strain was bad did not try the opposite of strain - relaxation. Those people who become able to read at a distance of less than twelve inches are unable to read by an effort. With a vision lowered by hypermetropia at twenty feet or farther it is very easy to demonstrate that a strain to see by concentration or some other effort always increases the hypermetropia. A strain to see at the near point produces hypermetropia, while a strain to see at the distance produces myopia.

Rest when properly employed cures all forms of imperfect sight. The great difficulty is that all people are not able to rest their eyes properly.

It has been found that the tendency of most people is to concentrate or stare. Concentration or an effort to concentrate is a strain which produces almost all cases of imperfect sight. When one letter of the Snellen test card is regarded continuously, without blinking, shifting, or a part of one letter of the Snellen test card is regarded continuously, without blinking, shifting, imperfect sight is produced. Trying to keep the eye immovable causes imperfect sight. The normal eye when it is at rest is always moving and sight becomes imperfect when an effort is made to imagine the letters or other objects stationary. It is not possible to keep the eye stationary without an effort. It is impossible to move the eye and keep it under a strain at the same time.
When the eye moves 'shifts' relaxation and clear vision result.

If the patient stands with his feet about one foot apart and sways the body, head, and eyes from side to side, it is possible to obtain a movement of the eyes which is a rest to the eyes and a benefit to the vision. **When the sight is good continuously, the movement of the eyes is slow, short, easy, and continuous.** (Saccadic - very fast, high frequency shifting also occurs automatically.) When things are seen wrong or when the vision does not immediately improve, one can by touching the upper lid with the forefinger lightly, feel all kinds of movements of the lid muscles and this movement effects the eye itself. The proper movement which is beneficial can only be obtained when stationary objects are imagined to be moving.

Some patients obtain benefit from moving the eyes in a circular direction because when the eyes move continuously, there is no stoppage of the swing and no opportunity to stare. (Infinity Swing)

For years it has been observed that many cases of hypermetropia changed to myopia. The number of theories as to how this was brought about were numerous and not one of them would stand criticism for any length of time. One of the most important theories that was published was by Risley, who mentioned that a large number of cases of hypermetropia became changed to mixed astigmatism in which one meridian of the eyeball was more fixed than any of the others. This astigmatism was changed at first into mixed astigmatism. Later on it became a retraction of myopia. It was a very attractive theory which lost its value when it was found that no one case was observed continuously until the hypermetropia became changed to mixed astigmatism and finally myopia.

Experiments on Outer Eye Muscles and Clarity of Vision

One day the physician in charge of the physiological laboratory made a tour of inspection. He asked for information or for statistics of the experimental work that was performed on a rabbit to find the cause of accommodation. He desired to know why results of experimental work on the rabbits which were 100 percent successful were not offered for publication before. He was told that these had not been published because there had not been a failure. A few days later a failure came. Electrical stimulation did not produce myopia in the rabbit with hypermetropia. Here was the failure that we had been waiting for. There was much excitement when we failed to obtain myopic refraction. However, it was found that the rabbit was born without any inferior oblique. When the function of the inferior oblique was obtained with the use of sutures, with the aid of the retinoscope myopic refraction was obtained as readily as in eyes which had nothing wrong. The director told us that when his experiments were 60 percent of the truth that they could be considered a contribution to the science of medicine and should be consequently published. The director was told about the failure and he agreed with us that the publication of the failure was a very necessary thing to do. It might have ended here perhaps but it was believed that the 100 percent of successful operations were worthy of investigation, but so far as is known no one else has performed similar experiments to determine the truth of the results claimed.

There are some facts which ought to be emphasized. In the first place, hypermetropia is the most frequent cause of discomfort, pain, or imperfect sight. The medical men of the last century tried to prevent the harm done by hypermetropia just as they are still trying to prevent the harm that comes from near-sightedness or myopia. The younger men of today are not encouraged to work in this field, when some of the authorities can stand up and say: "If I fail no one else can succeed; I know all there is to know about the eye."

There are a number of people at the present time who are studying hypermetropia, but it is not being studied as much as it should be. I believe that every school, public and private, should devote a short time frequently to the prevention and cure of imperfect sight. I am very much opposed to the practice of most ophthalmologists who fit each patient with imperfect sight with glasses which are not indicated.

For some years I have found that a large number of cases of myopia were suffering from hypermetropia which produced disagreeable symptoms. It is really surprising that so many cases of hypermetropia have been neglected. They are more readily cured than the myopic cases, but when a man at the head of a medical department of the schools tells me that it is useless to treat hypermetropia because he failed, it means that he will do all that he possibly can to injure or to interfere with the methods practiced by other men.

When studying the works of Donders forty-five years ago I was very much impressed when he gave the histories of quite a number of patients who had been cured of hypermetropia and other errors of refraction by one or more operations and by other treatment. This was an encouragement to me to keep on studying the facts which occurred in hypermetropia. I wish to state here that I feel very grateful to Donders for the many things which he taught me. That which pleased me the most and benefited me more than anything else that I learned from other doctors was his claim that there were some cases of hypermetropia and other errors of refraction which could be cured by treatment. I am sure that he did not know how voluminous were the writings on the use of glasses or the importance of wearing glasses which were written under his name. It seemed as though there were many articles on the cure of hypermetropia which were not written by him.

Hypermetropia is curable. Being curable it can also be produced, increased, diminished, or modified. If it were not curable it would be difficult or impossible to do this.

The cure of hypermetropia is very simple. When one practices in the right way, a cure is always brought about. It takes no more time to practice in the right way than the wrong way. Hypermetropia is cured by rest, and cannot be benefited by an effort. When one regards near objects or parts of a letter at the near point, hypermetropia is always increased. (If diffusion, strain, effort, staring is applied.)

Practice with fine print is one of the best methods of relieving hypermetropia. The fine print is held first at the distance from the eyes at which the patient sees best and gradually brought closer until the patient can read it at six inches from his eyes. He should not look directly at the letters; he should look at the white spaces between the lines and imagine that there is a thin white line beneath each line of letters.

Look at the white spaces before reading the print. When the print appears clear; then look directly at the print and read it.
If it blurs again, look back to the white spaces or at another object seen easily, clear, close or in the distance to relax the eyes.
Then, when relaxed and close vision is clear again, return to the print.
Reading fine print is one of the simplest, easiest cures for unclear close vision but opticians have been hiding this fact for years.
It also improves clarity of distant vision.
Correct practice with fine print daily has cured hypermetropia.

Hypermetropia

By Emily A. Bates

A woman, aged 63, who had been wearing glasses for twenty years decided to try the Bates Method and do without them. She called to see me for treatment while I was in the West and asked me when she first came if I would examine her eyes with the ophthalmoscope. As I was working by myself I was not permitted to use any instruments to examine the eyes so I did my work just the same and cured my patients without examining the eyes. Some patients were advised to see an eye specialist who took care of cases where examinations were needed. This patient had had eye tests made several times by eye specialists and opticians so I knew pretty well what her trouble was without the retinoscope or ophthalmoscope to help me.

Many cases like hers have come to me both in clinic and in private practice and with a few exceptions I am usually right after I have tested the patient with the Snellen test card. When this patient gave me a history of her case, she told me that in the

beginning when she first put on glasses her vision for the distance was not bad, but her sight for reading and sewing was poor and her glasses only helped her for a while. Eye drops and massage treatment were given her for the relief of eyestrain and headaches, but after a year of this treatment she had her glasses changed on the advice of her doctor. Her sight was tested again and she was told that her distance vision was impaired. Then she was advised to wear bi-focals or to have two pairs of glasses with her at all times. She tried bi-focals because she thought it would be much easier wearing only one pair of glasses, but she could not become accustomed to them so she tried two separate pairs of glasses.

As I listened to her explaining all this to me in her mild, soft way of talking, I could imagine how much discomfort she endured without saying very much about it and I could well imagine how anxious she was to get rid of her glasses altogether after having tried as faithfully as she had for more than twenty years. The last glasses which were given her for close work helped her to see better at the near point, but the strain and headaches came on periodically just the same. She tried massaging the eyes, thinking that this might help. She also went to Europe and tried different climates thinking that the change of air would be of benefit to her, but the pain in the back of her neck and in back of her eyes kept on just the same and at times became worse.

She obtained Dr. Bates' book and studied it according to the advice given for her particular case. She was able to do without her glasses for the near point but as her sight for the distance still troubled her a great deal she did not know how to go on by herself.

I began treating her by the palming method after I had tested her vision for the test card. Her vision in both eyes was the same, 10/30. When I placed the test card twenty feet away all the letters were blurred and she also had double vision when she tried to read the smaller letters.

She had traveled a great deal and liked to talk, so while she was palming, I encouraged her to tell me about a recent trip she had taken, and the memory of things which she had seen as she described them to me helped to improve her vision to 15/10 or better than normal with each eye separately. Before I tried another method I wanted to find out what caused her vision to be lowered at times and also what caused her pain and discomfort. During the course of a short conversation with her she told me of a very unpleasant experience she had had with someone whom she loved and who greatly disappointed her. I encouraged this conversation, not so much to get information from her but to have her talk about this unpleasant thing, which was interesting to her but not to me because I did not know the person under discussion. The patient palmed for ten minutes and I timed her especially to find out whether her vision would be the same for the test card after she had explained her unpleasant experience while her eyes were covered. I kept the test card at the same distance as I had before and when I told her to remove her hands from her eyes and to look at the test card and read it again, she said that with the exception of the three upper lines of letters all the rest of the card was blurred.

I knew immediately that speaking of or thinking about unpleasant things was the cause of a great deal of strain. I did not tell her so right away but she was eager to explain that this was the way her vision was a great deal of the time. It was lowered at times when she suffered discomfort and pain; then at other times her vision was good without any sign of strain. She did not realize that while she was palming and explaining about her unpleasant experiences that the thought of what she was telling me caused all her trouble or a great part of it. (negative, unhappy thoughts, emotions=mental strain, eye muscle tension, blur…) When I finally explained it to her, she believed that I was right. I did not have her close her eyes again during her first treatment, but I placed her by the window where the sun was shining and I gave her the sun treatment while her eyes were closed, using the sun glass on her upper eyelids. The sun was quite hot so I had to use the sun glass rapidly and for only a few seconds at a time.

After this treatment, I told her to sway her body slightly with a short sway from side to side, glancing at the test card in my room and then as she swayed toward the window to look at a distant sign about two city squares away. At this distance she read a sign which was painted on the side of a large building. She saw all the letters clearly and read them without any hesitation whatever. This seemed a revelation to her because it was something she could not do for many years without her glasses. She kept up the sway as I directed her, but at times I had to encourage her not to stare as she looked at the test card, while she swayed toward it.

She asked me to explain to her why the test card looked more clear to her at times only, so I told her to do the wrong thing, stare at the letters, for instance, as she looked at the card about ten feet away from her eyes. I also told her to look off at the distance as she looked out of the window and to stare at the distant sign which she read so easily just a few minutes before. She did this for only a few seconds when she promptly closed her eyes and asked for more sun treatment to relieve her pain. She was directed to practice parts of the method which helped her most, but only the method of treatment which I had given her and to do it as faithfully as she could every day until she was able to return for another treatment.

After a week of silence she telephoned me and notified me that she desired another treatment. She found out that she could not get along very well by herself with the treatment, so I gave her a special treatment each day for the next two weeks. Then she was asked to telephone me from time to time. Her reports were encouraging. She could read ordinary type and also fine type at the near point and she had no more trouble with her distance vision.

The year before she had come to me for treatment, she had given up in despair the driving of her car. She feared an accident when her vision would fail her for the distance and did not expect to drive her car again without having someone near to help her in time of trouble. She now drove many miles every day, she told me, and never forgot what I had advised her to do while she was driving, which was to shift from the speedometer to the center of the road and notice how the distant road in front of her car came toward her and finally rolled, as it were, under her car. Then again to shift from the speedometer to the center of the road ahead of her and to notice the same thing again and again. I explained to her that the roadside to her left and to her right would appear to move toward her and then move away from her if she would keep up the blinking and the shifting from the near point to the distance.

She called one day while I was out of town and told my secretary that she was helping others with the treatment of their eyes. She was a person who spent a great deal of time with poor people. The children near where she lived were fond of her and it was through them that she was able to benefit those who needed help. She purchased from my secretary enough material to help the young as well as the old folks. She purchased many sun glasses and taught mothers how to use the glass on the eyes of their children. This helped greatly in improving the sight of children, both for reading book type and also reading letters on the blackboard. She purchased test cards and took them to the Old Folks Home and those who believed that she could help them did as she directed them to do. She did a great deal of good work in helping elderly people to read book type and their newspapers without the use of glasses.

When I saw my patient again I gave her advice for helping various cases of imperfect sight and I was surprised to hear that she had benefited an old lady who had had cataract for many years and whose sight was failing fast. The vision of one of her eyes was nearly gone and the other eye was becoming almost as bad when my patient came to her and helped her. This old lady in time became able to take care of the more unfortunate ones in the home and to help in arranging personal things in their tiny rooms. This is indeed charitable work and much of it goes on in many places. If all patients who are benefited as this patient was would just help one other person with imperfect sight who cannot afford the treatment or who cannot find their way clear to visit an instructor

of the Bates Method, much more work could be accomplished.

Many errors are made by those who try to copy Dr. Bates' articles and mine and try to apply the same method to people who trust their eyes to them to be helped. It is pathetic to read the letters which come to us quite frequently with complaints about such things being done. There are some people who have a slight knowledge of the Bates Method who advertise themselves as teachers in eye training and also use Dr. Bates' name for commercial purposes. Sooner or later they are found out, but in the meantime many poor souls are made worse because of this practice.

Question And Answers

Q - What causes night blindness?
A - It is caused by a form of eyestrain which is different from the eyestrain which causes imperfect sight with other symptoms.

Q - What causes styes?
A - Infection, which is always associated with eyestrain.

Q - Are cataracts curable without operation?
A - Yes.

Q - I am forty-nine years of age and have had to wear glasses for five years, due to gradual weakening of the eyes. Is this curable?
A - Old age sight is curable, and you can discard your glasses by following the methods as outlined in the book, "Perfect Sight without Glasses.''

Q - I am practicing the methods in your book to cure myopia and astigmatism. Sometimes, for short periods, I see perfectly, then things fade away. Can you explain this?
A - This is what we call getting flashes of perfect sight. With continued practice these flashes will come more frequently and eventually will become permanent.

Q - I cannot gaze into the sun without discomfort. Do I do it incorrectly?
A - Read Chapter XVII in the book. **Do not gaze into the sun but at each side of it alternately.** In this way you not only **swing it, but allow the rays to shine on the eyes**. This is a great benefit.

Q - Can squint be cured by treatment, without glasses after an operation proved unsuccessful? Does age make any difference?
A - Yes. No, age does not make any difference.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

DECEMBER, 1928

Practice Methods

Many people have asked for help in choosing the best method of treatment for their particular eye trouble. A woman aged sixty complained that she had never been free of **pain**; pain was very decided in her **eyes and head**. She also had continuous **pain in nearly all the nerves of the body**. The **long swing when practiced 100 times** gave her great relief from pain. The relief was continuous without any relapse. At the same time a second woman of about the same age complained of a similar pain which, like the first patient, she had had almost continuously. She was also relieved by practicing the long swing. The long swing was practiced by other people with a satisfactory result.

It seemed that the swing was indicated for pain; it seemed to bring about better results than any other treatment. Later on, however, some patients applied for relief from pain which was not benefited by the long swing. Evidently one kind of treatment was not beneficial in every case. A man suffering from **tri-facial neuralgia** which caused **great agony in all parts of the head** was not relieved at all by the long swing. **Palming** seemed to be more successful in bringing about relief. Furthermore, there were patients who did not obtain benefit after half an hour of palming who did obtain complete relief after palming for several hours.

Patients with **cataract** recovered quite promptly when some special method was tried.

The experience obtained by the use of relaxation methods in the cure of obstinate eye troubles has proved that what was good for one patient was not necessarily a benefit to other patients suffering from the same trouble, and that various methods must be tried in each case in order to determine which is the most beneficial for each particular case.

Myopia

By W. H. Bates, M.D.

Myopia or near-sightedness is usually acquired. In myopia the vision for distant objects is much less than for objects at the reading distance. Rest of the eyes and mind is the cure for myopia. Any *effort* to improve the vision always fails. How can people with myopia be conscious of a strain? This is a very important question. When methods are practiced in the wrong way or practiced unsuccessfully, a strain or effort to see better can usually be felt, demonstrated, or realized by touching the tips of the fingers lightly to the closed eyelids of one or both eyes.

Quite frequently it is difficult for people with imperfect sight to believe that perfect sight requires no effort and that any effort to improve the sight is wrong. It has been so habitual to strain, and the habit of straining to improve the sight, the memory, or the

imagination, has been practiced so long that it requires much time and patience to stop.

Recently a schoolboy, aged twelve, boasted that he could stare at one letter of a test card with his eyes wide open without blinking or closing them and for a longer time than most children could stare. He also produced a greater amount of myopia than other scholars of his school.

Mr. Priestly Smith says: "To prevent myopia we must prevent young people from using their eyes too closely and too long on near objects. This principle was established long since by the labors of Donders, Arlt, and others, and has been practically developed by Cohn and other reformers of school hygiene."

It is not true that myopia is caused by too much use of the eyes at a near point. On the contrary, near use of the eyes in a poor light lessens myopia. This fact has been demonstrated frequently with the aid of the retinoscope, while the eyes were being used too closely for long periods of time on near objects. It is difficult to understand how or why so many eminent ophthalmologists like Priestly, Smith, Donders, Arlt, Cohn, and others should have neglected the aid of simultaneous retinoscopy in solving this problem.

It was a great disappointment to find in schools that although the desks and seats were mathematically correct, myopia was not prevented any more than before. In some schools iron braces adjusted to the head and face prevented the scholars from leaning forward when doing their schoolwork. Myopia was not prevented. One eye doctor who was convinced that the braces were useless continued to use them because he said that he did not know what else to do.

In order to measure the brightness of the light of the schoolroom the light was regulated by a photometer, invented by Professor L. W. Weber. He also invented an instrument called the stereogoniometer to measure quickly the amount of light from parts of the visible sky. Professor H. Cohn recommended that much money be devoted to the building of better school houses and also recommended that the school rooms be properly lighted. It was a great disappointment. No more myopia was acquired in a poorly lighted school room than in a well lighted one. A great deal more might be written describing the failures of these scientific men, who finally had to admit that they had not discovered how to prevent myopia from being acquired by school children.

The treatment of myopia which I have found best is as follows: The vision of each eye is tested and the patient is then directed to sit with the eyes closed and covered with the palms of each hand in such a way as to avoid pressure on the eyeball. At the end of half an hour or longer, the patient is directed to stand with the feet about one foot apart and sway from side to side as he reads the Snellen test card at five or ten feet. When the myopia is more than 5D. the patient may make better progress by practicing at a lesser distance than ten feet - five feet or nearer.

Some cases obtain a decided improvement in their vision in the course of about fifteen minutes. Other cases require additional methods. One of the best methods is to have the patient look directly, for five seconds, while blinking frequently, at one letter of the Snellen test card which has been committed to memory. When the eyes are closed, the memory of a known letter is usually better than when the eyes are open. By alternately regarding a letter, closing the eyes and remembering it better than with the eyes open, the vision of this letter will improve in most cases.

Those persons with a high degree of near-sightedness may not improve until the memory or the imagination of one known letter has improved to a considerable degree. It is interesting to demonstrate that the more perfectly a letter is remembered or imagined, the better becomes the sight. When a letter is remembered or imagined as well with the eyes open as with the eyes closed, a maximum amount of improvement in the vision is obtained. Some cases are benefited after other methods have failed by teaching the patients how to make their sight worse by staring, straining, or making an effort to see. When the cause of the imperfect sight of myopia becomes known, the vision oftentimes improves to a considerable degree. When myopic patients learn by actual demonstration the cause of their trouble, it makes it possible for them to improve their sight.

Myopic persons who desire a cure should discard the use of glasses permanently. Just putting glasses on for an emergency for a few minutes may bring on a relapse whereby what has been gained before is lost.

Some children with myopia may be unable to stand bright light. Many doctors prescribe dark glasses for the benefit of such cases. In my experience, the wearing of dark glasses or the use of other methods to reduce the glare of strong daylight or artificial light is an injury rather than a benefit. One of the best methods to relieve or prevent the intolerance of all kinds of light is to encourage the individual to become accustomed to strong light.

Sunglass

A convex glass of about 18 D. is very useful in these cases. One way to use the glass is to have the patient look far downwards while the instructor lifts the upper lid of the eyeball with the help of the thumb. This procedure exposes a considerable amount of the sclera. The strong light of the sun is now focused on the white sclera for only short periods of time to prevent the heat produced by the strong glass from causing discomfort.

This ends the routine treatment. For low degrees of myopia the results are usually very good. Imperfect sight without glasses has been temporarily or more permanently cured in a few visits.

One of the best treatments for a high degree of myopia is suggested by a few truths. All cases of myopia are temporarily cured by looking at a blank wall without trying to see. The retinoscope used at the same time has always demonstrated in flashes or for short periods of time that myopia was never continuous. When the best vision of fine print is obtained exactly at ten inches, the retinoscope always demonstrates under favorable conditions that the eye is not at this time myopic. But if an effort is made to see better by a strain the retinoscope demonstrates flashes of myopia. It should be emphasized that the strain which produces myopia is different from the strain which tends to produce other causes of imperfect sight.

When the **memory or imagination is perfect, the retinoscope used at the same time demonstrates that myopia is absent.** When a letter or other object is remembered or imagined imperfectly the sight is always imperfect and the retinoscope demonstrates that myopia has been produced.

Shifting the gaze from one point to another point may be done in such a way as to rest the eyes by lessening or preventing strain. **Staring or shifting with an effort always produces myopia. Moving the head and eyes from side to side produces an apparent movement of stationary letters or other objects** (oppositional movement)**.** A complete rest of the eyes with improved vision may be obtained in this way or it may be done wrong with consequent bad results.

The Thumb Movement



Move the end of the thumb lightly against the end of the tip of the pointer finger in a circular motion, the circles diameter being less than 1/4 of an inch.

Count a odd number when the thumb moves down and a even number when the thumb moves up.

One of the best methods of obtaining complete relaxation of the eyes and mind is to **move the ball of the thumb lightly against the ball of the forefinger in a circular direction in which the circle has a diameter of less than one-quarter of an inch. Just moving the thumb in this direction does not always succeed unless one can count one, three, five, or more odd numbers, when the motion is downwards, and an even number when the thumb moves upwards.** A great amount of relaxation is always obtained by practicing the movement of the thumb against the ball of the forefinger. It is not necessary for the patient to watch the movement of the thumb in order to keep up the practice.

The movement of the thumb on the finger also activates eye movement (shifting) and the sensation of oppositional movement, activates and integrates the left and right brain hemispheres (especially when alternately done with left and right hands; left hand for a while, then right… and moving the thumb in a small counter-clockwise and clockwise circle on the finger), takes the mind away from worries, negative thoughts, brings the mind to a relaxed positive state. Relaxes mind, body, eyes, improves clarity of vision.

Thumb can also be moved a small movement on the finger left and right, up and down.

Many patients complain that when walking about the house, walking up and down stairs or when they are lying down, the movement of the thumb is not kept up continuously. Relaxation may be obtained by practicing the memory of the movement of the thumb and forefinger. Dizziness which is caused by strain of the eyes and mind has been relieved most successfully, continuously, or perfectly when an incentive is used. For example, many patients with symptoms of eyestrain, pain, or fatigue were encouraged to practice the movement of the thumb when it was found that at those times when the thumb was stationary, the symptoms of eyestrain became permanent or disagreeable. One patient found that when he walked up a steep flight of stairs that the movement of the thumb was forgotten. When he again practiced the movement of the thumb, all the symptoms of discomfort caused by eyestrain disappeared.

A patient told me that at one time a prominent physician of New York made a diagnosis of walking pneumonia and said that if he did not retire or go to bed and obtain complete relaxation or rest, he would most surely die. Too have pneumonia at that time and to have to go to bed would have been a great inconvenience because he had many things to look after, and so he practiced the thumb and finger movement. After practicing it awhile, to his delight and the astonishment of his friends, all the symptoms of pneumonia disappeared and did not return. Having a case of walking pneumonia was a great incentive to him to practice this movement of the thumb and obtain just as much rest at his work as he would have obtained if he had gone to bed.

Another patient with a case of walking pneumonia was also suffering from a high degree of progressive myopia. The movement of the thumb, besides acting as a cure for the pneumonia, was also a great benefit to the progressive myopia from which this patient was suffering. On many occasions, while walking along the street, he would notice that the movement of the thumb had stopped - he had forgotten about it. After a while he became able to remember it almost continuously with great benefit to his progressive myopia as well as the pneumonia.

Another patient was suffering from heart disease, *angina pectoris*. His eyes bothered him very much and he was very much pleased to note that when the movement of the thumb had improved his heart trouble, the myopia from which he was suffering also improved. It was a problem for him to find out how to keep up this relaxation of the nerves continuously. By practicing the movement of the thumb continuously he acquired the conscious habit. Later the conscious habit became an unconscious one with benefit to his eyes and heart.

Myopia has many complications. In some cases **detachment of the retina may occur suddenly without warning. Cataract, Glaucoma, and other serious diseases of the eyes** are often found as a complication in myopia. In **glaucoma** the eyeball becomes increased in hardness. The practice of relaxation methods usually relieves tension and brings about relief.

Conical cornea is a form of myopia which causes much pain and loss of vision. The cause of conical cornea is a strain or an effort to see. It can be cured by practicing the long swing or other methods of resting the eyes.

Inflammation of the iris, retina, or choroid is always benefited by the same treatment which improves or cures myopia.

The cause of myopia in school children has been discovered. Its cure is now known, and I believe that in time no child will be found wearing glasses.

Christmas – 1927

By Emily A. Bates

(Military Story)



Our office surely was a busy place last December and a large number of poor people were made happy at Christmas. There were not very many patients in our clinic at that time, but each patient was invited to come to the Tree and bring his or her whole family along. One blind patient, a young man, who before the World War had good sight, was so grateful for the help he had received that he wanted to give and give. He had the spirit all right and even though his pockets were empty and he could not give in that way, he gave in the best way he could.

His way was to bring other blind patients from the Blind Men's Home to Dr. Bates. It never dawned on him that there was a limit to the poor souls the Doctor could treat, while he was taking care of his regular practice. No one in the office had courage enough to stop him and so they came. His enthusiasm was so great that he himself worked more earnestly than ever in his own case. Later on he wrote an interesting article in this magazine about himself and the help that he received from Dr. Bates.

After many months of steady treatment, which was given him without any charge, he became able to see again. **Sightless eyes, made so by the ravages of war, again saw light after several years of darkness and no hope.** Other physicians who had examined him said his sight was destroyed. This was not true, for if it were, even Dr. Bates with all his knowledge of the human eye, could not have given him his sight again.

He had been gassed during the war and many operations had to be performed. All of one lung was removed. It is true that his case seemed hopeless. Operations and treatment of all kinds failed to help. The constant strain he was under, which was brought about by shell-shock and much suffering, caused depression, which could only be relieved by morphine and other drugs. After he

was treated for a short time by Dr. Bates, he stopped this bad habit, but it had to be done gradually. It was pathetic to watch him struggling to do the right thing. In trying to stop using drugs he acquired the habit of smoking many cigarettes every day. In some way he was well supplied with them all the time and preferred to smoke rather than eat. One day I talked with him for a long time and he finally promised me to smoke a smaller number of cigarettes each day. The poor fellow tried hard and won out.

His vision at the present time is 10/10. He can read diamond type at less than six inches; if the occasion warranted it, he is able to read diamond type at two inches.

The light and heat of the sun was a great factor in bringing about a better condition of his eyes, and the added sun glass treatment, focusing the sun's rays upon the eye as the lids were raised, and also using the sunglass on the closed eyelids, was given every time he came. **When there was no sun a strong light called a Thermo-lite was used for hours at a time and then the test card practice was begun.** Little by little each day the **blood circulation of the eyes became better** and the **nystagmus condition from which he was suffering also improved.** For the first time the eyes looked healthy to the observer and the **pupil of each eye, instead of being very small, became almost natural size.** This was not accomplished in a day but in a few years time.

Many times we are asked why some patients are cured and others not. The only answer is that if the patient will practice as earnestly and as often as the Doctor advises and does not become discouraged, a better condition of the eyes and vision occurs in time. The question "How long does it take?" is asked many times. This young man of whom I write had no such question to ask. He came with the hope of getting some relief but he was not quite sure before the treatments were started. He was willing to wait, although it was hard on him and meant patience and labor on the Doctor's part. This patient had to be led when he first came to us and now he leads others who are afflicted!

One of the elevator operators in our building had been taking daily treatment from us, slipping into the office whenever it was possible for him to do so during the day. The condition of the eye being treated was getting worse and Dr. Bates feared that in time his good eye would become affected. He had been receiving treatment for a long time before we ever knew that he was married. I guessed that his age was about 23 or 25, so I was shocked to learn later that he was indeed a married man, having been married for quite a few years, and that he was much older than I had thought. He said he had four little ones whose ages ranged from four months to four years.

How the poor fellow and his family managed to even exist on the small wages that he received is something I cannot understand. He told me that they lived in a basement where the sun seldom shone and that their greatest difficulty was to keep warm during the cold winter months. If my clinic fund had been large enough I should like to have had a ton of coal under the Christmas tree for his family, but he is only one of the many patients who receive our help, and things must be shared evenly if possible.

At no time during the year do I wish I were rich as much as I do at Christmas time. There are so many who are too proud to go to charitable institutions for help and who suffer silently and go on without the outside world really knowing their plight. When I invited our elevator operator to bring his family to the Christmas tree he was delighted and they were there bright and early. Every one of the children were spick and span and as I relieved the little mother of her precious baby and held him close to me I could tell how much pains the mother had taken day by day to keep things in a sanitary condition, for the baby had an odor about it that was as sweet as the best cared for baby ever had. The eldest child was a girl and she was quite small for her age. Next to her was a boy just one year younger than herself. In disposition he was exactly opposite to the little girl for he smiled but once as I can remember it now, and that was when he was given a toy automobile which he managed to operate all by himself by moving the wheel and seeing it run from him. The little girl hugged her doll so tightly that there was a disaster, but this was quickly corrected when she was given another doll.

Both the boy and the girl looked very much undernourished, and seemed very much in need of good pasteurized milk and lots of it. The next youngest was a sturdy little boy who did nothing but smile all the time. The Christmas tree seemed to be the most beautiful thing he had ever seen; the colored lights just dazzled his eyes and his mother had a hard time taking him away when it was time leave.

The children also received their share of candies and oranges and their arms were laden with bundles. The baby had received the usual rattle, and the mother, instead of receiving the ton of coal that I had wished she might have had, received a new warm coat instead. The only one she owned was almost in rags. She had pieced it together as much as she could and it seemed to have been a coat that belonged to someone else at another time.

Even though we are very busy in our office we make time to fulfill the duties that must be performed at that season. I was ill myself at that time and appreciated very much the co-operation I received from those at our office.
Harold, our shipping clerk, who also does other things which help in running our office, obtained the tree and also helped in the trimming of it. Miss Baron, our bookkeeper, arranged her work so that she could assist in getting things ready, and Miss Hayes, who has been a faithful assistant in the treatment of clinic patients, took the time to purchase the coat for the little mother.

Since this young married man started treatment, the condition of his eyes has improved considerably, but his improvement would be much more rapid if he could devote more time to practice.

Two sisters who had been coming for more than a year were also present at our clinic party. One was near-sighted and the other was presbyopic. The one who was near-sighted seemed to make better progress than the other. The sister with presbyopia obtained relief and better vision each time she came but we soon found out why she did not hold the better vision; she wore her glasses from time to time. This interfered with the practice and for that reason it took her longer to be benefited permanently than her sister who left off her glasses entirely. These two women, as did other women who attended, received warm stockings, besides oranges and candies. The men received ties as well as candy.

Not only eye patients, but others who had never heard of the Bates method or our clinic, were made happy at this time. While I was still under the doctor's care, my surgeon selected from his list of charity patients the two cases which he thought needed Christmas cheer most.
He gave me two names and addresses of families who received their share of the things we had to give and Dr. Bates and I went to their homes and delivered the Christmas packages ourselves.

In one of these Christmas packages was a doll slightly larger and a wee bit better in quality than those which we placed under the tree. I was told that the little girl who was to receive the doll would perhaps be a cripple for life. For her, there was little hope that she would ever walk again without braces and her condition was most pitiful. While she shared in the joy there was to give, the money used was not taken from the clinic fund but was given to me by Dr. Bates himself. The doll looked like a fairy I used to dream about when I was a little girl and I arranged her just as beautifully as I could, and the extra box which I had was filled with a large portion of nuts, fruit, and candy.

The mother of the little crippled girl was janitress of the large tenement house where they lived and we had to climb a long flight

of stairs to reach her. There was an answer to our knock at the door and there stood before us a very sad looking mother who was busy arranging her household for the Christmas holiday. We soon found out what her sadness was all about. The little girl was not there at the time but the mother explained afterwards how just a few days before, the brace which helped the child to walk was broken and could not be mended at that time because there was no money. .

It just seems as though this world is full of such sad cases and that it is necessary for those who have full and plenty to look around just a little bit and at least help one poor soul at Christmas time.

We had introduced ourselves, saying that the doctor who was helping her little girl was the great surgeon who was responsible for my life. I explained how he had performed a skillful operation and that I was on the road to recovery and that I was grateful to him. I explained that even though we had each had a group of poor people to help that there was always enough left for just one more.

When we asked for the little girl, the mother said she would bring her to us. She seemed to be in a daze, not knowing what it was all about or what we had to give the little one. The mother left the room to go to her next door neighbor where the child was staying. She soon appeared in the arms of her mother. She was a girl nine years of age, old enough to walk but not able to because of the tubercular condition she had in one of her limbs.

The little girl looked at Dr. Bates and then at me, wondering whether we had good or bad news to tell her, when her eyes spied the packages. The mother placed the little girl on the stationary tubs in the kitchen and as there seemed to be no chairs, we stood all the time.

We placed the boxes beside her and told her that Santa Claus had whispered in her doctor's ear that we should come to her. She really believed In Santa Claus and thought that Santa had not the time to come and so we came to her instead. First she opened the largest package, imagining what it might be, (and I think she imagined it was a doll). It happened to be the box containing candies, nuts, and fruits which she opened first. She was so excited about what she saw that she offered everyone in the room part of her gift. I asked her to lay it aside and then open the other package because we wanted to see whether she would like it or not. When the package was opened there was the beautiful doll with her arms outstretched to the little girl. It is impossible for me to explain the joy that came to the child, but the mother wept with joy at the thought of her child being made so happy.

From there we went to another part of the city to see a little boy. The child had been troubled with rickets since birth. He was a puny little boy who did not seem more than three years old. I was told that he was almost five but that he had not been growing very fast because of his trouble. For this little fellow we had the regular size package containing fruit and candy, and in the other box was a toy automobile. It was built like a racer and was about eighteen inches in length. He screamed with delight and was soon creeping all over the floor following the automobile as fast as it would go.

I never saw a more tidy household than this one which was in a cellar. We had to go down a steep flight of stairs to get to this little place called home and when we reached it we found the mother standing at the ironing board ironing a big wash for someone else in order to earn a few pennies. The only light and air which was received from the outside world was through one single window which was partly concealed by the staircase. She had curtains on her windows made of cheap material, but they were laundered and arranged in the neatest possible way. There was a cloth on the center table which undoubtedly was converted into a dining table at meal time. There was linoleoum on the floor which was much worn but was clean and the little mother was cleanliness itself.

She was expecting another little one most anytime and she looked as though she needed rest and good food. As I watched her face while the child was enjoying what we had brought for him, I saw tears in her eyes. I asked her about her health and she said she was never better in her life. Yet I knew that she was in the first stages of tuberculosis.

I think I would know what to do with a million dollars if I had it. I would hire competent people to make a house to house canvass in the different districts of the poor of my city and I would reach the needy ones in that way. Anyway, there were a few made happy with what was contributed by Dr. Bates and those who have given to the Christmas fund. And I must not forget to extend my thanks to those who have again made it possible for us to make the poor of our clinic and others happy this Christmas time.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JANUARY, 1929

Time For Practice

So many people with imperfect sight say that they have not the time to practice relaxation methods, as their time is taken up at business or in the performance of other duties. I always tell such people, however, that they have just as much time to use their eyes correctly as incorrectly.

+They can imagine stationary objects to be moving opposite whenever they move their head and eyes. When the head and eyes move to the left, stationary objects should appear to move to the right, and vice versa.

+They can remember to blink their eyes in the same way that the normal eye blinks unconsciously, which is frequently, rapidly, continuously, without any effort or strain, until by conscious practice, it will eventually become an unconscious habit, and one that will be of benefit to the patient.

+They can remember to shift or look from one point to another continuously.

+When practicing shifting, it is well to move the head in the same direction as the eyes move. If the head moves to the right, the eyes should move to the right. If the head moves to the left, the eyes should move to the left. By practicing in this way, relaxation is often obtained very quickly, but: if the eyes are moved to the right and at the same time the head is moved to the left, a strain on the nerves of the eyes and the nerves of the body in general is produced (and central fixation, normal eye movement is prevented).

Astigmatism
(and Conical Cornea)
By W. H. Bates, M.D.

Astigmatism occurs in nearly all cases of imperfect sight for which glasses are employed to improve the vision. It is so often observed in many eyes soon after birth that many writers have stated that it is congenital and not acquired. The majority of statistics, however, show that astigmatism is usually acquired. As a general rule we may say that it always is a complication of myopia and less often of hypermetropia. In nine tenths of the cases, the astigmatism is due to a malformation of the cornea. Some writers have published accounts of cases of astigmatism produced by organic changes in the eyeball without necessarily producing corneal astigmatism.

Astigmatism frequently is recognized to be always changing. Without interference or treatment the astigmatism may increase to a considerable degree or it may become less and even disappear altogether.

The vision in most cases of astigmatism can be improved by the use of proper glasses. However, there are some forms of astigmatism in which no glasses can be found to correct the error. In regular astigmatism, two meridians of the cornea are at right angles to each other. Astigmatism often follows inflammation of the cornea. After the inflammations and ulcerations of the cornea have healed, they may leave behind scar tissue, which by its irregular contraction produces irregular astigmatism. In such cases, glasses seldom or never improve the vision, but it has been helped by relaxation methods.

When astigmatism is present, eyestrain is usually manifest. It should be more widely published that regular astigmatism, although not benefited by proper glasses, has been **improved or cured by the practice of central fixation**. A **perfect memory for letters and other objects is a cure for astigmatism.**

Conical cornea is usually acquired. In the beginning, the astigmatism which is produced or acquired is slight. After some years, however, the conical cornea will increase to a considerable degree. The astigmatism is so irregular that no operations on the cornea to correct this malformation have succeeded. The pain caused by conical cornea may become so severe that some physicians have recommended that the eye be removed. The treatment of conical cornea with the aid of central fixation has relieved pain in many of these cases. It is not right to ignore central fixation as a cure for conical cornea. Many eye doctors have condemned the treatment without a proper investigation.

Patients who suffered from conical cornea have consulted numerous physicians to obtain relief. These physicians too often informed the patients that there was no relief known to medical science to lessen pain in severe cases and improve the vision in conical cornea. Some of these unfortunates, after obtaining the opinion of prominent physicians, have been cured by central fixation and then returned to the specialists who had previously given them a bad prognosis. In some cases I have heard that these physicians were so annoyed by the report of the cured patient that the interview was not always a pleasant experience.

The results obtained in the treatment of astigmatism of all kinds, without glasses, and by the methods I have recommended, have been very gratifying.

Some cases of irregular astigmatism suffer an unusual amount of pain in ordinary daylight. After the eyes become accustomed to the sunlight or other forms of light, the astigmatism becomes less when measured with the help of the ophthalmoscope, retinoscope, or the ophthalmometer. No matter how sensitive the eyes may be to different forms of light, gradual exposure of the eyes to the same degrees of light has benefited the patient.

In the beginning of treatment, the strength of the light used should be less than will be used later on after the eyes have become more accustomed to the strong light. It is an interesting fact that eyes which have normal vision without astigmatism seem able to stand a strong light reflected into the eyes much better than can patients whose eyes are imperfect or who have a considerable amount of astigmatism.

Sunning

When practicing looking at the sun one should not at first look directly at it unless the eyes are normal. When becoming accustomed to strong sunlight a patient should move the head from side to side while the eyes are closed. Many people have observed that when looking at distant electric lights, the lights observed were imagined to be moving. When the lights did not appear to be moving, movement of the head and eyes from side to side would produce an apparent movement of the distant light. Patients who were able to look directly at the sun without any discomfort whatever volunteered the information that looking at the sun was not disagreeable, providing one imagined that it was moving from side to side. Shift the eyes left and right, side to side of the sun and move the head/face with the eyes. Shift top and bottom, circle the edge of the sun counter-clockwise and clockwise.

The treatment of astigmatism is a matter of importance because for many years no methods of treatment were at all successful. One of the most successful methods of treating astigmatism is to encourage the patient to **remember, imagine, or see letters of the test card perfectly.** The patients are encouraged to commit the card to memory. When letters or other objects are memorized perfectly, the astigmatism always becomes less until it disappears altogether. This is a truth to which there are no exceptions and suggests a method of treatment which should always prevent or cure imperfect sight produced by astigmatism.

With the consent of the principal of a large school in New York City, I placed a Snellen test card in all the rooms of the school. The principal asked me how I could prevent the pupils from memorizing the card. She was told that it was planned to encourage the pupils to memorize the card, because letters on the Snellen test card could be remembered, imagined, or seen best after they were memorized. She was also told that the teachers could help materially in the prevention or cure of astigmatism.
Looking at familiar, clear objects relaxes the mind, eyes, keeps the vision clear at all distances.

The principal shrugged her shoulders and said that she would not be a party to any such foolish plan and that she would not allow any of her pupils to use the Snellen test card for any purpose whatever. She told some of her friends, however, that she was going to put the card up and encourage the children to memorize it and then prove that she knew more than the Doctor, namely that the Snellen test card memorized was of no benefit whatever in curing astigmatism. She also admitted that she did not know the first thing about astigmatism and did not want to know anything about it.

At the end of three months I called on the principal again. A friendly teacher told me that my enemy was gloating over the prospect of finding out how little most doctors knew about the eye. She seemed very glad to see me and shook hands and smiled and said that they were all ready to test the sight with the Snellen test card and find out how much good had been done by its use.

First she examined the sight of all the children and compared it with a record that she had made previously. She was not satisfied with the result and asked another teacher to test the sight of the children and report. Quite a number of teachers were present at this second examination as well as at the first and the number of visitors increased until there were more teachers than there were pupils. Everyone was anxious to know the result of the trial.

It was a shock to all the teachers who tested the sight of the children to find that the vision of every pupil had improved and many

children wearing quite strong glasses for the improvement of astigmatism had read the card perfectly without glasses. My enemy was not satisfied; she thought there must have been something queer in my cards so she obtained some strange cards from other teachers and it did not add anything to her peace of mind to find that the vision of the children tested with the strange card was much better than when my card was used.

Some patients with astigmatism complain that when they first awaken in the morning their eyes are under a much greater strain than in the afternoon. When such cases are examined with the aid of the retinoscope during sleep, they are found to be suffering from a great strain. The strain is not always apparent; the patient does not always know when it is present. Children are sometimes great sufferers from eyestrain during sleep. Many others have been advised to watch their children during sleep and if they believe the child is straining his eyes, the child should be awakened and taken out of bed. (The mother can tell that the child is suffering from eyestrain if the eyelids twitch and if different parts of the body twitch). The mother should then have the child practice the long swing for a few minutes or longer.

One man came to me suffering great pain almost constantly, which was not relieved by the use of glasses for the improvement of his astigmatism. He was told about how eyestrain during sleep can produce astigmatism, and of the symptoms of astigmatism which were pain, fatigue, and dizziness, and also how much benefit is obtained by practicing relaxation methods more or less frequently during the night. He had no one to call him during the night, so he gave orders to a clerk in a nearby hotel that he should be called by telephone every two hours during the night. When he was awakened he would practice relaxation methods. The relief was considerable and there were mornings when he testified that he was rested and had no symptoms of eyestrain at all. It was a great comfort to him to get rid of his headaches and the agony of pain which he described as being in his eyes and had been there many years.

One patient, a boy about twelve years of age, memorized the Snellen test card so that he could read the whole card of fifty-three letters in less than ten seconds. It was discovered that with the improvement in his memory, his vision for a strange card was also improved and his astigmatism became less and finally disappeared entirely.

Staring

Many people are unable to stare for any length of time because staring is painful, disagreeable, and produces fatigue. However, a boy ten years of age had practiced this staring and had acquired much skill; he was able to outstare any boy or girl in his classroom. He then went to other classes and challenged each boy and girl in those classes to a contest to find out which one could outstare the other. In order to excite their antagonism he called them names, so they stood around him and attempted to outstare him, but he, being in good practice, came out the winner.

The boy's teacher noticed that after some of these staring contests, his eyes became quite inflamed, and his vision was unusually poor. His parents took him to a competent eye doctor who discovered that when he stared he produced a considerable amount of astigmatism. The doctor wanted to put glasses on him but the boy objected; he did not want glasses on because that wouldn't be fair to the others. The doctor said that if he did not get well he would have to wear glasses, so the boy made up his mind to stop staring.

Anyone who can stare and strain to an unusual degree is able to relax the strain. It is interesting to demonstrate with the aid of the retinoscope that staring may produce a very high degree of astigmatism, but always after the staring is stopped the vision improves very much and the astigmatism becomes less. In short, it is more difficult to produce astigmatism than it is to cure it.

A man, aged sixty, suffering from astigmatism, had great difficulty in practicing central fixation, shifting, swinging, and the long swing. After four visits to my office he said that he had obtained no relief from his depression, his headaches, or other symptoms of astigmatism. He was advised to sit in the waiting room and try to do nothing whatever. At the end of this time his vision was tested and found to be normal. He was unable to practice relaxation methods because he made too great an effort, but when he did nothing and made no effort, his vision improved.

Chronic Iritis Relieved By Treatment

By Emily A. Bates

In Santa Monica, California, there lives a grateful patient who was cured of iritis and near-sightedness by the Bates Method during my stay in the West. He held a responsible position in one of the large banks there and he needed his sight most of all at his work. Two years previous to the time I saw him, he suffered an attack of iritis which caused much pain and discomfort most of the time. The usual drugs were used to relieve the pain but at times even these gave little relief. At the advice of some eye specialists he put on dark glasses and these enabled him to go out in the bright sunlight, something which he could not otherwise have done. Most patients who suffer from iritis cannot open their eyes at all while they are in a bright light. Dark glasses relieved the pain somewhat but they did not cure his trouble. He obtained Dr. Bates' book, "Perfect Sight Without Glasses" and tried to apply the method by himself and then later came to me.

I wanted to be sure about the diagnosis which had to be made before I started treating him, so I sent him to an eye specialist who was taking care of my diagnostic cases. After my patient had called on this specialist for an examination of his eyes, he returned to me with the statement from the physician. It was purely a case of chronic iritis and the doctor was interested to see how the patient would get along under my care.

In March, 1927, the patient paid his first visit for treatment and he came alone. His vision for the test card with the right eye was 15/40 and with the left 15/50. The letters were blurred and indistinct and he lowered his head considerably while trying to read. When he was directed by me to hold his head straight while reading the card his eyes closed tightly and he did not have the ability to keep them open long enough to read even one letter at a time.

I handed him the Fundamental card and he said that at no distance, as he held the card farthest away from him and as near to his eyes as he could get it, could he read any of the type. After closing his eyes again for a short period of time **he read Number 3 as he moved his body from side to side** while sitting comfortably in a chair. By shifting from the white spaces on the card of the microscopic type that I gave him to the white spaces of the diamond type and then to the white spaces of the Fundamental card he read as far as Number 5 of the Fundamental card. (Looks directly at the print when reading it – central fixation.)

I had a case similar to his about four years ago, a case in which it ordinarily takes from four to six weeks to cure the pain alone. This patient was entirety relieved of pain, and her sight, which formerly was not normal, became so at the same time the iritis was

cured, which was inside of two weeks. She had an acute attack of iritis before I saw her, which lasted for several months. A physician friend of Dr. Bates and myself saw this case while she was under treatment and while she was still suffering intense pain. When he examined her, at my suggestion, his opinion was that she could not possibly be cured within six or eight weeks at least. After she was cured, the case was reported to this doctor, who was amazed at what had been done for her. This case came to my mind instantly when the patient mentioned above visited me.

I noticed that he did not sit quietly while he was palming and thought that he was not getting any benefit in that way, but when I suggested it to him, he said that he liked to keep his eyes closed, but that covering his eyes with the palms of his hands seemed to bother him. He was encouraged then to keep his eyes closed for a period of half an hour while I was planning a regular routine of treatment for him.

Before he opened his eyes to read the card again, I asked him to describe parts of his daily work at the bank. It was interesting to hear him describe the difference between the notes that passed through his hands. He explained to me how a counterfeit bill is discovered by examining it carefully. Because of the pain he had been suffering for a long time I refrained from joking in any way, which I sometimes do if the patient is agreeable. There usually comes to my mind some funny incident which occurred while treating someone and I like, if possible, to change the subject from pain to something else, especially while the patient is palming.

This patient, however, did not make me feel that way in the beginning because of his reserved manner and also because of his pain. It was quite unexpected then to have him answer me in a funny way and tell me of something which he could remember most of all and which was constantly before him while he was at work. He said it was a nice, shiny thing with a black hole at one end and he made me laugh when he said it was a revolver, which was only introduced on rare occasions when there were suspicious people a little too close to him. This was something new to me and I had not expected it. His hearty laugh was most relaxing not only to him but to me also.



Man runs with his dog, sees the dogs tail wagging above the tall grass in the distance. Seeing the tail wag helps his eyes shift, use central fixation and helps him to see objects swing, move opposite to the movement of his head, eyes.

I told him that my sight was apparently normal but I feared that if I came in close contact with his revolver as I came near his window, I was sure that I would become myopic or acquire a cataract or something else. As quick as a flash I asked if he had any pain and as quickly he answered me saying "No, I haven't any discomfort whatever just now."

Immediately he was told to open his eyes and to read the card, which he did without squeezing his eyelids together as he did before. (Squinting) His vision improved to 15/10 and he said that the letters were clear. I am anxious for those who read this not to misunderstand me. He was not cured by any means nor was his vision permanently relieved right at this time. His vision improved and his discomfort and pain were relieved because his mind was relaxed. I thought this was a good beginning for the first treatment and told him so. He agreed with me and promised to practice as I directed him to do until I could see him again.

Financial difficulties prevented him from coming to me every day, which he should have done and which would have made the cure of his eyes permanent in a much shorter time. I surprised him the next day by telephoning him and offering to help him over the telephone. I happened to call him at a busy time, so the discussion was short and took less than ten minutes of his time and mine. He wrote me a letter in a week's time telling me how much good I did him in those few moments.

As he talked to me at that time he stood before his telephone which was fastened to the wall. Just before I called him he had had an attack of pain and explained that all the window shades in the room where he was had to be drawn because the light caused so much pain. My advice was to **place himself before a bright electric light as close as he could stand the heat and, with his eyes closed, move his head slowly from side to side in order that all parts of the eyes would receive the benefit from the light and heat.**

I held the receiver while he did this and he soon came back to the telephone to tell me that the pain had gone and that he had raised the shades and was able to **look out into the bright sunlight from one of the windows without feeling any pain**. I advised him to write down immediately the things that helped him most and to practice these things, no matter how short a time he had each day. I told him to **sway his body from side to side** as he held the receiver and was talking to me and to **blink his eyes** with the movement of his body. This gave him some relief also. From time to time I advised him by letter and also by telephone.

In May of the same year my patient came again and this time he brought his wife, asking for permission to have her watch the treatment so that she could help him at home. I was glad that he brought her because I knew when I saw her that she would be a great help to us both. The instructions I gave her at this second visit were carried out by her and by the patient during the summer months while they were vacationing in the mountains. Toward the end of the summer, they both came to visit me and the condition of my patient's eyes as well as the expression on his face indicated no more trouble. I tested his sight for fine print and he read the Fundamental card, by W. H. Bates, M. D., through to the end, holding the card slightly farther than six inches from his eyes. His vision for the distance was also normal, 15/15 with each eye separately.

His wife had told me that at times he suffered agonies of pain during the night after he had slept for a few hours. As long as she could remember, she said, he had never slept quietly all through the night. He was troubled with nightmares and he also had insomnia for many years, and at such times he would sit up for hours and smoke his pipe in order to while away the time until daybreak. For quite a few years, Dr. Bates has been benefiting patients by having them do the **long swing 100 times early in the morning and 100 times just before retiring.** I remembered this and advised my patient to try it and let me know in a week's time whether he had any success with the swing or not.

Three days later I received a message over the telephone saying that since his last visit to me he had faithfully practiced the long swing 100 times in the morning and 100 times at night as I have advised. The results were good. He slept all through the night without waking up and without tossing about as he had been doing for so long a time. His wife remained awake purposely to watch the results and at other times, being a light sleeper, she would wake up to find her husband in the same position as he had placed himself before going to sleep.

My patient purchased a **sun-glass** from me and I directed his wife how to **use it on his closed eyelids as he sat in the warm sunshine on his patio.** In the beginning, when I first used the glass upon his closed eyelids he resented the treatment very much and the strain he was under while the sun glass was being used caused a considerable amount of tearing of the eyes. The patient feared the outcome of such treatment, but while the condition was made worse temporarily for a short period of time, it proved to be the best treatment in permanently curing his trouble.

Every day he became more accustomed to the **sun-glass treatment** and all during the summer while he was on his vacation, the sun treatment was given more frequently each day. A tent was used so that his body as well as his eyes could receive the sunshine. This proved to be a **benefit to his general health as well.** When he returned at the end of the summer, I was much surprised to

see a change in the expression of his face. **The sclera or the white part of each eye was as clear as mine and his eyes were wide open in a natural way.**

He told me of the different things he tried each day for relaxation of the eyes and mind. **His wife would read to him while his eyes were closed and he would construct mental pictures of what she was reading.** At other times he would **run and race with his pet dog**, **who could run much faster than he could and the dog would get quite a distance away from him. However, the wagging tail that he could see above the tall grass would always help him to find his pet and to run again with him.** He said the **wagging tail of the dog helped him to see things move opposite to the sway of his head and eyes**. He said he had not realized how much of a strain he had caused his wife, who was at one time a carefree girl with a jolly disposition, but through his suffering had become a very serious person.

The gratitude of both my patient and his loyal wife was most profound and they have since then proved loyal friends to "Better Eyesight." Many patients have come through them for treatment.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

FEBRUARY, 1929

Correspondence Treatment

Many letters are received from people in various parts of the world who find it impossible to come to New York and who believe that something might be done for them by correspondence treatment. I do not advocate correspondence treatment as a general rule, as the results are uncertain. There is always the possibility that the patient will not practice correctly the things which he is told to do.

If a patient has had one treatment at my office or at the office of one of my representatives, it is possible to treat that patient more intelligently through correspondence.

Some years ago a gentleman living a thousand miles from New York called and asked if anything could be done through correspondence for his wife who was bedridden and suffering with an agony of pain in her eyes. He described all her symptoms to me and gave me her last prescription for glasses. He was told that if he would take the treatment in my office, and so learn how to treat his wife, it would be possible for him to aid her intelligently when he went home. He did this and after taking several treatments, returned. He wrote me later saying that his wife was almost cured.

When my book, "Perfect Sight Without Glasses," is read carefully, those things which are not understood may be cleared up by intelligent questions, which I am always pleased to answer. I do not consider this as regular correspondence treatment.

Squint

By W. H. Bates, M.D.

In **SQUINT**, the right or left eye may turn in toward the nose while the other eye may be continuously straight. When the straight eye is covered with a screen, the squinting eye usually becomes straight temporarily. There are several types of squint, one of which is called divergent squint, in which one or both eyes may be turned out to a greater or lesser degree. In another type, vertical squint, either eye may be turned upwards, downwards while the other remains straight. In rare cases both eyes may be turned above the horizontal meridian, or the eyes may be turned below the horizontal meridian. Squint is usually acquired soon after birth, but a great many children do not squint until they are three or four years of age or older. Rare cases will acquire squint when past fifty years of age.

The eye which turns in different directions habitually usually has imperfect sight which is not always corrected by glasses. The vision of the squinting eye when imperfect is called **amblyopia**. Amblyopia means blindness without any cause which can be seen or described by the attending physician. The best treatment is to get rid of the strain which is always present. One of the early writers on squint, its treatment and cure, said that the blindness of squint was a condition in which neither the patient nor the doctor could see anything wrong with the eye. Lack of use of the squinting eye lowers its vision and, also the brain turns of the image from the squint eye to remove the unbalanced vision, incorrect, double… image produced by the squint eye.

Amblyopia is a condition of imperfect sight in which the retina, the optic nerve, and other parts of the eye show no organic change. The blindness of the squinting eye may be so great that the patient may not be able to see even daylight. These cases may develop absolute blindness with no perception of light and yet have been cured by treatment, by doing away with the strain. It should be emphasized that eyestrain has been frequently found in all kinds of squint and this eyestrain is sufficient to lower the vision until even light perception is lost. Palming, shifting, central fixation, improving the memory, imagination, relaxing the mind, eyes, equally activating and integrating the left and right brain hemispheres and other Bates treatments cures amblyopia, squint.

Eyestrain, which is a mental phenomenon, is capable of producing in the eyes organic changes which are sufficient to cause total blindness. By relieving the eyestrain the vision always improves until it may become normal. The men who for years have published in books or in various periodicals that the blindness of squint cannot be cured should investigate the facts by the aid of modern scientific methods, which prove that the **blindness of squint is not very difficult to cure.**

In searching through the literature for facts I found some very queer statements. One very prominent ophthalmologist published in a medical journal the statement that the blindness of squint could not be cured. In the very next sentence, he gave the history of a **patient born blind with amblyopia, squint, and cataract who obtained perfect sight by treatment.** The patient was forty years of age. The cataract in both eyes was operated upon successfully. The patient had never seen letters and could not read a newspaper, even with small size headlines. (Misprint? should be large size headlines or does it mean simple headline with only few words?) He could see flowers of different colors but he did not know the names of any of them. He was taught the names of familiar objects that he saw and in a very short time his eyesight seemed to be normal.

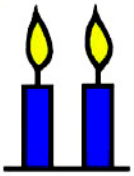
The eye surgeon called attention to the fact that the imperfect sight was improved to the normal by treatment of the eyestrain. The surgeon described how the cataract was removed and how the patient became able to read by being taught by school teachers who discovered the difference in the vision of each eye. The eye which habitually turned in had very imperfect sight. The vision of one eye and later both eyes improved to the normal by eye education which relieved or cured the eyestrain. Some of the readers of this doctor's article asked him embarrassing questions and he finally stated that he now believed amblyopia could be cured by eye education. He had unconsciously practiced my method. The amblyopic eye was blind from eyestrain and vision was restored after the eyestrain was relieved by relaxation

Patch over straight, normal eye.
Using crossed eye to improve movement, clarity of vision in crossed eye.



Practice of switching, shifting, central fixation must be done with the eye that needs improvement and also with: both eyes together, then one eye at a time; strabismus eye, then the other straight/normal eye, then strabismus eye again, then straight eye... then both eyes together again to keep both eyes straight, clear vision, working together, both left and right brain hemispheres equally activated, integrated, whole brain functioning, working with both left and right eyes, all eye muscles.

Double image of the candle flame. Images are correct, at a even height with eachother - this indicates the eyes do not have an upward, downward strabismus. Eyes/ pupils are at a even level with eachother.



Steps to correct crossed, wandering eyes. Use the eye patch.

+ Improve the vision to the best possible in the left and right eyes by switching, shifting, central fixation, memory, imagination, relaxation... on objects at close, middle, far distances using both eyes together, one eye at a time, both eyes together again.

+ Then, practice seeing double. No eye patch. Use both eyes together.

+ Imagine seeing double vision at 3 ft, 10ft, 20 ft. and farther; Example:
+ Place a candle at 20 feet. Light it.
+ Imagine, see a double image of the candle flame.
+ Eyes open; imagine seeing the two candle flames (double image) with the images 5 ft. apart. If the eyes actually see this, its good.
+ Eyes closed - imagine seeing the double image, two candle flames 5 ft apart in the mind, imagination and then:
+ Imagine the flames move closer together, farther apart, closer together...
+ Then, with the eyes open and then closed - remember, imagine and see the two flames one ft. apart. (Candle still 20 ft away in the distance.)

(If the two left and right images are at uneven heights-imagine the double image and imagine the left and right images are at a even height with eachother with the eyes open, closed, open. (See other diagram.) This corrects eyes that wander up or down, that are not even with eachother, and helps correct imperfect convergence, divergence, brings both left and right eyes at a even level with eachother. Look to objects in the distance beyond the candle and up close before the candle to see two flames and check for even height. Practice until they are even.)

+ Next: candle still at 20 ft. See the double image. (Cross the eyes to see this or look at a close object.) Remember, imagine and see with the eyes open, closed, open the double images 1 ft. apart and then;
+ Imagine the images correct:
- Right eye sees its image on right side of visual field.
- Left eye sees its image on left side of visual field.

Then: Relax and let the two images move closer together and merge into one image of the candle flame. Look directly at the candle flame. Shift on it part to part.
Practice repeating this, moving the images farther apart, closer and merging into one then shifting on it.

+Next: now use effort and make the image of the right eye move over to the left side of the visual field and the image of the left eye move over to the right side of the visual field.
+ Then; let the two images move toward eachother, and merge together into one image of the candle flame. See Dr. Bates full directions.

This last step may only work if the person has a wandering, crossed eye/eyes. It can be done by normal eyes without effort or strain by looking at a distance beyond the candle when the candle is placed closer. (See other diagrams with the tree in the distance and angel up close with the candle at the middle distance.) Compare to the Bead String Exercise popular in Natural Vision Improvement books.
This last direction by Dr. bates I find hard to understand. I have normal eyes and find it impossible, too straining to do this last step of seeing the images incorrect on opposite sides but I can easily do it by moving the candle closer and looking beyond it to the distance. Some people with strabismus can move the eyes in all different directions and this may make them capable of doing this experiment the other straining way with benefit by then realizing and releasing the strain and letting the eyes move to a normal position. Or, Dr. Bates meant for the person to look farther into the distance with the candle closer to produce the effect of the images from the left and right eyes to cross over to opposite sides of the visual field. The bead string, switching, shifting on objects at close, middle, far distances with both eyes, one eye at a time, and both eyes together again also helps to correct crossed, wandering eyes without feeling strain, effort. This also improves accommodation, un-accommodation which works with convergence, divergence and each of these improves the other.

treatment.

To obtain improved vision with the good eye covered, one patient wore a shade over the eye which was straight, while the vision of the squinting eye was benefited by eye education. At the end of a few months it was found that the eye which formerly had looked straight was now turned in. At periodic integrals the right eye became straight while the left eye turned in. After covering the good eye with a screen, the vision of the other eye became straight. It required several months before both eyes became straight at the same time and each had good vision.

Eye muscles, eyes learning to work with Brain, left and right hemispheres.

Practice Imagining, Remembering, Creating, Seeing, Controlling, Moving Double Vision/Images to Cure Crossed, Wandering Eyes.

In the cure of squint without operation it is important that the instructor become able to practice a few fundamentals in order that the patient may be more readily taught to do the same.

In all cases of squint, double vision should be imagined at three feet, ten feet, twenty feet or farther. It often requires considerable practice before the teacher can produce double vision. <u>The best possible vision should be obtained in each eye before much is attempted to cure the squint.</u>

Most children can see or imagine double vision by practicing with a lighted candle or other object. In some cases two candles are imagined five feet apart when one is practicing with a candle at twenty feet. By closing the eyes and resting them, it is possible for the patient to demonstrate that two objects appear to be five feet apart, by the use of the memory. Images five feet apart can be imagined to be either more or less separated.

The eyes of most people are capable of remembering, imagining, or apparently seeing two images one foot apart at twenty feet. If the objects are on the same level they can usually be controlled much better than when one is higher than the other. In a case of convergent squint it is quite easy to imagine the two objects as they should be imagined; the image of the right eye should be to the right, the image of the left eye should be to the left. When the two images are on separate levels it is well to practice so as to attain the two images on the same level. This makes it easier to control the two images in other directions.

By alternately regarding the images without effort or strain, they will approach each other until they touch, overlap or become fused into one object. Then more practice should be done with the object of obtaining control of the location. By some forms of effort the image of the right eye may be forced to the left while the image of the left eye may be forced to the right. This should be practiced for half an hour or longer, forcing the images seen by each eye to appear crossed. At first the images are not controlled; they may cross and separate a wide distance, three feet, or even six feet.

It is well to practice the production and control of the crossed images in cases of convergent squint in which the image of the squinting eye does not always reach a position on the opposite side of the image seen by the right eye. It is interesting to observe how quickly two images can be made to cross, to approach each other, to touch, and to merge into each other and form one. By practicing the production of crossed images a considerable time each day the crossed images become consciously, habitually, or permanently crossed (merged into one) when a cure is obtained.



Left (normal eye) covered with patch. Using the right, less clear vision, squint eye to improve vision in that eye.
+Shift on and remember, imagine and see a letter on the 20/10 line on the eyechart perfectly clear with the eyes open, then in the imagination with the eyes closed, then with the eyes open again. Practice as described here:



Eyechart
Practice with the chart at close, middle and far distances until vision is clear in both eyes at all distances.
Practice with both eyes together, then one eye at a time, with the eyepatch (more practice with the eye that needs vision, movement improvement,) then with both eyes together again.

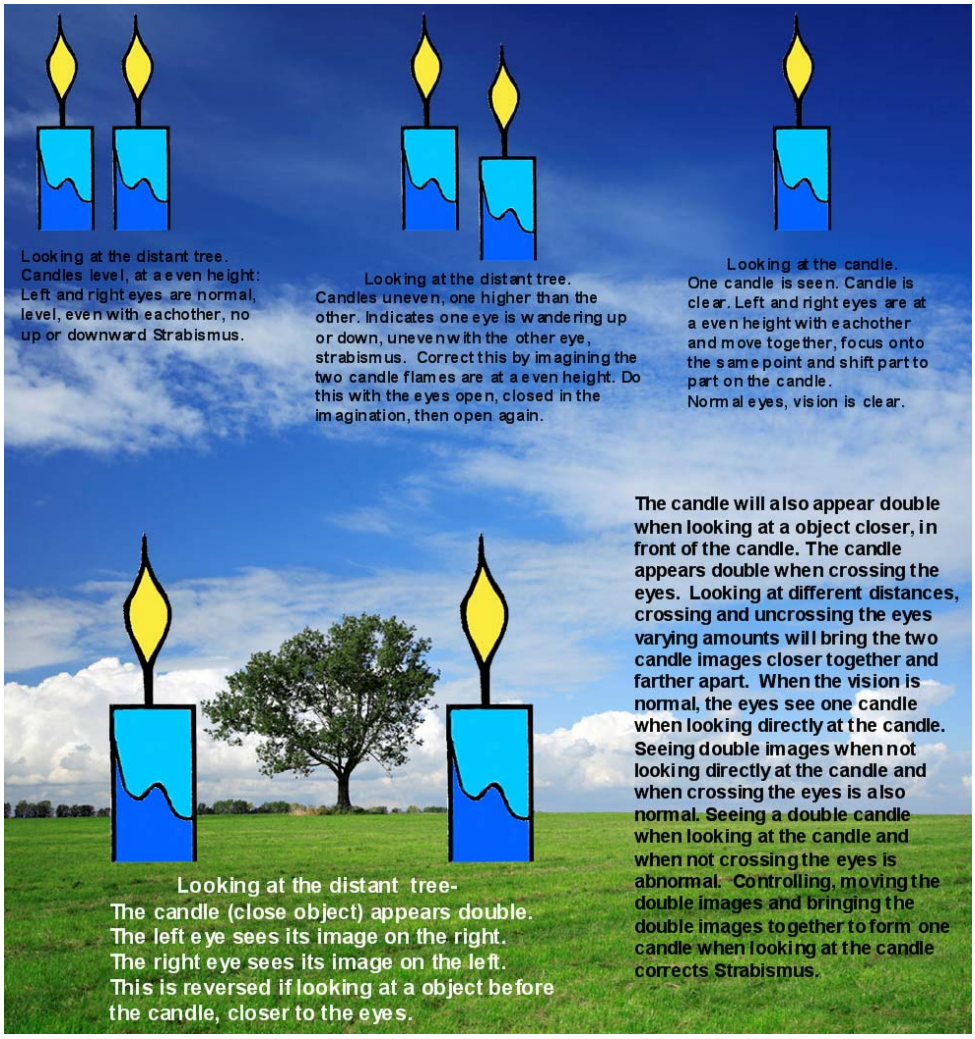


A girl, aged fourteen, had vision of the right eye of 3/200 while that of the left eye was 20/10. When she was two years old the tendon of the muscle which turned the right eye inwards was cut. The result was variable. Sometimes the eye turned in as before, but there were periods when the right eye was straight. Relaxation methods were employed daily with success and the squint became less when the vision improved.



Read fine print with both eyes, then one eye at a time, (and a little more practice with the squint eye), then with both eyes together again.

The method which helped the most was to improve the vision of the amblyopic eye by remembering or imagining perfect sight of one letter of 20/10 with the eyes alternately closed and open. The vision of the right eye improved until it became 20/10. The patient was also encouraged to imagine fine print six inches from the right eye. When she succeeded in improving her vision for twenty feet and later her ability to read fine print at six inches, the squint disappeared. Both eyes focused on one point at the same time.

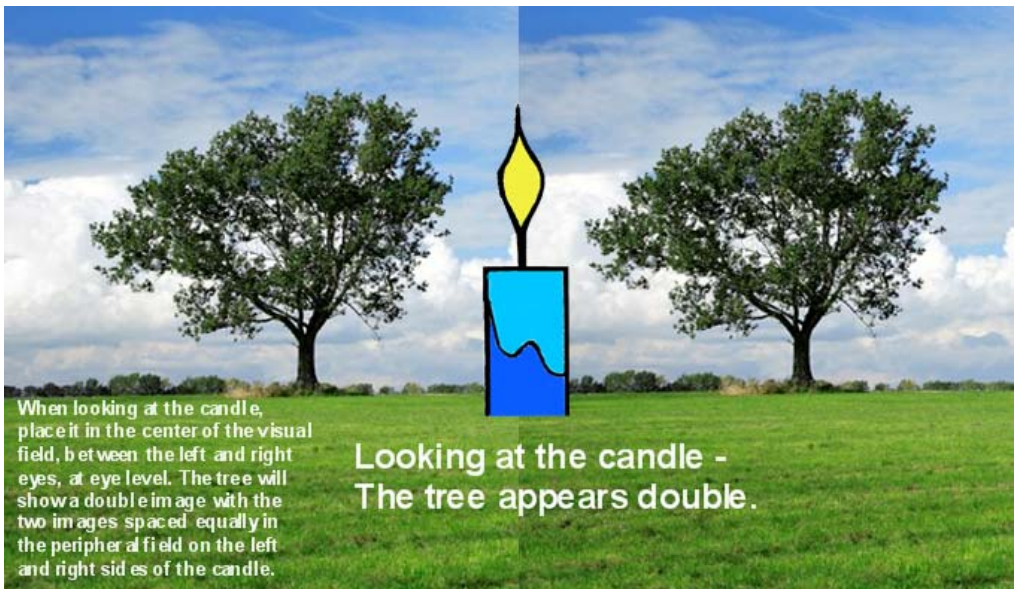




The appearance of the double candle flame is caused by the the same principles that cause the double beads to appear on the bead string. See book; Do It Yourself - Natural Eyesight Improvement, Switching chapters.



When looking at the red bead the green bead appears double.
When looking at the candle flame it appears single.
When looking before or beyond the candle flame, the flame appears double.
When the eyes are crossed objects will also appear double.



LOOKING AT BEAD 1
RED - CLOSE

Cover one eye at a time to see which eye sees which side of the double image in the peripheral field. The image that disappears is the image produced by the eye that is covered, not in use.

If one image is light, blurry, less clear - the eye producing that image needs vision improvement. The blur can alternate in the left and right eyes depending on the distance the eyes are looking at. Example; looking at the candle. Distant tree is double. Left image of the tree is less clear, lighter. Right image is solid, clear. Cover the left eye and the left image disappears=left eye is producing the blurry image. The left eye needs vision improvement at far distance.

Now look at the distant tree and observe the double images of the candle. Are they equally solid, clear..? Which eye is producing which image of the candle?



Central Fixation Cures Squint

CENTRAL FIXATION or seeing best a letter or other object regarded (object the eyes are looking directly at, in the center of the visual field) while all other points are seen worse, is a successful method of curing squint and improving the sight in cases of squint.

A very remarkable patient, a girl aged eight, was treated more than fifteen years ago. The vision of the right eye was 2/200 while that of the left eye was 10/200. The right eye turned in most of the time. The vision of the left eye was improved without glasses by alternately resting the eyes.

An attempt was made to teach her how to see best where she was looking. She very soon acquired the ability to practice central fixation when the larger letters were regarded. The child became much interested when she realized that her eyes felt better, while the vision and squint improved. She practiced central fixation on smaller letters and other objects. The strain which was manifest by the contortions of the muscles or her eyes, face, and other parts of her body disappeared. Her voice became more musical with the improvement of her vision and the subsidence of the squint.

It was remarkable how well she became able to practice central fixation on very small letters and other objects. She would hold a glass slide on which a small drop of blood was mounted, and claim that she saw the red cells, the white cells, and other minute particles with her right eye while the glass slide was pressed against her eyelashes. She was able to read each letter and period in photographic reductions of the Bible, by central fixation.

Many people have complained that they could not see black or imagine a black period for an appreciable length of time. This patient, when palming, stated that black was seen and that with the aid of central fixation even the smallest black periods were seen but they were always moving a distance nearly equal to the width of the period. An effort to see always failed. Distant objects were seen as far off, by central fixation, as it was possible to imagine them.

This patient was able to produce at will, consciously, and continuously, internal squint of the right eye with the left eye straight or could keep the right eye straight while the left eye turned in.

Don't Be Afraid

By Emily A. Bates

I have heard many patients who came for first treatment say "I am afraid." This remark is usually made when we suggest that the patient should stop wearing glasses immediately in order to receive a permanent benefit. I have known of patients who only had a minor defect of vision who were uncomfortable at work unless they wore their glasses. Those who have worn glasses for just a few years and received little or no benefit while wearing them would go to many doctors with the hope that they would obtain the proper eye glasses which would relieve them of their tension and pain.

Most of our cases are chronic and they appeal to Dr. Bates or to me to help them when all others have failed. I hope to be able to reach such cases through this article, and if what I am trying to explain will be of just a little help, it will be worth while.

A patient came to us recently who had traveled three thousand miles to see the Doctor, but when he was told that he could not possibly be helped unless he removed his glasses at once and did not wear them again, he became panic stricken and wept. Doctor is at a loss sometimes when such things happen and he usually appeals to me for assistance. Encouragement is not always enough for a stranger who comes to us not feeling at all sure that he is in the right place, even if he has been well recommended. He wants facts and he wants to meet others who have gone through the same ordeal that he is expected to go through.

Fortunately there was a patient in the next room who overheard the conversation I had with this man. He came to the door of our room and asked if he might talk to this patient and tell him of his own experiences. He explained how he had traveled many miles to see what Dr. Bates could do for him. He had worn glasses many years and they helped him for some time, but even with glasses on, his vision became worse for the near point. He did not need glasses at all for the distance but at the near point he was unable to distinguish large objects clearly enough to know what they were.

When our new patient first met Dr. Bates, who in his quiet way started right in to treat him, there was a fear in his heart that he had perhaps made a mistake in coming. He wanted things explained to him. He was afraid that sooner or later his vision, even for the distance, would become impaired and that in time blindness would surely overcome him. He was afraid. The older patient explained to this man how Dr. Bates had kept him for two hours in his office during the first visit and how, after he left the office, he was able temporarily to read finer print than newspaper or book type. He wanted to save time and expense and did not come again for several days, which was a big mistake, and he realized that it was.

He could not practice so well at home by himself and he became discouraged and put on his glasses again. When he called for another appointment he had to go right back to where he started from. He had wasted two precious hours and the fee besides, because he had been afraid. During the second treatment, however, he was able to read finer print with less difficulty that he had during his first treatment. This encouraged him very much. This time he made no promises to the Doctor that he would not wear his glasses, but he was determined that he would not. He explained to our new patient how some days he could not practice as successfully as he could on previous days, but he kept right on remembering what the Doctor had directed him to do and he did it. Two weeks of daily treatment have given him almost normal vision. All he needs now is a little more knowledge of what he has to do when a relapse comes and then he will be rid of glasses for all time. This talk with the other patient helped Dr. Bates to manage his new case more easily and with more confidence in the Doctor, I feel sure that the patient will win out.

Not long ago I had a patient who came from Chicago to be relieved of a swelling eyelid condition and a burning of the eyes whenever she read for an hour or longer, or when she did a little sewing of any kind. Even threading a needle was painful to her with her glasses on. She had received treatment from one of our students in Chicago with some benefit. She assured us that her lack of complete success was not the student's fault, but her own in not understanding just what to do first for the relief of pain and discomfort.

After Dr. Bates had examined her eyes with the ophthalmoscope he found that her condition was mostly mental; she strained hard to see the print of the book or newspaper she was reading. She did not realize that she was staring at the letters instead of looking at the white spaces directly below the sentence she was reading. (As mentioned previously; looking at the white spaces when reading the letters is not advised by modern Natural Vision Improvement teachers, but; taking a break and looking at the white spaces, blinking, shifting, looking to the distance occasionally to relax the eyes when not looking at/reading the print is beneficial.)

All proof readers or those who are obliged to read in a poor light can read without strain if they do not stare at the print and if they remember to shift their glance to the text and back to the white spaces below the sentence they are reading. (And look to the distance, shift on distant objects occasionally.) Public speakers often make mistakes in reading to an audience, even if they have beforehand studied the subject of their paper so well that they could almost say it by heart. They become unable to memorize and become mixed up in what they are saying or reading because they unconsciously stare at the print in order to read it, mostly because they are afraid they may make a mistake. As soon as we teach them to dodge (avoid staring at) the print and pay more attention to the white spaces between the lines of type (or look to distant objects if the eyes start to feel tired), they are soon cured and no longer need glasses to help them.

A few months ago a mother brought her daughter from high school where they had noticed that she was squeezing her eyes almost shut in order to see the writing on the blackboard. It is unusual to see a young girl sixteen years of age with many wrinkles in her forehead. It was so noticeable to others that she was soon made unhappy because of this. The authorities at the school that she attends notified the mother that her eyes must be examined for glasses. Neither her grandparents nor her mother or father had ever worn glasses and it was a shock to the mother to think that the daughter would have to wear them. The girl became depressed and unhappy and felt, as did her mother, that there must be some way in which to relieve her trouble so that she would not have to wear glasses.

As Dr. Bates has so little time to explain the reason why, he often calls upon me to do the talking if it is necessary, or even when it is not necessary. I thought I had convinced the mother that her daughter would not have any more trouble with her eyes if she would learn to do what we had told her, and that if she would practice every day the treatment we would outline for her while at school and in her home, she would enjoy good sight and not need her glasses. I was much surprised when the mother answered me like this:

"How can you possibly understand the discomfort that patients have who need glasses or who ought to wear them when you have never had imperfect sight yourself?"

I forgot myself and laughed at the remark and then I explained to the mother how for thirteen years I had worn glasses to do my work. When it was first noticed that my eyes were not functioning correctly and that I was making mistakes in my work, which was matching colors and combining them, my employer suggested that I should be examined for glasses. He explained to me that the mistakes were minor ones but that from day to day I would perhaps make more serious mistakes and I would lose my position.

That was a shock to me, and immediately I went to the New York Eye and Ear Infirmary at 13th street and 2nd avenue, where I was placed in a dark room after drops had been applied in each eye. I explained to this mother how I had been forgotten and left in that dark room much longer than was necessary and it seemed hours to me. The thoughts that went through my mind were mostly fearful ones. I was afraid that my eyes were going back on me. The doctors at the infirmary did not explain a thing to me before they gave me the drops.

The eye glasses which were fitted for my eyes suited me very well for two years and then my eyes began to trouble me more than ever and the glasses had to be changed. I did not go in the Eye Infirmary the second time but I went to an optometrist who had the most elaborate apparatus I ever saw for examining the eyes. After an hour of much fussing on his part I was given glasses which did not at first suit my eyes. I tried them for two weeks or a little longer, I believe, and then I went back to him and complained that they did not suit my eyes.

"Oh," said he, "you must get accustomed to the glasses; your eyes will sooner or later be adjusted to them."

Receiving no further encouragement or help, I tried again for a short time, always afraid when I was crossing the street that I would have an accident, because before I reached the curb I thought I was there and would step up. At other times I reached the curb sooner than I thought I would and I stumbled a few times and almost fell.

I returned to the optometrist and demanded a different lens, which he gave me and this I wore until I came to Dr. Bates as a patient nineteen years ago. I was skeptical, too, just as some of our patients are when they first come to us for help. That is why I try to understand a new patient and to give him the encouragement and advice that he needs as soon as it is possible to do so.

What a blessing it was for me to meet Dr. Bates and to be relieved entirely of my eye trouble in six weeks' time. When Dr. Bates first examined my eyes, the letters of the test card up to the 30 line were clear and black. The next three lines I could not distinguish clearly, and every letter had a tail, which bothered me very much. He did not spend very much time with me because he said I was an easy case to cure and advised me what to do at home.

I did exactly as some of our patients do now. I did the wrong thing, but one thing I did not do was to put my glasses on again. I put them back in their case and placed them in the back of my bureau drawer where they remained until sometime later when I displayed them to my friends very much as I would an antique or a curiosity.

Some of my friends did not like to see me without glasses and told me so. I did not look so well without them, they said. Others said I would surely make my eyesight worse by not wearing them, while still others said that I may have been able to do without glasses at any time, and that perhaps I did not have to wear them. Of course, these remarks were not always encouraging, but just the same I believed in Dr. Bates and was determined to win out. After the fourth treatment I had more confidence in the Doctor and I made progress from then on, although there were days when I had sudden relapses and became somewhat discouraged. He often said this to me: **"If you are not afraid, you will obtain normal vision, but fear makes you strain;** don't forget that."

This mother was grateful for what I had told her of my experience and we began to treat her daughter with unusual success during her first visit. She went back to school and returned in a few weeks' time for more treatment and the first thing I noticed was that the wrinkles had vanished. Various test cards were given her so that she would not tire of the practice at school and at home. A few months after her first visit to us, she was pronounced cured. Her vision, which in the beginning was about half of the normal, and her sight for the near point had both improved to normal. It did not matter to her what size type she was asked to read or how close she held it. She could read it just as well at any distance. With the familiar test card and strange cards she became able to read 15/10 with each eye. She wrote us a letter of gratitude which encouraged us greatly.

What applies to the eyes also applies to the mind and other parts of the body. **Fear causes great suffering and often impairs the mind permanently. Relaxation and rest of the mind can only be obtained when we stop making an effort**. With more faith in those who are trying to help us, whether it is mentally, physically, spiritually, or otherwise, we help to remove all fear of what might happen to us. It is not the thing that has happened that causes one to be afraid, but it is the unknown that frightens us.

Questions And Answers

Q – When palming and remembering black, is it advisable to keep the image stationary and to keep the same image, or is it just as good to shift from one object to another?
A – When palming and remembering black, one should imagine everything remembered to be moving and not stationary. It is necessary to shift from one image or from one object to another. Shift from part to part when looking at a object in the mind, memory, imagination; Notice tiny details – shift point to point on a small imaginary object – a Bee: shift on its yellow and black fur, eyes, nose, antennas, wings, feet, see it moving its legs, wings, face…, follow it as it takes off, fly's around through a field, lands on an apple in a tree, then fly's to, lands on a flower, see it moving up and down… as the wind lightly blows the flower, the bee fly's zig-zagging over a field of tall grass occasionally landing to investigate a flower, blade of grass, fly's along the river, over the sparkling water in the sunlight. Shift on each object the mind imagines as the minds eyes move from object to object, part to part.

Q – Would the reading of fine print at four inches be helpful?
A – The reading of fine print at four inches is usually helpful.

Q- While palming is it necessary to close the eyes?
A- Yes.

Q – Why is the reading of fine print a benefit?
A – Because it cannot be read by a strain or an effort. The eyes must be relaxed.

Q – My eyes feel fine after I palm and let my mind drift to various black objects. The period is more difficult, however.

A - Perfect mental pictures of ordinary objects means a perfect mental picture of a period. To try to see is an effort or strain and produces defective sight.

Q – Are floating specks serious? Sometimes they just flood my eyes like clouds of dust and greatly frighten me.
A – Floating specks are not serious. They are always imagined and never seen.
Shifting, central fixation, perfect memory, imagination, relaxation of mind, body and eyes removes floating specks, floaters.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MARCH, 1929

The Period

Many people have difficulty in obtaining a mental picture of a small black period. They may try to see it by an effort which always fails. They may persist in their efforts to see or remember it, paying little or no attention to their failures or the cause of their failures. As long as they continue to strain by trying to see, they will always fail; the period becomes more indistinct.

A small black period is very readily seen. There is no letter, no figure, no object of any kind which can be obtained more easily. Demonstrate that an effort to see a small black period by staring, concentrating, trying to see, always makes it worse. **Rest, relaxation, the swing, shifting, are all a great help.** Practice with a large black letter. Imagine that the upper right corner has a small black period. Do the same with other parts of the large letter. This practice will enable you to understand **central fixation**, seeing best where you are looking. Central fixation can always be demonstrated when the sight is good. When the sight is poor or imperfect, central fixation is absent. Shift from black dot to black dot on various parts of the letter. Shift easy, continually, relaxed. Blink.



Shift point to point (tiny part to tiny part) on a period to remember, imagine and see it clear. Blink, relax, see it 'swing', move in the opposite direction the eyes shift to.

Imagine a letter E is made of many small black dots (periods). Shift from dot to dot: left and right, top and bottom, middle, corner to corner and in any direction. Blink. Notice that shifting part to part (dot to dot) keeps the E clear.

See one small dot at a time darkest black, clearest in the center of the visual field. 'Central Fixation'. Combine shifting with central fixation. Imagine the dots smaller than in the example; imagine them as very small parts of the black ink of the letter E. 20, 50... tiny dots.

The benefits which can be obtained from the use of the period are very numerous.

+A perfect memory can only be obtained when the sight is perfect.

+A perfect imagination can only be obtained when the sight and the memory are perfect.

The period is the smallest letter or other object which is perfect or becomes perfect by perfect memory or perfect imagination.

Sympathetic Ophthalmia

By W. H. Bates, M.D.

I have been asked by the readers of this magazine what "sympathetic ophthalmia" really is. Many definitions of sympathetic ophthalmia have been given in my book and other publications. I will try, if I can, to explain it again in still simpler language. In sympathetic ophthalmia, the eyeball is soft when pressed lightly by the fingers of the attending physician. It is a serious symptom and unless it is corrected by treatment is followed by loss of sight. The reduced tension of the eyeball is usually due to an inflammation of the ciliary body - cyclitis - with loss of function.

The function of the ciliary body is to supply fluids to the inside of the eyeball. When its function is modified, lessened, with less fluid excreted, the tension or hardness of the eyeball naturally becomes less. It is also a truth that when the ciliary body supplies more fluid to the inside of the eyeball than usual, the tension of the eyeball is increased with the symptoms of glaucoma. In sympathetic ophthalmia, the activity of the glands of the ciliary body may be variable. For example, the increased tension of the eyeball may be due to an increased amount of fluid secreted by the ciliary body, while in other cases the amount of fluid secreted may be less than normal and the eyeball may be softer than it should be. The stimuli which regulate the activity of the ciliary body are variable. The mind controls the symptoms of strain.

When one eye is injured by a blow or by a foreign body lodged inside the globe, the other eye, from sympathy, becomes inflamed and diseased with loss of vision.

After the foreign body is removed one naturally expects benefit or complete recovery of both eyes. This rarely occurs. In a large percentage of cases the injured eye may heal and regain good vision, while the other eye may acquire a severe inflammation and become blind. When there is a doubt in the mind of the attending physician whether to remove the foreign body or not, the opinion of the patient may be valuable. If an eye containing a foreign body is removed, it is less dangerous to the other eye, which may heal more quickly. It is well to keep in mind that it is dangerous to practice a waiting policy, because one or both eyes may be lost from neglect. If the patient travels long distances he is likely to have trouble with one or both eyes. Soldiers, sailors, engineers, conductors, forest rangers, or others occupied without supervision, may be attacked at times or in places where no help can be obtained promptly. These people, for their own safety, are justified in having the eye with its foreign body immediately removed. It is far better to have the use of one eye than to be blinded in both.

For more than forty years I have been an eye surgeon and have removed injured eyes which contained foreign bodies which were not removable by an operation. It is only within recent years that I have been unable to operate because of a serious tubercular inflammation of my right elbow. Therefore when such cases come to me, I immediately refer them to other eye surgeons for proper surgical treatment.

One patient with sympathetic inflammation had an interesting history. At the age of twelve years he was accidentally struck in the right eye by a small lead shot which was followed almost immediately by a severe inflammation of the iris and ciliary body. **The foreign body might have been readily removed had it been of a different metal, such as steel, which responds to the**

attraction of a magnet and may be removed with its help quite readily. (A construction worker in California also told me this; while working, if he gets a small piece of metal stuck in his eye, he moves a magnet in front of the eye and the magnet pulls the metal out of the eye. In some cases only a doctor can remove a foreign object, as in cases where a blood vessel is cut and removing the object incorrectly can increase bleeding, cause more injury...) This patient, with the lead shot still in the right eye, recovered from the inflammation at the end of a few weeks, but with poor sight. Six years later at the age of eighteen, the vision of the right eye had improved, while the vision of the uninjured left eye was also improved.

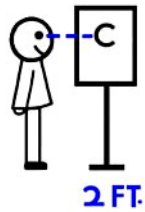
When he was thirty-five years old he was brought to my office. For some unknown reason the uninjured eye, the left, had been removed. The patient was reluctant to explain why the good eye was removed, but some members of the family volunteered the statement that at the time of the operation the left eye was decidedly more inflamed than the right or injured eye. The vision of the injured eye was reduced to one tenth of the normal. Glasses did not improve his vision. The field was normal with the ophthalmoscope; the optic nerve and retina were seen, at first momentarily - later they were seen more continuously. I talked to the patient and learned many things. He told me that he was a day watchman in a gas company. His sight was too poor to do any work at night. When I told him that he was curable if he would only visit me at least once a year or once in two years, he showed signs of overwhelming gratitude.

Memory and Imagination

He promised to come once a week, or until he was temporarily cured. I improved his vision to the normal temporarily in a very short time. It was an unusual thing to do. The patient was not expecting it.

The vision was improved by the following method:

He was told to imagine one letter, eye open, for a second, then close his eye and imagine the same letter for ten seconds and alternate, until one known letter is imagined correctly with the eye open. When this is done properly the one unknown letter becomes known and other letters of the same size are seen, not imagined. One can demonstrate that the imagination of a known letter improves the sight when the eyes are closed for ten seconds or longer. When this unknown letter is imagined sufficiently with the eyes closed it will be seen when the eyes are opened, and also other letters of the same size, at first for only one second with the eyes open and later more frequently or continuously.



1-Eyes open-Shift on the C and remember, imagine and see it clear.
2-Eyes closed-Shift on the C in the mind and remember, imagine it clear.
3-Eyes open: Repeat 1, 2.

The patient was able to see a large letter of the Snellen card at two feet from his eye, but the letter was not seen perfectly; when he closed his eye and rested it with the aid of a memory of a more perfect letter his vision was temporarily improved for a second when he opened his eye. With the aid of rest, alternately closing his eye for ten seconds and then opening his eye, he imagined for two seconds an improvement in his sight. On the second line of the Snellen card he improved his vision with the aid of his memory and imagination.

He was told that the letters were a benefit to his memory and imagination and by alternately closing his eye and resting it, he became able to distinguish what the letters were when viewed at two feet. On the third line were three letters. He was told that the first letter was a letter T. When he closed his eye he was able to remember or imagine a better letter T. By practice, the letter improved and was distinguished farther off with the aid of his memory and imagination until he saw it quite clearly at ten feet. With practice he became able to see quite clearly other letters of the card, not with the aid of his memory or imagination but with the aid of his sight.

All the letters of the fourth line were blurred to such an extent that he could not recognize one of them. He was told that the last letter of the fourth line was a letter O and that it had a white center which was whiter than the rest of the card. Staring lowered his vision, while blinking was a benefit. He was asked to look directly at the unknown letter O and to imagine it was stationary. The patient did not feel satisfied and complained that it was impossible to imagine the unknown letter as being stationary. His vision became worse even for the known letters and he demonstrated that **the more he tried** (used effort) **to imagine or to see better, the worse his vision became. Conversely, when he did not try to imagine or to make his sight better or avoided all efforts to stop the swing, his vision improved.**

At one time as his eye was being examined while he was remembering, imagining a letter quite perfectly, the cloudiness of the interior part of the eye became less and his vision improved. If the patient had cataract, it could be demonstrated that, with the aid of the ophthalmoscope, with a good memory of one known letter, the cataract in the injured eye would become less and the vision would improve.

In many cases, patients with sympathetic ophthalmia are usually affected periodically - not continuously. Sometimes the affected eye will have relapses quite frequently. The prevention of relapses is often very difficult. A continuous memory of the optical swing can be demonstrated to be of great benefit.

One of the most difficult conditions to relieve is **cyclitis** in which the **affected eye has become soft**. In these cases the **ciliary body has atrophied**, which is followed by **loss of the fluids of the eye**. It is difficult, very difficult, in such cases, even with conditions most favorable, to bring about a sufficient amount of relaxation to promote a continuous flow of the normal fluids of the eye.

Hypermetropia

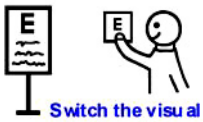
By Emily A. Bates

Two cases of hypermetropia were being treated by me at the same time, and both had to be treated in a different way to obtain permanent benefit. The patients were man and wife and both were over fifty years of age. Such cases as these sometimes require many hours of study in order to relieve the symptoms of imperfect sight. These patients had trouble in reading at the near point and both suffered a great deal of pain which glasses did not relieve.

The man had worn glasses many years and for a time they helped him in his work. He had always been employed in some piano factory and did good work until he became ill with Bright's disease. After he returned to his work again, he found that his eyesight was impaired. His eyes were examined by an eye specialist of good standing and he was told that the Bight's disease had affected his eyesight. After some treatment by this doctor, who instilled some eye drops, his sight was improved. Some years later he had a relapse and he called on another doctor who prescribed glasses. These glasses did not do him any good. He was examined by another doctor who prescribed glasses that helped him for some time, when he noticed the **sclera or white parts of his eyes**

were bloodshot. He thought it was just a cold that had settled in his eyes but later the **redness in his eyes** increased and the **watery condition** alarmed him, so he came to me.

I tested his sight with the test cards and found the vision of each eye was impaired. His vision was 15/40 with each eye and he stared at every letter that he read. His wife who was with him drew his attention to this fact of which he was previously ignorant. The patient noticed that while he was reading, the watery condition increased. His sight was first tested with a white card with black letters and later with a black card with white letters. He read equally well with both cards, but the black card was more comfortable, so this one was given him to practice with at home.



Switch the visual attention close and far and shift on identical letters on two identical eyecharts placed at close and far distances. Close card can be small copy or regular size.

We have small test cards which are similar to the large ones, for the benefit of patients who are very near-sighted or have diseases of the eyes which prevent them from reading the large card at the distance. I gave him one of these small black cards with white letters, (which was exactly the same as the larger card on the wall fifteen feet away) to hold in his hand. By reading the two cards alternately, his vision improved to 15/20; the redness of the white parts of his eyes was decidedly less, and the patient volunteered the statement that he had not felt so comfortable in a long time. I wanted to see if he could do as well with fine print and all he could read was sentence number 2 of the fundamental card. By closing his eyes frequently and remembering the white spaces between the lines of type, he became able to read number 5 in less than fifteen minutes' time. I gave him the sun treatment using my sun glass rapidly on his closed eyelids and advised his wife to do the same thing every day for him and to be sure that he did not open his eyes while the treatment was being given.

Sunning
Face the sun, eyes closed, move the head side to side.



A month later the sclera or white parts of the eyes were no longer bloodshot and his vision for the black test card was 10/10. I boasted about his being able to read all of the fine print of the Fundamental card but he remarked: "Oh, that was nothing at all; I became able to read that fine print in less than a day." Sit in the sun, face the sun with eyes closed and move the head side to side. Relax. If you want to relax deeper and fall asleep and still obtain benefits of sunlight, sit under tree branches for partial shade, sunlight to avoid sunburn. When the wind blows through the branches, leaves - saccadic sunning occurs.

His wife, who also had **hypermetropia**, told me that at times with her glasses on she could see at a distance with no discomfort or pain, but at other times distant objects were very much blurred and seemed more distorted the more she tried to correct the trouble. For instance, a flag pole less than two hundred feet away would wriggle like a snake and there would appear to be two instead of one. She always used glasses while sewing and if the material had stripes or checks, the pattern appeared to come up toward her eyes, which frightened her and made her uncomfortable. She tried a new pair of glasses – bifocals - but she could not become accustomed to wearing them. She then decided to come to me for help.

When the examination was made, **cataract** was seen in her right eye and I told her about it, but quickly explained how it would disappear by the treatment I would give her. It was a shock to her, no doubt, to learn that she had a cataract but she wanted to know the truth and I could not conceal it. Her vision when tested was 6/200 with the right eye and 10/200 with the left and all the letters were blurred.

Palming helped her, and with her **good memory for colors and works of art, while palming,** the vision with her right eye which had cataract improved temporarily to 10/100 in less than an hour and her left eye to 10/40. The dear little woman did not worry about the cataract after that. When she found that her sight could be improved in such a short time she did not need much encouragement to practice. She did as I told her to do and in four months' time she had no sign of a cataract. **She could see distant objects clearly at all times if she practiced shifting from an object near by to the distance, remembering always to blink her eyes,** which she had failed to do before she began treatment.

Threading a Needle

If she had any trouble in threading a needle she would hold the needle where there was a background, close her eyes for part of a minute, **remembering a small letter "o" while her eyes were closed** and this would help her to thread the needle without delay or trouble.

The oculist who gave her the bifocals had been an old friend for years and he doubted very much that the Bates Method could give her a permanent relief because he knew she had incipient cataract of her right eye but feared to tell her about it. He believes now that the Bates Method cured her. I hope in the near future he will become a student of Dr. Bates and stop prescribing eye glasses, especially for those who do not like to wear them.



Boy closes his eyes and imagines a clear image of a white cloud drifting across a blue sky.
Then, opens his eyes, still remembering, imagining the mental picture - his mind, eyes stay relaxed, eyes straight.
Imagining his dog is with him also relaxes the mind, eyes, keeps the eyes straight, vision clear.

Case Reports

Squint = Crossed/Wandering Eye Conditions Cured Naturally

(The following are reports of cases treated by Mrs. Edith Reid and Mr. Ian Jardine, Dr Bates' representatives in Johannesburg, South Africa.)

Squint is a very ugly disfigurement, especially when seen behind glasses. A girl of eighteen had been given glasses when she was three on account of a squint in the left eye. At eighteen the eye was straight, but she was almost totally blind in that eye, and suffered from severe headaches. After a few weeks' practice of the Bates Method, her headaches were relieved and the sight of the bad eye was about one half of normal.

Most cases of squint are caused by strain and if the strain can be removed, the squint will disappear.

A little boy of six, who had worn glasses for three years and was told that when he was eight he would have to be operated on to have the eye straightened, was able to **picture with his eyes closed a white cloud drifting across a blue sky. When he opened his eyes, still remembering this mental picture, his eyes were straight. Having his eyes open and imagining that his dog was in the room with him, immediately straightened the squint.** He has now reached the stage where he can make his eyes straight at will. He is reminded to do so, both at home and at school, as soon as the eye turns, with the result that after five months his eye is straight practically all day. His was a very bad

squint, the one eye being hardly visible, and with glasses the vision was 10/15. Today, he reads 20/10 easily without glasses and with eyes straight.

Movement of Childs Head Cures Squint

Another little fellow of four who was also threatened with an operation for squint and who had worn glasses for some time had his eyes straightened temporarily by having his head moved from side to side. His mother, who followed the whole proceedings, nearly had hysterics when **I took her son's head between my hands and moved it from side to side**. **When I stopped, his eyes were straight for nearly five minutes, but he strained again and the right eye ran in almost under his nose. Again I moved his head and again the eyes were straight. The mother was most amused and excited to see his eye being apparently shaken straight just as one would with a doll's eye which had gotten out of place.** After this had been repeated a few times I asked him more jokingly than seriously what he would do at home to straighten his eye when it went crooked. "I'll do this," he said, moving his head from side to side, and sure enough the eyes were straight again. This was kept up at home and now the little chap squints only occasionally when he is very tired or angry.

It is rather wonderful to think that so small a thing as moving the head from side to side could straighten a crooked eye when so many eye specialists were able to suggest only glasses or an operation.

A man thirty-eight years of age, whose eyes and health were in a very bad way, visited us on the 21st of October, 1927. He told us that he had been under chloroform 21 times and had had a series of injections for his eyes lasting 18 months. These at the instigation of three eye specialists in South Africa. As a result of the injections, he was compelled to go to bed every day at 12 o'clock, tired out, and every weekend was also spent in bed. He received no benefit. His eyes were so bad that even glasses could not be given him. **The right eye, slightly crossed, was blind with cataract and the left eye had been bad all his life. The doctors said that the optic nerve was diseased.** His test showed 10/70 and number 4 on the Fundamental card.

He was a printer by trade and had to have everything read to him. Also, he took on an average of two aspirin tablets every day to try to relieve his **constant headaches.**

He was taught to **palm, swing, and to sun his eyes**, all of which he has practiced regularly ever since. He was told to **blink all day long and to keep his eyes moving, never to stare or look hard at anything, and when he himself moved to notice the apparent movement of the stationary objects about him.** All this he has practiced most assiduously, with the result that on the 6th of February, 1928, he was able to read books for himself, sometimes even the newspaper, and was able to do all his own work without the aid of a "reader." With his blind eye he read the big "C' of the card one foot away.

Today he rides a bicycle about the city, plays tennis, and is able to thoroughly enjoy himself because of his better health and freedom from headaches.

He is a strong upholder of Dr. Bates' method and never tires of telling others of the wonderful results he has obtained in his own case. His wife and two children have also benefited by the help he was able to give them.

After reading the above, the patient asked if he might add something and if he might attach his signature to it. This is what he wrote:

"The left eye has been bad from the age of about seven years and I was under the best men in Melbourne, Australia, on and off till the age of 18 years, and they all told me nothing could be done for the left eye, the one I now read with. I have read the above and every word is true. I can never thank Mrs. Reid and Mr. Jardine for what they have done for me, and are still doing. I have hardly had a headache for the last twelve months and I no longer take aspirin. My average weight is now 150 pounds; before coming here it used to be 130-135 pounds.

"Yours with thanks for the Bates' Method.

"(Signed) Geo. H. Bowden."

Squint, Blindness, Nystagmus Cured and Eye Color (iris) Changed From Pink to Blue

One day in January a little boy was led to the office by his mother. He had **pink eyes**, white hair, a very white face, and even his lips were pale. **Both eyes had squint**. He was **almost blind** and had **severe nystagmus**. His mother was heartbroken and told of how she had worked her passage from South Africa to London so as to see what could be done for the little chap. Specialists had declared his case hopeless and had said that nothing could possibly be done.

She also took him to several hospitals, always hoping that he would be able to find some doctor who could offer a little hope, but every doctor who looked at the little fellow pronounced his case hopeless. She had to come back to South Africa as it was her home and her husband was there. She returned feeling thoroughly sad and miserable. She was told of Dr. Bates' method by a friend who had benefited greatly by it, so she came, hoping something could be done for her son. We immediately taught him how to **sun his eyes** and asked his mother to see that it was done **two or three times daily**. He was also shown how to rest his eyes by **palming.** He was a very bright, intelligent child which made it very easy to teach him; he understood and appeared to grasp all we said to him. Both mother and child left the office very happy and full of hope. He was not able to read, so he was given a book of pictures of animals.

At his next visit, which was three days later, he came in with the book under his arm and declared that he was feeling much better and that he was going to get quite well. After that, he was brought every day to get the **sun-glass treatment** and each day there was a marked improvement in the eyes. **They were turning from pink to blue; the blue came in patches which each day appeared to be spreading until the eyes became a beautiful blue.** He was being taught his alphabet so that he was able to practice with the **Snellen test card** which proved that his sight was improving wonderfully. The squint and the nystagmus had also improved very much.

The word squint has two meanings;
1 – squint = strabismus, crossed/wandering eyes.
2 – squint = Squinting - to partly close the eyelids, squeezing, keeping them close together in an attempt to see a object clearer. This gives a temporary state of clearer vision (due to the pinhole effect) while the eyes are squinting but leads to increased eye muscle tension, muscle tension in the face, head, neck, shoulders, disrupts shifting, central fixation resulting in increased vision impairment.
Avoid squinting; Replace it with shifting, blinking, central fixation, relaxation.

Questions And Answers

Q - While palming, is it necessary to close the eyes?
A- Yes.

Q - When I read and blink consciously, I lose my place.
A - This is caused by strain, which prevents one from remembering the location of the letters.

Q - How long is it necessary to read the test card before obtaining benefit?
A - Some patients by palming and resting their eyes have obtained benefit in a few minutes.

Q - How can I prevent the sun from hurting my eyes?
A - By becoming accustomed to sun treatment.

Q - Will you please tell me if results are obtained at all ages?
A - Results can be obtained at all ages.

Q - What is the circular swing and how is it practiced?
A - The circular swing is described in the June, 1928, number of "Better Eyesight.'' Modern Infinity Swing, Figure Eight is Best.

Q - I get nervous if I palm for any longer than ten minutes at a time. Can I obtain as much benefit by palming for short periods at more frequent intervals?
A - Yes.

Q - Is there a possibility of palming wrong? I can obtain some benefit, but later I feel strained.
A - Palming may be done properly or it may be done wrong. I would suggest that you read the chapter on palming in my book.

Q - Explain what you mean when you say "imperfect sight, imperfect memory."
A - If you see an object, (letter) imperfectly, blurred or gray instead of black, you cannot remember it perfectly.
You will remember it as you see it.

Q - My left eye turned in and was corrected by operation. Now it turns out. What method will cure this?
A - You need more than one method. Complete relaxation will relieve the strain and correct the squint.
Left and right brain hemisphere activation, integration, neck muscle relaxation, movement.

Q - Is a great amount of floating specks indicative of cataract? When I am weary these look like a flock of bees crossing my eyeballs.
A - No. Your particular strain produces floating specks. A different strain produces cataract.

Q - Would the reading of fine print at four inches be helpful?
A - The reading of fine print at four inches is usually helpful.

Q - Why is fine print beneficial?
A - Fine print is beneficial because it cannot be read by a strain or effort. The eyes must be relaxed.
Fine print activates, improves perfect central fixation, relaxation, tiny shifting. This improves ability to see small, fine details of objects clear at close and far distances.

Q - How can one overcome the stare if it is unconscious?
A – Blink consciously, whenever possible, especially when reading. Never look at an object for more than a few seconds at a time.
Shift your gaze: object to object, distance to distance, part to part on objects, small point to small point on parts of objects and on tiny opbjects.

Q - If type can be seen more distinctly with the eyes partly closed, (squinting) is it advisable to read that way?
A - No, it is not advisable to read that way because it is a strain, causes eye muscle tension, and alters the shape of the eyeball causing incorrect focus of light rays in the eye.

Q - I have attained normal vision, but after reading for a while, my eyes feel strained. Would you still consider I had normal sight?
A- If your eyes feel strained you are not reading with normal vision - Not reading with relaxation, interest in the subject, shifting, blinking.

Q - Are dark sun glasses harmful?
A - Yes. Dark glasses are very injurious to the eyes.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

APRIL, 1929

Blinking

Blinking is one of the best methods that may be employed to obtain relaxation or rest. When rest is obtained by blinking, the vision is improved, not only for one letter or part of one letter, but for all the letters of a page, which may be seen some parts best, other parts not so well. This is called **central fixation** and one cannot see anything clearly without it. In order to maintain central fixation there should be continuous opening and closing of the eyes by blinking which makes it easier for the vision to improve. When the eye discontinues to blink, it usually stares, strains, and tries to see. Blinking is beneficial only when practiced in the right way.

What is the right way? The question may be answered almost as briefly as it is asked. Blinking when done properly is slow, short, and easy. One may open and close the eyes an innumerable number of times in one second, and do so unconsciously.

Lord Macaulay was able to rend a page of print in one second, and blinked for every letter. In order to read perfectly, he had to see each side of every letter by central fixation. We know that he acquired or had a perfect memory, because it was only with a perfect memory that he could recite the pages of any book which he had read many years before.

A casual observer would not be able to determine the number of times Lord Macaulay blinked, as it was done so quickly and easily, without any effort on his part. While most of us will not be able to blink without effort as frequently as Lord Macaulay did, it is well to practice his methods as well as we can. Those with imperfect sight who do not blink sufficiently should watch someone with normal eyes blink unconsciously and then imitate him.

Illusions

By W. H. Bates, M.D.

Many people who know little or nothing about physiological optics have the habit of criticizing adversely anyone who has the courage, or who is foolish enough, to announce discoveries which do not meet with the favor of people who theorize. In order to bring about quick and lasting cures of myopia, hypermetropia, astigmatism, and many other causes of imperfect sight, one needs to know a great deal about illusions.

Many years ago a student of the eye, a man of great authority, after studying the illusions of perfect sight and comparing these illusions with those of imperfect sight, was very much upset because the more facts he obtained, the greater became the illusions. He finally made the statement that "seeing is deceiving." By this he meant that no one could understand the physiology of the eye without going to a great deal of trouble to prove that somebody else was deceiving the scientific world. He admitted that he was very much discouraged himself by the large number of illusions which were imagined or seen. To correct most diseases of the eyes it is absolutely necessary that one should learn by repeated experimental work something about illusions.

Unfortunately for the rest of us, this man was persecuted by his friends to such an extent that it ceased to be a joke and became a matter of great importance. It was hard for him even with all his "backbone," which was considerable, to keep on studying illusions when these studies were so very unpopular.

It may be a shock to some people who have not studied the illusions of vision to find that imperfect sight is difficult. In fact it is so difficult that the majority of people in this world dodge the illusions of imperfect sight because these illusions are usually so disagreeable or painful. Perfect sight can only be obtained easily without staring or straining to see. When the eye is normal, any effort to improve it always makes it worse.

It has been proven over and over again that with perfect sight the eyes are completely at rest. The movement that they always have is necessary in order to prevent the stare and other efforts to see which are difficult, painful, disagreeable, and cause fatigue. But when the eye with normal sight is permitted to move sufficiently to prevent the stare or the strain, the head and eyes do not make any effort. To make an effort requires that the eye should be kept stationary. When the eye stares it is always stationary; when the eye stares, it is always trying to be immovable unconsciously. The stare is only possible when a mental effort is made, consciously or unconsciously, to imagine that everything is stationary.

The normal movements of the eyes are passive. As soon as they become active and the eye is made to move by a strain, or stare, then the movement of the eye is no longer passive, it is active and it is this active movement of the eyes done consciously or even unconsciously which causes so much trouble. This is why shifting is practiced in a relaxed, easy, effortless way, with the goal of it becoming a automatic normal eye function, habit, occurring on its own, a subconscious function, just as the heart and lungs beat, breathe automatically. Practice the Bates method, shifting, central fixation… then 'take a break', 'don't practice', forget about the eyes and let the eyes shift… on their own. Return to practice if blur, strain, squinting, staring occurs in order to remove these incorrect functions and reinforce correct function.

This question is often asked: "What is the evidence that the normal eye is permitted to stare and strain unconsciously?" This is the answer. Many people can stare or strain as much during sleep as when they are awake. **If the active strain is practiced, a patient may awake in the morning with pain in the eyes, head or in other parts of the body or they may feel a sense of great fatigue. The vision is always worse.** When the passive movement of the eyes occurs, the movement may be imagined passively. The active movement requires the stare, strain, or an effort to remember, imagine, or see. This can often be recognized in myopia. The retinoscope is a great help in discovering the active swinging of the eyes. When the patient is asleep and straining the eyes unconsciously, the stare or strain is recognized with the aid of the retinoscope.

NEGATIVE AFTER-IMAGES: When a person with good sight regards a white Snellen test card which has black letters and does so with his eyes open, he may see the truth, that the white card appears white and the black letters appear black. When the eyes are closed an illusion is sometimes evident: the white card when remembered appears black and the black letters appear white. This illusion is promptly corrected with the aid of central fixation. One patient, a teacher of mental science, was able to see a white pillow perfectly white with his eyes open, but when he closed his eyes an illusion was seen or imagined at once - the white pillow appeared to turn into a black one. This was a great surprise to the professor. The illusion was prevented when the eyes were closed, by remembering or imagining each part in turn of the pillow best. He was then recommended to see two corners at the same time.

The illusion returned, but it required a strain in order to bring it back.

The patient's memory was improved by practicing central fixation with the eyes closed, seeing, imagining, or remembering one corner of a pillow at a time best and the rest of it worse. It was all done so quickly that the patient was not able quickly to remember, imagine, or see by central fixation. When he became able to produce the illusion or to prevent the illusion, his memory, imagination, and sight were very much improved.

He had worn glasses for the relief of headache for more than fifty years. It was a new and pleasant sensation for him to discard his glasses without suffering, as he had previously, with frightful headaches. The correction of various illusions of the sight are one of the best methods we have for the cure of imperfect sight without the use of glasses. If we correct the illusion, the eyesight may be improved.

One time I happened to be in the office of a well known professor of astronomy. With me was a high school girl, one of my patients, who wanted to learn something about astronomy. The professor asked us what we would like to see and with the naked eye I looked up toward the center of the sky where one could see the moon about the size of a nickel. I spoke to the professor and told him that I had so often seen the moon appear as big as a house and instead of being a dull gray it was usually a fiery red. I told him that I would be very much obliged if he would explain to me why the moon looked so much larger on the horizon than it did overhead. The professor said that there was a change in the density of the atmosphere when the moon was viewed low down on the horizon, which was entirely different from the air overhead. This, of course, is an illusion, not of imperfect sight, but of perfect sight, caused by conditions over which we have no control.

A man interested in the illusions of imperfect sight reported the following facts. One morning when he entered the bathroom he was surprised to observe that the tiles composing the floor had changed their colors. All the blue tiles had become pink and all the pink tiles had changed to blue. The illusion was very vivid. "What can I do" he asked, "to prevent this illusion, because it is maintained with a strain or effort to see which lowers my vision?" He was advised to practice central fixation which prevented or relieved the illusion very promptly.

Illusions are not harmless, as many people may think. They are always one cause of pain with imperfect sight. It is interesting to observe that when an illusion causes imperfect sight it also causes the stare, strain to see, or an imperfect memory (imagination) with poor vision.

Illusions which are beneficial do not cause pain, dizziness, fatigue, or any discomfort whatever. Beneficial illusions always improve the sight. For example: The <u>thin, white line</u> below the bottom of a line of letters is an illusion because there is no white line there. When it can be imagined, the vision is improved and this illusion is so important, even necessary, that one cannot read small letters or the newspaper unless the thin white line is imagined. The thin white line helps to improve the imagination of the black letters so that they can be read in a dim light. Other beneficial illusions are: white halos, glow around and inside letters, white glow on a blue sky above trees, mountains.., the illusion of oppositional movement 'the swing'.

The same man described the illusions he had when a headache bothered him in the morning soon after opening his eyes. In one illusion there seemed to be a thin white transparent curtain floating up to the ceiling and then slowly dropping downwards toward the bed. It surprised him very much to observe that when the illusion of the floating curtain was manifestly at its height that the headaches became worse and a severe pain was felt in his eyes, head, and in other parts of the body. The illusion lasted about fifteen minutes and slowly disappeared. In this case also, central fixation was a great help in correcting or preventing the illusion.

A well known surgeon of the city of New York came to me for **treatment of illusions**. He had so many of them that the available space of this magazine is too small to describe them all. Among his many illusions was the fact that at irregular intervals while walking along the street, he would suddenly become **totally blind** and unable to see the light of the sun even when he looked straight at it. The blindness would continue for about a minute, usually less. The frequency of these attacks increased.

In the beginning he had three or four in a week, but after some months he had a **partial or complete attack of blindness** more frequently. The attacks made him very despondent; he was afraid that he might have one in the midst of a surgical operation.

Double Vision – How to Produce and Cure It.

While he was being treated, an illusion of double vision became almost constant and interfered very much with his vision for the Snellen test card. The illusions of double vision were corrected by teaching him how consciously to produce them rapidly and in any form. That is to say, he could imagine two lights, one directly above the other, at an angle of 90 degrees or when he strained sufficiently the two lights would be seen on a horizontal plane. With the help of the stare, strain, or trying to see better, he saw the two images at an angle of 45 degrees, 60 degrees, or 75 degrees. In short, he became able, after some instruction, to produce double images close together or double images farther apart and at any angle he desired. During the many months of treatment he demonstrated without knowing himself that he was able to produce illusions at will. Furthermore, he was able to produce illusions which lowered his vision and illusions which improved his sight. To produce double images, one above the other, he looked at a light about ten feet away and strained to see a small letter just below it at an angle of 90 degrees. To obtain double vision at an angle of 90 degrees required an effort.

I called this doctor's attention to the fact that in order to produce an illusion of letters of the Snellen test card or to produce double vision required a stare or strain. I asked him this question: "Would you like to learn how to produce double vision of the Snellen test card?" He answered, "I do not see how you can do it, but the matter is so interesting I am willing that you should produce or show me how to produce double vision." He was taught how to produce double vision consciously and this pleased him very much. Finally the day came when he was getting so restless that I thought I was justified in helping him to get rid of the double vision by teaching him how to produce the blindness consciously. He objected very much at first but more of the nerve specialists tried to convince him that he was incurable and that if he had let the matter go untreated he would have attacks of double vision almost continuously and be compelled to give up his work. **The patient was told how to produce all kinds of illusions and that in order to produce illusions of double vision he would have to go to considerable trouble to accomplish it.** He was finally persuaded or convinced that if my methods failed there was no help for him and so we began.

Creates and Cures Blindness

I had a very hard time in making this patient blind consciously. The strain was terrible and he did not take it calmly, but he finally **made himself totally blind** so that he could look straight at the sun without being able to see light. **The blindness continued for about five minutes when it suddenly disappeared and the sight was just as good as it ever was**. He finally came to me less frequently than every day. **Eventually he became able consciously to increase the length of time of the blindness, and while still blind he could, with the help of central fixation and other methods, obtain his previous normal vision.** Some of my other patients out of curiosity made themselves totally blind by the same methods practiced by him. When war was declared between Germany and France he enlisted in the medical department of the French Army; he never had a single relapse; he knew the cause of his double vision and how it was produced and was therefore able to avoid it.

Mental Strain

By Emily A. Bates

Children who are nearsighted are suffering from a mental strain. Children who are cross-eyed are also suffering from mental strain. Eyes that have been injured, as by a foreign body entering the inside of the eyeball, even after it has been removed, may be responsible for a mental strain. This strain is different from that caused by nearsightedness or cross eyes.

Mental strain is only evident in these cases when symptoms are present. Children who are nearsighted are not always conscious of it. Therefore, at such times mental strain and the myopic condition are less, and the retinoscope has proved this in every case examined by Dr. Bates. What is true of children is also true of adults. After an attack of whooping cough or fever, such as measles, scarlet fever, diphtheria, malaria, hay fever, or other conditions, some patients have acquired **cross eyes**. Sometimes the right eye turns in while the left eye is straight, or the reverse may be observed. The eye which turns in usually has imperfect sight, while the eye which is straight may have normal vision for distant objects and for near objects. These cases can always be benefited. Strain, which is evident in cases of cross eyes may be relieved, but never cured, by wearing eyeglasses. All such cases under my observation have proved this to be true. Some patients have told me that they feel a sense of relief when they remove their glasses. It is the mental strain that is relieved and not the eyestrain.

When a child is placed under my care for the cure of squint or cross eyes, before I test the sight I hold a short conversation with the child to find out his mental attitude. It helps me to treat the child successfully and it helps my young patient to become acquainted with me. It is always best to have the guardian or parent in the room during the treatment given the child so that they can help in the home treatment, but sometimes I wish that I could be alone with my patient. I can do better work. This desire only comes when an anxious mother continually nags her child to do as I wish. Repeating to my patient that he or she must be good, must sit still, or must do as I say, is only a waste of time and does not help.

Some children troubled with cross eyes have very sensitive minds and constant or frequent nagging or scolding only causes more mental strain. While I was assisting Dr. Bates at the Harlem Hospital Clinic I was able to study the child mind. I found in cases of squint or cross eyes, which is the same thing, that children who were fortunate enough to have parents who loved them and helped them were cured of this trouble much quicker than those who were less fortunate. Sometimes I would send for the school teacher when a case was hard for me to benefit and with her help at school, encouraging the child to **practice with the test card,** with the aid of **palming** and the **long swing**, **in due time the eyes would become perfectly straight and the vision normal.**

In the early days of our work together, we gave test cards away to our clinic patients so that they would surely practice at home or at school or elsewhere. For the child of the clinic there was no alternative. They could not afford glasses; they must be cured without. A short while ago a little woman came to our office and with her was a girl twelve years old who was just a head taller than the woman. She asked to see me and when she stood before me she smilingly asked if I didn't remember her. This question is asked of me quite often by patients I have not seen for a few years and I do not always remember. When she smiled and spoke in her usual slow way, I recognized her. I said, "Of course, I remember you and this big girl is Ruth whom I treated for cross eyes at the hospital clinic nine years ago."

She apologized for taking up my time but said that Ruth was anxious to see me again because she had forgotten how I looked and she did want me to see how straight her eyes were. Indeed I was glad to see my little patient all grown up and I like to boast of my work being so well done. The mother also deserves credit for the cure of Ruth's eyes. Every day before the school hour the child practiced reading the test card letters with her mother to help her if she made a mistake. Immediately after school she practiced again. When her test cards became soiled she sent for new ones. Her efforts and mine were all worthwhile because Ruth can read all letters of any test card with either eye.

There is always a mental strain while glasses are worn. Sometimes patients are not conscious of it until they are informed that their glasses must be changed for a stronger pair. During the absence of Dr. Bates, I have been called upon to take care of his practice. At such a time I remember a patient placing on my desk four pairs of glasses which she wore at different times of the day. One pair was worn while she was reading or sewing, another pair for the movies or theatre, another pair, amber colored, to wear in the bright sunlight and the strongest pair she was advised to wear early in the morning at which time she suffered most pain and discomfort. She did not realize that she strained during sleep, which explained the pain and discomfort she had in the morning. I did not help her until after I had corrected the mental strain. After that it did not take me long to give her normal vision. The patient helped me by following my directions, practicing at home and elsewhere those things which helped her the most.

For many years she had avoided the bright sunlight, so during her first treatment I placed her near a window where the sun was shining. While her eyes were closed and shaded with the palm of her hand, I led her to the window. **I used my sun glass, focusing it quickly on her closed eyelids, first on one eye and then on the other.** Sometimes this treatment when it is first given causes a tearing of the eyes which is only temporary, but this patient had no such trouble. She enjoyed it so much that she asked for more of it. When there was no sun, a strong electric light was used with benefit. After the patient had had a few treatments, her vision improved for the near point and for the distance. After she had been doing well for some days she suddenly had a relapse and her vision was lowered. I asked her if she had put on her glasses again and she admitted that she had done so. In her case this was the worst thing she could do. It retarded her cure and made my task more difficult. I felt keenly her mental strain and proved without a doubt that imperfect sight is contagious, for I suffered with her mentally. Long ago, Dr. Bates trained my mind so that I would not lose patience with those who were under treatment for their eyes, but just the same neither he nor I are immune to their suffering or mental strain. We give each other the same treatment we give our patients sometimes when the day is almost done, so that we can enjoy the remainder of the day without any strain or discomfort. **It requires only a few minutes to relieve the mind of strain when you know how to do it.**

Questions And Answers

Q - Which is the best method of obtaining relaxation?
A - The object of all the methods I recommend is relaxation. Some patients obtain more benefit from the practice of one method than another.

Q - When palming and remembering black, is it advisable to keep the image stationary and to keep the same image, or is it just as good to shift from one object to another?
A - When palming and remembering black, one should imagine everything remembered to be moving and not stationary. It is necessary to shift from one image or from one object to another.

Q - How long is it necessary to read the test card before obtaining benefit?
A - Some patients by palming and resting their eyes have obtained benefits in a few minutes.

Q - What is most helpful when one is dreadfully nearsighted and finds it almost impossible to see without glasses?
A - Practice palming as frequently as possible every day. Keeping the eyes closed whenever convenient for five minutes ten times a day is also helpful.

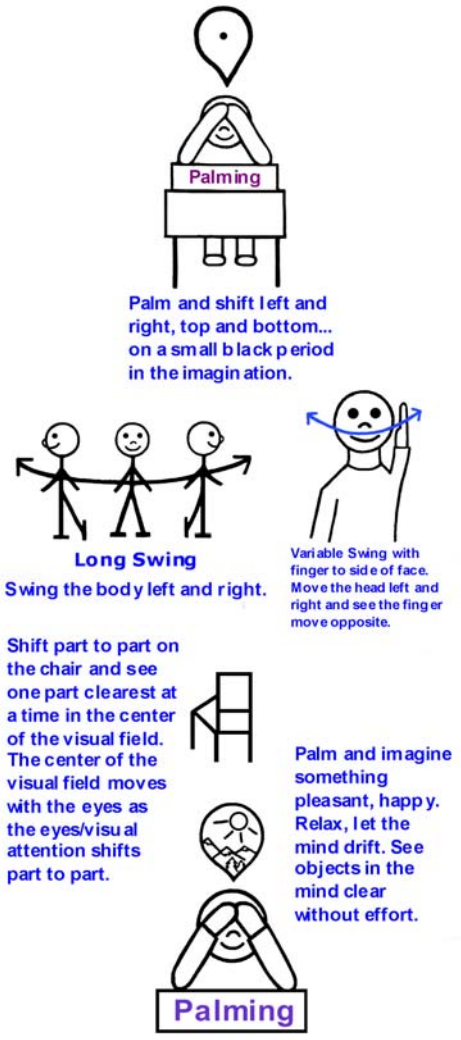
Q - I have noticed when I palm that my eyeballs hurt from the pressure. When I loosen this tension the light filters in.
A - Palming is done correctly with the fingers closed and laid gently over each eye, using the palms like a cup. If this is done properly there is no pressure and the light is shut out.

Q - Is there a possibility of palming wrong? I can obtain some benefit, but later I feel strained.
A - Palming may be done properly or it may be done wrong. Read the chapter on palming in my book.

Q - Should children read microscopic type?
A - Yes. Reading microscopic type is a benefit to the eyes of both children and adults.

Q - Dr. Bates says that in reading fine print one should look between the lines. Is this not contrary to the principles of central fixation? To see the print best, should one not look directly at it?
A - One can look between the lines and shift to the black letters with central fixation. Look directly at the letters when reading them.

Q - When I look at an object and blink, it appears to jump with each blink. Would this be considered the short swing?
A - Yes. You unconsciously look from one side to the other of the object when blinking.



Q - After palming for ten minutes or longer, my eyes are rested, but I feel sleepy.
A - The palming is not perfect. Try imagining stationary objects to be moving when you palm. Shift on the objects in the imagination.

Q - My eyes feel fine after I palm and let my mind drift on various black objects. However, the period is more difficult.
A - Perfect mental pictures of ordinary objects means a perfect mental picture of a period. To try to see is an effort or strain, and produces defective vision. Shift on the period in the imagination.

Q - Should I think only of a black period when palming? Should I imagine my body swaying and the period moving?
A - If it requires an effort for you to think of a period, you should not try to do so. It is just as beneficial to let your mind drift from one pleasant thought to another. When one remembers a period, it should be imagined to be moving from side to side. (as the eyes, mental visual attention is shifting on it.)

Q - Should one always imagine stationary objects to be moving in the opposite direction?
A - When one is riding in a train, one should imagine that telegraph poles and other stationary objects are moving in the opposite direction. When one is walking on the street, he can imagine when looking down, that the pavement is coming toward him; when he looks to the right or left, he can imagine that objects on either side are moving opposite. The object of this is to avoid the stare.

Q - Will you please describe the long swing?
A - The long swing is accomplished as follows: Stand with the feet about one foot apart, turn the body to the right - at the same time lifting the heel of the left foot. The head and eyes move with the body. Now place the left heel on the floor, turn the body to the left, raising the heel of the right foot. Alternate.

Q - How do you practice the variable swing?
A - Hold the forefinger of one hand six inches from the right eye and about the same distance to the right, look straight ahead and move the head a short distance from side to side. The finger appears to move.

Q - What is central fixation?
A - Central fixation is seeing best where you are looking, and worse where you are not looking. That is, when you look at a chair, for instance, do not try to see the whole object at once, look first at the back of it, seeing that part best and other parts worse. Remember to blink as you quickly shift your glance from the back to the seat and legs, seeing each part best in turn.

Q - How much time should I devote to palming each day?
A - The more time one devotes to palming, the quicker will results be obtained, provided one practices correctly. Palming should be practiced for five, ten, fifteen minutes or longer at a time. Some patients obtain more benefits from practicing palming for short periods of time at more frequent intervals.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MAY, 1929

Shifting

When the normal eye has normal sight it is at rest and when it is at rest it is always moving or shifting. Shifting may be done consciously with improvement in the vision, or it may be done unconsciously with impaired vision.

Shifting can be practiced correctly and incorrectly.

+A wrong way to shift is to turn the head to the right while the eyes are turned to the left, or to turn the head to the left while the eyes are turned to the right.

+Correct way = Eyes, head/face, body move together, synchronized, same time, same direction.

To improve imperfect sight by shifting, it is well to move the head and eyes so far away that the first letter or object imagined is too far away to be seen at all clearly. Shifting from small letters to large letters alternately may be a greater benefit than shifting from one small letter to another small letter. Quite frequently the vision is decidedly improved by shifting continuously from one side of a small letter to the other side, while the letter is imagined to be moving in the opposite direction. **When the shifting is slow, short, and easy, the best results in the improvement in the vision are obtained.**

The eye also moves quick, very fast (Saccadic) and this occurs automatically. Any attempt to stop the shifting always lowers the vision. The letter or other object which appeared to move is usually shifting a short distance – one half or one quarter of an inch. It is not possible to imagine any particular letter or other object stationary for a longer time than one minute.

Strain, blur begins when the eyes have not moved after a fraction of a second to one second.

While the patient is seated, benefit can be obtained from shifting, but even more benefit can be obtained when the shifting is practiced while the patient is standing and moving the head and shoulders, in fact the whole body, a very short distance from side to side. (The Sway, Rock) Shifting the whole body makes it easier to shift a short distance and may explain why this method is best. It is easy to see letters on a eyechart clear when shifting easily on the letters while doing the sway a short distance left and right. Blink, sway, relax.

Treatment

By W. H. Bates, M.D.

Vision is largely associated with the activity of the mind. The memory, imagination, must be nearly perfect for the vision to be nearly perfect. When the memory is imperfect, the imagination and sight are always imperfect. There are no exceptions.

In **MYOPIA**, or short sight, (unclear distant vision) the eyeball is elongated. Myopia can be produced by a stare, concentration, or an effort to see distant objects. When all objects are regarded with an effort to see more than two parts perfectly at the same time, myopia is always produced. (Shift from part to part, seeing one part at a time perfect, clearest produces clear vision) To do the wrong thing, a strain or effort is made. The greater the strain, the more imperfect becomes the vision. To do the wrong thing requires much trouble, hard work, and a useless effort. The production of myopia is not easy. Rather it is difficult. This truth, when demonstrated by the patient, is important. It demonstrates the cause of myopia and when the cause of myopia is known, treatment can usually be suggested which helps in the cure.

The production of improved or perfect sight is easy. Rest or the absence of strain is helpful in obtaining normal vision.

When the sight is normal, the eye is at rest. **Any effort to improve the sight is wrong, always fails, and the vision soon becomes less.** Perfect sight is easy and is not benefited by strong efforts to improve the sight. **Myopia is cured by the efforts which are not made, rather than by strong efforts to see.** Most people with myopia are not conscious of the stare, strain, or effort. Persons with normal sight are often able successfully to demonstrate the existence of strain in myopia and to suggest successful methods of treatment for the prevention of strain.

One method of treatment has been practiced consciously, continuously, and successfully, namely: "Make the sight worse by a strong effort to stare." The imperfect sight of myopia does not come easily by staring. When it does come the patient feels a manifest **strain in his head and all his nerves.** By alternately producing the stare consciously and unconsciously he realizes the harm it can produce. He becomes acquainted with the stare. By practice, he becomes able to produce it to any extent and at all times.

Imperfect sight is difficult and normal or improved sight is easy and enables most people with myopia to obtain a cure in a very short time. It should be known that high degrees of myopia are not always easy to produce. It is a truth that quick cures of myopia can only be obtained by persons who have the ability to make the myopia worse.

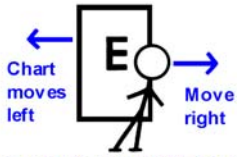
Some statistics on the production of myopia in school children and others show that 10 percent of the population are myopic, 80 percent have imperfect sight from other causes, and 10 percent have normal sight. Some statistics state that 50 percent of the

population of China and about the same percentage in Japan have acquired myopia by improper use of their eyes. What is improper use of the eyes, and what is known of the cause of myopia in these countries? They are a book-reading people to such a slight extent that we need not consider the use of books in the daily life of the Chinese. No one can say that the Chinese have acquired imperfect sight from reading. The characters of the books that they do possess are very large compared to our print and that used in other countries. Many writers have stated that fine print is a strain on the eyesight, and is the cause of myopia; the Chinese use very large print and there is no nation in the world that has so much myopia! Large print instead of being a rest to the eyes is a great strain.

Some years ago, a prominent ophthalmologist of Cleveland was told to introduce in the public schools books printed in very large type. After a short time, the teachers complained to the authorities that the large print hurt the eyes of the children and increased the production of myopia and made so much trouble that they requested that the new books be discarded and books with finer print be used again. This is offered as evidence that myopia does not result from the reading of fine print. Fine print, instead of being the cause of nearsightedness, is the best preventative that one can use. One should not stare at the letters of fine print, but rather, he should take a break and look at the white spaces between the lines, look to other objects, then, when the eyes are relaxed, look back to the fine print. Blink, relax, shift on/along the words or through the center of the words as the sentences are read. Look at the white spaces or distant objects to rest the eyes, then back to the print. In this way the print is seen without strain.

The Snellen test card can be used in various ways to improve the vision. The best distance of the card from the patient is variable. Some patients with a high degree of myopia will improve more when the card is read at a short distance, five feet or less. Other patients prefer to have the test card at a greater distance from their eyes and they improve their vision more when they practice with the card at a long distance off - twenty-five, thirty, or, forty feet. The optimum distance of the card from the patient is the distance at which the best results are obtained. To imagine the card to be moving, when held in front of the patient, who at the same time sways from side to side, is usually beneficial. After a little practice, when the patient sways from side to side, the card may be imagined to be moving about four to six inches from side to side. If the card seems to sway a very short distance or not at all, it usually means that the patient is staring, straining, or trying to see.

One should avoid looking directly at the Snellen test card, because then the movement of the card becomes uncertain or disappears altogether. **A long movement of the card from side to side can be shortened with an improvement in the vision. When the patient stands with the feet about one foot apart and sways from side to side, without looking directly at the card, the letters may be seen to move in the same or in the opposite direction.**



+Sway left and right in front of the eyechart and see it move, 'swing by' in the opposite direction the body, head, eyes move toward.
+Then sway shorter side to side, 4-6 inches and see a shorter opposite movement.
+Shorten the sway to 1-2 inches and see a very small opposite movement.
+Shift left and right on a small letter and see an even smaller opposite movement.
+Shift on a tiny period and see a tiny opposite movement = Very clear vision!

The correct result is for the letters to move opposite – 'oppositional movement'. If a object is in front of the card, closer to you, the card, letters appear to move with, in the same direction as the eyes, head, body. The shorter the sway, the shorter the oppositional movement.

Sometimes practice with the card will be followed by double or multiple vision, due to the fact that the patient stares, strains, and makes an effort to see the letters. For example, one patient saw one line of letters multiplied two or three times. This would not have occurred if the patient had imagined the card moving slightly from side to side, and had not tried to see the letters. Palming, when practiced successfully, has relieved many cases of double vision. Some letters, objects appear double, triple as the blur and any underlying astigmatism is removed and the brain, eye muscles relax, left and right brain hemispheres work together, correct with eyes, eye muscles.

Some patients, when they palm, see flashes of light and all the colors of the spectrum, without at any time seeing black. It is strange to hear patients complain of the numerous objects they remember or imagine when they palm. Thinking of pleasant things has helped some people to palm more successfully. The memory of imperfect sight is a strain and should not be practiced when palming. The length of time that patients can palm with benefit is widely variable. Some patients have gone to sleep while palming and when they awakened in the morning they were still palming, with their hand covering their eyes, with the result that their vision was very much improved. Others obtain more benefit from palming for short periods of time at frequent intervals.

The Thin White Line

If one can imagine a **thin white line below letters of the test card or beneath a line of fine print it is very helpful.** This thin white line is only imagined, it is not seen, because the line is not really there. It is valuable in the treatment and cure of presbyopia, hypermetropia, astigmatism and many cases of myopia. It is well to imagine it in the right way. The wrong way is to try to imagine the thin white line and the black letters at the same time. This is a strain which always blurs the black letters and prevents the thin white line from being imagined. It is actually seen, it appears and is a beneficial illusion.

Many patients complain that they have difficulty in imagining the thin white line. To overcome this, one should imagine it just below some word or collection of words which are known. The line is then readily imagined and it can be imagined extending from one side of the page to the other, and wherever it becomes manifest the vision is always improved. One can read rapidly, clearly, and without discomfort, when he is conscious of the thin white line, but to fix the black letters and expect to read them is a mistake which very few teachers or students have observed. The fact that one cannot read properly when looking at the black letters should be more widely known. Much time has been lost in the class room by teachers trying to force the children to look directly at the blackness of the black letters. When black letters are regarded and seen best, much pain, discomfort, or imperfect sight is experienced: If staring, squinting, effort, diffusion to see the letters clear is used.

One cannot be sure when imagining the thin white line that the eyes are directed toward it. When one plans to look at the thin white line and while trying to read something feels discomfort or pain, it means that the eyes are not directed on the thin white line as the reader may imagine.

Bates writing about the white spaces, thin white line is a bit confusing. Modern teachers state; to see a letter, object clear; look directly at it. I believe Bates means for the person to be able to see the thin white line by looking directly at it, shifting back and forth from the letters to the white line, to the letters again… To shift to the black letters, look directly at them, move the eyes on the letters to read, see them clear. No staring at the white line/spaces, no staring at the letters. Let the eyes shift, move, blink, relax.

Modern teachers have removed many of Bates paragraphs concerning the white spaces and thin white line.
They are left in this book so the reader can obtain Dr. Bates original work.
In other issues of Better Eyesight Magazine Dr. Bates gives these modern directions.
The blue print is by Clark Night to explain Modern versions of the methods.

Just remember; when you want to see the thin white line or white spaces; look directly at them. 'Central Fixation.' Shift on them.
If you want to see/read the black letters; look directly at the black letters. 'Central fixation.' Shift, move the eyes along the sentence.
The white spaces and line will also appear in the peripheral field when reading the black print in the center of the visual field and when shifting from sentence to sentence, spaces to words, words to spaces.
The white line, white glow also appears around blue, green and other colored letters and on other colored paper/backgrounds.
See the white glow on the blue sky above mountains, trees. Shift back and forth on the mountains, trees and sky and see the glow flash. The glow can also be seen around a person, especially the head. It can be different colors. Scientists, religions state a aura, energy field can appear.

It is well for each patient to test his ability to concentrate, stare at on one point of a large letter or of a small letter. In less than a minute the patient suffers fatigue, pain, imperfect sight. When concentration causes trouble, common sense would suggest that the concentration be avoided. Shift from point to point for clear vision.

Most cases of imperfect sight are cured by relaxation - relaxation of the mind, relaxation of the nerves of the head and of all other parts of the body. The importance of the control of relaxation is very great, because most diseases of the eyes are caused by the stare or strain and cannot be cured until the stare or strain is relieved.

Case Reports

A girl, twelve years of age, was brought to the office by her mother who complained that her daughter was suffering from a high degree of **progressive myopia**, and that her glasses had to be changed quite frequently because of this fact. She said that she did not want to buy any more glasses because each pair had to be changed after a few months. When I tested her glasses, I found that she was wearing Concave 12 D.S. After she had been under treatment for some time, her mother said that the girl did not see the Snellen test card, but that she committed it to memory. To satisfy the mother and to obtain some facts, I showed the daughter a strange card. Although it was placed more than fifteen feet away, she read every letter correctly, much to the surprise of the mother.

When the daughter was asked how she did it, all she said was ''Starch.'' The mother asked her why she answered so queerly. Then I told the mother that I had trained the girl to improve her sight by the use of a perfect imagination or memory. When she remembered or imagined things perfectly she always had perfect sight. She must have remembered the starch perfectly white in order to become able by the memory of starch to see the letters on the strange card perfectly. The mother then said to me: "I wish you would speak to her about the way she goes downstairs; she runs down three steps at a time and I am very much afraid that she will stumble and hurt herself.'' I spoke to the girl about this and she told me that while she was going downstairs, three steps at a time, she remembered a piece of white starch. **The memory of the starch gave her a perfect balance so that she was always certain of the steps that she took. The memory of starch or a white handkerchief freshly laundered has helped other people to improve their vision immediately.**

A man, aged 51, had worn glasses for hypermetropia and for reading for 20 years. Without glasses his vision at fifteen feet was 15/200. He was told to imagine a thin white line between the white spaces of the Fundamental card. In about five minutes the patient became able to remember or imagine a thin white line when regarding the white spaces between the lines of black letters. By repetition and some patience he became able to read diamond type at six inches. After this was accomplished, his vision for distance became normal and he read the bottom line without trouble at fifteen feet.

Eye Injuries

By Emily A. Bates

It is not always easy to treat a case where the sight has become impaired through an accident or injury to the eye. I have in mind particularly two patients who came to me recently, and who at one time had had normal vision.

One was a young man, 23 years of age, who had been to several doctors for treatment during a period of ten years, and as he explained his case to me, I realized how despondent he was, fearing that he would go blind completely. He was thirteen years of age when he was taken on a long automobile trip, at which time the accident occurred. Being far away from civilization, it was some time before he was able to receive medical aid, and during that time his vision became very poor in both eyes. Some of the occupants of the car were instantly killed. He was found pinned under the overturned car, some days after the accident and after he had recovered consciousness he found that he could not see well. His head had been cut very badly and the doctors feared that internal injuries on his head and other parts of his body would prove fatal, and for a time it was thought that he would lose his mind as well as his sight. When he came to me, there was a scar on his forehead directly over each eye, but otherwise he showed no outward signs of injury.

He had received a different kind of treatment from every doctor who had treated him with the result that he did not go blind entirely. He got along very well with the aid of glasses for a time and then **cataract began to form in each eye**. An operation was advised but the boy refused to submit to this. Friends cared for him and helped him with his education but his sight was too poor to aid him in doing any kind of work which would require the use of his eyes. He stopped going to doctors for help because each one who had treated him advised an operation for the removal of cataract, with the exception of the last doctor who had given him medical treatment. This doctor knows Dr. Bates very well and has from time to time cured headaches and other pain by the Bates method, although he is not an eye specialist.

At the advice of this doctor, the boy came to me for treatment while I was in the West. The cataract could easily be seen by the naked eye, but there was a small spot about the size of the head of a pin in the retina which was clear. Not being allowed to use my retinoscope in California, in the absence of a doctor, I asked him to bring me a written statement from a specialist who had given him a thorough examination of his eyes. He replied that he had already been to one and explained that the doctor had said that

there was no hope of his ever regaining his sight. He gave me a written report from a few of the doctors who had examined him and each one had given him a different diagnosis, but all of them said there was no hope of his ever seeing again, unless he submitted to an operation, which would probably be useless.

Sometimes I have to spend a considerable amount of time convincing a patient that I can really help him, if he can have enough confidence in what I am able to do, but this young man did not need any explanation, for I seemed to be his last hope. He did not ask me for an opinion, but just came at the advice of his family physician. He felt that I really could help him if there were any chance at all.

I placed a large test card five feet from his eyes. I thought I would use the **black card with white letters first**, **because this card seems easier for the partially blind patient**, or those patients who have diseases of the eye, such as glaucoma, atrophy of the optic nerve, and so forth. Before I placed the card in position at five feet I had told him to close his eyes to rest them because all the while he had been in my presence, he stared hard to see me and seldom blinked his eyes. I placed the test card with the blank side of the test card facing him. There was only a plain white surface to look at and I was hoping that he would see it as it really was. When he opened his eyes, at my suggestion, he was waiting for me to tell him what to do while he looked at the blank side of this card. I asked him if he could see any letters on the card and he said, "No, it seems like a blank white paper."

I was pleased that he saw the card as it really was, without my telling him. I told him to close his eyes immediately and while his eyes were closed, I turned the card right side up. I told him to open his eyes and tell me what he saw. He was able to read three lines of the test card immediately. I encouraged him then and told him that if he were willing to sacrifice his time that I surely would give him my time to help him to improve the little vision he had.

After he palmed and improved his memory by reciting history, which was his favorite subject at school, he read the card again for me, and this time his vision improved to 5/30. I gave him a test card to practice with at home and told him to report to me in a few days' time.

Seven months later he came again for treatment. His eyes looked much better and his face showed signs of relaxation, which were absent at his first visit. I tested his sight again with the same black card with white letters and his vision had improved to 5/20. He reported that he had practiced two hours in the morning and two hours in the evening every day since his first visit. He remembered what I had said to him about **blinking his eyes consciously all the time in order to avoid the stare which made the cataract worse.**

I placed him by a **window and told him to look across the street where there was a large sign with letters that looked to be about three feet in height.** He said he could not read any signs from the window. I gave him a **fine print card to hold in his hand and he looked at the white spaces below the lines of black type** that were on the small card. I told him to **look at the white spaces and then to close his eyes and to imagine the white whiter than he saw it on the card.** He did this alternately for about five minutes and when he **looked out of the window to where this large sign was, he began to see the letters one by one by quickly looking away, after seeing each letter as I directed him,** and **taking the sun treatment as he stood by the window,** which I thought would help him. Without giving him notice, I told him to turn around with his back to the light and to look at the test card which was five feet away, and he read another line of the test card at 5/15.

I gave him the **Fundamental card** to read, but all he could see was sentence Number 1 and the words "Fundamentals by W. H. Bates, M.D." All the rest of the card was a blur to him. He knew there were words on the card, but he could not distinguish them.

Not far away from my office there was a public park where he would **sit for hours at a time to take sun treatment**. The warmth of the western sun is the most healing thing in the world in cases where the sun is helpful. I can prove it by this particular case, because the next time my patient came, he was able to read the whole of the Fundamental card up to sentence Number 15, which is in **diamond type**. He did not read it immediately as one with normal sight would have done, but with many hours of patience on my part and with the aid of the **sun-glass treatment** in between times he finally read it. Sometime later he came for another treatment and this time he read the **microscopic type** I gave him, which is a reproduction of that contained in the small Bible. He read this type at nine inches from his eyes. I then tested his sight for the large test card and his vision had improved to 7/20, and later 7/15 by **palming** and the **long swing**.

He left the West for other parts and I did not see him again but I received a letter sometime later, saying that he was still practicing with the test card and also with the fine type every day. After that, however, I lost track of him. There is not much satisfaction in treating a case like that unless we can cure it, but I hope that wherever he is that he is still keeping up with the Bates treatment and receiving benefit. At any rate, I was very much encouraged to know that the Bates Method helped when all else failed, and that I was able to improve his vision, instead of saying as others had said to him that there was no more hope.

The other case which was interesting to me was a young man, twenty years old, who had started to wear glasses at the age of ten years. He had been playing with some boys near a building that was being torn down and without realizing it the boys were playing near a section of a wall which was about to come down. It finally did tumble down and buried them under a mass of debris. **The boy's glasses were broken and the right eye was severely injured, having been cut by the broken glass**.

His father was a physician and he took him to various eye specialists in the hope that the left eye could be saved. For some time the left eye was discharging and he almost lost the sight of it. With medical treatment and care the discharge ceased and apparently there seemed to be nothing wrong with his left eye. He strained terribly in daylight, but at night he had very little trouble in seeing things. Since the accident he had acquired the habit of turning his head to one side and squeezing the lids of his right eye together tightly, in order to see with the left.

Before I tested his sight with the test card he told me that there was a dead nerve in the left eye which was caused by the injury to the right eye—at least he was told by the eye specialists that this was so. After the accident he said that he had had an attack of malaria, and then keratitis settled in both eyes. At the age of fifteen he suffered a great deal of pain in his right eye and was treated for iritis.

After listening to all he had to say, I tested his sight. He could only see the large letter "C" of the test card at six inches from his right eye. Everything else was a blank to him. His vision with the left eye was 15/20, and all the letters were clear and black. In order to read with the left eye, he turned his head to one side. I told him to palm and reminded him that he must not remove his hands from his eyes while I was talking to him. I told him that no matter what the diagnosis was or how bad his sight was that he could at least see something on the test card with his right eye and that I did not believe that there was anything radically wrong with his left eye. If there were, he could not have seen the 20 line letters of the card at fifteen feet.

I gave him some **sun treatment after he had palmed** a little while and then told him to **palm again** before I tested his sight the second time. I felt that it was necessary for him to close his eyes and palm after being in the bright sunlight.

This poor fellow had quite a story to tell me and I had a strong desire to become better acquainted with him and help him in other ways besides improving his sight. He was not a nice looking boy and neither was he clean. He did not wear a coat or vest and he

had no hat with him when he came. His shoes were soiled and much worn and he looked as though he had not received much affection or care for a long time. He was short in his answers and when he looked at me, he would just look for a moment and then look away. I told him that I believed that he was far away from his home, but that he was not the only one, and that I was three thousand miles away from my home too.

While he was palming, I noticed a tear drop on the front of his shirt and then I encouraged him to tell me all about everything that was on his mind. I told him I wanted to be his friend if he would let me. He told me that he was sad and lonely too and that his family no longer cared about him. He said that it was his own fault, of course, but a strict father whose confidence he never had made it hard for him to live at home. He said that he did not know what was the matter with him, but that he could never hold a job for any length of time. He knew there was something wrong with him but he did not know how to become better and he had no one to guide him.

I asked him if he had a home somewhere and he said "Yes." He said that a distant relative had befriended him and given him a place to sleep. What I had to say to him that day helped, I know, because the next time he came his shoes were cleaned, his top shirt had been washed and ironed and his face and hands were clean. We became friends after that and up to the last week of my stay in the West, I helped him with his sight and in other ways. As his vision improved, he obtained a position in an office which paid him a fair salary. Every day he arose early in the morning to practice with the test card and before retiring at night he practiced again. During the day he remembered what I had advised him to do with the **small pocket test card and microscopic type**. He practiced the **long swing** and **palming** which always helped to improve his sight, and on the last day I saw him his right eye had improved to the 50 line of the test card, as he held the card at two feet from his eyes. His left eye improved to 12/10 which is more than normal vision.

I have had no further report from this patient, but I am confident that he has not forgotten what to do to avoid the loss of vision in his right eye.

If this patient I have written about reads this article, he will know who I mean. I hope that if at any time he visits New York he will come to see me if he needs more help for his eyes.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JUNE, 1929

Go To The Movies

(Editor's Note. - Recently a great many letters have come from patients and others asking if the movies were injurious to the eyes. For the benefit of these inquirers we are reprinting an article which appeared in this magazine in October, 1920.)

Cinematograph pictures are commonly supposed to be very injurious to the eyes, and it is a fact that they often cause much discomfort and lowering of vision. They can, however, be made a means of improving the sight. When they hurt the eyes it is because the subject strains to see them. If this tendency to strain can be overcome, the vision is always improved, and if the practice of viewing the pictures is continued long enough, nearsight, astigmatism and other troubles are cured.

If your sight is imperfect, therefore, you will find it an advantage to go to the movies frequently and learn to look at the pictures without strain. If they hurt your eyes, look away to the dark for a while, then look at a corner of the picture; look away again, and then look a little nearer to the center: and so on. In this way you may soon become able to look directly at the picture without discomfort. If this does not help, try palming for five minutes or longer. Dodge the pain, in short, and prevent the eyestrain by constant shifting, or by palming.

Shift on objects; object to object, part to part, small point to small point. Shift on/see fine details clear. Blink, breathe abdominally and relax. Trace objects and parts of objects with the Imaginary Nosefeather. See diagram last pages this book.

Bring an eye patch to the movies; Practice shifting, tracing, central fixation on the objects, parts of objects, people on the screen with both eyes, then with one eye at a time, then both eyes together again.

Then just relax, forget about the eyes and enjoy the movie.

Practice this shifting, tracing, central fixation… both eyes, one eye at a time, both eyes together again, on any objects in your environment; close and distant.

If one eye needs more vision improvement, practice a while longer with that eye. Often correcting less clear vision in one eye; clarity of vision, eyes movement for shifting, central fixation, switching close and far - convergence, divergence, accommodation, un-accommodation is all that is needed to bring the vision in both eyes to 20/20 and clearer. This is basic 'Behavioral Optometry applied with the Bates Method' and is often not emphasized enough in many vision improvement courses.

When switching close and far on objects is taught, Optometrists would forget to teach the person to also shift on the object the eyes are looking at. Shifting and central fixation on the objects must be done when switching, looking at close and far objects.

Cataract

By W. H. Bates, M.D.

Sinbad the Sailor Story, How Goats Perform Their Own Cataract Operation



Adventures of Sinbad the Sailor

Sinbad the sailor told many stories of his voyages which have pleased some adults and many children. I wish to maintain that some of his experiences were true while many were not. On one of his voyages, when sailing in the tropics, a violent storm struck the ship and he was wrecked on the shores of an island in the Pacific Ocean. As usual, most of the sailors were drowned but Sinbad lived to return home and tell of the wonders he had seen.

It was related by him that the island was frequented by goats who were blind for a variable length of time. After a few days or weeks many of them recovered their sight, being cured in some way by a thorn bush which had large thorns. Sinbad watched them closely and discovered that each goat pushed each blind eye directly onto one of these thorns. After a few efforts the goat became able to see. How was it accomplished?

The cause of the blindness was the presence of an opaque body behind the pupil. This opaque body is a cataract. There are numerous operations for the cure of cataract but all are planned to move it to one side, above or below the optic axis so that the pupil appears perfectly clear and permits good sight. Eye doctors during the period when Sinbad flourished had no other cure for cataract except an operation such as the goat performed on his own eyes. It was done so easily, so quickly, and in most cases so successfully that many quacks or irregular practitioners who did not understand it failed to remove the cataract properly and the sight was not improved.

Sinbad wrote a very clear account of how the goats got rid of their cataracts. He told how a goat would, in his blindness, move his head and eyes about different parts of the thorn bush until he was able to push one of the thorns into his center of sight and push the opaque cataract out of the way.

Sinbad wrote a great deal about the failures. He described how in many of the goats which operated upon itself, foul matter would form and destroy one or both eyes. But when the goat did things right, the eyes healed without any bad symptoms whatever. Sinbad's operation for the cure of cataract was described so long ago that there are still many doctors who claim that as they had never heard of Sinbad's operation there never was such a person as Sinbad.

Modern physicians believe that the thorn is not the best instrument to use to remove the cataract in elderly people. Various and numerous operations have been recommended and practiced with good results.

An opacity of the crystalline lens which is sufficiently opaque to interfere with the vision is called a cataract. There are two kinds of cataract - hard and soft. The hard cataract occurs usually in adults. An operation for its removal is usually advised for an improvement in the sight. When the operation is done properly, the vision is usually permanently improved. After the operation is completed without accidents, strong glasses are prescribed, which increase the vision. Two pairs of strong glasses are used by the patient. One pair is to improve distant vision, while a second pair with much stronger glasses may be necessary for reading, sewing, or other close work. The Bates Method can improve vision without glasses after cataract operation and can reverse cataract and prevent the need for surgery.

Soft cataract occurs usually in children or in adults at the age of 45 or younger. One operation is called "needling," in which a needle or very sharp knife penetrates a small part of the lens. A slight opacity of the lens may be seen for several days or longer, which usually causes no discomfort. It is customary to wait a few days or longer until the opacity made by the operation has disappeared. The operation is then repeated as before. By alternating in this way, the opacity of the lens becomes less after each needling until the cataract has disappeared altogether. The patient uses two pairs of glasses just the same as after the operation for the removal of a hard cataract.

Who were the earliest physicians? Who were the best doctors to cure the blindness of cataract? Barbers at an early date always bled their patients to cure any disease. Their motto was to bleed the patient until he was cured.

If the first bleeding failed it was considered good practice to bleed him some more. George Washington met his death at the hands of the barbers from too much bleeding. In the treatment of cataract in modern times we do things which are not always considered to be proper. At one of the best eye hospitals in this country patients suffering from severe pain and loss of sight have been bled from the temples and elsewhere and lost much blood that I considered unnecessary. While bleeding has apparently in some cases been a general benefit, this method of treatment is seldom indicated in a large number of patients.

Cataract occurs in a small percentage of persons with imperfect sight. One and the same method of treatment for all cases of cataract is not advised. It has been demonstrated and frequently published in this magazine that **the cause of the opacity in the lens is a strain, a stare, an effort to see. When the strain is removed by relaxation methods, the cataract disappears and good or perfect sight is obtained without an operation of any kind.** This being true, the removal of the cataract by some sort of an operation is the same as it would be to amputate the foot to cure rheumatism of the big toe.

People with cataract in one or both eyes may suffer from rheumatism, diabetes, bladder trouble, or other serious diseases which make it impossible for them to travel on land or water. Headache is sometimes continuous and of great severity. These patients may become bedridden and unable to walk without distress. The heart is often inflamed to such an extent that the slightest exertion brings on severe symptoms.

Some years ago a very intelligent Spaniard called to see me in reference to treatment of his wife who was a very sick woman and had been bedridden for many years. Her vision was very poor. She was unable to count her fingers when held in front of her face at a distance of two feet or more. The husband was told that it would be better for his wife to be cured of cataract while she was at home as the trip to New York would probably cause her so much discomfort that it would be very difficult to cure or improve her cataract by treatment. I told him that it would be possible for him to learn relaxation methods and have his wife practice them under his supervision. The fact that he himself had good sight would enable him to treat her more successfully than someone who had poor sight. He accepted my suggestion and told me that he would faithfully carry out any treatment which I might suggest.

The first thing I had him do was to:

+Read the Snellen test card at fifteen feet with each eye separately.

+Then he was directed to stand with his feet about one foot apart and to sway from side to side, while facing the Snellen test card. He learned how to do this very quickly. His attention was called to the fact that when the Snellen test card appeared to move in the opposite direction to the movement of his head, eyes and body, that the white card

appeared whiter than it really was. The black letters also appeared much blacker and more distinct than when he did not practice the sway.
+He was then told to close his eyes and by opening and shutting them alternately, his vision improved.
+With his eyes closed he was able to imagine a small letter just as black as a large one and to imagine it better with his eyes closed than with his eyes open. When he imagined a small letter at the beginning of a line of letters perfectly black or as black as the larger letters, his vision improved to better than the average sight.

I examined his eyes with the retinoscope and found that the memory of imperfect sight caused the area of the pupil to appear blurred. **When he strained or made an effort to improve his sight, the area of the pupil became very cloudy, the eyeballs became hard and the vision worse - a condition similar to that which occurs in cataract.** This man was told that with his good sight he could at will increase the hardness of his good eyeballs more readily and lower his vision more readily than his wife who had cataract.

It is a truth that persons with normal eyes can produce imperfect sight at will to a greater degree than when the sight is imperfect from cataract. A large number of patients with cataract have been examined with the retinoscope at the same time that a strain is made to improve the sight. **In all cases without exception the cataract became worse by an effort to see and the vision was still further lowered.** Many persons with normal eyes were also examined at the same time. An effort to see better lowered the vision to a greater extent than occurred with the patients suffering from cataract.

It should be emphasized that a stare or strain is the principal cause of cataract. The retinoscope demonstrates that when an effort is made the cataract becomes worse. When the patient remembered or imagined letters or other objects the cloudiness and imperfect sight disappeared. An important point is the readiness with which an eye with good sight is able to produce imperfect sight while one with imperfect sight has great difficulty in straining sufficiently to increase it.

The husband was very much pleased because it seemed to him that there would be more difficulty in teaching his wife how to increase her cataract than to lessen or cure it. In due time I received a very grateful letter from him; he was much pleased to inform me that his wife had cured her cataract by my methods and after the cataract was cured, she became able to leave her bed. (She had been bedridden because of fear of walking about because of her poor eyesight.) The method was a benefit not only to her eyes but to her general health as well.

Man 106 Years Old - Vision Cured of Cataract by Bates Method

We have received many letters of inquiry from patients who have cataract who ask the questions: Can people eighty years of age be benefited? Which are the best methods of helping cataract? These questions were answered by the results of treatment in a man who was **106 years old**. He came to the clinic with **cataract** so far advanced in each eye that he was unable, even with strong glasses, to read ordinary type. He was treated by rest of his eyes with the aid of **shifting, swinging, memory,** and **imagination**. After the first visit, he became able to read large print without glasses. His vision rapidly improved so that after some weeks of treatment, the **cataract had disappeared and his vision for distance became normal**. It was interesting to watch his cataract disappear while he was forming mental pictures of the white spaces between the lines of black letters.

Many patients with cataract who knew about this old man asked me how it was that he was cured in so short a time while many younger patients were not cured so quickly. The word obedience suggests that the reason this patient obtained so prompt and permanent a cure was because of **his ability to obtain perfect relaxation of his eyes and mind as well as all the nerves of his body.** For example, when he was told to close his eyes and keep them closed until told to open them, he did this thoroughly and well. Too many of my cataract patients do not practice **central fixation** as obediently as did my elderly patient.

So many people with cataract, when they close their eyes, feel that they are doing what they were told and cannot understand why they obtain so little benefit. Closing the eyes is not always followed by relaxation and rest. In short, there are many patients with cataract who strain their eyes more when they are closed than they do when they regard letters and objects with their eyes open. These patients are directed to practice the **universal swing, the long swing, the variable swing and other methods of obtaining relaxation**. One of the best methods of lessening cataract is to encourage the patient to **regard a blank wall of one color. When the eyes are examined at the same time, it is usually found that the cataract has become less because the eye is not straining to see any one particular object.**

Some cases of cataract acquire the ability to read without glasses very fine print held a few inches from the face. When such patients are recommended to **read the fine print many hours daily**, the cataract becomes less and the vision improves. **The practice of regarding fine print or other small objects is one of the best methods of curing cataract.**

Itching Of The Eyelids and Presbyopia

By Emily A. Bates

Itching of the eyelids is sometimes a difficult thing to relieve. When a patient is troubled that way, Dr. Bates usually prescribes a salve and eyewash or eye drops to relieve the condition. Usually, such applications help, but there are times when a patient is troubled for a long period without much or any relief.

A middle-aged woman came to me in a highly nervous state and told me that she had been to several doctors, but they could only give her temporary relief. The doctors had given her exactly the same prescription that Dr. Bates usually prescribes for such a condition. Before coming to me as a last resort, she tried wearing dark glasses, thinking that she would find relief that way. Wearing the dark glasses indoors only aggravated her trouble, but while she was in the sunshine she felt relief most of the time.

She was a business woman and managed a summer hotel which kept her indoors most of the day. She was called upon at times to do some bookkeeping and after she had worn the dark glasses for a while, she discovered that she could no longer see at the near point. The last doctor whom she had called upon diagnosed her case as presbyopia, but he did not say what had caused it. He told her that at her age she had to expect a change in the condition of her eyes. He advised her to wear the glasses he prescribed for her only when it was absolutely necessary, and if that would not help to come and see me.

I had benefited the wife of this doctor and I am greatly disappointed that I did not have an opportunity to meet him before I left the West where I was taking care of patients. I tested the patient's vision for the distance and she read 15/15 with much effort and

squinting of her eyes. She squinted her eyes most of the time in order to see without discomfort. I gave her the Fundamental card to read. The type on this card starts with larger than ordinary reading type and ends with diamond type, which is much finer than ordinary type. She held this card at arm's length and then drew back her head as far as she could in order to read the diamond type on the card. She could not understand how I could bring back her sight to the normal by our method of eye training. Before she came to me she believed that proper glasses would eventually relieve her of all her trouble, but that she would have to wear glasses at all times as long as she lived.

After a doctor friend of mine had examined her eyes, and diagnosed her case as presbyopia caused by strain, he asked me to examine her eyes with his retinoscope and verify his statement. The itching and burning of her eyelids had nothing to do with her sight. Sun treatment sometimes instantly relieves itching of the eyelids and also does more sometimes than medicine applied to the eyes. I placed my patient in the sun and while her eyes were closed I focused the strong light of the sun on her closed eyelids with the aid of the sun glass. This was done so quickly that the patient did not realize what I was doing.

Immediately after I used the sun glass I placed my hand before her closed eyelids to shade her eyes from the sun. Then I placed myself between my patient and the direct rays of the sunlight and asked her to open her eyes. She began to blink in a natural way as she looked at me and remarked how differently everything looked about her. She sighed with a sense of relief and asked me to do it again.

The second time I applied the sun glass she could stand the strong rays of the sun for about a minute and then I again placed myself between the sunlight and my patient's eyes. Again I told her to open her eyes and look at me, but this time I held the Fundamental card before her, about twelve inches from her eyes. She read Number 3 or the third sentence on the card and then her eyelids began to itch again. The sun treatment was repeated for an hour, while she alternately read the Fundamental card and she read two more sentences, without noticing that she was gradually reading smaller type.

The patient was pleased with her first treatment and came daily for a week and each time her vision improved for the near point and the itching and burning of the eyelids became less.

We seldom advise patients about the amount of water that they drink, or the kind of food that they eat, but this patient had brought up the subject herself. My experience for many years with clinic patients has taught me much about the mistakes people make in eating the wrong food and not drinking sufficient water. I feel quite sure that my patient's assistance and intelligence about eating unseasoned foods and drinking a large quantity of water every day helped to cure the irritation and discomfort of her eyes.

I did not cure this patient in a week's time but at the end of one week's treatment, after I had seen her for the last time, the presbyopia was entirely cured and she read microscopic type in bright sunlight as well as she could read ordinary type at six inches from her eyes. When reading microscopic type, she had to have a strong, artificial light, or place herself directly in the sunlight in order to read it. By looking at the white spaces of the diamond type, which is a little larger than microscopic type, she became able to see the white spaces between the lines of microscopic type and in this way, she was able to read it.

Like most people who have trouble with their eyes, she seldom blinked, which she thought was an affliction instead of a natural thing to do. While I did not like the discomfort that staring caused me, I purposely stared or blinked less frequently than I ordinarily do, as she stood before me. It helped her to understand how **necessary it was to blink often and to do it continuously, in order to form the unconscious habit of blinking,** when she no longer had trouble with her eyes. She noticed that when I blinked my eyes that the eyes moved slightly and when she began to practice this, she said that the burning of her eyes and itching became less. **She made a mask from a large linen handkerchief and only exposed her eyes when she placed herself in the sun.** She would **sit in the sunshine for an hour at a time each day** while her eyes troubled her. At the end of seven days, giving her daily treatment, her trouble disappeared entirely.



White cloth over head, face. Eyeholes for sunning without getting sunburn on the skin.

On the seventh day, I returned the dark glasses which she had placed in my possession, so that she would not be tempted at any time to wear them while under treatment. I asked her to put them on while she was sitting in the sun and tell me how she felt with them on. She said it seemed as though the world had become dark, without any sunlight. While she was talking to me, the discomfort she felt while the glasses were on was such that she threw them off quickly and said she did not want to use them again.

There comes to my mind a clinic case which I would like to report now. A woman who seemed fairly well dressed brought her little boy to the clinic and as he appeared before me, I noticed how shabbily he was dressed. His hair looked as though it had not been combed for many days and from the appearance of his little hands it seemed to me that soap was almost an unknown thing to him. The poor little fellow was about eight years of age or perhaps younger.

While I was giving my attention to some of the children who were having their eyes tested with the test cards, he came close to me and watched every move I made. His mother was holding his hand and as he moved closer to me, she drew him away, none too gently. A thought passed through my mind instantly that surely this was not his mother. He looked so shabby and dirty and she looked just the opposite. Dr. Bates placed him in the little dark room where all the patients had their eyes examined and after he had finished examining the little fellow's eyes, he called my attention to the condition of his eyelids, which I had not noticed before.

His eyesight was normal. There was nothing wrong with the retina, but the **cornea and sclera or the white parts of his eyes were much inflamed.** The **eyelids of both eyes were much mattered**. Dr. Bates asked him what his greatest trouble was and he said his **eyes itched all the time and even at night the itching prevented him from sleeping.** Dr. Bates questioned the little boy's mother and asked her how long he had had this trouble. She said she had noticed him rubbing his eyes for a few weeks or longer, but did not pay any attention to it until his school teachers sent him home to be examined by the Doctor.

We placed him in a good light and as the Doctor focused his magnifying glass on the eyelids, he drew back suddenly and asked me not to touch the boy's eyes. On a slip of paper, the Doctor wrote the word **"parasites."** The mother became enraged when the Doctor diagnosed the case as such. My heart went out to the little fellow. I did want to take him away from a mother who cared so little for her child. Dr. Bates advised the mother not to have anyone else use his towel or wash cloth and he directed her further to use an eye wash he prescribed and a salve to be applied afterward and to come regularly every clinic day until he was rid of his trouble.

Apparently the directions for his treatment at home meant time and attention which she did not care to give for the little fellow. Before we realized what had happened, the mother had left the clinic and we did not see her or her little boy again. We reported this case to someone in authority at the clinic who was to send a social worker to the home of the little boy. What became of the case we could never find out, but for the sake of any child who may be afflicted or become afflicted as this little boy was, I decided to tell about this case, so that mothers of public school children who might possibly read this article will know what to do to help their

children.

If the mother cannot afford to visit a physician at his office, she can always find a competent one at any eye clinic and receive treatment with permanent benefit. Sometimes through no fault of the mother or child, a thing like this happens and it seems out of nowhere that this **contagious thing strikes even the cleanest and well cared for children**. The itching in this condition is terrific. If the trouble is noticed and looked after in time, it can be easily cured by treatment. As Dr. Bates explained this condition to me, he said that he did not believe that he nor any doctor can tell where such things originate. We do know, however, that cleanliness helps to eliminate the trouble.

Questions And Answers

Q - After palming for ten minutes or longer, my eyes are rested, but I feel sleepy.
A - The palming is not perfect. Try imagining stationary objects to be moving when you palm.

Q - Are memory and imagination the same? When we remember an object do we have to visualize it?
A – A perfect memory cannot be obtained unless you are able to imagine that you see or visualize what you remember.

Q - Please give me a simple demonstration or example of the swing. I cannot see objects moving when I know they are stationary.
A - When you ride in a railroad train which is traveling fast, and look out that window, you may see the telegraph poles and other objects moving in the opposite direction.
Q - My little son, four years old, becomes fidgety while palming. Do you prescribe something else equally beneficial?
A - Your little son may become able to palm for a few minutes at a time. Swaying from side to side usually helps.

Q - How can one overcome the stare if it is unconscious?
A - Blink consciously, whenever possible, especially when reading. Never look at an object for more than a few seconds at a time. Shift your gaze.

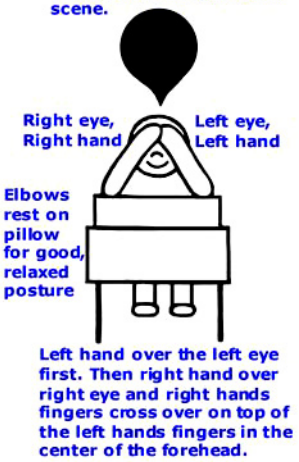
Q - (a) My eyes are swollen and disfigured in the morning. (b) Although I have eight and nine hours' sleep, it does not rest me.
A - (a) The swelling of your eyes or eyelids in the morning is due to eyestrain when you are asleep. Read chapter in my book on this subject. (b) You may be restless and sleep very poorly and strain your eyes terribly, although apparently you may be asleep for a long time.

Q - When palming and remembering black, is it advisable to keep the image stationary and to keep the same image, or is it just as good to shift from one object to another?
A - When palming and remembering black, one should imagine everything remembered to be moving and not stationary. It is necessary to shift from one image or from one object to another.

Q - What is most helpful when one is very nearsighted and finds it almost impossible to see without glasses?
A - Practice palming as frequently as possible every day. Keeping the eyes closed whenever convenient for five minutes ten times a day is also helpful.



Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear.

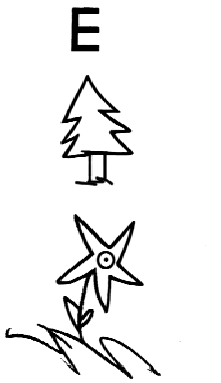


BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

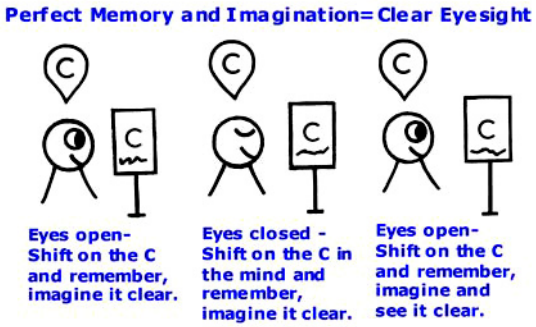
JULY, 1929

Mental Pictures



Perfect imagination of clear mental pictures improves eye health and clarity of vision. Shift on the E, tree, flower in the mind, imagination. See them clear, in color. See 'The Swing' of opposite movement when shifting on a object.

With imperfect sight, a mental picture of one known letter of the Snellen test card is seldom or never remembered, imagined, or seen perfectly when regarded with the eyes open. By closing the eyes, the same mental picture may be imagined more perfectly. By alternately imagining the known letter as well as possible with the eyes open and the remembering it better with the eyes closed, the imagination improves the vision and unknown letters are seen with the eyes open.



The improvement of the vision is due to a lessening of the organic changes in the eye. When the imperfect sight is caused by **opacities of the cornea**, a mental picture imagined clearly lessens or cures the disease of the cornea. A large number of cases of **cataract** in which the lens is more or less opaque have been benefited or cured by the imagination of mental pictures. Nearly all organic changes in the eyeball which lower the vision have been improved to some extent in a few minutes; by devoting a sufficient amount of time, all organic changes in the eyeball, no matter what the cause may be, are benefited or cured by a perfect imagination of a letter, a tree, a flower, or anything which is remembered perfectly.

I do not know of any method of obtaining relaxation or perfect sight which is as efficient and certain as the imagination of mental pictures. It should be emphasized that a good or perfect imagination of mental pictures has in all cases brought about a measure of improvement which is convincing that the imagination is capable of relieving organic changes in the eye more quickly, more thoroughly, more permanently, than any other method.

Throw Away Your Glasses

By W. H. BATES, M.D.

(Editor's Note: The following is a reprint from an article which appeared in Hearst's International, September, 1923, which is being republished in Better Eyesight at the suggestion of some of our readers.)

MORE than thirty years ago, not knowing any better and being guided by the practice of other eye doctors, I recommended patients with imperfect sight to throw away their eyes and see with their glasses. Since that time I have made some valuable discoveries which have enabled me to cure people without glasses. The slogan now is: "Throw away your glasses and see with your eyes."

We are rapidly becoming a four-eyed nation. The enthusiasm of the eye doctors is putting glasses on many people who do not need them. Just as soon as we go to the doctor and complain about our eyes or some nervous trouble with our minds and our heads, the stomach or something else, the doctor prescribes glasses. Fifty years ago the number of persons wearing glasses was very much less than it is now. Human nature is such that when one person gets glasses we believe everybody else should do as we do and wear glasses. When prominent people set the fashion the rank and file feel that they must do the same. It is a matter of record in this country with a population of one hundred and ten million or more, that all persons over forty years of age, according to the old theories, should wear glasses.

Some eye specialists have gone so far as to say that all children attending school should wear glasses either to relieve imperfect sight or to prevent their eyes from failing. This matter was considered by the Board of Education of the City of New York in 1912 and much pressure was brought bear to have it done. I was the only physician that went before the Board of Education and recommended the method of treatment which had cured and prevented imperfect sight in school children without the use of glasses.

The craze for glasses has even included nursing babies. It is all wrong, and the evidence has been accumulating through the years that imperfect sight is curable without glasses. Most of us should have an interest in the welfare of every child and get busy and investigate the facts. The medical profession has neglected its duty. They have done noble work in the study and prevention of yellow fever and other conditions, but when it comes to the eyes the doctors can only recommend glasses. My investigations have demonstrated many facts of great practical importance.

In the first place all children under twelve years of age with imperfect sight can be cured without glasses. This is a challenge. If there is one child who cannot be cured by my treatment I am wrong about the whole thing. There is no exception and when a proposition has no exception we call it a truth.

They can be cured not only by me but by their parents, by their teachers, by anybody who has normal sight, but they cannot be cured by people who have imperfect sight. The teachers in the public schools have succeeded by practicing my suggestions with the children, reading the Snellen test card with each eye as well as they can every day, devoting in most cases only a few minutes daily. Those children whose sight is already normal only need to read with normal sight, one minute or less, every day to prevent eye-strain and imperfect sight.

One day I visited a classroom and I said to the teacher: "Can you pick out the children who have imperfect sight?" She selected a number of children that she thought had imperfect sight. In every case her selection was made because of the way the children used their eyes. Some of them squinted, some of them strained in other ways.

I tested the sight of these children and found it imperfect. Then I suggested to the teacher that she ask the children to use their

eyes without strain, without making any efforts to see. I said, "You will find how well they can see when they use their eyes easily, without effort".

Much to her surprise they all read the card with normal vision. Some of these children were wearing glasses. When they removed their glasses at first their sight was imperfect but after resting their eyes by closing them for five minutes or longer their vision became very much improved. In one classroom the teacher found that all her children had imperfect sight; but by showing them how to rest their eyes, by avoiding the strain, and by closing them, the vision of all of them was improved and all obtained perfect sight except one. I learned that this one also obtained perfect sight a few weeks later. It is impossible to cure those children while they are wearing glasses.

In all my enthusiasm I felt that it was not proper for me to interfere with children who were under the care of a physician while wearing the glasses he prescribed. Of course I could not be blamed if the children lost their glasses and got well without them.

It should be emphasized that teachers wearing glasses have a larger percentage of pupils with imperfect sight than have the teachers whose sight is normal and who do not wear glasses. Why is this? The facts are that children, being naturally great imitators, not only consciously or unconsciously practice the strained look of the eyes of the teachers with imperfect sight, but also the strain of all the nerves of the body. For the benefit of the school children no teacher wearing glasses or who has imperfect sight should have charge of children in any public or private school.

Parents wearing glasses are under a nervous strain almost continuously. It can be demonstrated in all cases that the children's eyes tend to strain and that the sight becomes imperfect because most children, if not all, imitate consciously or unconsciously the nervous strain of their parents. The future of our country is in the hands of the children and I believe that we should all make any sacrifice which can be made for their welfare.

It was demonstrated that all persons I tested wearing glasses were curable without glasses. I have demonstrated this fact, that the eyes of all near-sighted persons become normal while looking at a distant blank wall without trying to see. The same is true in all other cases, in far-sightedness, in astigmatism; there are no exceptions.

It can always be demonstrated that when the normal eye with normal sight makes an effort to see at the distance the eye becomes near-sighted; again, no exceptions. When the normal eye strains to see at the near point the eye tends to become and does become less near-sighted and produces a measure of far-sightedness.

The strain in astigmatism can always be demonstrated. One can by will produce in the normal eye any kind of imperfect sight by the necessary strain. The normal eye is always at rest and nothing is done in order to see. If anything is done it is always wrong and always produces imperfect sight. This suggests treatment and prevention. Treatment can only succeed when perfect rest is obtained.

Every physician wearing glasses, like every child, every man, every woman, has to strain to make his eyes fit the glasses. In every case this fact can be demonstrated. Surely the leaders in this movement for the benefit of the eyes of the school children can be or ought to be the medical profession, and I feel that we are lax in our duty when we neglect to study these methods and practice these methods which cure imperfect sight without the aid of glasses.

Imperfect sight is usually contagious. Actors on the stage do not feel the need of glasses. Fancy some operatic star going through a performance wearing strong glasses. The strain would spoil the music.

Sunlight

Many people are afraid of the light. They protect their eyes with dark glasses when they go to the seashore, they use umbrellas, sunshades; in tropical countries special kinds of hats are popular, hats which are supposed to prevent the bad effects of the sun.

Bookkeepers and people who work by artificial light wear contrivances of all kinds to shade their eyes from the artificial light. Is sunlight injurious? It is not. Of course after remaining in a dark room and suddenly going out into the bright sunlight one feels the change, and if one is at all nervous the effect of the light on the eyes is magnified—exaggerated. Some people believe it injures the eyes to read in the bright sunlight with the sun shining on the page. They complain that the light dazzles their eyes.

I know a farmer who for fifteen years had never been able to do a stroke of work out in the sun. He complained that the light blinded him and so he remained in a dark room most of the time and was not as happy as he might have been. He had a large family and in their sympathy they believed as he did and all the time cautioned him to protect his eyes. If someone opened the door suddenly and let in the daylight there was a great rush to close the door and protect the gentleman from the light.

He came to me with his eyes well wrapped up and protected from any light striking his eyes. I darkened the room and had him look down, and when he looked far down I lifted the upper lid and focused a strong light on the white part of his eye—first the artificial light and then the strong light of the sun.

The effect was miraculous. He smiled and walked around the room, looked out the window, put on his hat and walked down the street and came back feeling first rate. Ever afterwards he enjoyed the light instead of suffering from it. All he needed was a little encouragement. Focusing the strong light in his eyes with the aid of the burning glass and doing it right caused him no pain or discomfort whatever.

I know a white man who lives in Borneo, an island in the **tropics**. This man goes around **without a hat**. He told me that the natives did not wear hats and had no discomfort from the sun and what was good enough for the natives was good enough for him, and it certainly worked. He has lived there forty years or more and the sun does not do him any harm. Did he ever suffer sunstroke? No. Did anybody else ever suffer sunstroke in Borneo? There is no record. Out in the Canadian northwest in the summer time the sun is very strong and the crops mature in a few months. They raise fine wheat there. Do you hear of anybody being sunstruck working in the wheat fields?

In New York City the papers publish records of sunstroke from time to time during the hot weather. I have been called to attend such cases. Quite a number of people living in tenement houses have been ill during the very hot weather and I am quite sure that many years ago I believed that I was treating cases of sunstroke. It is very queer but many of these cases never saw the sun and most of them had a breath that we in the days of prohibition might envy.

I do not believe any baseball player or any tennis player in spite of his strenuous exercise on bright sunshiny days has ever suffered from any bad effect of the sun. Most tennis players do not even wear a cap to protect their eyes from the sun and you have to have good eyesight to play a good game of tennis. The light of the sun often shines directly into their eyes when they serve the ball and the experts are able to drive the ball quite accurately in spite of the sun.

Many years ago I listened to the older and the wiser men who treat the eye and they complained that something ought to be done to prevent children playing out in the sun without any hats on. We are more liberal now and treat **tuberculosis** in children by **exposing not only the head and eyes but their whole bodies naked to the sun** and I understand it is a very successful treatment. **Miners who seldom see the sun always have disease of their eyes. All people who wear dark glasses and avoid the bright sunlight always have trouble with their eyes.**

I had a patient once who spent two years in a hospital here in New York many years ago, occupied a dark room and had her eyes

bandaged with a black cloth so that not a ray of light could possibly enter her eyes, and at the end of her treatment left the hospital worse than she was before. I cured her by having her practice looking at the sun. At first when she did it she was temporarily blinded. She said that she had no perception of light whatever, but in a few hours she recovered and her eyes felt better.

I undertook to caution her by suggesting that she do it gradually not to get too much of the sun at once, to wait until she became more accustomed to it; but she paid no attention to what I said and went ahead and blinded her eyes again and kept it up every day, with very rapid improvement in her sight, until it was not more than a week or so before she could look straight at the sun without suffering any inconvenience whatsoever. Her vision which had been one-tenth of the normal with glasses became normal without glasses after the sun treatment.

Some scientists in Boston experimented on the eyes of rabbits. They focused the strong light of the sun directly into the eyes and then examined the retina with a microscope and much to their surprise found nothing wrong. They tried strong electric arc lights and found that the retina was not injured. They used every known light on the eyes of these animals and in no case was the light ever an injury.

About ten years ago the Scientific American published a series of articles on the effect of light on the eyes and published that some of the rays were injurious. I tested the facts and found that the man who had written the article had neglected to report the exceptions.

Recently an acquaintance of mine told me that he had seen in the last three months seventy-four cases of disease of the eyes from exposure to strong light from the electric arc. I told the gentleman that he had had an unusual experience, but in my heart I knew he was not telling the truth.

Concentration

For many years it had been drummed into my mind by my teachers when I first when to school and later by my professors in college, that in order to accomplish things and to make a success of life, one should practice concentration. Recently in New York I received an advertisement from a man who delivers popular lectures, an invitation to attend the lecture with the title "Concentration the Key-note to Success." About the same time one of my patients suffered very much from imperfect sight. The patient bought a book of 500 pages on concentration. He bought the book to improve his memory and sight.

For many years from time to time patients from the faculties of Columbia, Yale, Harvard, Princeton, Cornell and other colleges come to me for treatment of their eyes. They all say that not only are they unable to use their eyes for any length of time but that they are also ill in a great many other ways, physically, mentally, with their nerves all shot to pieces. They complain that they have lost the power to concentrate.

By investigating the facts I find that invariably they have been teaching concentration. It does me a great deal of good personally to get square with them because these are the people who cause so much imperfect sight. It can be shown that all persons with imperfect sight are trying to concentrate. I have repeatedly published and described the evidence which proves conclusively that concentration of the eyes is impossible.

Trying to do the impossible is a strain, an awful strain and the worst strain that the eyes can experience. So many people have a theory that concentration is a help and if we could all concentrate we would all be much better off. The trouble is that concentration is a theory and not fact. If you try to concentrate your mind on a part of a large letter of the Snellen test card at ten feet or twenty feet it can be demonstrated that the effort fails and the vision becomes imperfect.

The same is true of the memory and of the imagination. The dictionary says concentration is an effort to keep your mind fixed on a point. I have tested a great many people and not one of them was ever able to accomplish it for any length of time, and the result is always bad for the eyes, the memory, the imagination, the nerves of the body generally. If the professors of concentration were wise they would avoid trying to practice it. It is only in that way that they can avoid trouble.

Treatment

If you have imperfect sight and desire to obtain normal vision without glasses, I suggest that you keep in mind a few facts. In the first place **the normal eye does not have normal sight all the time, so if you have relapses in the beginning do not be discouraged**.

It is normal for the clarity of vision to fluctuate: clear, less clear, back to clear. Avoid eyeglasses. The vision will return to normal on its own.

First test your sight with a Snellen test card with each eye at twenty feet, then close your eyes and rest them. Cover them with one or both hands in such a way as to shut out all the light and do this for at least an hour, then open your eyes for a moment and again test your sight with both eyes at the same time.

Your vision should be temporarily improved if you have rested your eyes. If you vision is not improved it means that you have been remembering or imagining things imperfectly and under a strain. With the eyes closed and covered at rest, with your mind at rest, you should not see anything at all—all should be black. If you see colors—red, green, blue, or flashes of light—you are not resting your eyes, mind but you are straining them.

Some people when they close their eyes let their minds drift and think of things which are pleasant to remember, things which come into their minds without their volition and which are remembered quickly, easily and perfectly. Some patients have great difficulty in improving their sight by closing their eyes and trying to rest them. If you fail, get someone with perfect sight to demonstrate that resting the eyes is a help and who can show you how to do it.

When persons with normal eyes have normal sight they suffer no pain, discomfort, headaches or fatigue. When a person with imperfect sight closes the eyes and rests them successfully the eye becomes normal for the time being. When such a person looks at the distance and remembers some letter, some color or some object perfectly the eyes are normal and the vision is perfect. This is a very remarkable fact; it has been tested in thousands of cases and one can always demonstrate that it is true.

One of the quickest and most satisfactory ways of improving the sight is a perfect imagination. The normal eye at twenty feet imagines it sees a small letter of the same size as it does at one foot. The eye with imperfect sight on the contrary usually sees a letter at twenty feet larger than it really is.

The normal eye imagines the white of a Snellen test card at twenty feet, ten feet, as white as it is at one foot. The eye with imperfect sight sees the whiteness of the card less white or a shade of gray.

The white centers of the letters are imagined by the normal eye to be whiter than other parts of the card, while the eye with imperfect sight imagines the white centers of the letters to be less white than the margin of the card. Persons with imperfect sight have been cured very quickly by demonstrating these facts to them and encouraging them to imagine the letters in the same way as the normal eye imagines them.

When reading small print in a newspaper or in a book the normal eye is able to imagine the white spaces between the lines whiter than they really are. The whiter the spaces are imagined the blacker the letters appear and the more distinct do they become.

Persons with imperfect sight do not imagine the white spaces between the lines of fine print that they are endeavoring to read, to be as white as the margin of the page.

The above sentence may be a misprint or not perfectly clear.

When sight is imperfect, the person might imagine the white spaces between sentences to be as white as the margin of the page or a gray blur which is less white than the margin.

Persons with perfect sight imagine, see the white spaces between sentences perfectly clear, and as a glowing, bright, white , brighter, whiter than the margin of the page, whiter than areas of the page away from the black print.
Also, the edge of the outer area of the page, the papers edge does show a thin white, bright glowing line.

Persons with imperfect sight do not become able to read fine print until they become able to imagine the white spaces between the lines of letters to be whiter than they really are. (Whiter than areas of the white page that are farther away from the black print)

When people with normal vision have normal sight they are always able to see one letter best or one part of a letter better than all the rest. It is impossible to see a whole letter at one time perfectly. One has to imagine different parts best. Persons with imperfect sight, when they regard a line of letters that they do not read, discover that they do not see best one part of the line of letters, but rather they see most of the line a pale gray with no separation between the letters.

By Central Fixation is meant the ability to see best where you are looking. When one sees a small letter clearly or perfectly it can be demonstrated that while the whole letter is seen at one time, one sees or imagines one part best at a time. The normal eye when it has normal vision is seeing an illusion and sees one letter best of a line or one part of one letter best at a time.

The eyes shift from part to part on the letter, seeing one small part at a time best, clearest in the center of the visual field. The center of the visual field moves with the eyes from part to part. The eyes can shift so quickly, that the whole letter, all parts appear equally clear at the same moment. The center of the visual field is clearest due to the fact that the macula and fovea centralis in the center of the retina produces the clearest vision in the center of the visual field. The part of the object the eyes are looking at is placed in the center, clearest area of the visual field. Moving the head/face, body with the eyes, same direction, improves central fixation and shifting.

We do not see illusions, they are imagined. Central fixation is a truth to which there are no exceptions and yet it is all imagination. The more perfect the imagination, the more perfect the sight, the more perfect is central fixation.

It is interesting to realize that the truth about vision in all its manifestations, does not obey the laws of physiology, the laws of optics, the laws of mathematics, and to try to explain in some plausible way, why or how all these things are so, is a waste of time, because I do not believe anybody can explain the various manifestations of the imagination.

Most people have an imagination that is good enough to cure them if they would only use it. What we see is only what we think we see or what we imagine we see. When we imagine correctly we see correctly, when we imagine imperfectly we see imperfect. People with imperfect sight have difficulty in imagining that they see perfectly at twenty feet the same letter that they do at one foot or less.

It can be demonstrated that when one remembers a letter perfectly one cannot at the same time remember some other letter imperfectly. The same is true of the imagination and of the vision. This fact is of the greatest importance in the treatment of imperfect sight without glasses. **If one can remember perfectly a mental picture of some letter at all times, in all places, the imagination and vision for all letters regarded are also perfect.**

One can improve the memory by alternately remembering a letter with the eyes closed for part of a minute or longer and then opening the eyes and remembering the same letter for a fraction of a second. Unfortunately it is true that many people with imperfect sight are unable to remember or imagine mental pictures perfectly. The treatment of these cases is complicated.

One patient when he looked at a white pillow saw it without any difficulty. He thought he saw it all at once. When he closed his eyes he could not remember a mental picture of the pillow.

With his eyes open I called his attention to the fact that he did not see the whole pillow equally white at the same time but that his eyes shifted from one corner that he saw best to another corner or to another part of the pillow and that he successively imagined one small part of the pillow best. With his eyes open he could not see two corners of the pillow best at the same time. He had to see it by central fixation, one part best, in order to see it perfectly. I suggested that when he closed his eyes he remember the pillow in the same way, one corner at a time or one small area best at a time.

He immediately for the first time in his life obtained a mental picture of the pillow. Afterwards he became able to remember or imagine a mental picture of the pillow with his eyes closed by practicing the same methods. He became able to imagine mental pictures of one letter at a time. Always he found that he could not remember the whole letter at once. The strain was evident and made it impossible. By alternately remembering a mental picture of a letter with his eyes closed and remembering the same picture with his eyes open for a short fraction of a second he became able to remember the mental picture of a letter when looking at a blank wall where there was nothing to see, just as well as he could with his eyes closed.

It required many hours of practice before he could remember the letter perfectly when looking anywhere near the Snellen test card, because he could not remember one letter perfectly and imagine one letter on the Snellen test card imperfectly without losing the mental picture. In other words he could not imagine one thing perfectly and something else imperfectly at the same time.

After a patient has become able under favorable conditions to imagine mental pictures as well with the eyes open as with the eyes closed, his cure can be obtained in a reasonable length of time. One patient, for example, could not see the largest letter on the Snellen test card at more than three feet but by practicing the memory of the mental picture of a letter, alternately with his eyes closed and with his eyes open, he was permanently cured in a few weeks.

In the beginning even with the strong glasses the vision that he obtained was one-tenth of the normal, but with the help of the mental pictures he became able to read without glasses at twenty feet a line marked ten on the Snellen test card. School children who have never worn glasses, under twelve years of age, can easily be cured by their teachers in two weeks or less.

It is very important that all patients who desire to be cured of imperfect sight should discard their glasses and never put them on again for any emergencies. It is not well to use opera glasses. Going without glasses has at least one benefit: it acts as an incentive to the patient to practice the right methods in order to obtain all the sight that seems possible.

All magnifying glass for distant or close: magnifying glass lens for reading, seeing small objects, microscopes, binoculars (this

includes close and distant eyeglass lenses), cause vision impairment.

PREVENTION OF MYOPIA IN SCHOOL CHILDREN

About fifteen years ago I introduced my method for the prevention of myopia in school children in a number of the schools in the City of New York. In one year I studied the records of twenty thousand children who had been tested before and after the treatment. To prove a negative proposition, to prove that something does not occur because something else is done, is a difficult or impossible proposition. When I recommended my treatment for the school children I claimed that every child who used the method properly would see better and that no matter how poor the sight might be or how long the sight had been imperfect the vision would be improved always.

I made the statement that if there were one exception my method was only a working hypothesis at best or a theory, and that I was wrong about everything I said. Since all the children who used the method had their sight improved it is evident that imperfect sight from myopia was prevented in those children at that time.

I have published from time to time reports on results of my method for the prevention of myopia in school children. These reports are on file in the New York Academy of Medicine and can be consulted by anybody.

In 1912 I read a paper on this subject before the New York County Medical Association in which I made the statement that every child with normal eyes and normal sight who strains to see at the distance becomes temporarily or more continuously near-sighted. There are no exceptions.

If one competent ophthalmologist can prove that I am wrong about one case, I am wrong about all the statements I have made about myopia. This experiment can be performed in the doctor's office or at his clinic and the facts determined with the aid of a retinoscope, an instrument used for measuring the amount of near-sightedness which may be present in the eye.

There were present at this meeting a large number of prominent eye doctors of the City of New York. They knew that I was going to make this statement and issue this challenge because I sent a copy of my paper to these gentlemen two weeks before I read it. It would have been very easy for any of them to have tested the matter and determined whether I was right or wrong, but when the Chairman of the Society called on them to discuss my paper they declined to say anything about it or to publicly deny it.

I have the records of many persons who threw away their glasses and now have perfect sight with normal eyes.

They did it.
Everybody can do it.
YOU can do it.

The Use Of The Sun Glass

In using the sun glass, it is well to accustom the eyes of the patient to the strong light by having him sit in the sun with his eyes closed, and at the same time he should slowly move his head from side to side, in order to avoid discomfort from the heat. Enough light shines through the eyelid to cause some people a great deal of discomfort at first, but after a few hours' exposure in this way, they become able to gradually open their eyes to some extent without squeezing the lids. When this stage is reached, one can focus, with the aid of the sun glass, the light on the closed eyelids, which at first is very disagreeable. When the patient becomes able to open the eyes, he is directed to look as far down as possible, and in this way the pupil is protected by the lower lid. Then by gently lifting the upper lid, only the white part of the eye is exposed, while the sun's rays strike directly upon this part of the eyeball. The sun glass may then be used on the white part of the eye. **Care should be taken to move the glass from side to side quickly. The length of time devoted to focusing the light on the white part of the eye is never longer than a few seconds.** After such a treatment the patient almost immediately becomes able to open his eyes widely in the light. Plain sunning without the sunglass is equally beneficial in most cases. Also, shining direct sunlight (no sunglass) onto the sclera, white part of the eye is healthy. Sunglass is used only by a experienced ophthalmologist and only in a case of near or complete blindness when plain sunning without the glass does not improve the sight.



Sunning - Face the sun, eyes closed and move the head slowly side to side.



Sunglass - Eyes closed. Head still. Sunglass with sunlight shining through the glass is moved quickly, 1-2 seconds on the eyelids.



Sunglass with eyes open - Head still. Eyes looking down, pupil under eyelid, away from the sun s light. Sunglass moves the sunlight quickly, 1-2 seconds on the sclera, upper white area of the eye.

Sunglass is used only in cases of blindness, by an experienced ophthalmologist, only when other methods have not helped restore the vision.



Sunlight shining on the sclera, white part of the eye. Person looks down, eyes pupil under the lower eyelid. Upper lid is pulled up to expose the sclera to the sunlight.

SCHOOL NUMBER
BETTER EYESIGHT
A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES
AUGUST, 1929

Comparisons

In practicing with the Snellen test card, when the vision is imperfect, the blackness of the letters is modified and the white spaces inside the letters are also modified. By comparing the blackness of the large letters with the blackness of the smaller ones it can be demonstrated that the larger letters are imperfectly seen.

When one notes the whiteness in the center of a large letter, seen indistinctly, it is usually possible to compare the whiteness seen with the remembered whiteness of something else. By alternately comparing the whiteness in the center of a letter with the memory of a better white, as the snow on the top of a mountain, the whiteness of the letter usually improves. In the same way, comparing the shade of black of a letter with the memory of a darker shade of black of some other object may be also a benefit to the black.

Most persons with myopia are able to read fine print at a near point quite perfectly. They see the blackness and whiteness of the letters much better than they are able to see the blackness of the larger letters on the Snellen test card at 15 or 20 feet. Alternately reading the fine print and regarding the Snellen test card, comparing the black and white of the small letters with the black and white of the large letters, is often times very beneficial. Some cases of myopia have been cured very promptly by this method.

All persons with imperfect sight for reading are benefited by comparing the whiteness of the spaces between the lines with the memory of objects which are whiter. Many persons can remember white snow with the eyes closed whiter than the spaces between the lines. By alternately closing the eyes for a minute or longer, remembering white snow, white starch, white paint, a white cloud in the sky with the sun shining on it, and flashing the white spaces without trying to read, many persons have materially improved their sight and been cured.

School Children

***By* W. H. BATES, M.D.**

Imperfect sight is found in the eyes of most school children of the United States, Canada, France, and other countries. In Germany a great deal has been done to lessen this evil among school children and it is well known that the statistics of imperfect sight in school children in Germany have proved that the numerous methods recommended for the prevention or cure of imperfect sight have been failures. It is estimated that in the city of New York, one tenth or more of the children are wearing glasses. All attempts to benefit the eyes of school children so that they will not need glasses have been suppressed by the Board of Education and the Board of Health. Many principals of large schools have encouraged to the best of their ability the work that can be done to cure or prevent imperfect sight in school children. It is difficult to understand why there should be so much opposition to this work.

In 1912 all school teachers were encouraged in some of the larger schools to recommend and practice any methods which promised prevention or cure. One of the opponents of the prevention of imperfect sight in school children made the statement that it is impossible to cure a negative proposition and therefore a negative proposition cannot be prevented. A positive proposition is one in which a cure can be obtained by treatment. When the methods employed do not cure imperfect sight without glasses, one cannot expect the same methods to prevent imperfect sight. A positive proposition suggests methods that cure; a negative proposition does not suggest successful treatment and does not prevent imperfect sight. Measures that cure also prevent; methods that do not cure cannot be expected to prevent.

In some cities it was believed by many that the cause of imperfect sight in school children was the use of small print in the text books. When schools were permitted to use only large print for the children, eye strain, headaches and other troubles became more numerous than when small print was employed; repeated trials of books in which large print was used always failed to prevent discomfort. Just as many children wore glasses after the use of text books with large print as when the books were printed in small print. Even the school authorities and the Board of Health were finally convinced that large print was more injurious to the eyes of school children than was the small print which had previously been used continuously. Evidently, the cause of imperfect sight in school children was not connected in any way with the size of print used in text books.

It has been generally believed also that the imperfect light of school rooms is the cause of imperfect sight in school children. In some cases there seemed to be too much light, while in other cases it was believed that there was not enough light. I have studied the connection of the amount of light to the cause of imperfect sight. After many years of observation, I became convinced that the amount of light has nothing whatever to do with the cause of myopia, hypermetropia, astigmatism, or other cases of imperfect sight in school children. Many children with high degrees of myopia and other causes of imperfect sight have been permanently cured by **practicing the reading of microscopic type**, with changing powers of illumination. It is an error to claim that light has anything to do with the production of imperfect sight. Children with progressive myopia have been benefited or cured by eye education when a poor light or a bright light was used.

Fluorescent lights impair the clarity of vision, health of the eyes.

In Germany and in other parts of Europe, as well as in this country, the problem of the cause of imperfect sight in school children has received a great deal of attention. For example, in the year 1882, the minister of public education in France convoked a committee which investigated very thoroughly the light in school rooms. The committee dwelt especially upon the point that as the most essential light was that which shone directly from the sky upon the scholars, every scholar should be in a position to see a piece of the sky corresponding in size to a window space of at least 30 centimeters (about 12 inches) long, measured from the upper edge of the glass, of the upper window.

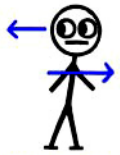
There is a large library of books describing the necessity of the proper amount of light, as measured with scientific instruments, each instrument being different in some particular from every other instrument for measuring the light. These studies and the injurious or the beneficial effects of light will now have to be modified, as I have found that the light has nothing to do with the cause of imperfect sight and that any measures adopted to change, lessen, or increase the light are usually a waste of time and effort.

Scientists now know that full spectrum sunlight, entering the room through open windows, skylights, (and if necessary: full spectrum

non fluorescent light) improves the health, function of the eyes, brain, body and clarity of vision.

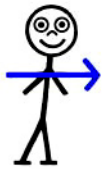
A study had been made in some schools of the desks where the children do their work. Here again much time was spent uselessly in publishing rules for the measurement of the height of the desks.

Dr. Cohn has done an enormous amount of work to determine the cause, prevention, or cure of imperfect sight in school children. He recommended what was considered to be the best form of lighting in schools and also devoted a great deal of time to desks and seats. He advised that the seats and desks be so arranged so that they would give the children the most comfort. He believed that he had made a valuable discovery toward prevention of imperfect sight when he recommended an apparatus which prevented school children from leaning far forward when they were studying or writing.



Incorrect - Swaying left, eyes move in the opposite direction to the right.

The apparatus was successful up to a certain point; it prevented the children from leaning far forward; he did not claim that his methods were a cure for all cases. After his method for the prevention of imperfect sight in school children had been in use for some time, the vision of the children was tested. Much to the surprise of the parents of the children, the vision was not benefited. A friend asked Dr. Cohn for his statistics on children who were benefited; he said that no children were benefited and that the method was a failure. He was then asked why he continued to use the method when he knew that the children were not benefited. Cohn's answer was that he did not know what else to do. A number of prominent ophthalmologists were disappointed when he admitted that his system was of no practical use. Good posture improves the vision but complete freedom of movement, relaxed body, neck, head, eyes must be allowed.



Correct - Swaying left, eyes move with the head, body in the same direction.

I have proved that any effort or strain to improve the vision always lowers the vision. Straining the eyes to see at long distances always produces near-sightedness. When efforts were made to see at the near point continuously, the eyes became far-sighted. It can be demonstrated that the normal eye with normal sight becomes imperfect by a strain to see. When the eyes are relaxed the vision always becomes normal. One of the best methods for children to practice in order to produce relaxation is that in which the body is swayed from side to side. This prevents strain, because the eyes are kept in motion and the stare is avoided. When the eyes stare, an effort has to be made to prevent the eyes from moving.

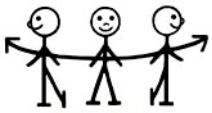
It is a rest to the eye to shift from one point to another point. When done easily, without effort, the eyes are rested, the vision improves, and the stare is prevented. Swinging was first used to rest the eyes and it was not expected that the movement of the eyes slowly, continuously, would be followed by any other benefits. It was demonstrated, however, that all children who practiced the method, besides relaxing their eyes also obtained relaxation in all parts of their body.



Long Swing - Swing and turn left and right. Eyes, head/face, body move together, at the same time, in the same direction.
Person is turning to the left (diagrams are of a person facing the reader) and the eyes move with the head, body in the same direction to the to the left.

It is a fact—a truth—that rest improves the sight and relieves or cures many diseases of the eyes. Those children who do not practice the sway correctly are not benefited. The most common mistake that is made is to turn the head to one side and turn the eyes in the opposite direction while swaying. In many cases the strain is so terrific that it is followed by much pain or discomfort, and imperfect sight.

I have found that a great many children strain while they are asleep; this I have discovered by the use of the ophthalmoscope, without necessarily awakening the child. Those children who strain during sleep are often very nervous while awake and suffer from headaches and pain in the eyes and other parts of the body. **Practicing the swing properly just before retiring at night fifty to one hundred times is beneficial**. Some children will palm until they go to sleep. This produces relaxation which may last through the night and bring relief. This method of prevention may be practiced by young children at the age of four as well as by older children.



Long Swing
Body, head, eyes move together, at the same time, in the same direction.



Sway/rock left and right.

The writer wishes to recommend a method for the cure or prevention of imperfect sight in school children which has been used successfully. A Snellen test card is placed permanently on the wall of a class room in a place where it can be read at all times by the children. All the children's eyes were tested at ten feet each day, first with both eyes together and then with each eye separately. All the teachers who practiced the methods reported that every child who used the method regularly was benefited to a greater or lesser degree. Not only was the sight improved but also headaches, pains, and other nervous symptoms were relieved. One of the greatest benefits of the method was that it cured retardation. The mentality of children who had been backward in their studies was improved so that they were able to keep up with the work along with the other children.

School Children

***By* EMILY A. BATES**



Incorrect Vision Habit, incorrect posture.
Eyes up looking over top of the eyeglasses, head bent down. Neck tension, eye muscles tense, dysfunction, eyestrain, increased blur, astigmatism, cataracts and other eye problems.
Looking down under the eyeglasses with the head tilted up and use of bifocals also causes this vision impairment.

THE number of school children who were successfully treated during the past year by Dr. Bates, Miss Hayes, our assistant, and myself, far exceeds that of the year before. Our records show that the Bates method is becoming better known all over the world.

Children with imperfect sight who come to us for treatment and who have never worn glasses, are very easily cured. Some need only one treatment while others need one or two weeks of daily treatment before the sight is brought back to normal. Some cases of high myopia or hypermetropia need personal supervision for even a longer time, especially when eyeglasses have been worn. During the last year I have had quite a number of school children under my care and up to date not one of them has failed me. According to my records and reports by letter, every one of them has had permanent benefit.

June and Donald are brother and sister. A former patient of Dr. Bates met their mother and told her what Dr. Bates had done for her and for her children. Then she came to us. They came on June 14, 1929, and each of them was examined by Dr. Bates. Donald is eleven years old and a manly little chap. He had mixed astigmatism with myopia. Two years ago he put on glasses for the first time, and from the time he put them on, his mother

noticed that he **acquired the habit of lowering his head to look at anything he wanted to see at close range. While lowering his head, his eyes were looking upward. This caused constant strain.** The mother noticed that Donald did not do this when he removed his glasses at night. She also noticed that he was less nervous without his glasses than he was while wearing them. From time to time during the two years in which he wore his glasses, he was taken to different eye specialists, to find out if he was wearing the wrong glasses, which was thought to be the reason why he held his head in an unnatural position. The doctors who examined him told her that he would outgrow this habit in time and that the glasses were quite right for him.

Doctor is wrong! The glasses caused the patient to develop this incorrect vision habit which causes more vision impairment, eye muscle tension, dysfunction, neck tension, pain… See Thomas Quackenbush's book; 'Relearning to See' for description of Incorrect Vision Habits that cause unclear vision and Correct Vision habits (normal eye function) that produce clear vision, healthy eyes.

The vision of both eyes was the same, 15/30 minus, which meant that Donald could only read some of the letters of the 30 line of the test card. Even with the largest letter of the card which is seen by the normal eye at 200 feet, he strained to see. After his eyes were tested with the test card and Dr. Bates had examined him, we proceeded in the usual way of testing his eyes with the various test cards at ten feet. He was eager to see what could really be done for him so that he could get rid of his horrid glasses. I asked him if he enjoyed football, swimming, horseback riding, and baseball. He said there was no need in going any further about what kind of sports he liked most. He said he liked them all, but that his glasses hindered him from participating in such fun for fear of having an accident, which would cause him to lose his sight. When a boy talks like that, it doesn't take very long for him to respond to the treatment and to carry out the instructions necessary to restore his sight to the normal.

I explained to Donald how mental pictures help when the eyes are closed, and that if he could remember something perfectly, while he was resting his eyes, such as a letter of the test card, a rainbow with its many colors, a beautiful sunset, or his cravat, with stripes of colors, which could be remembered while his eyes were closed, or any object which is pleasant to the eyesight, he would no doubt be able to read the test card better when he again opened his eyes.



+Shift, then trace on/along a letter T on the test card.
+Then, close the eyes and imagine seeing the T and trace, draw on the T in the mind and, at the same time: draw the letter T in the air with the finger.
Improves memory, imagination, eye movement, visualization of a clear mental picture of the letter.
+Eyes open, repeat and experience clear vision.
Persons blind from birth or at an early age use this and similar methods (feeling objects, symbols of objects…) to gain mental pictures of objects and this helps to restore their vision, the brains function with the eyes when the vision returns.

He followed my suggestion carefully in looking at a letter of the test card then closing his eyes and drawing the outline with his finger while his eyes were closed. I asked him if he could remember the shade of the letter. The letter was black and the background was white. He said that he could remember the letter was a perfect black by first imagining that the background was as white as snow or as white as a white cloud. **He said he could feel the movement of his eyes as he outlined the letter with his finger**. Donald enjoyed the fun, as he called it, outlining letters while his eyes were closed and then occasionally looking at the card to read a few more letters.

The brain works with the eyes; when shifting on a object in the mind, imagination, drawing a object in the air, the brain continues to activate eye movement.

Draw a letter in the palm of your hand with the other hands finger, eyes closed and feel the eyes move as the finger moves on the hand and the mind visualizes the letter being drawn.

Helen Keller used this method to learn how to speak, communicate.

His sister, who was sitting outside of the room but could hear everything that was said, was a little doubtful about what could be done for her eyes. The mother was in the room watching everything that was going on and taking notes so that she would know how to take care of Donald's treatment at home. Patiently, Donald worked with me, resting his eyes by closing them frequently when I told him to, and outlining the last letter he saw on the test card each time he rested. As the sun was not shining in the room where he was being treated, a thermo-lite was used, which the seemed to like very much. The light and heat helped in the improvement of his vision and also helped him to look at the card, without lowering his head.

As his mother watched the steady improvement in his sight, she could not suppress her enthusiasm and gratitude. Occasionally, she would remark to her boy, "Think of it, Donald, you will not need glasses ever again." Gradually, I placed the test card farther and farther away and in an hour's time, he read 10/15 with each eye. I placed him comfortably in a chair, telling him not to open his eyes, but to take the light treatment until he felt uncomfortable, and then to shut off the light and still keep his eyes closed while I treated his sister, June.

June is nine years of age and had worn glasses for a year or more. She had trouble in keeping her eyes open normally without her glasses and closed them almost entirely in order to see. She preferred to do this rather than to wear her glasses. She also had myopia, about the same degree as her brother. When I placed her before the test card, ten feet away, she strained to see the letters and did not blink as I pointed to the largest letters of the test card. She could read the first three lines by squeezing her eyes together, but the letters looked blurred to her. By closing her eyes often, following the treatment I gave her brother, imagining the white background of the card whiter than it really was and imagining the black letters blacker, outlining letters with her forefinger as she mentioned them, her vision with each eye improved to 10/30. It took about an hour to improve her vision to 10/10, but gradually as she read one line after another, alternately closing her eyes to rest them and receiving the thermolite treatment frequently at short intervals, she became able to read with her eyes open in a normal way. I told her to sit with her eyes closed for a while and to remember familiar objects as I had advised Donald to do.

Then I returned to Donald to give him more help. I placed the test card thirteen feet away and by receiving a little light treatment, at intervals, with the light about ten feet away from him so that the rays was not too strong for his eyes or the heat too great, he became able to read the smallest letters of the test card without any strain or discomfort. The long swing was added to the latter part of his treatment, swaying and looking at a blank wall where there was nothing to see and then to the test card, reading one letter at a time and then swaying again to the blank wall.

Then June followed her brother in the treatment, doing just as well as he did with the reading of the test card letters at 13 feet. This is more than the normal distance.

Both children expressed their gratitude to me for the help that had been given them and then they insisted that Dr. Bates be called away from his work to come to them for his share of praise. They wanted to shake hands with the great man who could do so much good for school children.

I was very tired that morning and did not feel physically fit to look after the work that had to be done. After Donald and his sister June had spent more than two hours with me, I was relieved of all fatigue and discomfort for the rest of the day. I had a good reason to be happy and to feel that something good had been done; because I had helped two children obtain normal sight in one treatment. After the children had left, their mother promised to write to us for further help, if further help was necessary. She was not to communicate with us unnecessarily, if the children retained their normal vision. Up to date, we have not heard from the

mother.

Paul was another boy who came for treatment about the same time. His father telephoned before sending his son, telling me that the school authorities had insisted very strongly that he get glasses for Paul, but the father refused to submit to such a thing, until he was sure that nothing else could be done. Paul had never worn glasses and when they were suggested to him, if Dr. Bates could not help him, he wept bitter tears and at times was disobedient, which sometimes called for punishment.

Paul came with a written statement from his mother, saying that at the age of five years, he was taken ill with measles and after that sties appeared at intervals, causing an almost constant inflammation of the eyelids. Because Paul had played with a child who was supposed to have an incurable eye trouble, Paul's mother feared that he had acquired this incurable disease also. His eyelids were itchy most of the time and at the advice of an eye doctor a solution of boric acid was used and a medicine called "mecca" was also applied. Paul found some relief from the use of these applications, but the sties appeared just the same and he noticed that the letters on the blackboard at school became less distinct at such times.

In 1928 he had scarlet fever, and pink eye began three months previous to his visit to me. Paul's vision with each eye was 10/10 but he strained to see as he read the smaller letters of the test card. The sun was shining through the windows in the room where I was treating him. I placed him in the sun with his eyes closed and used the sun glass rapidly on the edge of his eyelids as well as on the upper and lower lids. This was about midday, and the sun was rather hot so I had to use the glass very rapidly in order to avoid any discomfort or burning of the lids. His elder brother who came with him remarked how well the eyelids looked after the sun treatment. This was accomplished in less than an hour's time.

After the sun treatment, I placed the test card at ten feet. He read the smallest letters without any effort or strain. Again I placed him in the sun and taught his elder brother how to use the sun glass while I was occupied with something else. We had to keep Paul busy while he was resting this way, because he was restless and being a perfectly normal healthy boy did not like being quiet. He told me a funny tale and then in turn I told him one and in this way we passed the time away. Finally after another half hour of sun treatment, Paul read all the tests cards with different letters at fifteen feet from his eyes without any trouble whatever.

The irritation of the eyelids had disappeared and the itching had stopped, but Paul was told that this might be only a temporary relief and that he would have to take a good deal of sun treatment before he was finally rid of his trouble. He promised to take all the sun treatment he could possibly get by placing himself in the sun, and raising his head so that the sun could shine on his closed eyelids. He was given a test card to practice with daily and to use to show his mother how far away he could read it while blinking and swaying his body from side to side to avoid the stare.

Paul and his brother promised to notify Dr. Bates if he needed further help, or if he had any further discomfort with his eyes. Two weeks later, his elder brother came to report that apparently Paul was cured in one treatment because no further complaints came from the school about his having to wear glasses nor did the irritation of the eyelids reappear. I am sure that Paul himself takes time enough for the sun treatment whenever there is sun, because he promised me faithfully that he would do so without troubling any member of his family.

Case Reports—School Children

***By* KATHERINE HAYES**

Since it has been my privilege to assist Mrs. Bates in clinic work, I have come in contact with a number of interesting cases, especially among children of school age. I have found that children as a rule respond much more readily to treatment than adults and I believe the reason is because they have a natural aversion to the wearing of glasses and are willing to learn how to improve their vision without them. I think this is especially true of children from ten to fourteen years of age who have some definite reason for wanting to discard their glasses.

About six months ago, a little girl came to the clinic for treatment. I noticed as she came into the room with her mother that she was unusually pretty, but I also noticed that she kept looking down and did not raise her eyes once. While she waited for her turn, her grown up manner was most amusing, not only to me, but to the patients in the room. Every few moments she would take out a hand mirror from her little purse, survey herself critically and then place the mirror back in her purse, quite unaware of the attention she was causing and of the embarrassment of her mother.

When this girl's turn came for treatment, her mother gave me an account of her case. She was eleven years of age and had been wearing glasses off and on for **squint** for five years. When she was six she had an attack of **whooping cough** which caused her left eye to turn in. The vision in that eye was also impaired. They had been to several eye doctors, most of whom had advised an operation, but her mother was unwilling to have the child submit to this. After her mother had finished, the little girl came over to me and said in a confidential tone, without raising her eyes: "You know, people say that I would be quite a little beauty if it weren't for my cross eye. I hate glasses because they make me homely and I only wear them once in a while. Someday I want to be an actress on the stage or in the movies and I know they won't take me if I am cross-eyed. Can my eye ever be made straight again?" I told her I thought it could, if she would do what she was instructed to do at home and come regularly to the clinic.

I tested her sight and found that in the right eye it was 15/10 or better than normal, while in the left eye it was 15/50. I showed her how to **palm**, which she did for fifteen minutes. I then told her to remove her hands from her eyes. For a moment, her eye was straight. I tested her vision again and found that by having her **sway and blink as she read the card**, her vision improved to 15/30. I told her to practice palming every day as many times as possible for five minutes at a time, to practice the **long swing 100 times morning and night**, and to remember to **blink her eyes frequently.**

When she came again, two weeks later, her vision was still 15/30, which indicated that she had been faithful in her practice work. I also noticed that her eye was not quite as crossed as it had been. She came regularly for about four months and the last time she came her vision in the left eye had improved to normal and her eye was perfectly straight. Little Elsie was very happy. I told her that even though her vision was normal and her eye straight she should remember to **rest her eyes occasionally, in order to avoid any strain which might lower her vision and cause a return of the squint**. I have not seen or heard from her since, but I am sure that her vanity, if nothing else, will encourage her to take good care of her eyes.

About the same time a boy of thirteen came for treatment. He was wearing glasses which he had been using for three years. His dislike of glasses was not prompted by vanity as in little Elsie's case, but was because being a real boy, he liked all sorts of sports and could not engage in any of them because of his "old glasses" as he called them. "Gee," he said, "if I didn't have to wear those things, I'd be happy."

After testing his vision, I found that he had quite a high degree of myopia. His vision was 15/70 with both eyes. Palming seemed to make him restless, so I told him to just close his eyes and sit back comfortably in the chair. After twenty minutes, he was directed to stand up and look out the window, then to start swaying from side to side as he blinked his eyes. After practicing this for five

minutes, I again tested his vision, and found that it had improved to 15/40. I told him to leave his glasses off and gave him instructions to follow at home.

When he came again, his vision was not quite 15/50. He said that he had had a bad cold and was not able to practice. I gave him light treatment for about twenty minutes, after which his vision improved to 15/30 minus. I told him to get a great deal of sun treatment at home, letting the sun shine on his closed eyelids as he moved his head slowly from side to side. When he came again, his vision had improved to 15/20 minus. He continued to improve steadily and when he came the last time, which was about a month ago, his vision was normal in both eyes. Needless to say he was a happy boy, and incidently, as he was leaving the office he said that he thought Dr. Bates was the most wonderful man in the whole world, with the exception of his own father.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

SEPTEMBER, 1929

The Colon

While the colon is a valuable punctuation mark, it has a very unusual and better use in helping the memory, imagination, and sight. Medium sized or small letters at the distance are improved promptly by the proper use of the colon. While the eyes are closed or open, the top period should be imagined best while the lower period is more or less blurred and not seen so well. (Central Fixation) In a few moments it is well to shift and imagine the lower period best while the upper period is imagined not so well. Common sense makes it evident that one period cannot be imagined best unless there is some other period or other object which is seen worse. The smallest colon that can be imagined is usually the one that is imagined more readily than a larger colon.

When palming, swinging, et cetera, cannot be practiced sufficiently well to obtain improvement in the eyesight, the memory or imagination of the small colon, one part best, can usually be practiced with benefit. To remember or imagine a colon perfectly requires constant shifting. When the colon is remembered or imagined perfectly, and this cannot be done by any effort or strain, the sight is always improved and the memory and imagination are also improved. It is interesting to note that the smaller the colon, the blacker and better can one remember, imagine, or see one period of it, with benefit to the sight. One may feel that the memory of a very small colon should be more difficult than the memory of a large one, but strange to say it can be demonstrated in most cases that the very small colon is remembered best. If the movement of the colon is absent, the sight is always imperfect. In other words, it requires a stare, strain, and effort to make the colon stop its apparent motion. Shift top, bottom, top, bottom on the two dots of the colon : and see the colon move in the opposite direction that the eyes shift to.



Look at, shift on one period at a time. Do this with the eyes open, then in the imagination with eyes closed, then with eyes open again.

The period the eyes are looking directly at is in the center of the visual field and is clearest. The other period is in the peripheral field and is less clear.

When the eyes shift to the period in the peripheral field, that period is now in the central field and is clearest and the other period in now in the peripheral field and is less clear. Shift back and forth on the periods. Practice on small and fine print colons.

Retinitis Pigmentosa

By W. H. Bates, M.D.

There are many cases of imperfect sight which are congenital. That is, people are born with different diseases of the eye. Retinitis pigmentosa is usually congenital. The condition is easily recognized in most cases with the aid of the ophthalmoscope. In all cases, the retina is covered, more or less completely, with black areas. These black areas are about 1/30 of an inch in diameter. They are very irregular in size and shape. In severe cases of retinitis pigmentosa, the retina may be covered so thickly by these black specks that the retina cannot be seen.

Most cases give a history of poor sight from birth. At first, only a small number of black spots are visible, but after the child is twelve years of age or older, the number of these spots increases gradually. At the same time that these spots are increasing, there are serious changes taking place in the back part of the eye. The optic nerve becomes atrophied, but the atrophy does not increase sufficiently to produce complete blindness. The middle coat of the eyeball is inflamed and produces floating spots in the vitreous (one of the fluids in the back part of the eye).

All cases of retinitis pigmentosa acquire cataract before they are thirty years of age. There are exceptions to this rule, however. Some patients acquire retinitis pigmentosa after they are fifty years of age or older. One characteristic of retinitis pigmentosa is that the vision is always changing, sometimes for the better, sometimes for the worse. One very common symptom that is usually present is night blindness. **Treatment for the cure of the night blindness helps retinitis pigmentosa**. In some cases myopia is present and it is of a kind which is difficult to cure.

It is a prevailing belief that retinitis pigmentosa is incurable and that when it becomes manifest in its early stages, the condition goes on increasing and the blindness becomes more decided. Usually, the blindness does not become permanent. One case of retinitis pigmentosa with myopia was observed. The patient left town and was not seen again for more than six months. She then came into the office to report. Her first words were that her eyes were better.

A physician was calling on me at the same time, and he was asked: "Would you like to see a case of retinitis pigmentosa." He replied that he would.

Before the doctor used the ophthalmoscope, I examined the eye myself. I examined the right eye first and found that the nasal side of the retina was not diseased. There were no black pigment spots anywhere to be seen on the nasal side. Somewhat disturbed, I examined more carefully the temporal side of the retina and again I was disappointed because there were no black spots there. After a long and tedious search for the black spots, I had to confess to my friend that the **patient had recovered from the retinitis pigmentosa and accomplished it unconsciously without practicing relaxation methods**. The doctor could not resist looking at me incredulously. I am quite sure he thought I was not telling the truth. The atrophy of the optic nerve had also disappeared and with its disappearance circulation of the nerve was restored. The size and appearance of the nerve were normal. The patient became able to read 20/20 without any trouble. It is very interesting to observe in most cases of retinitis pigmentosa how much damage can be done to the retina, while the vision remains good.

Many physicians believe that **night blindness** cannot be cured. The majority of these cases in my practice have usually recovered and obtained not only normal vision, but they have become able to see better than the average. All patients who were suffering from chronic retinitis pigmentosa had **changes in the optic nerve** which were very characteristic. In the first place the **blood vessels were smaller than in the normal eye and the veins just as small if not smaller than the arteries** which emerged from the center of the optic nerve. In most cases the middle coat of the eyeball becomes inflamed and usually much black material is found in the vitreous. There are well marked changes which take place in the crystalline lens. The back part of the lens becomes cloudy and this cloudiness moves forward toward the center of the lens and clouds all parts of it so that the vision is lowered by the opacity of the lens as well as by the more serious changes which occur behind the lens.

A patient sixty years of age came to me for treatment. She said that the doctors told her that she had **retinitis pigmentosa** and that she could not be cured. Within the last few months her doctor had told her that a cataract had formed. Her vision was zero in the right eye, which had **cataract**. The vision of the left was about one third of the normal and was not improved by glasses. She had a well marked case of retinitis pigmentosa in which the retina of the left eye was apparently covered almost completely by the pigment spots. In some parts of the retina over an area of more than double the diameter of the optic nerve, the retina could not be seen.

The patient was very anxious to have me do what I could for her sight. She said that her husband was a business man and had occasion to travel all over the United States, Canada, and Europe. He frequently took her with him, and whenever they came to a large town where some prominent ophthalmologist had his office, she would consult him about her eyes.

I found that the back part of the crystalline lens was covered by a faint opacity which was sufficient to lessen her vision. The patient was **given a Snellen test card to practice with for the good eye**. In twenty-four hours the vision of the right eye had improved from no perception of light to the ability to read some of the large letters of the Snellen test card at five feet. Improvement in the vision of the left eye was manifest. The great improvement in so short a time in the vision of the right eye was unusual.

Treatment for retinitis pigmentosa and cataract

The treatment which improved the vision of this patient was **palming, swinging,** and **reading very fine prin**t. This patient gave evidence that retinitis pigmentosa is caused by a strain or an effort to see. The fact that retinitis pigmentosa in the eyes of this patient was so promptly relieved, benefited, or cured was evidence that **the disease was caused by strain.**

The clinical reports of other cases of retinitis pigmentosa confirm the fact that a strain or an effort to see produces retinitis pigmentosa. The efforts which are practiced by the patient can be demonstrated in every case. When the patient makes an effort to improve the vision, it can be demonstrated in every case that the cause of the eye trouble is always due to this effort and the **cure of the disease is always obtained by relaxation methods.**

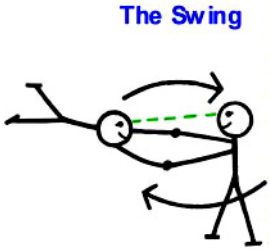
I have found that among the methods of relaxation which secure the best results are the **memory or the imagination of perfect sight**. If the memory or the imagination is imperfect, the disease is not completely relieved or benefited. When one letter of the Snellen test card is seen perfectly, it can be remembered or imagined perfectly. There is no procedure which yields better results in the cure of this eye trouble than the memory of part of a letter, which the patient can demonstrate. It is very interesting to observe that in these cases the **memory and imagination are capable of bringing about the absorption or the disappearance of organic conditions**. This makes it possible for this treatment to accomplish results readily, quickly, when all other treatment is of no avail.

For example, a girl fifteen years of age had suffered from retinitis pigmentosa from birth. The disease was rapidly progressing and it did not seem that any relief would be obtained by any form of treatment; the patient was simultaneously suffering from progressive myopia. **Relaxation treatment**, the correct use of her **memory, and imagination** improved the progressive myopia and much to the delight of the patient, the retinitis pigmentosa improved at the same time and continued to improve until all traces of the disease were absent and she was permanently cured.

It seems to be one of the peculiarities of the disease that it is variable. Oftentimes it gets better for a short time when all of a sudden, overnight perhaps, the disease will return with all its accustomed forms of **black pigment spots, atrophy of the optic nerve, diminished circulation, and incipient cataract.**

Improved circulation in the eyes cures many vision/eye problems/diseases; Relaxation of mind, body, eyes, eye muscles, neck, eye movement/shifting, central fixation improves circulation in the body, brain, eyes.

Retinitis pigmentosa has been observed in cases of glaucoma, chronic cases which progressed with more or less rapidity until almost total blindness was observed. In other cases, different parts of the choroid would be destroyed, and there would be loss of vision in these areas.



The vision of children ten years of age, suffering from this disease, has been remarkably improved by **swinging the child in a circular direction several times daily repeated for many weeks**. This promotes **relaxation**. It is a mistake to dispose of **cradles, rocking chairs, and other methods of promoting the swing**. **The long swing**, (described several times in this magazine) is a very efficient method of obtaining relaxation. Many people object that children have not sufficient intelligence to practice the swing successfully. On the contrary children ten years of age or under can practice the long swing as successfully as many adults. It is a treatment that the patient enjoys to a decided extent. Games of all kinds should also be encouraged. It is well to **protect the child from adults and others who make the child nervous**. Nervousness always causes strain. **Laughter and good time are relaxing.** The kindergarten is a good place for all children at an early age, because relaxation methods of the best kind are taught there.

Before closing, reference should be made to a **girl fourteen years of age who cured herself of retinitis pigmentosa by playing games and engaging in sports that she enjoyed.** In the summer time she enjoyed swimming and diving from very great heights; in the winter time she practiced skating, devoting long periods of time to this sport. Besides the relaxation methods which I have described, it is worth the trouble to teach children who have so-called incurable diseases how to **enjoy themselves for long periods of time both winter and summer**. Their **eyes** as well as their **bodies** are **kept in motion** while playing games or engaging in sports which **relieve the stare and strain that cause imperfect sight**. It is so much more efficient and better than drugs.

Discarding Glasses Not Injurious

By Emily A. Bates

THE most difficult thing for a patient to do is to discard glasses immediately. When a patient comes to us, recommended by his physician or oculist, we have no difficulty in this respect, even though he has worn glasses for many years. But when a patient comes for treatment at the suggestion of a friend or someone who has been benefited by the Bates method, there is sometimes a doubt in the patient's mind as to whether it is a mistake or injurious for him to stop wearing his glasses immediately, after having worn them for a long time.

Nineteen years ago I came to Dr. Bates as a patient. **Headaches, nausea,** and **continuous pain in the back of my neck** made me irritable and nervous, and sometimes I was not a very agreeable person to have about. A neighbor of my little mother first told me about Dr. Bates and how he had cured her five children of imperfect sight and other ailments.

I felt quite comfortable at times with the glasses I wore and because they helped me to see better I wore them almost constantly. As I explained in a previous article, I had worn glasses a little more than thirteen years, and during that time I had them changed three times. The last glasses I wore did not help me when I first put them on. The oculist informed me that I would have to wear them for a few weeks until I became accustomed to them. They were much stronger glasses than those I had worn previously and for that reason the oculist told me my eyes would adjust themselves to the glasses in time.

This must have been the case because after a while I got along nicely with them for a few hours every day but toward the end of almost every day the nausea and discomfort became a regular occurrence. When I visited Dr. Bates for the first time I did not know that the glasses I was wearing were the cause of my pain and discomfort. In fact I did not altogether believe that Dr. Bates was right in the diagnosis he had made of my case. I put my glasses away as he suggested, but the very next day I was ready to complain about my usual headache and other pain. However I did not have anything to complain about. But I neglected some of my daily duties about my home to practice what the doctor told me to do.

I soon found out that blinking often made me feel easier—that things about the house looked clearer to me when I blinked. I liked that, so I kept it up all day. Dr. Bates noticed during my treatment that I did not breathe regularly and advised me to do so. I made it a practice to blink as I inhaled and exhaled so one thing reminded me to do the other. As I looked into a mirror I noticed as I blinked that my eyes moved slightly, which gave me a sense of relaxation I did not have while wearing my glasses. Dr. Bates explained in his book and in other articles that he has written that when eyestrain is relieved, strain in all parts of the body is also relieved. Dr. Bates advised me to close my eyes to rest them, which always improved my vision for the test card.

The second day I wanted very much to put on my glasses again because I woke up that morning with a terrific headache. I was almost sure that Dr. Bates was wrong about the whole thing. I telephoned to him and argued the matter with him. I was much surprised to have him tell me that I might have strained my eyes during sleep. How absurd this seemed to me, but he was right about this and I will explain how I found it out for myself and how I relieved the strain by doing exactly as he advised me.

I placed my alarm clock on a chair beside my bed and set the alarm to ring two hours after I had fallen asleep. Being a light sleeper I did not wind up the alarm to ring more than a second or two. In this way I did not waken anyone else in my household. If I had a dream during those two hours of sleep, I had a pad and pencil near me to write down what I could remember of my dream. Some of our "Better Eyesight" readers will say that this was a waste of time and sleep and may even laugh at such a procedure during the night. Later on I was glad I did this because I was entirely cured of **nightmares**, which caused me many times to apologize for waking up members of my family with screams or causing other disturbances which were sometimes a great worry to those near me.

I practiced the **long swing for five minutes or longer every night and morning** in addition to other things that Dr. Bates advised me to do during the night.

Children are more ready to discard their glasses than are adults and for that reason there are more children cured without glasses than adults, and in a shorter time. Some patients who come to us for treatment have been wearing eye glasses that are very weak in power and yet they say they cannot possibly do without them. Doing without glasses a little longer each day is a good way to begin. If one has been wearing glasses for a long time, it is much easier for the patient to gradually do without them, if he is not under treatment for the removal of glasses.

A man, aged 57, who had astigmatism in both eyes, was afraid to leave off his glasses after the first treatment. He had worn glasses for thirty-six years, having had them changed several times during this period. At the age of 21, he paid his first visit to an oculist who told him that the compound **hypermetropic astigmatism** which he had would get worse if he did not wear his glasses steadily. He obeyed the oculist and in a year's time he had the glasses changed. The first few years he did not notice much discomfort while wearing the glasses, but later on if he did not remove the glasses occasionally and close his eyes to rest them, he would feel so tired that even at his work he would fall asleep.

He was examined by a good specialist who was recommended by his family physician, thinking that perhaps he might have had an attack of sleeping sickness. After chemical tests were made it was found that all the organs of his body were perfectly normal, and the doctor suggested that perhaps he might be wearing the wrong glasses. Then he became interested in the Bates method and came for treatment. I asked him to read the test card with his glasses on and he read 10/40. Without glasses he could not see anything on the test card clearly at ten feet, so I placed the cards at seven feet. At seven feet he could only read up to the 50 line letters of the test card.

He liked palming very much and kept his eyes closed for a considerable length of time while I was talking to his family physician, who came with the patient to see what could be done for him. I told my patient, while he was palming, that a good memory usually helped, but not to remember anything disagreeable while palming. He liked outdoor sports and was a good golf player, so I told him to imagine the golf ball as he sent it across the field and to imagine that it went into the cup. After he had rested his eyes in this way it was amusing to hear him tell us that he had had a good game of golf while his eyes were closed. Evidently this helped because his vision improved to 7/15, although all the letters on the 15 line were not entirely clear to him. When he strained to see some of the letters they became blurred and distorted and he read them incorrectly. After he had palmed his eyes again for a shorter period, he read all the letters of the 15 line clearly and without any hesitation whatever.

I gave him the Fundamental card to read and told him to hold it at the usual reading distance. He said all the print was blurred and he could not see anything but the word "Fundamentals" at the top of the card after he had closed his eyes for a few seconds. I told him to hold the Fundamental card in his left hand while in his right hand he held the small card with diamond type. I directed

him to look first at the white spaces of the small card in his right hand and then turn his head and look at the Fundamental card and not to try to read the letters. While he was doing this I told him to draw the Fundamental card a little farther away, about twelve inches from his eyes. By alternately closing his eyes to rest them, imagining the white spaces between the lines of type, and then looking at the beginning of each sentence, he read down to sentence number 6.

I told him to look directly at the print and see what happened. He immediately closed his eyes and said that the print blurred and that it made him uncomfortable. For almost an hour he practiced looking from the white spaces between the lines of fine print to the white spaces between the lines of larger print of the Fundamental card and before he left the office that day, he read all of the Fundamental card at six inches as well as at twelve inches. He telephoned a few days later and said that he felt no discomfort although he had discarded his glasses. There were times, however, when he did have a strong desire to put them on again. Advice by mail helped and in a year's time his vision became normal.

Having so little fear about removing his glasses after having worn them so many years was proof enough that it could be done. It requires will power and also confidence in the instructor or doctor who is teaching the patient to see without glasses.

It is a mistake for patients to discuss the treatment until they are cured, because friends have a certain amount of influence in the matter, either for right or wrong. While some patients are cured quickly, there are patients who do not do so well and keep practicing sometimes for a year or longer without obtaining a cure. This is because the method has not been practiced properly at home or the advice given by the doctor has not been carried out completely. Some patients need more supervision than others and for that reason it is best not to discuss the treatment with those who do not understand or who are skeptical about it. I have been assisting Dr. Bates long enough to know that glasses can be discarded permanently no matter how long they have been worn.

Questions and Answers

Q—Is diabetic cataract curable?
Answer.—Diabetic cataract is curable when the general disease of diabetes can be relieved by treatment.

Q—After a serious illness several years ago my pupils became very large. Is there anything you can suggest that will help them to contract?
A—Dilated pupils are not usually symptoms of disease of the eye. The sun treatment is beneficial. Sit in the sun with the eyes closed, allowing the sun's rays to shine directly on the closed eyelids, moving the head a short distance from side to side to avoid discomfort from the heat. This should be practiced for a half hour, an hour, or longer.

Q—What causes my vision to become blurred upon sudden confusion or when I have a number of activities coming at once?
A—The fact that your vision becomes blurred at such times is proof of your eccentric fixation. Do not try to see or do several things at once. Practice central fixation, seeing the part regarded best and other parts not so clearly, all day long.

Q—My daughter, aged ten, is practicing your method for the cure of cross-eyes. Would it help to cover her good eye with a shield, which is easy for her and keeps the left eye straight for a certain period of time, besides making it work? It helped her so much when she wore glasses, that I thought it might help her without them in the same way.
A—It is first necessary to improve to normal the vision of both eyes, when used together. Then cover the good eye and practice improving the vision of the poor eye.

Q—When you suggest new methods do you mean to discontinue with the old?
A—Not necessarily. All the methods I recommend have relaxation for their object. It is for the patient to determine which treatment is most beneficial and to continue its practice faithfully. Some patients tire easily when one thing is done continuously. For this reason several methods are suggested in order to vary the practice.

Q—I am told that I am losing my "central vision." Is it possible to regain what I have already lost or to forestall the loss of the remainder?
A—Yes, it is possible by faithful practice of my methods.

Q—What causes my **eyes to flash violet sparks and splashes?**
A—This is caused by a **mental strain**.
Learn to **relax** and **improve your memory and imagination**. **Palming** should help you a great deal.
Staring, neck tension, incorrect posture, many hours with the head, neck bent down or pulled forward reading, typing without taking a break causes this symptom and unclear vision, dizziness.
Use correct posture, walk around, look to the distance to prevent tension in the neck, eyes, blur.

Q—It is very hard for me to think in terms of black and white. Is there some other method which is just as beneficial?
A—Yes, letting your mind drift from one pleasant memory to another will accomplish the same results.

Q—In case of illness where one is unable to practice with the Snellen test card or stand up, what method is used?
A—Blink frequently and shift your eyes constantly from one point to another. Turn your head slightly from side to side on the pillow or close your eyes and think of something pleasant, something that you can remember perfectly, and let your mind drift from one pleasant thought to another.

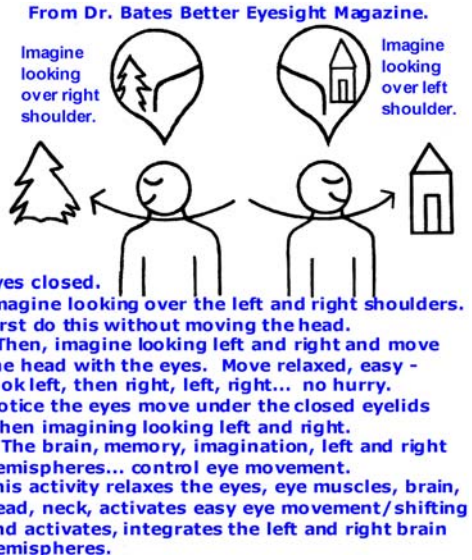
Q—What does "Seeing things moving all day long" mean?
A—Your head and eyes are moving all day long. Notice that stationary objects appear to move in the opposite direction to the movement of your head and eyes. When you walk around the room or on the street, observe that the floor or pavement appears to come toward you, while objects on either side of you appear to move in the opposite direction to the movement of your body.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

OCTOBER, 1929

The Memory Swing



The memory swing relieves strain and tension as do the long or the short swings which have been described at various times. It is done with the eyes closed while one imagines himself to be looking first over the right shoulder and then over the left shoulder, while the head is moved from side to side. The eyeballs may be seen through the closed eyelids to move from side to side in the same direction as the head is moved. When done properly, the memory swing is just as efficient as the swing which is practiced with the eyes open, whether it be short or long.

Feel the physical eyes move left and right when imagining moving left and right and when physically moving the head left and right. The eyes move in the same direction the mind imagines moving and the physical body, head moves. The brain works with the eyes.

This swing also relaxes, improves movement of the neck. Enjoy relaxation of the mind, eyes, head, neck, shoulders, body.

The memory swing can be shortened by remembering the swing of a small letter, a quarter of an inch or less, when the eyes are closed.



Eyes closed. Shift left and right on a small letter E in the imagination. See it move 1/4 inch or less in the opposite direction the eyes shift to.

The memory swing has given relief in many cases of imperfect sight from myopia, astigmatism, and inflammations of the outside of the eyeball as well as inflammations of the inside of the eyeball. It is much easier than the swing practiced with the eyes open and secures a greater amount of relaxation or rest than any other swing. It may be practiced incorrectly, just as any swing may be done wrong, and then no benefit will be obtained.

Mental Activity

***By* W. H. BATES, M.D.**

IT IS a truth that activities of the mind under favorable conditions accomplish many things. As an example, let us consider the following case. A man, aged 30, employed in a distant city as a helper in a library, was treated about 15 years ago. He called to see me at about seven o'clock in the evening and remained with me for more than two hours. The patient was born with **cataracts in both eyes**. He also had **amblyopia from birth**. Some months previous to his visit, the cataract in both eyes had been removed. The vision of the right eye was very poor and not corrected by glasses. The vision of the left eye was worse than that of the right and also was not improved by glasses.

The treatment which was prescribed was to rest both eyes by closing them. His attention was also called to a known letter of the Snellen test card, a letter which he imagined better with his eyes closed than with his eyes open. When a known letter was regarded by central fixation, the vision improved. It did not take longer than half an hour to improve the right eye in this way, at first in flashes and then more continuously later.

At first he was able to flash the letters of the Snellen test card when he had momentary glimpses of the known letter very much improved. It did not take long before, much to my surprise, he was able to read all the letters on the lowest line at 10 feet. The vision of the left eye improved much more slowly, but after continual practice the vision of this eye became normal.

The eye which obtains improved sight by the aid of the memory and imagination very soon obtains improved vision for all the letters. It was demonstrated in this case and in others that **the memory and the imagination of a known letter is a cure for myopia, hypermetropia, astigmatism, cataract, glaucoma, atrophy of the optic nerve, and other diseases of the eye.**

With the aid of the retinoscope it has been demonstrated that the memory and the imagination are capable of improving the vision of these cases of refraction until the functional element is relieved. It is interesting to observe that these patients become able to see as well without glasses as they had previously seen with them.

Congenital cataract, traumatic cataract, and simple cataract have all been promptly cured with the aid of the imagination when it became as good with the eyes open as with the eyes closed. When one letter, a part of one letter, a period, a comma, or a semi-colon, is imagined as well with the eyes open as with the eyes closed, there follows almost immediately a temporary cure of imperfect sight. To understand how this can occur, one should demonstrate how imperfect sight is produced by an effort. It is a truth that the memory of imperfect sight has produced myopia, hypermetropia, and the increased tension of the eye in glaucoma. **School children acquire myopia by a strain to see better**. Some forms of concentration produce an inflammation of the retina similar to the imperfect sight of amblyopia ex anopsia. This must be a truth because it suggests proper treatment for amblyopia; namely, rest of the eyes.

Amblyopia is very frequently associated with imperfect sight, an imperfect field which may be irregular in its outline. For many years amblyopia has been considered by authorities to be incurable, but these cases have been studied in recent years so that now most authorities believe that amblyopia is usually curable. It is a fact that some individuals with amblyopia ex anopsia recover without treatment. It seems reasonable to believe, if a number of patients recover spontaneously, that the treatment suggested to achieve this result would be successful in obtaining a cure. Normal eyes have been observed to acquire amblyopia, which was increased by an effort or a strain to see. By the practice of relaxation methods the amblyopia is usually benefited or cured.

There are **diseases of the choroid** which for many years have been understood to be incurable. The fact that a strain or effort to

see may produce choroiditis suggests that relaxation methods should be practiced in order to obtain a cure. Cases of this type are too often neglected because they have not been sufficiently studied. The proper kind of mental activity benefits and cures functional or organic diseases of the eye: Some patients suffering from choroiditis obtain benefit quickly, while others take a longer time.

A man, aged 25, complained of many disagreeable symptoms. With both eyes open his vision at fifteen feet was one third of the normal. He suffered very much pain. Treatment relieved this pain and made it possible for him to read at the near point. At ten feet he read the bottom line of the test card with his right eye, a vision of 10/10. With the left eye at ten feet, he read the 50 line. In a poor light, his vision for distance and for the near point was much below the normal with either eye. When he covered the closed eyelid of the right eye with the palm of his hand, he saw a field of green which continued to be evident for part of a minute. When the eyelids of the left eye were covered with the palm of his hand, he imagined the whole field to be red, changing to yellow and orange. When he produced those colors in his closed eyelids he complained of headache, dizziness, and considerable pain in both eyes.

Some months previous each eye had started to turn in at different times. A stare, strain, or effort to see better increased the squint of the left eye. When the left eye was covered, an effort to see produced a squint of the right eye, which turned in. An operation, which was a failure, was performed on the left eye by a prominent ophthalmologist. Shortly after the operation the left eye turned out almost continuously.

The patient was nervous. His mind planned very unusual things which lowered the vision of the right eye when he stood six feet from the card. When he regarded the Snellen card at six feet and a half, only half a foot further off, his vision became much worse. When he regarded a letter at seven feet that he remembered or imagined, the vision of the right eye became normal for a few minutes. When the illumination of the Snellen test card was imperfect, his vision became very poor.

At a distance of ten feet, in ordinary daylight, his vision became normal. At twelve feet the vision of the right eye was reduced to one fourth of the normal. Most of the time the vision of the left eye was imperfect at a near distance, five feet or further. He was able to read fine print at ten inches from his eyes. At twelve inches he could remember or imagine diamond type, which he read quite readily, but at the same distance, he was unable to read print which was five times as large as diamond type. Such cases are rare.

After resting his eyes by palming for long periods of time—one hour, two hours, or longer—the vision of the right eye was improved to the normal for a few hours, but the vision of the left eye was improved to 1/20 of the normal for a few minutes only. Under favorable conditions the vision of the left eye was decidedly improved. When the light was quite bright, the vision of the left eye improved, while the vision of the right eye became worse. At twelve inches or farther, he was unable to read any of the print.

It was interesting to study his mind while the left eye was reading the Snellen test card at different distances. There were times when he could straighten the left eye when the Snellen test card was placed at five feet or ten feet. This ability to straighten the left eye was very changeable. With the right eye covered, the left eye read one half of the Snellen test card at five feet. Later the large letters of the Snellen test card were distinguished at 20 feet, while strange to say, his vision at five feet or ten feet was very poor. At about the same time he could read the Snellen test card with normal vision with the left eye at twelve inches.

It was difficult to explain or to find out why it was that there were periods of time when the vision at the middle distance was poor and why the vision at 20 feet was good. Sometimes the vision at the middle distance would be almost entirely absent. It was difficult or impossible for me on many occasions to understand the idiosyncracies of this man's vision. Another important fact was that the patient himself could improve his vision for any distance desired by some activity of his mind which was neither a strain or a relaxation. This patient, like other and similar cases, was bothered by a large blind area which interfered seriously with his sight. There were times when he was able to increase the blind area while there were other occasions when the area lessened its size.

The activity of this man's mind was very uncertain, and neither he nor his friends could prophesy what was going to happen next. He discontinued coming to me before he was entirely cured and I have not heard from him since.

Glaucoma is a very serious, treacherous disease of the eyes. The principal symptoms are hardness of the eyeball and a contracted field with imperfect sight. By prescribing rest or relaxation of the eyes all cases of acute glaucoma have been benefited.

Recently a number of patients were seen suffering from a mild form of glaucoma. Usually the field was contracted on the nasal side, but there were periods of time when the contracted field was on the temporal side. One patient could consciously manipulate the size, form, and location of the blind area of the field. A large letter which would appear about three inches in diameter, when regarded by an eye with normal sight, would seem to some cases of glaucoma to be only an inch or less in diameter. The large letter which was seen by the normal eye to be a dark shade of black would appear to some patients as brown, lavender, yellow, or fiery red when regarded at fifteen feet or farther. At twelve inches the letters of the Snellen test card might have almost any color.

The letters might appear to be single, double, or more numerous. Every other line of letters would appear to consist of a number of letters instead of being seen properly one at a time. The mental strain to accomplish this consciously was not understood. As a matter of common sense, one would expect that if one line of letters was seen double, all the lines of letters should be seen double. Sometimes the letters of one line would be apparently one above the other. Sometimes the double images appeared to be slanting. The ways that the patient mentioned that he was able to have imperfect sight were very numerous. One of the peculiarities of his case was that he was able to see small letters more clearly than large letters. The different ways that he could see imperfectly with the left eye were not duplicated with the right eye.



Double image of the letter E caused by imperfect vision. Shift on the letter, part to part, blink, relax, use central fixation and the letter will merge into one clear image.

Another patient, a girl with a very high degree of near-sightedness, had difficulty in finding a way which would produce some improvement in her sight. After spending a good many months in studying the problem and in trying various methods, she became able, with the aid of a rectangular swing, a swing which was accomplished by moving one hand in a rectangular direction, to obtain benefit. A finger of one hand was moved in such a way that she appeared to be drawing a rectangle, three feet by one foot. The patient was very much thrilled to find that the improved vision occurred at the same time that she produced the rectangular swing.
(Original, partial versions of the modern Infinity, Figure Eight swing.)

Some patients improved their vision by practicing the vertical swing; others, by practicing the oblique or horizontal swing, obtained an improvement in the sight. The more the facts were investigated, the greater became the evidence that it is a mental strain which lowers the vision and not a local strain of the eye itself. In all cases of imperfect sight a mental strain can always be recognized. When this strain is relaxed, the vision always improves.

In the treatment of imperfect sight by eye education, the results should be obtained very promptly. One soon becomes able to remember many other ordinary objects besides the letters of the Snellen test card. **When the memory becomes as good with the eyes open as with the eyes closed, the mental strain disappears and the vision becomes normal**. This suggests that by

practicing with the Snellen test card at a near point—three, five, or ten feet—the memory will become more nearly normal. Patients with high degrees of myopia have been cured very promptly, perfectly, and continuously by the memory of perfect sight.

It is very important that mental activity be understood, because imperfect sight is not possible without a mental strain. When a patient with very imperfect sight is benefited or cured by relaxation methods he is very much inclined to say that he does not *see* the letters on the Snellen test card—that he just remembers or imagines them. The mind of the patient with imperfect sight will always imagine things wrong, although the patient may not be conscious of this fact. For example, he may see a large letter E at fifteen feet, and make the statement that it is not a letter E, but that it is a letter O. The patient may argue about that for some time. When he is told that it is a letter E, he says that it can't be a letter E, that it must be something else.

In short, most patients are more apt to miscall large letters than to miscall small letters. Sometimes the letter E is not imagined or seen until the letter is brought a foot or two away. Then when the letter becomes known by regarding it at the near point, it may gradually be taken farther away and still be seen as a letter E. The next day when the E is regarded, it may not be seen, although it is known to be an E. It may be necessary to place the letter E closer to the patient again before it is recognized.

I have repeatedly stated that it is usual for patients to see a known letter better with the eyes closed than with the eyes open. In the treatment of such cases one should realize that the number of ingenious methods employed to make the sight worse are sometimes very remarkable. If the patient knows what is wrong with his eyes, the knowledge is a great help in obtaining a cure. Some patients have been told a number of times that when they know what is the matter with their eyes or their sight that they are more readily cured. By repetition, the vision of most people has been permanently cured.

Staring, squinting, not shifting on a letter and remembering, imagining it unclear causes strain and blur.
Experiencing this teaches the person to avoid it.

There are many ways of securing relaxation, but the best one of all is the simplest. The perfect memory of a house or a chair is a great help, but one obtains still greater assistance by the memory of a very small part of a chair. The smaller the object, the more perfectly can it be remembered, imagined, or seen. After the patient becomes convinced that he is suffering from a mental trouble as well as an eye trouble, progress toward a complete recovery in a very short time is obtained. Patients with a high degree of myopia have been cured by the memory of one half of a large letter, but others have been cured more quickly by the memory of a smaller area. Large letters are not seen, remembered, or imagined as well as small periods.

Presbyopia

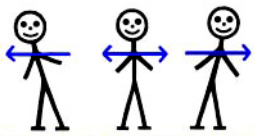
***By* EMILY A. BATES**



Long Swing
Swing and turn left and right.

PRESBYOPIA is middle age or old age sight. When people who are troubled with presbyopia try to read fine print at the near point, or even try to read ordinary type at the reading distance and fail, they usually put on eyeglasses to correct their trouble. If the trouble is slight and the correct glasses are worn only when it is absolutely necessary, there is not much damage done. If the wrong eyeglasses are prescribed there is sure to be trouble ahead. When eye glasses do not fit right or the wrong glasses are worn, the patient usually suffers from headache or he tires sooner than a person with normal sight.

People who have myopia or near-sight sometimes obtain normal vision just by removing their glasses and not wearing them again, Reports of such cases come to us from time to time. Those who have acquired presbyopia, however, and have worn glasses for a considerable length of time do not find it so easy do without glasses, either for reading or doing fine work at close range. Such cases need supervision in order to bring back their sight to normal.

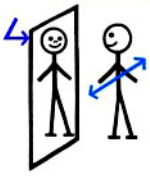


+Sway, rock the body left and right.
+Rock forward and backward.
Roll back and forth on the feet: heel to toe, toe to heel.
+Then move, rock forward and backward by walking a step forward and backward. Alternate with the left foot forward for a while then right foot forward.

I had a **patient over 60 years of age who wore glasses for 25 years for the correction of presbyopia**. She was told by an eye specialist who fitted her with glasses that in time she might be able to do without her glasses and if she lived long enough she would have what is called "second sight." Instead of this happening, her vision gradually became worse and her bi-focals had to be changed three times during the 25 years. She gradually became **deaf in her left ear** and could only hear a loud noise like an automobile horn or a whistle if the sound was near. There was a swelling below her lower lids and her forehead was wrinkled much like that of an older person. When she did not have her glasses on, the wrinkles became more numerous as she tried to see at the near point.

Her vision when first tested was 15/20 with each eye. Resting her eyes by keeping them closed for over a half an hour improved her vision to 15/10. The long swing, counting up to 100 as she swayed from side to side, caused the wrinkles of her forehead to disappear temporarily and her eyes looked more natural than they did when she first came to me. I placed her before a long mirror and asked her to sway backwards and forward with me, as she put her right foot out about a foot farther than the left. I told her as she swayed before the long mirror to look down to the tip of her shoe, and as she swayed backward to look in the mirror at the top of her head. She said that she could feel the strain leaving her, so she kept that up for a considerable length of time, alternately placing the left foot out farther than the right and vice versa.

Sway forward and backward in front of a mirror. Follow Dr. Bates directions.



Occasionally she would make a mistake and not look at the tip of her shoe as she swayed forward and when she swayed backward, she seemed to forget to look at the top of her head. I had to watch her almost constantly to keep her swaying properly so that she would keep up the relaxation that caused her discomfort to become less. She came to me daily for a week and at the end of that time, she noticed that the baggy condition under the lower lids was considerably reduced. She had spent three hours each week at the masseur and had received all sorts of facial massage and treatment to help her get rid of her wrinkles and the baggy condition of her eyelids. Now, in one week's time with daily treatment, spending a little over an hour each day with me, she found that the Bates method was doing something that she had not expected.

When I tested her vision for fine print, she held the little Fundamental card with graduated type at arm's length. She could see the Figure 1 for Sentence No. 1 and the Figure 2 for Sentence No. 2. She could see that there was black print on the rest of the card, but she could not make out words or sentences. Neither could she imagine that the sentences were divided by white spaces. I made her comfortable in an arm chair and told her to keep her eyes closed—palming if she cared to—but at no time was she to open her

eyes until I told her to.

The memory and the imagination always help the sight when things are remembered or imagined perfectly. I explained to her that in order to imagine something it would have to be seen first. To imagine something which is explained to her, but which has not been seen, would cause her to have an imperfect imagination.

Memory, Imagination Example – Gardening

This patient traveled a great deal but when she was at home, she attended to a beautiful garden of flowers, which beautified a section of her home overlooking a lovely spot on the Pacific coast. She mentioned an orchid in the bud and how beautiful it seemed to her when it was in full bloom. She mentioned the different flowers which needed her daily attention to help them grow from the seed to the flower in full bloom. In this way, she remembered the seed as she planted it, then the little green speck as it appeared above the dark soil, then later with the warmth of the sunshine and fresh water that she gave the little flower each day, she saw the little plant grow into a living thing lovely to look at. She had a perfect imagination and memory for plants and flowers and as she explained these things to me, her mind became relaxed and when she opened her eyes to read the Fundamental card, which I had placed twelve inches from her eyes instead of arm's length, she read all of Number 8 of the Fundamental card.

She made only one mistake when she first began to read Sentence Number 8 and saw the word "variable" as "vegetable". She knew immediately that she had seen the word wrong, that it must be something in connection with the swing, and that it could not be a "vegetable." I told her to place her finger directly below Sentence Number 8 and told her to shift slowly from the white spaces above sentence Number 8 to the sentence below, directing her all the time to blink as she shifted this short distance. She did this faithfully as I directed her to do and then she read sentence after sentence to Sentence No. 15, which she read without any trouble. She became hysterical as she finished reading this little card and her gratitude was most profound.

To be sure that she would practice properly while she was away from me, I told her to hold the Fundamental card again at arm's length and to look at the sentences without blinking or shifting. Immediately the whole card became blurred and she could not read at all. She asked me not to have her do that again because it gave her pain and discomfort in her eyes. It was necessary for me to have her do this, however, because she would have done this same thing without knowing it. Again I had her close her eyes, using her memory and imagination and before she opened her eyes again, I held the Fundamental card six inches from her eyes instead of twelve inches as we did before. Holding the card in my own hand she did not realize how close it was to her closed eyes. When she opened her eyes and read all the sentences of the Fundamental card, she did not realize that I was holding the card so close to her eyes. We measured the distance to be accurate about it and when she found out how much she had improved, she was quite sure that she understood the method enough to go on by herself.

Thinking that the eyes cannot see at a specific distance blocks vision improvement.

Thinking positive, knowing the eyes can see clear at that distance results in clear vision.

I saw her recently for the first time in about two years and her ability to read at the near point has not changed during that time. I asked her if she had stopped practicing after she found that her vision had become normal again and her answer was "No, indeed, I have been very careful to give my eyes enough time for practice every day since I came to you for treatment." This is another proof that if patients carry on the work by themselves after they no longer receive personal attention, that the vision does not go back to where it was before the Bates method was first practiced.

Another patient, aged 58, first put on glasses at the age of 30 for the relief of headaches. At her first visit she had with her the four pairs of glasses which she had worn from the time she had first started to wear glasses. She gave me her history, explaining that she looked at figures all day long, being a bookkeeper and accountant for a large corporation. She said that the first glasses she wore gave her instant relief from pain until one day about a year later she received a shock which caused her great sorrow. She had lost a member of her family whom she loved dearly and this caused a great deal of depression. Feeling that her glasses needed to be changed, she called on her oculist who gave her another pair. She did not wear them constantly because they did not give her much relief or help in her work. Again she had them changed with better results this time and she got along very nicely with these glasses until shortly before she came to me to be relieved of eye glasses altogether.

When Dr. Bates examined the first pair of glasses she had worn, he said that they were plain window glass. I explained to my patient that apparently the mental effect which the glasses gave her when she put them on was what helped her, and not the glasses themselves. When she received the nervous shock which caused depression and sadness in her life, she undoubtedly strained her eyes, which caused imperfect sight.

The second pair of glasses, not suiting her properly, probably made the condition of her eyes worse. At any rate, when Dr. Bates examined her eyes, he said that she had mixed astigmatism with presbyopia. I am sorry that there are not more eye specialists who find it a mistake to exchange eye glasses for stronger ones for those who came to them for relief of their eye trouble. In this particular case eye glasses did not help and the patient was grateful to her friends who recommended Dr. Bates and his treatment for the relief of eye strain.

With the right eye her test was 15/40, but none of the letters were clear or distinct. Her left eye had normal vision, 15/15, and she saw all the letters clearly. Palming, and mental pictures also helped this patient and she found the long swing most helpful in obtaining relaxation of the mind and body before starting out to her work each day. She appreciated the fact when it was demonstrated to her that when she looked directly at print without shifting an eighth of an inch or less away from the point where she was reading, the strain became worse and the pain and discomfort she had from the stare and strain was increased.

This last sentence actually means: Look directly at the letters when reading them, and keep the eyes moving, let the eyes move around, shifting from part to part on the letters, and from letter to letter, word to word. Staring, eyes immobile, locking the eyes on one part of a letter causes strain and unclear vision.

Modern teachers state that reading through the center of the words activates central fixation, eye movement and clear vision.

The reader can also let the eyes move freely in any direction on/along the letters.

I improved her right eye to 15/15 in less than an hour's time, which, of course was only a temporary improvement. I did not have much trouble in teaching her to read fine print and to see figures by shifting (from part to part on the figure and from figure to figure) and noticing the white (glowing bright white) spaces between lines of type and figures.





Follow the dots: Shift point to point (dot to dot) on the apple and E to see them clear. Blink, relax.

She needed only one treatment with instruction for home practice to restore her sight to normal. She corresponded with me regularly several times a month, just sending reports of the progress she made or the difficulty she had in practicing certain things before she started out to business in the morning and before retiring at night. She was told to return for another treatment if she found it necessary, but apparently she did not need it because I did not see her again.

The most important thing for people who have presbyopia or astigmatism or any other trouble which causes imperfect sight is to avoid looking at reading type or at anything, in fact, without shifting or blinking, which is something the normal eye does frequently all day long.

Announcement

Dr. Bates takes pleasure in announcing that Dr. John A. Rath of 111 North West Ave., Jackson, Mich., has recently completed a course of instruction under him and is fully qualified to practice the Bates Method.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

NOVEMBER, 1929

Improve Your Sight



+ When convenient, practice the long swing. Stand with the feet about one foot apart, turn the body to the right, at the same time lifting the heel of the left foot. The head and eyes move with the body. Now place the left heel on the floor, turn the body to the left, raising the heel of the right foot. Alternate.

+ Rest your eyes continually by blinking. The normal eye blinks irregularly but continuously. When convenient, practice blinking in the following way: Count irregularly and blink for each count. By consciously blinking correctly, it will in time become an unconscious habit.

+ When the mind is awake it is thinking of many things. One can remember things perfectly or imagine things perfectly, which is a rest to the eyes, mind, and the body generally. The memory of imperfect sight should be avoided because it is a strain and lowers the vision.

+ Read the Snellen test card at 20 feet with each eye, separately, twice daily or oftener when convenient. Imagine the white spaces in letters to be whiter than the rest of the card. Do this alternately with the eyes closed and opened. Plan to imagine the white spaces in letters just as white, in looking at the Snellen test card, as can be accomplished with the eyes closed.

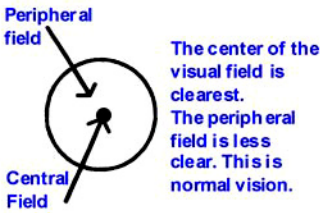
+ Whenever convenient, close your eyes for a few minutes and rest them. Palming.

+ Sunning. Go outside and expose the eyes, skin to Full Spectrum Sunlight daily.

Amblyopia

Dim, low, no vision in one or both eyes.
Usually occurs with squint or advanced eye problems but can occur alone.

***By* W. H. BATES, M.D.**



WHEN the sight is poor and cannot be improved promptly by glasses, the cause is usually due to amblyopia. The word amblyopia means blindness. **In amblyopia the vision is less in the region of the center of sight.** One cannot have imperfect sight without having at the same time a measure of poor vision in which all parts of the field are involved. It seems curious that it is possible for the most sensitive part of the retina to become blind while other parts of the retina have considerable vision, better, in fact, than the vision obtained by the activity of the center of sight.

Some cases of amblyopia cannot count fingers. Many others have no perception of light and yet, strange to say, the advanced cases can oftentimes be cured just as quickly as other cases in which the vision is only slightly lowered. Some cases of amblyopia may have poor vision at a distance of fifteen or twenty feet, a similar reduced vision at six inches or less, but at ten feet the vision may be nearly normal.

Color Blindness

In most cases of **amblyopia** the field of vision is usually very small. Sometimes the letters regarded at fifteen feet appear to be blood red while other letters regarded at three feet may seem to be brown or to have a tint of green or some other color. The perception of colors varies greatly at different distances. Red may look like green when the card is regarded at fifteen feet or farther—yellow may give one the appearance of blue.

For many years **color blindness** has usually been considered incurable, but since **amblyopia and color blindness are usually found together, the treatment which helps or improves the sight without glasses also benefits the color blindness**. The reverse is also true; when color blindness is benefited the amblyopia becomes less.

Since it is a truth that staring, concentration, causes imperfect sight, any treatment which relieves strain should always improve the sight or improve the vision in amblyopia and color blindness. A great many lives have been lost as a result of acquired color blindness. A patient with imperfect sight was brought to my office by his family physician with a history of having run into another automobile while driving his own car. When I tested his vision with the Snellen test card, I found it to be normal.

The patient was very much upset and said in his defense to me: "Doctor, I never saw that automobile." A good deal of time was spent in demonstrating that the patient had acquired amblyopia which was so complete that he really did not see the other car, but the blindness had lasted for such a short time that it was not an easy matter to prove that he had an **attack of temporary**

blindness or an attack of amblyopia.

This phenomena has occurred very often to locomotive engineers who would state after an accident that they had suddenly gone blind for a short time and when they were blind they did not see the danger signals.

One patient, a **sea captain**, told me that he believed that for his own safety and that of his passengers he ought to give up his occupation because he was having more and more frequent attacks of imperfect sight from amblyopia. At one time his vision was very good and he had no trouble whatsoever in seeing a lighthouse on the shore many miles away, but recently he had attacks of blindness which prevented him from recognizing the officers and sailors on his ship.



Bates method: shifting, central fixation, relaxation, movement, memory and imagination, looking at familiar objects... keeps sailors, pilots... vision clear.



The popularity of the airplane has increased in recent years. Every once in a while a report is published of some flying machine failing to the earth and causing many deaths, because of attacks of sudden blindness suffered by the **pilots**. An aviator once visited me for relief. He said that some years previous he had been very much concerned about the action of his machine. The machine would start to fall, but would stop before reaching the ground. He lost control of it in the beginning, although he was positive that he acquired control again. After he had rested for a month or more, he still had the attacks of temporary blindness which cause him to lose control of the plane, although they were not so continuous.

He was told that the cause of these sudden attacks of blindness was eyestrain. The eyestrain was treated by the usual methods and treated so successfully that he drove a car for long periods of time without further attacks of sudden blindness. At one time he reported to me that if he took the trouble to practice relaxation methods he had no attacks of blindness. He was convinced that the relaxation methods prevented amblyopia and loss of mental control.

There are other occasions when these attacks of amblyopia with color blindness have interfered with the work of some **artists**. A portrait painter gave a history of attacks of temporary blindness while at his work. Sometimes after devoting considerable time to his work he found that he had to do it all over again because of the attacks of amblyopia and color blindness.

In another case a well known **surgeon** suffered from attacks of blindness at irregular periods. The blindness was complete so that he had no perception of light. The attacks of blindness worried him very much because he was afraid, while performing an important or dangerous surgical operation, that in the midst of it would come an attack of sudden blindness which would tend to interfere seriously with his work.

The neurologists whom the surgeon consulted all told him that he was threatened with insanity and that unless he took a long rest he might unexpectedly find himself blind and insane. Every ophthalmologist whom he consulted gave him a different pair of glasses to wear, none of which gave him any relief. He not only suffered from attacks of blindness but he was also bothered by illusions of sight.

He said nothing about the amblyopia at his first visit, but told me that he called to have something done for his eyes. He had many symptoms of discomfort and he would be very much obliged to me if I would cure him. While examining his eyes with the ophthalmoscope and seeking to find some treatment which would improve his vision, I discovered that he was suffering from amblyopia. Then he was told that the reason that his sight failed and that he had attacks of double vision was because of this amblyopia. Then began a great battle. The doctor knew a great deal about physiological optics and would not encourage me to treat him until he was convinced that I was right and he was wrong.

Double vision, multiple images

When he was in his office he said that where he knew there was only one light, he saw two, three, or four lights. The images in some cases were arranged one above the other and the distances between them varied within very wide limits. He said, however, that the principal illusion that he suffered from was that it seemed to him that his hands and feet were double, sometimes more than double, The size of the double images varied; sometimes one image was four or five times as large as the other. In some cases the double images were arranged one above the other, while in other cases they were arranged in an oblique direction. When he looked at a Snellen test card hanging up in my office, the bottom lines were double and the color of each line of letters appeared different. With the aid of central fixation this illusion disappeared and did not return.

Double vision caused by squint, crossed/wandering eyes is different from double, multiple images which can occur in one or both eyes and are usually caused by imperfect relaxation of the mind and eyes, eye muscles, imperfect eye muscle coordination, abnormal eye, cornea, lens shape, left and right brain hemispheres not activated, integrated, resulting in astigmatism, abnormal images.

A little double image effect can occur temporarily when the vision is improving from blurry to clear. The double, multiple images appear but are basically clear and will merge into one perfect clear image as the mind, eyes, eye muscles continue to relax, function correct.

Tension, pressure on the nerves, muscles in the neck can resonate into the eyes/eye muscles and cause double, multiple images, blur.

Relaxation and movement of the neck along with all Bates Method activities corrects these conditions.

To satisfy the surgeon I made repeated examinations of his eyes with the aid of the ophthalmoscope and each time I reported that his eyes were all right and that there was nothing in either of his eyes which could explain the illusions from which he suffered. They did not come from any malformation of the interior of the eyeball but were imagined. He was very much impressed when I told him how to produce illusions of sight consciously whenever he so desired. He discovered that it was necessary to strain in order to do this and knowing the cause of his trouble made it easier for him to relieve it by doing away with the strain.

This doctor went though the **World War** and when he returned he came to my office and thanked me for what I had done for him. He said that he had not had a single attack of temporary blindness from the stare or strain of amblyopia, because knowing the cause of his trouble he was able to prevent it.

The great mistake that has been made for the last one hundred years or more was in ignoring amblyopia. It was astonishing to find the number of doctors who did not believe that amblyopia was of great importance. Time after time patients with amblyopia

were treated in my office with success by relaxation methods. Some doctors stated very strongly that amblyopia was congenital and emphasized the matter so strongly, so continuously that most other doctors hesitated to treat amblyopia at all, but were very glad to turn such cases over to someone else.

Amblyopia

***By* EMILY A. BATES**

AS DR. BATES' article in this issue is on amblyopia, I thought that it would be a good opportunity for me to tell about some interesting cases which I have taken care of.

In 1912 when I first began assisting Dr. Bates in his experimental work in the Physiological Laboratory of the College of Physicians and Surgeons in New York I had no idea that there was so much to be learned about the cure of imperfect sight without glasses. As I became more acquainted with the Doctor's work, the desire to learn more grew stronger. Each day I helped him. Watching the Doctor in his experiments with animals (these experiments were always performed immediately after the death of the animals) was most interesting and often students in the Physiological Laboratory who were doing their experimental work would stop long enough to watch Dr. Bates doing his work and making new discoveries.

I felt very proud then to stand by his side after our work at the office was finished, taking an hour before clinic time and an hour after the clinic session was over. There were times when our work together seemed almost too strenuous for me and many times I felt as though I could not go on another day. Before I offered my assistance there were doctors who tried to keep on in assisting the Doctor until his experimental work was accomplished, but in due time, one by one, they had to give up, because they could not spare enough time away from their offices and for other reasons.

Dr. Bates has always been a great reader and has studied every book written by prominent eye specialists. He always found time enough to try other ideas and experiments even while he was doing his own work. While other doctors were away for the summer months, enjoying a rest away from their work, Dr. Bates, who did not at that time believe in vacations, would sometimes be the only physician doing any experimental work at the laboratory. Occasionally Professor Lee, who in his heart believed in Dr. Bates' work and respected his ability to do what other doctors failed to accomplish, would come into the room to watch the experimental work going on.

Amblyopia not only occurs in human beings but also in animals. Anyone who doubts this might ask the keeper of the zoo how an animal in captivity acts when he is under a strain. In the early spring, when animals that have been housed for the winter months, because they cannot stand the extreme cold, are first given the fresh air and more space outdoors, they wander around and about in a blind sort of fashion. Some of them toss their bodies against the tall railings which prevent them from escaping and for a while they do not know what it is all about. After a while, when they become accustomed to their new surroundings and different light, their temporary blindness wears away, and if anyone who understands the use of the retinoscope is near he will find that there is nothing wrong with the interiors of the animals' eyes.

Having had the opportunity of being with Doctor Bates during his experimental days, I was able to understand how something could be wrong with the eyesight of school children when apparently there was no organic change in the retina. I made a special study all by myself of the cure of the eyes of school children and this is what I found:

Usually children of the poor have very little or no idea of school work before they enter the school room. When it comes time for the mother to take her child to the public school, usually the mother does not know what is in the heart or the mind of that child. He has been accustomed to a little play each day in the streets and at other times was happy and familiar in the surroundings of the little place called home. Usually children are shy when visitors call; some become irritable for no reason whatever and are sometimes punished for that. The mother does not realize that strain of the mind is produced because the child either likes or dislikes the visitor. House pets such as dogs or cats which are accustomed to the members of the household usually run away and hide when a visitor calls. It doesn't require much to cause mind strain and when there is strain of the mind there is always eyestrain.

When a child is bought into a large school he feels as though he is in another world. The child meets children who seem different from those with whom he has been acquainted. He meets a teacher who tries her best to become acquainted with him and doesn't always succeed. He sees his mother leaving him to the care of those whom he has never met before. All these things have to be overcome, and this is not readily done in every case.

After a while the tests begin. Children soon have to read the writing on the blackboard. When this cannot be accomplished by the pupil it is understood that the child has imperfect sight and needs glasses. Eye tests are made with the aid of the Snellen test card and it is found that the vision is not normal. (Even the sound of the voice of the person who tests the vision has a mental effect on the child.) Then the mother receives a note saying that the child needs to be fitted for glasses.

In some schools this is still going on, but in others it is not. I found many schools using the Bates Method without calling it so. Schools in New Jersey have used the Bates Method successfully for many years, and while it has been stopped by the authorities as a daily routine, there have been a large number of children benefited by the use of the Snellen test card. In the larger cities of the United States as well as in Germany, South Africa, Great Britain, Switzerland, and Spain, the Bates Method is being carried on.

A great deal of eyestrain could be prevented if children were told what to do before they begin their studies. Amblyopia could be prevented by explaining to the child how necessary it is not to stare in order to see better. Blinking irregularly but often is something that is done universally by people who have no trouble with their eyes. Animals in the same way blink their eyes often, although they themselves are not conscious of it, as far as we know. **When blinking is done right the eyes move and it is seldom that amblyopia is observed in people who practice this.**

In the October issue of the magazine, "Good House-keeping," there is an article entitled "A New Job for the Public Schools," by Elizabeth Frazer. Her illustration of the children studying at their desks shows mental strain as well as eye strain. In the article the following appears: "What is the matter with these children? What causes them to fail in schools? What can be done to help them? Progressive educators are beginning to ask these questions and want to help to prevent failures."

I can tell them how, for I have been with school children a good many years and have helped them along just by improving their eyesight to normal. All those who are unruly should have their sight tested every day with the Snellen test card. I can prove, if I am given a chance with a group of such children, that every one has eyestrain. I can prove that when eyestrain is entirely relieved by resting the eyes, the mentality of such children is improved. Not only does the child benefit by the Bates Method of relieving eyestrain, but the mother is relieved of a great problem and the teacher is able to teach with less mental strain for her. I am ready for an interview at any time and I shall greet with pleasure anyone who is interested enough to let me help in improving the defective eyesight of school children.

Squint

During the nine years of clinic work which was done by Dr. Bates and myself at the Harlem Hospital here in New York City, many such cases as Elizabeth Frazer describes came to us to be fitted for glasses. In my book, "Stories from The Clinic," I wrote about a case of squint or cross eyes. This particular case was a little mulatto boy who first came at the age of four years, accompanied by his grandmother. He wasn't wanted in kindergarten because he was not only unruly but destructive. He was not wanted in his home where a new baby had come and where he was not safe to have around because of his cruelty. His grandmother was the only one who cared to bother with him. When he had fits of extreme nervousness, he would act exactly like a blind person and yet he was not blind. This is amblyopia.

I had to be very patient with this boy in order to do anything with him at all. His right eye turned in toward the nose so far that one could hardly see the iris. One could easily imagine the mental strain that this caused the child. Glasses had been prescribed for him, but with such a nature as he had, how was it possible to prevent the glasses from being broken? This little chap refused to wear them from the start. The family physician did not know what to do for him because physically he seemed all right and he did not know what to do for him mentally. Through some mother who had brought her child to us for treatment and whose child also had squint, this grandmother heard about Dr. Bates and his relaxation treatment for the relief of tension and eyestrain.

When I gradually won the boy over, we had to play a game at pretending. We went into the land of make believe while his eyes were closed. I also had to close my eyes frequently while treating him, because he produced a strain in my eyes as well as in his own. It was the only way I knew to treat him and obtain results. His grandmother watched him closely each time I gave him a treatment and she followed me as well as she could when she treated him at home. **When the sight of his right eye improved for the test card, the right eye became straighter and he displayed less nervousness**. He attended clinic regularly three days a week for some months and each time he received a treatment he became more and more patient and did as he was told by me.

Each time I tested his sight for the test card I made note of the improvement he made and so did his grandmother. He did not always do as he was told but a decided change for the better was noticed in due time and then he and his grandmother stopped coming to the clinic for a while. I did not hear from them for a year, but when he did return I did not know who he was when he spoke to me. Both eyes were straight and his vision was normal for the test card. His grandmother had brought him to me to let me see the improvement in her little boy and I was surprised to note the difference in his attitude toward her and toward me. She had helped him for an hour every day and had used the test cards as I directed her. He had in the meantime returned home to his mother and was again going to school.

A boy, aged fifteen, was brought to my attention through a patient who was treated and cured by Dr. Bates. This former patient was Mrs. H. D. Messick of Cleveland, Ohio, who has done a great deal of charity work in relieving eye strain in school children among the poorer classes. She heard of this boy whose left eye was almost blind and whose vision for the right eye was 10/30. The best eye specialist in the middle west pronounced the left eye incurable and advised him never to be without glasses for fear of going absolutely blind in the other eye. The eye which was almost blind was examined with the ophthalmoscope and nothing could be found wrong with the retina or optic nerve or any other part of the eye, yet he could not see out of that eye.

This is amblyopia or blindness without any apparent cause. The patient does not know what is wrong; neither does the doctor, yet the patient cannot see. This boy had for many years tried to improve his ability as an artist by drawing pictures of ships, but he always drew them imperfectly because he could not see them perfectly. When this boy, who was well acquainted with the Doctor's cured patient, found out what had been done for her he promised to do anything he was advised to do if he could receive help as she did. If only he would not go blind in the one eye, he said, he wouldn't mind it much having one blind eye, and the great specialist who had pronounced his apparent blindness incurable had no hope whatever for that eye.

With such thoughts in his mind I first began to treat him. When he noticed how quickly the vision improved in the blind eye, he went to work with the Bates Method as no other boy under my supervision has done since. He improved steadily, sending me reports regularly until the vision of the poor eye was normal. This was due to the help and encouragement he received from Mrs. Messick. The teachers in school knew that he had worn glasses and when he returned to school without them, they attempted to persuade him to wear them, but he wouldn't and he said that they were thrilled to notice the improvement not only in his eyesight, but in all the class work that he did under their supervision. He sent me a picture of a ship which he had drawn, after his vision became normal. "It is as perfect as any drawing could be," Dr. Bates exclaimed after he had examined it.

What was done for one boy can be done for other boys who need help as Elizabeth Frazer has explained so well in her article.

Notice

Dr. Bates, as well as the Central Fixation Publishing Company, has been receiving a number of letters recently from people who have been unsuccessfully treated by practitioners who have not taken Dr. Bates' course of instruction and do not understand the Bates Method thoroughly.

Dr. Bates gives a course of instruction to doctors, teachers, nurses, and others who wish to practice his method professionally. At the end of the course the student receives a certificate authorizing him to help others by the Bates Method. This certificate, however, does not authorize the student to instruct others so that they may in turn teach the method. Those wishing further particulars may obtain them by writing direct to Dr. Bates at 18 East 48th Street, New York City.

Questions and Answers

Q - My trouble is cataract. Shall I cover up the good eye while practicing?
A - Practice with both eyes together until your vision is normal. Then, cover the good eye and improve the vision of the poor eye.

Q - Often, when I am trying to see a thing, it will come to me, but my eyes will commence to smart and then I blink and lose it. What shall I do to overcome that?
A - Blinking can be done correctly, and it can be done incorrectly. You strain while you blink. The normal eye blinks easily and frequently. Strain is always accompanied by the stare. By standing and swaying from side to side so that your whole body, head, and eyes move together, the stare is lessened.

Q - What causes redness and smarting sensation of the eye even when plenty of sun treatment has been given? Should one continue with sun treatment under the circumstances?
A - Take the sun treatment frequently for five or ten minutes at a time daily, increasing the length of time until the eyes become accustomed to the sun. The eyes should always be benefited after the sun treatment, and one should always feel relaxed. When done properly, the redness and smarting should soon disappear. If the eyes are not benefited, it is an indication that you strain while taking the treatment. Alternate the sun treatment with palming or closing the eyes to rest them.
Move the head side to side when sunning.

Q - Is resting the eyes by palming a more effective cure for smarting of the eyes than the sun treatment?
A - This depends upon the individual. Some are benefited more by palming, while others receive more benefit from the sun treatment.

Q - Should motor goggles be worn as protection against wind?
A - No protection is needed against the wind if the eyes are used correctly. Blinking, shifting, central fixation, and the imagination of stationary objects to be moving, should be practiced while motoring, and, in fact, all the time. Motor goggles weaken the eyes and make them sensitive to the sunlight.

Q - Is age a factor in the cure of imperfect sight without glasses?
A - Age is not a factor.

Q - In palming should one close the eyes tightly?
A - No, easily and naturally at all times.

Q - When you suggest new methods do you mean to discontinue with the old?
A - Not necessarily; all the methods I recommend have relaxation for their object. It is for the patient to determine which treatment is most beneficial and to continue its practice faithfully. Some patients tire easily when one thing is done continuously. For this reason several are suggested in order to vary the practice.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

DECEMBER, 1929

The Flashing Cure

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the one you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principle of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

Hypermetropia
(Unclear Close Vision, Farsight)

***By* W. H. BATES, M.D.**

THE importance of hypermetropia cannot be overestimated. It is sometimes acquired soon after birth, or it may be manifest at ten, twenty, thirty, or forty years of age. Eighty percent of eye troubles are caused by hypermetropia, while near-sightedness occurs in ten percent. There are only ten percent of normal eyes. These figures are startling. The majority of persons at the age of forty-five or over acquire hypermetropia, and it is of the utmost importance that such cases be carefully studied.

Nearly everyone has the symptoms of hypermetropia. When the sight is good for distant vision, that does not necessarily mean that the sight is also good for reading at a near point of ten or twelve inches. Too often such cases are not treated seriously. Poor sight for reading (hypermetropia) is usually corrected by the use of reading glasses, while vision at all other distances is neglected.

In middle age, serious eye diseases are caused by hypermetropia. Among the most common are **glaucoma, cataract,** and **diseases of the optic nerve and retina**. In the early stages of these serious diseases, they are more readily curable than after they become chronic and more serious, because the vision is only slightly affected and **the treatment which cures hypermetropia is the treatment which prevents serious eye diseases**. **Cataract and glaucoma are now being prevented or cured by treatment which cures hypermetropia.** It should be emphasized that early treatment of hypermetropia yields quicker, more continuous results than later treatment.

Eye physicians or ophthalmologists have almost universally believed that absolute glaucoma is not curable by any form of treatment. It has been demonstrated that glaucoma is caused by strain—the strain of hypermetropia. When this strain is relieved or corrected, glaucoma usually improves. This treatment is more successful than operation or eye drops. It is only in the last ten years that it was discovered that glaucoma is caused by a strain which produces hypermetropia and that when this strain is relieved the glaucoma improves. I think it is a mistake to condemn this simple method of relieving the hypermetropia, which also relieves glaucoma. The eye strain which produces hypermetropia also produces cataract.

It has been repeatedly demonstrated that in all diseases of the eyes which cause imperfect sight, the eye is under a strain and when this strain is removed all diseases of the eye are benefited. Patients with atrophy of the optic nerve have good sight when eyestrain is not present. For example, a patient came from Austria for treatment of amblyopia which was so advanced that the vision in one eye was only perception of light and in the other eye it was one half of normal. She had consulted many physicians who advised operation for the cure of the total blindness. She was given the hypermetropia treatment daily for about two weeks, at the end of which time the vision was normal in both eyes. Surely if hypermetropia treatment can be so beneficial, more physicians ought to know about it. There have been numerous similar cases.

It can be demonstrated that atrophy of the optic nerve can be caused by the eyestrain of hypermetropia. Palming, swinging, central fixation have always improved the sight temporarily or permanently. It is interesting to prove that such a disease as atrophy of the optic nerve can be benefited by the treatment which relieves hypermetropia.

Patients suffering from **squint** are benefited by hypermetropia treatment. Patients with hypermetropia not only strain to produce squint with one or both eyes turned in, but they also strain to correct the imperfect sight which is caused by the squint. This fact should be more widely known, because even at this time many physicians believe that the poor sight caused by hypermetropia is incurable. (Two types of strain combined. One type of strain can lead to a secondary different type of strain.)

What is the lowest degree of hypermetropia that can be produced? is a question that has been asked. The answer is that there is no limit, not only to the low degree of hypermetropia, but there is no limit to the high degrees. In other words, by an effort hypermetropia of thirty diopters or more can be produced and, by treatment, perfect vision can be obtained just as readily.

In studying the production of high or low degrees of hypermetropia it is interesting to discover the conclusions of well known ophthalmologists. One prominent doctor was asked this question: Is hypermetropia curable? He replied that it was not curable. He was then asked, "Why do you claim that no one can cure hypermetropia?" He answered, "I know that it cannot be cured because I was unable to succeed and if I cannot succeed no one else can."

Massage of the eyelids has been recommended for the cure of hypermetropia. Another doctor claimed that he was able to cure a majority of the cases of hypermetropia, and that if the patient was not cured by massage, no other doctor in the world could succeed. Other physicians, however, did not believe that massage was a cure for hypermetropia.

Since hypermetropia is so common and produces so many different kinds of eye trouble—imperfect sight, pain, dizziness, and other nervous symptoms to a greater extent than do other errors of refraction—it is well to understand as much as we can of the occurrence, symptoms, prevention, and cure of hypermetropia.

The **best methods of preventing hypermetropia** are the **sway, reading fine print** such as diamond type, **palming** occasionally, and i**magining stationary objects to be moving when the eyes move in the same or opposite direction**. (oppositional movement) The last one of these methods is not always easy to practice. Some cases are very obstinate without any known reason. They may try for days, without success, to imagine stationary objects to be moving. The cause of failure is usually due to concentration, staring, looking fixedly at stationary objects, and efforts to try to see.

When success is not attained, hold the finger about six inches from the chin while looking at distant objects and move the head and eyes from side to side, taking care not to look directly at the finger. When this movement of the head and eyes is practiced easily, continuously, the finger appears to move in the opposite direction. This method is called the **variable swing** and most people have no trouble whatever in imagining the finger moving. The length of the movement of the finger is much wider than stationary objects regarded at ten, twenty, or forty feet or farther. (Distant objects appear to move with the eyes in the same direction.)

Another case of failure occurs when the patient turns the head to the right and simultaneously turns the eyes to the left. It is a very painful experience. When one fails to obtain movement of stationary objects with the variable swing, he suffers much pain, dizziness, and other nervous symptoms.

Hypermetropia may be prevented by many other methods. The **memory or the imagination of perfect sight prevents hypermetropia in the normal eye**. The memory of imperfect sight is very difficult and the memory or imagination of perfect sight is easy.

Practice with the eyes open, looking to the distance and in the imagination with the eyes closed.



Variable Swing - finger in front of face. Move the head side to side and see the finger move in the opposite direction. Practice seeing this in the imagination with the eyes closed.

In the city of Chicago a school teacher developed a method of treating children which prevented hypermetropia from being acquired. She had charge of about fifty ore more children at the age when fatigue is common. As a result, all the teachers in the Chicago school allowed their children to rest for a time at frequent intervals—about every half an hour in two. (in two – misprint?) They were taught relaxation methods, although they were all under ten years of age. It was astonishing to observe how much they could remember, how much they could imagine, and how much their activities were improved with benefit to their eyes. Sometimes the usual exercises in the class room would be stopped and the children would be taught how to palm successfully and while palming to improve their imagination. They were taught to draw pictures which they copied from the blackboard twenty feet away. After some months, the hypermetropia was improved and finally entirely cured.

A school teacher in Long Island was treated by me for compound hypermetropic astigmatism. By the use of relaxation methods the hypermetropia and astigmatism were corrected and the patient obtained normal vision. The hypermetropia was prevented from increasing by curing it. The patient was very much pleased with the results and told the principal of her school that because hypermetropia was curable, it was also preventable. A negative proposition cannot be the truth. Hypermetropia could be prevented when it was found possible to cure it.

A number of teachers became interested and all those wearing glasses for hypermetropia were cured either by **palming** or **swinging** or by the **memory of fine print**. The principal was much pleased and placed a Snellen test card in all the cases rooms with directions that it should be read by all the teachers and pupils who were afflicted with hypermetropia. The first patient cured of hypermetropia was to continue the work.

Since she could not treat patients in the class rooms, she decided to treat them outside the school building. She made an arrangement with the teachers who wished treatment that she would teach them how to use their eyes properly and prevent or cure hypermetropia. She made arrangements with them all that after a teacher was cured, she would agree to teach, cure, or prevent

some other teacher from acquiring hypermetropia. So much interest was shown by the teachers in this school building that it made an endless chain and a great many teachers and school children were cured of hypermetropia.

For many years, it has been believed that retardation is incurable. It seemed wrong that children, fifteen or sixteen years old and older should be kept in the grades with children ten years old or under. These children did not like to study. Many of them complained of severe headaches and other discomforts. Truancy was common. After retardation was cured by relaxation methods, most of the children started in and worked hard with their studies, with the result that many of them graduated into the rapid advancement classes.

I was told by many principals that imperfect sight was never found in the rapid advancement classes. Nearly all cases of retardation were suffering from hypermetropia. It was demonstrated that patients suffering from imperfect sight from any cause were also suffering from retardation. The teachers who devoted an hour or more every day to the **cure of hypermetropia** discovered much to their surprise that **almost every disease of the eye and nervous system was benefited or cured by treatment which cured hypermetropia.**

In one year, 20,000 pupils suffered from pain, headache, loss of memory, imperfect sight from hypermetropia. In one year after, 80 percent of the 20,000 children who were suffering from headaches and other nervous troubles all recovered after the hypermetropia was cured.

Reading fine print improves eye muscle relaxation, function, coordination, shape of and normal pressure on/in the eye, central fixation, shifting resulting in improved circulation of blood, fluids in the eye resulting in healthy eyes and clear close and distant vision.

Christmas 1928

***By* EMILY A. BATES**



AS I began to write my Christmas story, a sense of fear comes over me that I might forget to give credit where it is due, or to omit some important detail which helped to make our Christmas party, I think, the best we ever had, I should say "parties," for there were three of them.

One party was held at the office of a doctor here in New York, who specializes in ear, nose, and throat work. This doctor, with his untiring efforts, has saved the lives of many children who were suffering from a stoppage of the throat from diphtheria or some other diseases which affected the larynx and trachea. It doesn't matter what hour it may be, he is always ready to respond to a call at a time when other doctors are asleep. Both he and his nurse deserve only the highest kind of praise for the wonderful work that they are doing. Along with his private practice, he has a host of charity cases; among them are children of the slums, who would not be alive today if it were not for his skill.

The doctor's nurse gives untiringly of her time to the children who need her special care. In her kind, quiet way she explains to some patients how necessary it is to be clean. Most of these patients are little soldiers and never tell the doctor during their treatment whether it hurts or not. He knows and so does the nurse, so after the treatment is over they are usually repaid for their courage with good things to eat.

In the group assembled at our Christmas Festival were children between the ages of six and sixteen. The younger children all believed in Santa Claus and were anxious to know what he had brought for them. Mothers of some of them were present, and they shared in what there was to give.

We were quite certain at the Christmas party that the doctor was the happiest of the group. The large dining table was filled with tempting things to eat, and our Christmas fund provided all of his charges with useful gifts. Each of the boys over ten years of age received the usual necktie. Each of the younger boys received a mechanical toy of some sort, while each of the little girls received a doll; purses were given to the older girls. Boxes of good candy from Loft's, oranges, and apples were provided for all, including the mothers.

One of the poor patients of our own clinic, a woman whose sight was so impaired when she first came to us that she could not make her living, placed an envelope in the hand of our assistant, Miss Hayes, and said: "It is only a little that I have to give, but let me help someone less fortunate than I am, and you and Mrs. Bates will find that someone much better than I can." She made me think of "the widow's mite" and how much it meant to the greatest Teacher this world has ever had. When we opened the envelope we found not a mite, but ten dollars.



This woman had had what is known as compound myopic astigmatism. Her eyes at times were much irritated and the pain she suffered prevented her from doing any sort of work. She came for two years off and on and during the last year was able to earn her living again. When she first came her vision with the test card was 10/70 in the right eye and 10/50 in the left; her vision at the near point was also very poor and she had been obliged to wear glasses when she attempted to do any close work. When we last saw her, her vision had improved to 10/10 in each eye and she was able to read No. 15 on the Fundamental card at eight inches from her eyes. She no longer wore her glasses and she said that the pain from which she suffered had entirely disappeared.

Although I am usually at the office during clinic hours, the Doctor's work keeps me in other parts of our office during clinic time each Saturday morning. Miss Hayes deserves all the credit for the cure of this poor woman, as well as other cases. Not once has she failed us in taking care of her charges and the many cases which have been treated and permanently cured by her are more than grateful.

The poor woman was very happy when she learned that her money was spent to make not only one, but eight unfortunate boys, happier than they had been for a long time. These boys had their first real Christmas party in all the years of their confinement in the Home for Feeble Minded. The one who had charge over these boys was a Bates' student. She came first to Dr. Bates as a patient and after she was cured she studied the method so that she could help others. Fate and good fortune brought her to this Home for the Feeble Minded in Thiells, N. Y., where hundreds of boys and girls and men and women are confined because their minds are not normal. The eight boys who were made happy because of our Christmas fund were between the ages of seventeen and twenty years of age, but their minds were like those of little children at the age of eight years or younger. Time and again those who took care of them left because the strain was too great. Others who were less tender hearted did not handle the boys properly, which did not aid in the improvement of the minds of these poor unfortunates.

For no other reason but to be of good service Miss Anna Woessner came to take charge and see what she could do for them. The

boys responded quickly under her gentle treatment and care and changed in time from being destructive to being useful and willing to learn. Some of them had a constant desire to steal anything they could lay their hands on when she was not looking, but she did not lose patience with them or threaten them at any time. She studied their greatest faults and weaknesses and taught them right from wrong.

Although she did not mention to the heads of the institution the method that she was using to improve the minds of her charges, she went about in a quiet way, teaching them relaxation and rest of the mind and body by using the Bates Method. She allowed them to come to her room after their work hours were over and encouraged them to read her test cards, teaching them how to rest their eyes by palming.

They would do anything to hear a fairy story, so while their eyes were closed and covered they sat quietly while she told them simple fairy tales. She taught them the long swing of the body, explaining how well the big elephant could do it and how restful and happy he was because it relaxed him. She explained that relaxation meant that he was on his good behavior when he did the long swing. Even though their simple minds did not grasp everything she told them, they at least understood what good behavior meant.

Miss Woessner's mother, one of the good old-fashioned kind one reads about, always had a package for her to take back to the home after her weekend visit with her family and friends. The package usually contained homemade jellies and home-made cake which the mother prepared, arranging everything temptingly for the boys. It was always a joy to the boys to see Miss Woessner return to them. When they did wrong, they were denied the good things which she had for them. When they repented and promised to do better next time, they were always forgiven and given their share of the contents of the package.

She taught them how to make flowers of tissue paper and being an expert herself at making wax flowers, she taught them how to do this also. Some of their work was placed on exhibition for visitors to see when they called at the home. When our Christmas package arrived for them, each boy received a tie as well as candy and oranges. One of the boys sent a letter which he had written all by himself; it was hardly readable, but expressed the gratitude of each one and the letter ended by saying that he was anxious that I should receive his most precious possession, a live "bunny rabbit," as a gift.

At our own Christmas party, which was held at our new offices, there were about eight children altogether. No partiality was shown among the children so the presents that were purchased for the boys were carefully chosen so that each one received a similar gift. The same thing was done in selecting the dollies for the little girls. The men received ties and the women handkerchiefs and purses. Our tree for the clinic family seemed more beautiful than ever; it was lit up with electric lights and placed in the reception room where everyone could enjoy it.

There was one old lady who was especially happy with her gift. She had saved up enough money from her husband's small earnings during the year to buy a much needed winter coat for herself; she had also managed to buy a cheap hat and now with her new purse, she had a complete new outfit. She had been coming to the clinic almost every Saturday for about a year. She had been suffering from **cataract in both eyes**; her vision was so bad when she first came that she was unable to come alone and had to be brought to the office by her sister-in law. She was very much frightened the first day, because, not knowing very much about the Doctor's work, she thought that he might advise operation as had other doctors whom she had consulted. She was very much relieved when she was told that Dr. Bates did not operate and that he had cured cataract without operation or eye drops. She was ready to devote as much time as necessary to home practice.

She sat in the sun every morning for an hour or longer; she palmed or rested her eyes every hour for ten minutes and practiced the long swing every night and morning. When she first came, her vision was 10/200 in the right eye and 10/100 in the left. She complained of a mist before her eyes, which was becoming worse all the time. Dr. Bates examined her eyes several times during the year and each time found an improvement in their condition. The last time her vision was tested, she could read the line next to the bottom at ten feet (10/15) with either eye and the mist which had troubled her for so long had almost entirely disappeared. It was only when she strained her eyes that it would bother her and after she relaxed her eyes it disappeared. She stopped coming soon after Christmas, before she was entirely cured, but I feel sure that she kept up her practice at home.

Dr. Bates, Miss Hayes, and I wish to take this opportunity to express our gratitude to those who added to the clinic Christmas fund and helped to make our Christmas parties possible.

Notice

Dr. Bates, as well as the Central Fixation Publishing Company, has been receiving a number of letters recently from people who have been unsuccessfully treated by practitioners who have not taken Dr. Bates' course of instruction and do not understand the Bates Method thoroughly.

Dr. Bates gives a course of instruction to doctors, teachers, nurses, and others who wish to practice his method professionally. At the end of the course the student receives a certificate authorizing him to help others by the Bates Method. Those wishing further particulars may obtain them by writing direct to Dr. Bates at 18 East 48th Street, New York City.

A Suggestion

A great many people who have been benefited by Dr. Bates' book, "Perfect Sight Without Glasses," Mrs. Bates' "Stories from the Clinic," or by "Better Eyesight," order copies of the books or subscriptions to "Better Eyesight" to be sent to some of their friends suffering from imperfect sight. Why not order books or subscriptions for some of your friends as a Christmas gift. We will mail books direct to the recipients, postage prepaid, and enclose your Christmas card.

Questions and Answers

Q—Would the reading of fine print at four inches be helpful?
A—The reading of fine print at four inches is usually helpful.



Q—You mention the black period in your book. Must this be any particular size? I only imagine large round black objects like cannon balls, the center of a target, or a moving football. This is restful, but is it beneficial?
A—No. Anything that is restful is beneficial.

Q—I have attained normal vision, but after reading for a while, my eyes feel strained. Would you still consider I had normal sight?
A—If your eyes feel strained you are not reading with normal vision.

Q—Seeing stationary objects moving appears to me to be merely self-hypnotism. I can't do it.
A—When riding in a train the stationary telephone poles appear to move in the opposite direction. Of course this is an illusion, but it is a benefit to the eyes to imagine all stationary objects moving.

Q—Is it possible to cure **squint in a child under two years of age** by the Bates Method, and what is the treatment employed?
A—A child, two years of age or younger, can be treated and cured of squint, with or without imperfect sight, by the Bates Method. The treatment is varied. The swing can be practiced by the mother holding the child in her arms. If the child is able to stand or walk, it is held by the hands and the sway is practiced with the child moving from side to side. Keeping time with music encourages the child to continue the swaying for a longer time.

Improving the memory and imagination of the child is also recommended. The child is encouraged to play with toy animals and is taught the names of the different animals. Usually the animals are placed on the floor in groups and the child is asked to pick up the animals as they are named. As the child reaches for one and then another, the parent may observe whether the child goes directly toward the toy or reaches to either side of it. This method is used in extreme cases of squint where the child does not see perfectly where is looking.

Colored yarns are also used in these cases. The child is taught the names of different colors. An improvement is always noted after such treatment, because the child is constantly shifting his glance from one colored skein of yarn to the other as he selects the one called for. The problem is to educate the eyesight. The more the eyes are used the better.

Palming is beneficial in the cure of squint. If the child is told that it is just a game of peek-a-boo, he immediately becomes interested and enjoys it. Reading a story to the child as he palms is usually beneficial, and improves the squint.

With children three years or older, the pot hook card is used. This is a test card with the letter "E" pointing in various directions. The child tells whether it is pointing up or down, left or right. If a mistake is made, palming is introduced in order to rest the eyes.

Children with squint are usually unruly, disobedient or destructive. When the squint is improved, a change in their conduct is also noted. They become quiet, obedient, and their mental efficiency is improved.

See left and right brain hemisphere activation, integration, balance and other new methods for curing squint.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JANUARY, 1930

The Imagination Cure

When the imagination is perfect the mind is always perfectly relaxed, and as it is impossible to relax and imagine a letter perfectly, and at the same time strain and see it imperfectly, it follows that when one imagines that one sees a letter perfectly one actually does see it, as demonstrated by the retinoscope, no matter how great an error of refraction the eye may previously have had. The sight, therefore, may often be improved very quickly by the aid of the imagination. To use this method the patient may proceed as follows:

Look at a letter at the distance at which it is seen best. Close and cover the eyes so as to exclude all the light, and remember it. Do this alternately until the memory is nearly equal to the sight. Next, after remembering the letter with the eyes closed and covered, and while still holding the mental picture of it, look at a blank surface a foot or more to the side of it, at the distance at which you wish to see it. Again close and cover the eyes and remember the letter, and on opening them look a little nearer to it. Gradually reduce the distance between the point of fixation and the letter, until able to look directly at it and imagine it as well as it is remembered with the eyes closed and covered. The letter will then be seen perfectly, and other letters in its neighborhood will come out. If unable to remember the whole letter, you may be able to imagine a black period as forming part of it. If you can do this, the letter will also be seen perfectly.

Imagine a black letter is composed of many tiny black periods and shift continually, easy, relaxed from one period to another on the letter.

When shifting: see one period at a time darkest black and clearest in the center of the visual field as the central field moves from period to period as the eyes shift.

When a letter is seen perfect, the mental image, memory, imagination of the letter is further improved, perfected, resulting in perfect memory, imagination, relaxation, and clear vision.

Astigmatism

***By* W. H. BATES, M.D.**

IN ALL cases of astigmatism one meridian of the cornea is more convex or less convex than all the other meridians. One definition of astigmatism is that the astigmatic eye is not able to focus the light from the sun or from any other object down to a point. There are many authorities who claim that astigmatism is always congenital or that people with astigmatism were born with it. However, recent work on astigmatism has demonstrated that it is always acquired and never congenital. Young children, babies, when examined with the retinoscope soon after birth usually have astigmatism which is acquired by a strain or effort to see. When the child's eye is at rest no astigmatism is manifest, but when the child's eye or the child's mind is under a strain, astigmatism is always present.

Animals always acquire astigmatism when under a strain. Those who examined the eyes of cats found that it is very difficult or impossible to make them strain to see. No fish were found which had astigmatism. The evidence is worth consideration because it is based on the examination of a great many fish at the New York Aquarium. The observer with the retinoscope stood outside of the tank and was able to observe the dark cloud moving in the same direction as the movement of the light from the retinoscope. At times the fish would come very close to the glass and strain their eyes, without the production of astigmatism. I never saw a fish with nearsightedness or astigmatism. There were a number of ophthalmologists who believed that fish were nearsighted or had astigmatism.

School children are often nervous and when the nervousness is considerable, a large amount of astigmatism may be produced by a strain of the eyes or mind. When rest is secured the astigmatism in school children promptly disappears. Rest of the eyes is not always obtained readily. Closing the eyes, palming with the help of a nearly perfect memory of some letter or other object, secures a considerable amount of rest. The more perfect the memory the greater is the rest or relaxation. Rest of the eyes and mind is also obtained after the child practices central fixation or seeing best where the eyes were looking. However, it is necessary to practice central fixation without a conscious effort. When the eye is fixed on a point it is oftentimes very easy to make an effort and the effort, even when slight, is capable of lowering the vision when astigmatism is present.

There are many conditions which are favorable in securing relaxation or rest. Some people see better when the illumination is unusually good, whereupon the astigmatism immediately becomes less. There are other people who cannot stand even a moderate amount of light and their astigmatism is less when the light is poor. The distance of the print from the eyes when seen best also varies with people. In some cases letters or other objects are seen well at twenty feet or farther and not so well at twelve inches. One patient had a vision of 20/30 plus. The large black letters of the Snellen test card appeared blood red but at one half or one quarter of the distance the astigmatism was worse or increased. In other patients the color of the black letters was a shade of brown or yellow or green at a distance of fifteen feet, while the black letters never appeared black, but corrected the astigmatism when the distance was less than ten feet.



Shift back and forth, top and bottom on the colon. Blink. Eye movement = relaxation, clear vision. Practice on a fine print colon.

The facts observed on the production of astigmatism were modified by shifting. One patient looking directly at the first letter of a line of letters had no astigmatism at six feet. The patient was told that he would be asked to look at the last letter of the Snellen test card and he was able to do this, but before his eyes looked from the first letter to the last letter on the same line the astigmatism became very decided. Shifting from one letter to another at ten feet produced astigmatism. Astigmatism was temporary and by alternately shifting from the top period of the colon to the bottom period of the colon his vision improved. When he tried to see all parts of the colon simultaneously a strain resulted and a severe headache annoyed the patient very much. He found fault and said that he came to have his headaches cured, not to have them made worse.

To increase astigmatism is a very difficult thing. It requires much effort and with that effort to increase the astigmatism and to make the sight worse the patient complains that it is more difficult to increase the astigmatism and make the sight worse than it is to lessen the astigmatism and make the sight better. After many methods have been tried with much strain, it can be demonstrated that the production of a large amount of astigmatism is difficult. To lessen the astigmatism and improve the sight to normal is easy and can only be accomplished without effort.

The successful treatment and the cure of astigmatism without glasses is generally accompanied by so much strain that it is not always easy to make progress. It is very easy, however, to demonstrate that astigmatism is caused by a stare or strain and that rest or relaxation of the eyes will bring about a cure of astigmatism. The memory of familiar objects with the eyes closed is a great help in obtaining relaxation and lessening the amount of astigmatism. After the astigmatism is lessened by treatment, greater benefit can often be obtained by having the patient close his eyes and remember letters, music, and other mental pictures. Perfect memory means more perfect sight, because the greater the relaxation the quicker does the astigmatism disappear. It often happens that patients with astigmatism find it difficult to obtain relaxation, because they try to see too much of any one object at once and try to see letters, left side best, top best, bottom best, right side best (trying to see all best/equally clear at the same time, without shifting part to part).

The mere act of seeing one side of a letter at a time makes it easier to imagine the vision of each part of a letter.

One patient, when examined with the retinoscope, had a high degree of astigmatism. When he looked at the left side of some letter he could imagine the left side was straight, curved, or open. He imagined it straight with his eyes open and more or less clear; with his eyes closed the left side of the letter was remembered or imagined straight; the top was also imagined straight; the bottom was also imagined straight; and with the eyes open the left side, top, and bottom were imagined correctly. By alternately regarding each side of the letter with the eyes open and imagining these sides much better with the eyes closed, each side was imagined correctly. The patient was told to close his eyes and think of a letter, the left side straight, the top straight, the bottom straight, right side open. "What can you imagine the letter to be," he was asked. He answered: "It is an "E." The patient was drilled on a number of other letters with success. He was convinced that the imagination of one part of the letter improved the relaxation and enabled the patient to ignore the blurred outline of the letter regarded.

When the imagination improves the vision improves. One can at will plan to imagine a letter with the left side more or less straight and do it successfully after a number of times. Many failures occur because patients try to imagine the unknown letter by a strain. One of the most difficult cases to cure by relaxation methods responded favorably when his attention was called to the fact that he could, when the astigmatism was corrected, see a part of a letter better than a number of small letters. The letter was so imperfect that he could not distinguish the size, the color, or the form. **By explaining to him that he could see these blurred letters, one part of the letter at a time much better than he could see the whole of the letter at once,** he soon became able to see the letters perfectly in this way. When a pointer was placed in the neighborhood of the letter, the vision for that one

letter was improved more than for other letters of the same size and color. He could not see the left hand side correctly with his eyes open or closed. He was asked if he could imagine how the left side of the unknown letter would look if it had no blur. The imagination improved and with the improvement in the imagination the sight improved.

Some time ago there was printed in this magazine a description of a method of curing astigmatism which is far superior to all other methods. The patient was advised that there were white spaces between the lines of black letters and that these white spaces became whiter by alternately imagining them as white as possible with the eyes closed and then with the eyes open. The attention of the patient was called to the fact that one could imagine the bottoms of the letters resting upon the upper part of the white spaces, and when the letters were read a thin white line could be imagined going across the card from left to right. This thin white line was improved by the imagination of the line with the eyes alternately open and closed. When the imagination was successful in improving the thin white line, the black letters were imagined blacker and could usually be distinguished very quickly; but when the imagination of the white spaces was less perfect, the black letters could not usually be normally seen. In other words, the improvement in the vision for the black letters depended primarily upon the improvement of the whiteness of the thin white line. Of the two the thin white line was more important because one can imagine the whiteness of the thin white line much whiter relatively than the imagination can picture the blackness of the black letters.

The thin white line is directly under the bottom of the letters/sentence and is bright glowing white. The remaining area of the white space between the sentences is below the thin white line and is also bright white but less white than the thin white line.

Letters are frequently received by me, containing this very important question: "How can I remember black? It is impossible for me to remember black." One person wrote from the middle west that he could not remember or imagine black by central fixation. Whenever he tried he always failed and a number of friends of his also tried and they believed that it was impossible to remember or imagine a period that was anywhere near black. The man who complained had a high degree of astigmatism. This astigmatism was corrected by relaxation methods. His vision improved rapidly. By alternately practicing with his eyes open and with his eyes closed, his memory, his vision, and his imagination soon became normal.

Many people who try to see one period of a colon blacker than the other fail. If the patient can demonstrate that the cause of failure is a strain he soon learns that his failure is due *entirely* to strain. This strain is a mental strain. Many people fail because they lose their sight, memory, and imagination by an effort. **It is a benefit to people with imperfect sight to demonstrate that the cause is always an effort or trying to see.** It is astonishing to know that the memory of imperfect sight is so difficult and that it requires considerable time and patience to help a patient realize the facts. Most people believe that to do wrong is easy and are very much surprised when someone tells them the contrary and still more surprised when the facts are demonstrated.

Children eight years of age or younger have repeatedly demonstrated that imperfect sight, imperfect memory, and imperfect imagination are difficult.

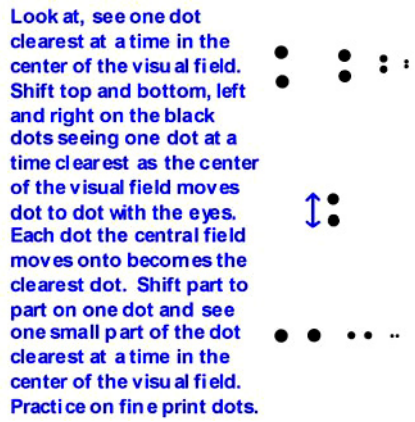
When the largest letter of the Snellen test card is regarded, the blackness of it, the clearness of it, are so much better that people erroneously believe that the imagination of a large letter is much easier than the imagination of one half of the letter. When one half of a letter is covered, some people can imagine successfully that one half of the largest letter on the card is just as black, clear, and distinct as the same letter very much smaller. By continued practice the size of the letter or other object can be reduced to an area as **small as the eye of a needle**.

Perfect central fixation, using the exact center of the retina, fovea centralis, center of the visual field.

On one occasion a child ten years of age was brought to my office with normal eyes. The vision was tested and found to be normal. Her father said to her: "Can you tell that the largest letter on the test card is blacker than the very small letters." The child intelligently declared that the large letter was not blacker or clearer than the smaller letters. She could also make an effort sufficient to produce a considerable amount of astigmatism. Having normal vision, her control over her imagination was much better than that of patients with imperfect sight. The father then asked his daughter how she explained that she could see the small letters better than large ones. She replied that the reason she saw small letters better than large ones was because there was not so much to see.

Having good sight the child could very readily produce a considerable amount of astigmatism by an effort of which she was conscious. Her father had much less control over his eyes than his daughter had. He could regard the card with good vision but his daughter could strain much more and produce a higher degree of astigmatism measured with the aid of the ophthalmometer. She was also able to imagine, when she saw a small letter at fifteen feet, that it was moving.

She was asked if she could stop the movement and when she did so a larger amount of astigmatism was demonstrated in her eyes than in those of her father. She was very much annoyed when she produced astigmatism because she said it gave her great pain. His central fixation was not so good as hers. It was difficult for him to imagine the top period of a colon best and the bottom worse or to imagine the bottom best and the top worse. He invariably saw both at the same time nearly equally well, while the daughter always saw one period at a time, the upper or lower, best.



A boy came to me to obtain glasses for the correction of astigmatism in each eye. With the right eye his vision was 10/20 or one half of the normal, but with the other eye he saw four times as much and the astigmatism was four times as great as in the other eye. This boy, when he covered over both closed eyes with the palm of one or both hands, instead of seeing black, saw everything else but black—gray, green, blue, yellow, and other colors—and his efforts to obtain black did not readily succeed. When he imagined imperfect sight he did not see black. When he imagined perfect sight and remembered perfectly the things which he had seen the astigmatism disappeared and he was able to remember, imagine, or see perfect black.

Many facts of considerable value were observed. When the boy imagined a large object while palming, his astigmatism was slight when he opened his eyes, but when he remembered letters or other objects with imperfect sight with the left eye open his vision became worse. Perfect imagination enabled him to produce a greater amount of astigmatism than he was able to do when the vision was poor. When the right eye had more perfect imagination he became able to imagine more perfect vision and in addition he could imagine sight that was more imperfect. With a good imagination he had more perfect sight and at the same time remembered or imagined a greater degree of astigmatism than when his sight was poor. He demonstrated that when his mind was more under his control he could remember or imagine a larger amount of astigmatism. When his sight was good the mental control of his vision was improved. When his eyes were closed he could remember or imagine more perfect black than he could remember or imagine when his eyes were open. He demonstrated that he could produce a larger amount of astigmatism or a lesser amount of astigmatism as he desired because, his mind being under his control, he could remember things or imagine things better than he could when his mind

was not under his control. The retinoscope was a great help in controlling the astigmatism. With its aid the amount of the astigmatism could be determined.

Two Cases of Myopia

***By* EMILY A. BATES**

A LITTLE girl, aged seven, came to Dr. Bates for the first time for treatment. She had a high degree of myopia with astigmatism and had worn glasses for a few years. According to her mother's statement she was a very nervous child, due to eyestrain. The vision in each eye was 15/40 minus. The usual treatment was given the child, first having her close her eyes to rest them. Then with the aid of the **long swing**, the **variable swing**, and the **sway** of the body, which was a rest to her, her vision improved to 15/20 minus. Dr. Bates explained to the mother that it would be necessary for her to have daily treatment for at least two weeks in order to bring about a satisfactory improvement in her sight. The mother explained that she was taking a long trip with her family and could not at that time remain longer than a day.

On her way west she stopped at a place where we had a competent student who treated the child successfully and gave her a temporary improvement in her sight as Dr. Bates did. The mother then went west where her child was placed under the care of a person who has only a slight knowledge of what the Bates Method really is. As the result of the improper treatment given this child, in one year's time her vision was lowered from 15/40 to 15/100 in each eye. Dr. Bates was much concerned about the lowering of her vision and found out that diathermy (A form of physical therapy using the therapeutic generation of local heat in body tissues by high-frequency electromagnetic radiation, electric currents, or ultrasonic waves.) and other appliances were given as treatment for the relief of eye strain. The treatment produced more strain and the myopia became worse. When such patients return to Dr. Bates they are extremely hard to treat and if I can possibly help it I try to dodge such cases unless I am promised a reasonable length of time in which to benefit the patient.

After the Doctor saw the child again, Miss Katherine Hayes, our secretary and assistant, was directed to treat the child, which she did with satisfactory results. On October 19th, the day the patient returned for more help, her vision was 15/100. On October 22nd her vision had improved to 15/15.

On September 12th, 1929, the mother returned again with her child for more treatment. It was found that the vision in both eyes was the same and by practice she improved to 15/10. During her absence between September 12th and October 26th, her vision gradually became better because the mother had kept in constant communication with Dr. Bates. The advice which she received for home treatment for her child helped. With but a few exceptions results are usually obtained if the mother keeps up the constant practice for her child every day.

On September 14th, the mother again left for her home in the west and again returned early in December for a check up. It was found that Betty had carried out the instructions given her for daily practice at home or wherever she might be, with the result that she no longer made an effort to read the letters of the various test cards placed before her, which was something she always did and had to be reminded constantly not to do. She found out all by herself that the harder she tried to read the letters of the cards the more her vision blurred. Shifting from a near object to the test card as she was reading avoided any effort to see better. When she noticed that the black letters of the white test card became blacker if she did not look too long at them, she enjoyed the treatment much more. The card which she had moved near her was placed at ten feet and she began to strain her eyes to see, causing a frown and a wrinkling of her forehead, which the mother herself corrected before I had a chance to do so myself. I know that the mother's efforts to help me with the child brought about a better vision which remained with her most of the time.

The next day Betty did better, improving two lines on a strange test card. On a sign about fifty feet to the left of our office windows were letters which she could not read distinctly at first, but during the treatment she became able to read all of the sign letters which were much smaller at the bottom of the sign than at the top. Shifting from this sign to the test card in the room again improved her vision for another line, namely 10/15.

The next day, having sunshine in the room, we gave her the sun treatment for about twenty minutes. Small test card letters seen by the normal eye at four feet she was able to read nine inches farther away by shifting from the white spaces to the type. Then all the test cards which were used in our office were placed at a distance of fifteen feet and she read each one of them through to the bottom line without a mistake. Her mother and I decided to test her memory for these various test card letters by having her close her eyes and read from memory. She was able to do this successfully with two of the test cards but she had not memorized the others, even though she had practiced with them while she was in our office. This proved to the mother that the memory of the known letters with her eyes closed helped her to read all the other test cards when her eyes were open and to read them at more than the normal distance. The nervous twitch of her body which was in evidence always toward the end of her treatment and during her last few treatments had entirely disappeared. I believe that Betty is entirely cured now.

Betty's brother Bobby, aged twelve, had never worn glasses although he has for many years had myopia or short sight. His vision in the right eye was 10/50 and with some help from me he was able to read some of the ten line letters of the card with his left eye. He explained that the bottom line of the test card looked as though each line had a tail to it, and that all the P's looked like T's and the F's much like a P, only distorted. He could not raise his head sufficiently to read the test card but always while reading he would lower his head so that his chin almost touched his chest. This produced a strain which Bobby did not at first believe was the cause of his trouble. He thought that it was perfectly right for him to lower his head in order to see better.

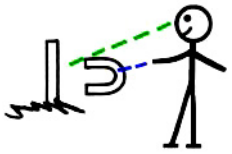
I did something to Bobby which I rarely care to do with most patients, although it is a good demonstration to the patient that strain causes the lowering of sight. Dr. Bates is successful in having patients demonstrate for themselves that producing discomfort from straining helps them to overcome the trouble. In most cases I have hesitated to try this because it affects me personally and causes me to strain so that sometimes I cannot go on with the treatment. Bobby was so enthusiastic about wanting to be cured that he was perfectly willing to have me demonstrate anything that he did which was wrong so that he could cure it.

Bobby had the mind of a boy sixteen or seventeen years of age instead of a boy of twelve, and he carried out my instructions very much like our West Point cadets or the boys who are ready to enter Annapolis. We have had many from both academies and so far we have not found one of them difficult to treat, no matter how severe their eyestrain might be. Dr. Bates thinks that discipline and knowing what it means to pay attention makes this type of patient easy to treat and to benefit. I think little Bobby is headed for either one of these places for he spoke about it every time he came.

He was encouraged to do the long swing, not paying any attention to stationary objects in the room. Occasionally I had to remind

him to keep his chin up like a soldier, which always spurred him on. I believe also that his sister being in the room and watching his treatment helped me in treating him also. She looks upon him very much like a hero and is proud of everything good that he does. Just a little sound of approval from her made him show off a wee bit, which made it amusing to me. His vision improved in less than a half hour's time to 12/10, reading with both eyes together at first. Having no sunshine while treating him I gave him the thermo-lite for half an hour. Then I tested his right eye, having his left eye covered, and found that he had improved to 10/15 from 10/50 in less than one hour's time and not once had he lowered his head to read better.

The next day we had sunshine and while Bobby resented the strong light of the sun at first as the sun glass was used on his closed eyelids, he soon became accustomed to it and liked it, asking for more. After the sunlight treatment the vision of the right eye improved that day to 10/10. The next day we did some mental arithmetic while he was taking the sun treatment and found that that was not so good. Trying two things at one time was not helpful to Bobby. The sun glass was then used and after half an hour of sun treatment he palmed and then we did some mental arithmetic. He visualized the numerals as they were given to him and as quickly as I mentioned the figures he gave the answers correctly, not once making a mistake. Again his right eye was tested with a strange card and his vision had improved to 12/10.



Playing horseshoes. Eyes follow, shift on the horseshoe as it is thrown through the air, and on the target. Improves eye movement, central fixation. Juggling, baseball... many sports keep the vision clear.

I drew his attention then to the sign outside of our window and then to a more distant sign about five hundred feet away and he became able to read all of the sign at that distance with both eyes together. Then I turned him around, facing another strange test card and he read the bottom line, the smallest letters of the card, at fourteen feet two inches.

This boy before coming to me had had diathermy and other treatment, which perhaps improved his vision temporarily but did not last. He explained to me that the electric treatment which was given him for the improvement of myopia caused a nervous affliction of the body. The advice given Bobby to keep up the good vision obtained through our treatment was to play ball, watch the ball as he threw it to the other player and then blink and sway a little bit as the ball was thrown back to him. I gave him a little demonstration of this in the office, which he enjoyed. I told him to play other games where only two objects were used, one a ball and the other a goal or certain point where the ball should be thrown. **The old fashioned horse-shoe game is not only relaxing but it gives the patient an opportunity to practice shifting.**

Betty and Bobby could not be treated exactly alike because their minds were not alike. Each had to be studied carefully before the treatment could be successfully given. If the doctor or student does not carry out this idea the patient has little chance to be relieved entirely of eyestrain.

Notice

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+ We wish to inform our subscribers that the Better Eyesight Magazine will be discontinued after the June, 1930, issue. This will enable Dr. Bates and Mrs. Bates to devote more time to the writing of new books on treatment alone for which there has been a very great demand during the past year. Subscriptions for the remaining months, however, are being received. +

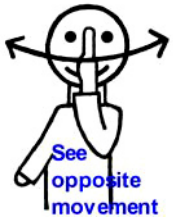
BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

FEBRUARY, 1930

See Things Moving

When the sight is perfect the subject is able to observe that all objects regarded appear to be moving. A letter seen at the near point or at the distance appears to move slightly in various directions. The pavement comes toward one in walking, and the houses appear to move in a direction opposite to one's own. In reading, the page appears to move in a direction opposite to that of the eye. If one tries to imagine things stationary, the vision is at once lowered and discomfort and pain may be produced, not only in the eyes and head, but in other parts of the body.



This movement is usually so slight that it is seldom noticed till the attention is called to it, but it may be so conspicuous as to be plainly observable even to persons with markedly imperfect sight.

+If such persons, for instance, hold the hand within six inches of the face and turn the head and eyes rapidly from side to side, the hand will be seen to move in a direction opposite to that of the eyes. If it does not move, it will be found that the patient is straining to see it in the eccentric field. By observing this movement it becomes possible to see or imagine a less conspicuous movement, and thus the patient may gradually become able to observe a slight movement in every object regarded. Some persons with imperfect sight have been cured simply by imagining that they always see things moving.

The world moves. Let it move. All objects move if you let them. Do not interfere with this movement, or try to stop it. This cannot be done without an effort which impairs the efficiency of the eye and mind.

The Sway

***By* W. H. BATES, M.D.**





Sway left and right, up and down, diagonally, forward and backward and see opposite movement of objects in the visual field. Relax and blink.

WHEN one imagines stationary objects to be moving in the same or opposite direction to the movement of the head or eyes when both heels are resting on the floor, it is called the sway. When both heels are lifted from the floor it is not called the sway, but the swing. The apparent movement of stationary objects may be horizontal, vertical, or at any angle. The sway is a very valuable thing to use because it promotes relaxation or rest much better than many other methods. In fact, so general is this conclusion that I always try to have every patient practice the sway immediately upon starting treatment.

The sway may be practiced rapidly or slowly and with a wide or a narrow motion. When the sway is practiced, distant objects are covered more or less completely, which explains why rest is obtained. When the sway is used properly, all stationary objects regarded appear to be moving. Whether the sway is short or long, if practiced properly, the vision is usually improved after other methods have failed.

Distant objects move in the same direction the eyes, head/body move to and close objects move in the opposite direction.

In reality, distant objects appear to move opposite but the movement is so slow that they appear to move opposite especially when there is a close object in front of the distant object.

Patients suffering from insomnia are much benefited by the sway. They soon become able to sleep at night and a maximum amount of rest is obtained. Most people with imperfect sight have a constant strain and tension of nearly all the muscles of the body. The nerves are also under a strain and their efficiency is frequently lost. By practicing the sway properly, fatigue is relieved as well as pain, dizziness, and other symptoms. The sway always brings about a relief from the effort of trying to see, staring, or concentration.

The normal eye needs relaxation or rest; it does not always have normal sight. When it is at rest it always has normal sight. Things which are done by the patient to improve the sight do not always succeed. There are many ways of improving the sight by the sway, provided it is practiced correctly. I remember a patient who came to me about ten years ago, who went to London to obtain relief from a severe and constant pain in her eyes and head. She could obtain no relief in London and was advised to come to me. When I saw her, she was in a pitiful condition from the constant pain which was often present every hour during the day and at night. Many people suffer from pain unconsciously during the night and the characteristic symptom is pain the first thing in the morning as soon as the patient becomes conscious.

(Trying to see all areas of the visual field at the same time, central and peripheral field, equally clear. Placing the object of visual attention in the peripheral field, moving the eyes and head/face in opposite directions. These are all types of diffusion, eccentric fixation, the opposite of central fixation.)

This patient had eccentric fixation simultaneously practiced unconsciously most of the time when the patient was conscious. She was examined and shown that when she practiced the sway with her eyes moving in one direction and her head in the opposite direction, the result was a very bad strain which was very painful. This is another illustration of the fact that many things which can be practiced properly can also be practiced improperly. I do not know of a pain which is more severe than that which happens when the eyes are moved in one direction while the body moves in the opposite direction. This method of practicing the sway is to be condemned because of its bad results in producing pain and other symptoms. When this patient practiced the sway properly, her pain disappeared.

A physician wrote to me about his ten-year old son. The vision of the left eye was good, but the vision of the right eye was very poor because the **center of sight was gone.** As a result of an injury his central vision was lost and one could see that the retina was destroyed, forming a disk of about one quarter of the size of the papilla of the optic nerve. When examined with the ophthalmoscope it was found that the center of sight had been destroyed over an area of one eighth of the size of the papilla of the optic nerve. The boy was treated for about six months and much to my surprise his vision improved and became normal in the injured eye by the practice of the sway, without any other treatment.

A third patient was treated for central **scatoma**. The vision of the left eye was normal but that of the right eye was very poor. The principal cause of her defective sight in the right eye was inflammation of the retina and choroid. She had called on many physicians and most of them told her very positively that she would become blind in the right eye and later on blind in the left eye. When she came to see me she was almost frantic with apprehension and with tears in her eyes she begged me to help her. I was having very good results with the sway and knowing very well that the sway could do her no injury I did not hesitate in having her practice it. In two weeks she was cured and had perfect sight in each eye.

About fifteen years ago an elderly woman was ushered into my office. It seems that she had traveled all over the country consulting prominent ophthalmologists, but had had no success in obtaining relief. She gave a history of constant pain, constant fatigue, inability to sleep at night, and many other symptoms which she could not describe. She told me that if she could only find out what was wrong with her, she might by some possibility obtain relief. She had so many and varied symptoms of discomfort that she could not discover the cause of her trouble. Every doctor who examined her admitted that he did not know what was wrong. Her sight for distant vision was good, and although over fifty years of age she had no presbyopia and could read diamond type at six inches rapidly, easily, without discomfort. In fact there were times when she could read all night without fatigue, but suffered from some discomfort that she could not describe. In other words she did not know what was the matter with herself.

Blindness was expected by some doctors in the course of two or three years. Some other doctors believed that she could live for only one year without becoming totally blind. I told the lady that I did not know what was the matter with her either, but I believed that she could be cured even without any diagnosis being made, or without discovering the cause of her trouble. Then I said to the lady: "Place your finger about opposite the lower part of the chin and then move your head and eyes from side to side. When you do it properly, you can imagine the finger to be moving and there will come to you a relief from all the various troubles from which you suffer." She started to do as I suggested and by watching her very closely it was quite easy to keep her head and eyes moving as they should. This sway was a great relief to all the troubles of which the patient complained and it gave complete relief to many discomforts from which she had suffered.

A woman from Washington came for treatment of **disease and blindness of the central part of the right eye.** The left eye was nearly normal, with good vision. She had been told that the right eye was inflamed to such an extent that it was probable that it would require a long time, many months, before the symptoms were relieved. When she moved her head and eyes a short distance from side to side, the test card five feet away and other stationary objects appeared to move in the opposite direction. But when her

right eye moved to the left while her head was moved in the opposite direction, pain and imperfect sight were produced. The sway was practiced daily and in a few weeks her vision became normal in both eyes.

Why Patients Fail

***By* EMILY A. BATES**

ON PAGE 15 of my book, "Stories From The Clinic" I have suggestions which if read by patients would help them to do the right thing while taking treatment for their eyes. Suggestion Number One reads as follows: "If the vision of the patient is improved under the care of the doctor, and the patient neglects to practice, when he leaves the office, what he is told to do at home, the treatment has been of no benefit whatever. The improved vision was only temporary. Faithful practice permanently improves the sight to normal." This does not mean one must work hours at a time, practicing the advice given for the improvement of sight, but it does mean that he should devote as much time as possible to practice and not make hard work of it.

We have repeated in a great number of articles that it only takes a minute to test the sight with a test card and if the patient practices a few minutes in the morning, it will help a great deal during the day. If at any time during the day, a strain is produced for some reason or another, the memory of one of the test card letters which was seen perfectly usually relieves all symptoms of strain and discomfort. Sometimes relief is only for a minute or two, but if the patient can remind himself to do this several times a day, the improved vision remains for a long time. Even with errors of refraction and organic diseases, the symptoms are lessened by the memory of a known letter or a known object seen clearly.



The color green relaxes the mind, eyes. Carry a green emerald, rhinestone and shift on it close to the eyes. Relaxing and improves close and distant vision.

Most people, even those who have no trouble with their eyes, feel relieved from strain and discomfort of other parts of the body by the **memory of some pleasant scenery or beautiful colors which are remembered without effort**. There are certain shades of color which do produce mental strain and at the same time cause a lowering of the vision. Green, no matter what shade of green it may be, is usually a rest and relaxation to the mind and eyes. Personally I can relax immediately if I am suffering from mental strain, which is frequently the case, by thinking of a Nile green shade or any object of that color.

Perhaps I can make myself understood better by telling about a case of hypermetropia in a woman, fifty-one years old, whose sight was poor for the near point as well as for the distance. She suffered from a great deal of pain and discomfort in her eyes at times. I tested her sight for colors, using different shades of yarn which I held exposed to her view at a point about ten feet from her eyes. She wore a light colored dress which had the combined shades of brown, tan, and yellow. She mentioned the different shades of yarn as I held them up for her to see and when I placed before her a shade of black yarn, she said: "Isn't it funny that I don't care for black especially."

Here was a problem. For years the doctor had helped patients by the memory of black, usually remembered by the patient with his eyes closed. For some time we had made good progress in benefiting patients' eyes by having them remember colors with their eyes closed and imagining one period blacker than another and then vice versa. I had planned to treat this woman in this way, using a colon as an object. I immediately removed that thought from my mind and planned to help her in some other way. Some of our test cards have red and green lines which are sometimes a great help in improving the patient's vision for the smaller letters at a distance of ten feet or further. Testing her with these cards and improving her sight with the memory of the green colored line not only helped the patient's eyes, but also relieved the symptoms of pain and discomfort that she had had for some time.

At this patient's second treatment she gave me a report of the progress she had made while practicing at home. She enjoyed drawing, which I advised her to continue to do, and then for pastime while she was practicing she used different colored crayons for the drawings. She brought the drawings with her, and we thought they were beautifully done. At her second visit she wore a black gown, and all through her treatment I had to listen patiently for twenty minutes to her account of the sadness she had had through her life, of the care that some of the members of her family were to her, and of how hard it was for her to remain cheerful.

I tested her sight and found it about the same as it was before I treated her in the beginning. I made the room unusually bright by using the thermolite as well as the ceiling lights which we have in our office. I then started testing her sight for colors at fifteen feet, using the yarns again and while it took a little longer to have her mention the colors correctly, I did succeed finally in making her forget about her family troubles and worries. I wanted to be sure that I was right about the change of temperament because of her black gown, so mentioned it to her and told her to remember black while palming. Instead of being quiet she talked incessantly of her pain and the operations that she had had from time to time and the only way I could quiet her was to tell her that I had several of them myself but that I did not worry about them any longer. I asked her if she had read Irvin Cobb's book on operations and told her some of the funny stories which were in his little book. She soon found out that I did not care to discuss operations.

What I want to explain at this point is that color has a great deal to do with mind strain. I believe that people are much happier now that brighter color combinations are being used in our homes.

Modern teachers state that a dislike for certain colors can be caused by left and right brain hemisphere imbalance, one hemisphere or part of the brain not as active as the other hemisphere/areas of the brain. A unpleasant past or present experience that is associated with a certain color can also cause dislike for the color. Removing the negative thoughts, emotions associated with the color enables the person to enjoy the color. A lady that disliked the color yellow had worked in a factory where most of the toy items were yellow. She was abused by employees at the factory. After practicing deep relaxation, left and right brain hemisphere activation and integration exercises, color treatment, replacing the negative thoughts, emotions associated with the factory with positive ones, finding a better job and associating the color yellow with the shiny, bright golden color of the pollen in the center of a dandelion in the sunlight; she came to like and generative a positive feeling when seeing the color yellow.

Exposing the person to a color they dislike, in a positive way can activate the brain hemisphere/area of the brain that is suppressed for equal activation and integration of the left and right hemispheres and bring to the surface unpleasant thought emotions associated with the color, enabling their release and replacement with positive thought, emotions and clear vision.
Dr. Bates and Emily's method of using colored yarn, crayons, remembering, imagining colors is an original version of modern Natural Vision Improvement Color Treatment.

Sometime ago I had a patient over sixty years of age who had double vision almost all the time. Large objects were seen single but small objects were always seen double. Test card reading was not easy for this patient so I had to conceal every letter on the test card with the exception of one. After he mentioned that one correctly it was covered over and another letter was exposed to view. If he looked at a card longer than a fraction of a second, without turning his head either to the right or to the left, he would

always see the letter double. Shifting quickly from a letter to the blank wall on either side of our room helped him to see the letter single and not double when he looked at it again. He was told to do the long shift when he practiced with the card and to shift only an inch or two to the right or to the left whenever he was looking at anything else either up close or at the distance.

This patient did not come regularly for treatment, but he came off and on for about a year, when he was finally cured of his double vision. A variety of flowers which were growing near his home helped when he was outdoors where he practiced the sway of the body, moving from left to right and always remembering to blink. As he did this he saw the flowers as they were, instead of seeing them double which had been his trouble for many years.

Tension in/on the muscles, nerves, vertebrae in the neck, can disrupt eye muscle, eye, brain, ear function resulting in unclear vision, double vision... Relaxation, movement of the neck removes the blur and double vision.

At the present time we have a little **child** taking treatment for **blindness** in one eye. Both eyes have **cataract**, but the left eye also has **scar tissue in the cornea**. Apparently there was not any sight in the left eye because there was no red reflex seen when the ophthalmoscope was used. Toys of different colors were placed before her and as she mentioned the names of each of the animals they were placed on the floor at a distance of five feet or farther. At this distance she sometimes made a mistake in naming the animal. The harder she tried to see the toy at the distance, the more blind she became.

I taught her the long swing, having her shorten the swing to a short sway of the body and advising her to blink as she swayed. She then became able to name the animals correctly as they were placed a few feet farther, but only when she mentioned the color of the toy first. Just by blinking as she swayed she remembered for part of a minute the color of the animal she was asked to mention. When she was not reminded to blink or to keep up the sway she made an error in naming the animal.

It is good to have someone in the room while such patients are under treatment, especially if they are to help the patient away from our office. They can understand very readily why some patients fail when they stare even for only a fraction of a second. It is necessary constantly to remind the patient that in order to bring about a permanent benefit, he must not fail to do as he is advised when away from the office.

Failure to remember a color with the eyes closed lowers the vision and causes the sight to become imperfect. Failure to take time enough to practice or to read the chart every day is a mistake and causes failure. Daily practice counts, no matter how little time one has. After all, the Bates Method is eye education. To miss one day in the cure of the eyes when they need attention for the improvement of sight is much like failure to study a certain lesson each day in school, or to attend to any work which requires daily study or practice. In most cases when improvement is made in the sight by a teacher of eye education it is only a temporary one, but it is enough to encourage the patient to keep on with the practice until the sight becomes normal. Patients who are cured in one visit are those who can retain the relaxation and rest which is the foundation of the method.

Eye diseases such as atrophy of the optic nerve, iritis, glaucoma, and cataract, are always benefited when the patient does not neglect to practice every day. The sight of patients who suffer from organic diseases is usually very poor. All organic diseases become less when the sight improves by relaxation and rest.

Case Report

(Editor's Note—We believe that the following letter will prove of interest to our readers. Dr. Rath, of 115 Francis St., Jackson, Mich., has recently completed a course of instruction and, as the following report of a case indicates, he is already doing splendid work.)

Dear Dr. and Mrs. Bates:

It just occurred to me that you might be interested to know how I am coming on with the little boy that had so many doctors. We call him "**the little boy of the forty doctors**." His name is Stanley and when Stanley's father first came to me he had just about given up hope. He remarked that Stanley lived in a world all his own. He did not play much with other boys because he could not see. Stanley spent most of his time with his mother when not in school.

The school physician placed Stanley in the "Eye Saving School." They use great large letters in all their books.

Stanley's father was not satisfied with his last doctor and really did not know what to do. He talked to the superintendent at the factory where he works about it, and he sent him to us for advice. Having just returned from No. 18 E. 48th Street, full of inspiration, I told him to bring the boy down and let me look at him. He has now been to see me just ten times. He is now reading the bottom line on the C chart, the white card with black letters, 10/10 vision, and the bottom line on the little hand chart. He does not do this very rapidly, but he is doing it.

I wish you could see him do the "long swing." He does this with a grace that is charming.

The last time they came, his mother told me that Stanley's complexion had actually changed since he began the "Bates System." The neighbors are noticing the great change in the lad, and the mother and father want to send him to the regular school. I don't know how we will come out in this respect as they likely will not believe he can see well enough. I had him bring with him a book that they use in the regular school, and he reads it without the least difficulty. He plays with the other boys, and he tells me, in playing ball, he not only sees it, but he can hit it too.

Every time Stanley comes to see me he is just a little better. When I first saw him he was downcast; now he is happy and buoyant.

I am doing wonderfully well with the "Bates System" and if it were not for making a tedious and long letter I would write you more.

With best wishes,

Sincerely,
(Signed) John A. Rath.

P.S.—I neglected to state that when Stanley was first brought to me he was seeing all colors of the rainbow, especially green. This has all ceased.

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Announcement

Dr. Bates takes pleasure in announcing that the following have recently completed courses of instruction under him and he highly recommends them to anyone desiring their services:

Miss Clara M. Brewster,
Studio 6, Aquila Court,
Omaha, Nebraska.

Mr. Fred Baechtold,
633 Hudson Ave.,
West New York, New Jersey.

Mr. Baechtold will be pleased to visit those patients who desire to receive treatment at home. Appointments can be arranged by telephoning him at Palisade 7735.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MARCH, 1930

How Not to Concentrate

To remember the letter O of diamond type continuously and within effort proceed as follows:

+Imagine a little black spot on the right-hand side of the O blacker than the rest of the letter; then imagine a similar spot on the left-hand side.

+ Shift the attention from the right-hand spot to the left, and observe that every time you think of (look at) the left spot the O appears to move to the right, and every time you think of (look at) the right one it appears to move to the left. This motion, when the shifting is done properly, is very short, less than the width of the letter. Later you may become able to imagine the O without conscious shifting and swinging, but whenever the attention is directed to the matter these things will be noticed.

+Now do the same with a letter on the test card. If the shifting is normal, it will be noted that the letter can be regarded indefinitely, and that it appears to have a slight motion.



Imagine a black dot on the left and right sides of a fine print letter O. Shift back and forth, left and right on the dots and see the O move in the opposite direction the eyes move to. A very short movement, less then the width of the letter. Shift right, the O moves left. Shift left, the O moves right.

To demonstrate that the attempt to concentrate spoils the memory, or imagination, and the vision:

+Try to think continuously of a spot on one part of an imagined letter. The spot and the whole letter will soon disappear.

+Or try to imagine two or more spots, or the whole letter, equally black and distinct at one time. This will be found to be even more difficult.

+Do the same with a letter on the test card. The results will be the same.

Staring = Trying to see/look at all parts of a object at once, without shifting part to part, (staring, not moving the eyes) or: Looking at only one part without shifting to other parts (another type of staring) causes strain and blur.

Squint and Amblyopia: Their Cure

***By* W. H. BATES, M.D.**

SQUINT, or strabismus, is that condition of the eyes in which both eyes are not directed to the same point at the same time. One eye may turn out more or less persistently while the other is normal (divergent squint), or it may turn in (convergent squint), or it may look too high or too low while deviating at the same time in an outward or inward direction (vertical squint). Sometimes these conditions change from one eye to another (alternating squint), and sometimes the character of the squint changes in the same eye, divergent squint becoming convergent and vice versa. Sometimes the patient is conscious of seeing two images of the object regarded, and sometimes he is not. Usually there is a lowering of vision in the deviating eye which cannot be improved by glasses, and for which no apparent or sufficient cause can be found. This condition is known as *amblyopia* and is supposed to be incurable after a very early age, even though the squint may be corrected.

Operations, which are now seldom advised, are admitted to be a gamble. According to Fuchs,[1] "their results are as a rule simply cosmetic. The sight of the squinting eye is not influenced by the operation, and only in a few instances is even binocular vision restored." This is an understatement rather than the reverse, for a desirable cosmetic effect cannot be counted upon, and in not a few cases the condition is made worse. Sometimes the affected eye becomes straight and remains straight permanently, but often, after it has remained straight for a shorter or a longer time, it suddenly turns in the opposite direction.

I myself have had both successes and failures from operations. In one case the eyes not only became straight, but binocular single vision—that is, the power of fusing the two visual images into one—was restored, and when I last saw the patient, thirty years after the operation, there had been no change in these conditions. Yet when I reported to the ophthalmological section of the New York Academy of Medicine that I had cut away a quarter of an inch from the tendon of the internal rectus of each eye, the members were unanimous in their opinion that the eyes would certainly turn in the opposite direction in a very short time. In other cases the eyes, after remaining straight for a time, have reverted to their old condition, or turned in the opposite direction. The latter happened once after an apparently perfect result, including the restoration of binocular single vision, which had been permanent for five years. The consequent deformity was terrible. Sometimes I tried to undo the harm resulting from operations, my own and those of others, but invariably I failed.

Glasses, prescribed on the theory that the existence of errors of refraction is responsible for the failure of the two eyes to act together, sometimes appear to do good; but exceptions are numerous, and in many cases they fail even to prevent the condition from becoming steadily worse.

The fusion training of Worth is not believed to be of much use after the age of five or six, and often fails even then, in which case Worth recommends operations.

Fortunately for the victims of this distressing condition, **their eyes often become straight spontaneously**, regardless of what is or is not done to them. More rarely the vision of the squinting eye is restored. If the sight of the good eye is destroyed, the amblyopic eye is very likely to recover normal vision, often in an incredibly short space of time. In spite of the fact that the text-books agree in assuring us that amblyopia is incurable, many cases of the latter class are on record.

The fact is that both squint and amblyopia, like errors of refraction, are functional troubles, originating entirely in the mind. Both can be produced in normal eyes by a strain to see, and both are immediately relieved when the patient looks at a blank surface and remembers something perfectly. A permanent cure is a mere matter of making this temporary relaxation permanent.

Permanent relaxation can be obtained by any of the methods used in the cure of errors of refraction, but in the case of young children who do not know their letters these methods have to be modified. Such children can be **cured by encouraging them to use their eyes on any small objects that interest them**. There are many ways in which this can be done, and it is important to devise a variety of means so that the child will not weary of them. For the same reason the presence of other children is at times desirable. There must be no compulsion and no harshness, for as soon as any method ceases to be pleasant it ceases to be beneficial.

The needle, the brush, the pencil, kindergarten and Montessori material, picture books, playing cards, etc., may all be utilized for purposes of eye training. At first it will be necessary to use rather large objects and forms, but as the sight improves the size must be reduced. A child may begin to sew, for instance, with a coarse needle and thread, and will naturally take large stitches. As its sight improves a finer needle should be provided, and the stitches will naturally be smaller. Painting the openings of letters in different colors is an excellent practice, and as the sight improves the size of the letters can be reduced. Map drawing and the study of maps is a good thing, and can be easily adapted to the state of the vision. With a map of the United States a child can begin by picking out all the states of a particular color, and as its sight improves it can pick out the rivers and cities. In drawing maps it can proceed in the same way, beginning with the outlines of countries or states, and with improved vision putting in the details. A paper covered with spots in various colors is another useful thing, as the child gets much amusement and benefit from picking out all the spots of the same color. With improved vision the size of the spots can be reduced and their number increased.

Many interesting games can be devised with playing cards. "Slap Jack" is a good one, as it awakens intense interest and great quickness of vision is required to slap the Jack with the hand the moment its face appears on the table.

These ideas are only suggestions, and any intelligent parent will be able to add to them.

Case Reports

CASE 1

Several years ago, a woman came to me with her daughter, aged ten. The child was suffering from well marked alternate internal squint. Sometimes the right eye would turn in so far that the pupil was covered over by the inner corner of the lids. At other times, the child was observed to be afflicted with internal squint of the left eye. Her mother told me that they had been to several large cities, including the capitols of Europe, where she had hoped to obtain a cure for her daughter's squint.

The child was a great reader and had read many books. Her memory was unusually good. She also had a very good imagination. She could read the ten line of the Snellen test card at more than twenty feet in a good light. When the light was poor and her vision was tested with the aid of a strange card, she was able to imagine correctly each of the four sides of any letter. For example, the letter "E" was the fourth letter on the fifth line of the test card. When the test card was placed thirty feet away in a poor light, she was unable to distinguish the letter as a whole.

After closing her eyes and covering them with the palms of both hands (palming), she imagined the left side of the "E" to be straight. When she imagined the left side of the "E" was curved or open, she strained. She imagined the top straight, and the bottom straight, and the right side open, which was, of course, correct. When any of the sides were imagined wrong, she always strained and was more or less uncomfortable.

She was then asked to imagine the fourth letter on the sixth line. She was still practicing palming. She was able to imagine the left side of the unknown letter to be straight, the top straight, the bottom open, and the right side open. She imagined that the letter was an "F" and was correct.

She was then tested with diamond type at about ten feet from her eyes, a distance at which it was impossible for her to read the letters. She was then told to palm. While palming, she was asked to imagine the first letter of the fourth word, on the fifteenth line of the diamond type. With her eyes closed and covered, she was able, without effort, by imagining each of the four sides correctly to demonstrate a letter "M." She imagined this letter so perfectly that she was able also to imagine other letters of the same word correctly. The exercise of her imagination was continued for an hour during which time she imagined correctly a number of lines of the diamond type. The result was very gratifying, because the squint disappeared in both eyes and the relief was manifest two days later.

The mother supervised the imagination of the fine print for half an hour daily for many days and weeks, with the result that at the end of six months, the child's eyes were still straight. The treatment was then discontinued, and at the end of five years, her eyes still remained straight.

CASE 2

A girl, aged fourteen, had vision of the right eye of 3/200 while that of the left eye was 20/10. When she was two years old the tendon of the muscle which turned the right eye inwards was cut. The result was variable. Sometimes the eye turned in as before, but there were periods when the right eye was straight. Relaxation methods were employed daily with success and the squint became less when the vision improved.

The method which helped the most was to improve the vision of the amblyopic eye by remembering or imagining perfect sight of one letter of 20/10 with the eyes alternately closed and open. The vision of the right eye improved until it became 20/10. The patient was also encouraged to imagine fine print six inches from the right eye. When she succeeded in improving her vision for twenty feet and later her ability to read fine print at six inches, the squint disappeared. Both eyes focused on one point at the same time.

Central fixation or seeing best a letter or other object regarded (in the center of the visual field) while all other points are seen worse (in the peripheral field) is a successful method of curing squint and improving the sight in cases of squint.

CASE 3

A very remarkable patient, a girl aged eight, was treated more than fifteen years ago. The vision of the right eye was 2/200 while that of the left eye was 10/200. The right eye turned in most of the time. The vision of the left eye was improved without glasses by alternately resting the eyes.

An attempt was made to teach her how to see best where she was looking. She very soon acquired the ability to practice central fixation when the larger letters were regarded. The child became much interested when she realized that her eyes felt better, while the vision and squint improved. She practiced central fixation on smaller letters and other objects. The strain which was manifest by the contortions of the muscles of her eyes, face, and other parts of her body disappeared. Her voice became more musical with the improvement of her vision and the subsidence of the squint.

Microscopic Vision

It was remarkable how well she became able to practice central fixation on very small letters and other objects. She would hold a glass slide on which a small drop of blood was mounted, and claim that **she saw the red cells, the white cells, and other minute particles with her right eye while the glass slide was pressed against her eyelashes.** She was able to read each letter and period in photographic reductions of the Bible, by central fixation.

Many people have complained that they could not see black or imagine a black period for an appreciable length of time. This patient, when palming, stated that black was seen and that with the aid of central fixation even the smallest black periods were seen but they were always moving a distance nearly equal to the width of the period. An effort to see always failed. Distant objects were seen, by central fixation, as far off as it was possible to imagine them.

This patient was able to produce at will, consciously, and continuously, internal squint of the right eye with the left eye straight or could keep the right eye straight while the left eye turned in.

Cases of Squint in the Clinic

***By* EMILY A. BATES**

AMONG the numerous letters we receive from correspondents there was one which drew my attention. Reports of cases are usually from those who have myopia or presbyopia. Cases of squint are less numerous. Most of the patients who have been treated for this trouble have been children whose ages ranged from two years to sixteen years and sometimes up to eighteen. The older ones are usually high school boys. There are just as many cases of squint among girls of school age as there are among boys, but those who have come to me for treatment were mostly boys.

The letter which caught my attention was from a man about 40 years of age who had **squint of the left eye.** This eye also had **myopia** and the **other eye was farsighted.** The man did not mention this in his letter, but explained how difficult it was for him to do his work under constant strain because of his eye trouble. He had subscribed to the "Better Eyesight" magazine and after reading the reports of squint cases, he mustered up courage enough to write and ask for help. To begin with he had very little money to pay for treatment and yet he did not wish to be a charity case. He had lost his wife when his two sons were quite young. Because of his affliction he had no desire to have a housekeeper in his home to take care of himself and his children. His boys were sent out to board but they were dissatisfied and this worried him. This worry caused still more mental strain to the poor man.

When he first wrote for help we could not admit him into our clinic at the Harlem Hospital because patients who lived outside of the hospital district were not admitted there. We gave him a little help for a while and in each letter he wrote he sent a grateful message for the help we were giving him. People who have not been to Dr. Bates or myself are not encouraged to take up correspondence treatment because it is unsatisfactory and we cannot diagnose a case properly under such conditions. Many have been helped by just reading our books, but they are usually the myopic and presbyopic cases.

We gave this patient an appointment for office treatment and with our help he was able to go on with his work and do it more easily and with less strain. Being employed every day and living about forty miles outside of New York City, he could come but once a week. Anyone who understands the treatment of squint cases will realize how difficult it is to make progress with a patient under these conditions. He was a temperamental type and most sensitive because of his eye trouble. For years he had avoided looking at people's faces and when I first met him his voice trembled when he answered my questions. I knew that mental strain was his main trouble.

I decided that the first thing to do was to speak to him in as low and gentle a voice as possible and see what effect that would have upon him. It was easier to speak to him with my eyes closed and while my eyes were closed I asked him to close his. I noticed that having our eyes closed while we talked had a soothing effect upon him because his voice sounded more relaxed and he was pleased because I spent enough time with him to listen to his troubles and the difficulties he had in taking time to practice with his eyes.

His vision for fine print is now normal at six inches, although it was much impaired when he first came for treatment. His vision for the distance improved but only at times did he have normal vision. Other cases of squint have been treated at the clinic but none received the care that he did because it was not required. The mental strain that he had almost constantly was the principal trouble and a stumbling block in the path of permanent benefit within a reasonable time.

In the beginning of the treatment, when I pointed to a letter of the test card at ten feet he would see it and if he forgot to blink regularly or stared at the letter it would disappear entirely and the test card was immediately a blank to him. The methods for treating him were varied from time to time because it was necessary on account of his mental condition. His vision first improved but then he seemed to lose ground and he stayed away from the clinic for a while. When he again returned he could not talk to me for quite a while nor could I treat him until he had finished weeping, which was an unusual sight to see at the clinic.

It is marvelous the fortitude and the splendid way in which some of our clinic folks go about the cure of their eyes. They have so little time to spend for themselves and yet they find the necessary time, even though it is early in the morning and late at night, to practice as they are directed to do. Patients at the Harlem Hospital Clinic have an advantage over patients in our clinic because they may be seen and treated three days each week, but this poor man had to wait until Saturday before he could come and then there were times when his work prevented him from keeping even these weekly appointments. The day he wept he told me that he had contemplated suicide and was about to do so when he remembered my voice and what I said to him at one time, which was that even though his eyes were crossed, others did not notice it as much as he was conscious of it himself. He also remembered what I said about being a coward and not being brave enough to face life as he had to face it, and that there were others who were less fortunate than he was.

I hope that those who have taken up the Bates Method and are practicing it seriously will have an extra amount of consideration for a man like that. His condition could not be reached or improved until he was relieved of tension and strain. After that was accomplished he improved steadily; he still comes for treatment occasionally. He can now read diamond type at six inches with his left eye and right eye separately and can read the fifteen line of the test card with the left eye at ten feet. Only at times is the squint noticeable.

Another squint case which we had lately was that of a little girl aged eight. She seemed to respond right from the start just for the sake of a smile. When I first became acquainted with her, she looked like a very serious little person who seldom smiled. When I greeted her with a smile and said that I could easily help her condition if she would co-operate with me she settled herself comfortably in the large arm chair where I placed her and after I had tested her sight for the distance and told her that closing her eyes to rest them was a benefit to her, she obeyed me. Her vision when tested on November 24 was 15/10 in the right eye and 15/100 in the left eye, the eye with squint. By practicing the sway and blinking, her vision improved to 15/20 in the left eye the first day, a temporary improvement.

A doctor who was especially interested in this case wrote me a letter asking me if I would see what I could do for her. In his letter he told me that glasses did not help or improve the squint and that her duties at school were a great punishment to her because she could not see the blackboard. While treating her in the beginning I used but one test card, which was a black one with white letters. Closing her eyes, remembering her best doll, and explaining to me how it was dressed, improved her vision considerably for the smaller letters of the card. Shifting while she was seated in her chair, looking first at a blank wall and then at the test card also helped to improve her vision, and as her father looked on he commented upon how straight the eye was as she shifted from the wall to the test card.

Purposely I had her stare to see the letters of the card without shifting and immediately her eye turned in as it had when I first tested her sight. Her father was given directions on how to take care of her eyes at home and she got along very nicely when all of a sudden our little girl stayed away and we did not see her for some time. She had retained the better vision she had shown upon her previous treatment and she again took up her eye work very seriously when she returned. Her sister, who is a few years older than she, came with her from time to time and learned how to help Elizabeth at home. A record was kept, not as regularly as we had wished, but it was enough to convince us that she was doing her part at home. The last time she came she read all of the card at normal distance 10/10 and both eyes were straight during the time she read the card.

When such cases are under treatment we cannot emphasize too strongly that **using the poor eye or the eye with squint for a period of time each day while the good eye is covered with a patch is a benefit to the poor eye and lessens the squint**. I know children do not like to wear a patch, because no one cares to have the eye with good sight covered while the eye under treatment is called upon to see everything for a length of time. At first the patch should be worn for five minutes each day and then the time gradually increased until the patient is able to wear the patch all day long. Every morning and night the test cards should be read with both eyes together and then with the poor eye alone, having the good eye covered.

I do not know of anything which helps more than the long swing, which can be practiced fifty or one hundred times by the patient each morning and night. After the long swing I usually have the patient shorten the swing so that he is able to read one letter at a time of the test card and then sway the body to the left or to the right, whichever is found to be best for the patient. If the right eye turns in it is best to sway to the right and then to the test card which is placed directly in front of the patient. In this way both eyes move at the same time in the same direction and there is no squint visible while the swing and the reading of the test card is going on. When the squint is again noticeable while reading the card and practicing the half swing, it is best to draw the card up a little

closer where the patient has less strain while reading. The squint will then be less and the patient can practice better without any discomfort.

The reason why some cases of squint take longer than others is because the patient does not practice enough at home every day. Cases of squint in adults as well as in children need not only supervision but encouragement from those who are fortunate enough to have good sight. No one with imperfect sight ought to try to help such cases at home or away from our office because it cannot be done successfully. The unconscious strain which is evident when the sight is not perfect always produces more strain in the squint case which is under treatment.

One cannot encourage the patient enough to blink often, do the long swing morning and night as Dr. Bates advises often in his articles in this magazine, and if possible to do the long swing 100 times at least twice daily. **While the long swing is being practiced, both eyes move together and at such times both eyes are straight.** Every day one should notice how long the eye remains straight during treatment. If the eyes remain straight for just a few minutes longer from day to day the improvement will soon be noticed by the patient and this will encourage him to do more practicing.

Announcements

Dr. Bates wishes to announce that the following have recently completed courses of instruction and are authorized to practice the Bates Method:

Miss Mary E. Wilson,
2538 Charming Way,
Berkeley, Calif.

Miss Wilson is the principal of the Anna Head School for Girls in Berkeley and plans to introduce the method into the school for the prevention and cure of imperfect sight in her pupils.

Mr. Harold E. Ensley,
112 West 104th Street, Tel. Academy 6941,
and 45 W. 45th Street, New York City, Tel.
Regent 9483.

Mr. Ensley was formerly a student at Princeton University.

It has come to our attention that certain parties not connected with Dr. Bates in any way are desirous of publishing a periodical called "Better Eyesight." We wish to say that any such use of this title is not with the permission of Dr. Bates or the Central Fixation Publishing Company and that any magazine issued under this title, other than the present one, is not published in the interests of the Bates Method. The title "Better Eyesight" is protected against illegal usage.

We wish to announce that after June, it will be necessary to raise the price of bound volumes of "Better Eyesight" They are now listing at $3.00 per volume and begin with the year 1923. They contain much valuable information and we would suggest that subscribers secure any volume or volumes which they may desire before the price is raised.

We desire to inform our subscribers that the "Better Eyesight" magazine will be discontinued after the June, 1930, issue. This will enable Dr. Bates and Mrs. Bates to devote more time to the writing of new books on treatment alone for which there has been a very great demand during the past year. Subscriptions for the remaining months, however, are being received. We request that all those who desire to be notified upon the publication of new books kindly send us their names and addresses, which will be kept on file.

March, 1930

1 - "Text-Book of Ophthalmology," authorized translation from the twelfth German edition by Duane, p. 795.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

APRIL, 1930

The Optimum Swing

The optimum swing is the swing which gives the best results under different conditions.

Most readers of this magazine and of "Perfect Sight Without Glasses" know about **the swing**. The swing may be spontaneous; that is to say, when one remembers a letter perfectly or sees a letter perfectly and continuously without any volition on his part he is able to imagine that it has a **slow**, **short**, **easy swing**. **The speed is about as fast as one would count orally. The width of the swing is not more than the width of the letter**, and it is remembered or imagined as easily as it is possible to imagine anything without any effort whatsoever. The normal swing of normal sight brings the greatest amount of relaxation and should be imagined. When one is able to succeed then it becomes the optimum swing under favorable conditions. Nearsighted persons have this normal optimum swing usually at the near point when the vision is perfect. At the distance where the vision is imperfect the optimum swing is something else. It is not spontaneous but has to be produced by a conscious movement of the eyes and head from side to side and is usually wider than the width of the letter, faster than the normal swing, and not so easily produced.

When one has a headache or a pain in the eyes or in any part of the body the optimum swing is always wider and more difficult to imagine than when one has less strain of the eyes. Under un-favorable conditions the long swing is the optimum swing, but under favorable conditions when the sight is good, the normal swing of the normal eye with normal sight is the optimum swing.
The long swing brings a measure of relief when done right and makes it possible to shorten it down to the normal swing of the normal eye.

Vision and Education

***By* W. H. BATES, M.D.**

POOR sight is admitted to be one of the most fruitful causes of retardation in the schools. It is estimated that it may reasonably be held responsible for a quarter of the habitually "left-backs," and it is commonly assumed that all this might be prevented by suitable glasses.

There is much more involved in defective vision, however, than mere inability to see the blackboard, or to use the eyes without pain or discomfort. Defective vision is the result of an abnormal condition of the mind, and when the mind is in an abnormal condition it is obvious that none of the processes of education can be conducted with advantage. By putting glasses upon a child we may, in some cases, neutralize the effect of this condition upon the eyes and by making the patient more comfortable may improve his mental faculties to some extent, but we do not alter fundamentally the condition of the mind and by confirming it in a bad habit we may make it worse.

It can easily be demonstrated that among the faculties of the mind which are impaired when the vision is impaired is the memory; and as a large part of the educational process consists of storing the mind with facts, and all the other mental processes depend upon one's knowledge of facts, it is easy to see how little is accomplished by merely putting glasses on a child that has "trouble with its eyes." **The extraordinary memory of primitive people has been attributed to the fact that, owing to the absence of any convenient means of making written records, they had to depend upon their memories, which were strengthened accordingly; but in view of the known facts about the relation of memory to eyesight it is more reasonable to suppose that the retentive memory of primitive man was due to the same cause as his keen vision: namely, a mind at rest.**

Telescopic Vision

The primitive memory as well as primitive keenness of vision have been found among civilized people, and if the necessary tests had been made it would doubtless have been found that they always occur together, as they did in a case which recently came under my observation.

The subject was a child of ten with such marvelous eyesight that she could **see the moons of Jupiter with the naked eye**, a fact which was demonstrated by her drawing a diagram of these satellites which exactly corresponded to the diagrams made by persons who had used a telescope. Her memory was equally remarkable. She could recite the whole content of a book after reading it, as Lord Macauley is said to have done, and she learned more Latin in a few days without a teacher than her sister, who had six diopters of myopia, had been able to do in several years. She remembered five years afterward what she ate at a restaurant, she recalled the name of the waiter, the number of the building and the street in which it stood. She also remembered what she wore on this occasion and what everyone else in the party wore. The same was true of every other event which had awakened her interest in any way, and it was a favorite amusement in her family to ask her what the menu had been and what people had worn on particular occasions.

When the sight of two persons is different it has been found that their memories differ in exactly the same degree. Two sisters, one of whom had only ordinary good vision, indicated by the formula 20/20, while the other had 20/10, found that the time it took them to learn eight verses of a poem varied in almost exactly the same ratio as their sight. The one whose vision was 20/10 learned eight verses of the poem in fifteen minutes, while the one whose vision was only 20/20 required thirty-one minutes to do the same thing. After palming, the one with ordinary vision learned eight more verses in twenty-one minutes, while the one with 20/10 was only able to reduce her time by two minutes, a variation clearly within the limits of error. In other words, the mind of the latter being already in a normal or nearly normal condition, she could not improve it appreciably by palming, while the former, whose mind was under a strain, was able to gain relaxation, and hence improve her memory, by this means.

When the two eyes of the same person are different a corresponding difference in the memory has been noted according to whether both eyes were open, or the better eye closed.

+ A patient with normal vision in the right eye and half-normal vision in the left when looking at the Snellen test card with both eyes open could remember a period for twenty seconds continuously, but could remember it only ten seconds when the better eye was closed.

+ A patient with half-normal vision in the right eye and one-quarter normal in the left could remember a period for twelve seconds with both eyes open and only six seconds with better eye closed.

+ A third patient with normal sight in the right eye and vision of one-tenth in the left could remember a period twelve seconds with both eyes open and only two seconds when the better eye was closed. In other words if the right eye is better than the left the memory is better when the right eye is open than when only the left eye is open.

School Children

Under the present educational system there is a constant effort to compel the children to remember. These efforts always fail. They spoil both the memory and the sight. The memory cannot be forced any more than the vision can be forced. We remember without effort, just as we see without effort, and the harder we try to remember or see the less we are able to do so.

+ The sort of things we remember are the things that interest us, and the reason children have difficulty in learning their lessons is because they are bored by them. For the same reason, among others, their eyesight becomes impaired, boredom being a condition of mental strain in which it is impossible for the eye to function normally.

Some of the various kinds of compulsion now employed in the educational process may have the effect of awakening interest. Betty Smith's interest in winning a prize, for instance, or in merely getting ahead of Johnny Jones, may have the effect of rousing her interest in lessons that have hitherto bored her, and this interest may develop into a genuine interest in the acquisition of knowledge; but this cannot be said of the various fear incentives still so largely employed by teachers. These, on the contrary, have the effect, usually, of completely paralyzing minds already benumbed by lack of interest, and the effect upon the vision is equally disastrous. Boredom, fear tactics in school causes mental strain, unclear vision.

The fundamental reason, both for poor memory and poor eyesight in school children, in short, is our irrational and unnatural educational system. Montessori has taught us that it is only when children are interested that they can learn. It is equally true that it is only when they are interested that they can see. This fact was strikingly illustrated in the case of one of the two pairs of sisters mentioned above. Phebe, of the keen eyes, who could recite whole books if she happened to be interested in them, disliked mathematics and anatomy extremely, and not only could not learn them but became myopic when they were presented to her mind. She could read letters a quarter of an inch high at twenty feet in a poor light, but when asked to read figures one to two inches high in a good light at ten feet she miscalled half of them. When asked to tell how much 2 and 3 made, she said "4," before finally deciding on "5"; and all the time she was occupied with this disagreeable subject the retinoscope showed that she was myopic. When I asked her to look into my eye with the ophthalmoscope she could see nothing, although a much lower degree of visual acuity is required to note the details of the interior of the eye than to see the moons of Jupiter.

Short-sighted Isabel, on the contrary, had a passion for mathematics and anatomy, and excelled in those subjects. She learned to use the ophthalmoscope as easily as Phebe had learned Latin. Almost immediately she saw the optic nerve, and noted that the center was whiter than the periphery. She saw the light-colored lines, the arteries; and the darker ones, the veins; and she saw the light streaks on the blood-vessels. Some specialists never become able to do this, and no one could do it without normal vision. Isabel's vision, therefore, must have been temporarily normal when she did it. Her vision for figures, although not normal, was better than for letters.

In both these cases the ability to learn and the ability to see went hand in hand with interest. Phebe could read a photographic reduction of the Bible and recite what she had read verbatim, she could see the moons of Jupiter and draw a diagram of them afterwards, because she was interested in these things; but she could not see the interior of the eye, nor see figures even half as well as she saw letters, because these things bored her. When, however, it was suggested to her that it would be a good joke to surprise her teachers, who were always reproaching her for her backwardness in mathematics, by taking a high mark in a coming examination, her interest in the subject awakened and she contrived to learn enough to get seventy-eight percent. In Isabel's case letters were antagonistic. She was not interested in most of the subjects with which they dealt and, therefore, she was backward in those subjects and had become habitually myopic. But when asked to look at objects which aroused an intense interest her vision became normal.

When one is not interested, in short, one's mind is not under control, and without mental control one can neither learn nor see. Not only the memory but all other mental faculties are improved when the eyesight becomes normal. It is a common experience with patients cured of defective sight to find that their ability to do their work has improved.

A teacher whose letter was quoted in an early issue of "Better Eyesight" testified that after gaining perfect eyesight she "knew better how to get at the minds of the pupils," was "more direct, more definite, less diffused, less vague," possessed, in fact, "central fixation of the mind." In another letter she said, "The better my eyesight becomes the greater is my ambition. On the days when my sight is best I have the greatest anxiety to do things."

Another teacher reported that one of her pupils used to sit doing nothing all day long and apparently was not interested in anything. After the test card was introduced into the classroom and his sight improved, he became anxious to learn, and speedily developed into one of the best students in the class. In other words his eyes and his mind became normal together.

Improving close and distant vision activates and integrates the left and right brain hemispheres, improves all left and right hemisphere functions: math, science, art, music, sports, speech, relaxation, energy level…
Exercises to activate and integrate the left and right hemispheres improves the clarity of vision at all distances.

A bookkeeper nearly seventy years of age who had worn glasses for forty years found after he had gained perfect sight without glasses that he could work more rapidly and accurately and with less fatigue than ever in his life before. During busy seasons, or when short of help, he has worked for some weeks at a time from 7 A.M. until 11 P.M. and he reports that he felt less tired at night after he was through than he did in the morning when he started. Previously, although he had done more work than any other man in the office, it always tired him very much. He also noticed an improvement in his temper. Having been so long in the office and knowing so much more about the business than his fellow employees, he was frequently appealed to for advice. These interruptions, before his sight became normal, were very annoying to him and often caused him to lose his temper. Afterward, however, they caused him no irritation whatever. In the case of another patient whose story follows, symptoms of insanity were relieved when the vision became normal.

From all these facts it will be seen that the problems of vision are far more intimately associated with the problems of education than we had supposed, and that they can by no means be solved by putting concave, or convex, or astigmatic lenses before the eyes of the children.

One of the most striking cases of the relation of mind to vision that ever came to my attention was that of a physician whose mental troubles, at one time so serious that they suggested to him the idea that he might be going insane, were completely relieved when his sight became normal. He had been seen by many eye and nerve specialists before he came to me and consulted me at last, not because he had any faith in my methods, but because nothing else seemed to be left for him to do. He brought with him quite a collection of glasses prescribed by different men, no two of them being alike. He had worn glasses, he told me, for many months at a time without benefit, and then he had left them off and had been apparently no worse. Outdoor life had also failed to help him. On the advice of some prominent neurologists he had even given up his practice for a couple of years to spend the time upon a ranch, but the vacation had done him no good.

I examined his eyes and found no organic defects and no error of refraction. Yet his vision with each eye was only three-fourths of the normal, and he suffered from double vision and all sorts of unpleasant symptoms. He used to see people standing on their heads, and little devils dancing on the tops of the high buildings. He also had other illusions too numerous to mention in a short paper. At night his sight was so bad that he had difficulty in finding his way about, and when walking along a country road he believed that he saw better when he turned his eyes far to one side and viewed the road with the side of the retina instead of with the center. At variable intervals, without warning and without loss of consciousness, he had attacks of blindness. These caused him great uneasiness, for he was a surgeon with a large and lucrative practice, and he feared that he might have an attack while operating.

His memory was very poor. He could not remember the color of the eyes of any member of his family, although he had seen them all daily for years. Neither could he recall the color of his house, the number of rooms on the different floors, or other details. The faces and names of patients and friends he recalled with difficulty, or not at all.

His treatment proved to be very difficult, chiefly because he had an infinite number of erroneous ideas about physiological optics in general and his own case in particular, and insisted that all these should be discussed; while these discussions were going on he received no benefit. Every day for hours at a time over a long period he talked and argued. Never have I met a person whose logic was so wonderful, so apparently unanswerable, and yet so utterly wrong.

His eccentric fixation was of such high degree that when he looked at a point forty-five degree to one side of the big C on the Snellen test card, he saw the letter just as black as when he looked directly at it. The strain to do this was terrific, and produced much astigmatism; but the patient was unconscious of it, and could not be convinced that there was anything abnormal in the symptom. If he saw the letter at all, he argued, he must see it as black as it really was, because he was not color-blind. Finally he became able to look away from one of the smaller letters on the card and see it worse than when he looked directly at it. It took eight or nine months to accomplish this, but when it had been done the patient said that it seemed as if a great burden had been lifted from his mind. He experienced a wonderful feeling of rest and relaxation throughout his whole body.

When asked to remember black with his eyes closed and covered he said he could not do so, and he saw every color but the black which one ought normally to see when the optic nerve is not subject to the stimulus of light. He had, however, been an enthusiastic football player at college, and he found at last that he could remember a black football. I asked him to imagine that this football had been thrown into the sea and that it was being carried outward by the tide, becoming constantly smaller but no less black. This he was able to do, and the strain floated with the football, until, by the time the latter had been reduced to the size of a period in a newspaper, the strain was entirely gone. The relief continued as long as he remembered the black spot, but as he could not remember it all the time, I suggested another method of gaining permanent relief. This was to make his sight voluntarily worse, a plan against which he protested with considerable emphasis.

"Good heavens!" he said, "Is not my sight bad enough without making it worse?"

After a week of argument, however, he consented to try the method, and the result was extremely satisfactory. After he had learned to see two or more lights where there was only one, by straining to see a point above the light while still trying to see the light as well as when looking directly at it, he became able to avoid the unconscious strain that had produced his double and multiple vision and was not troubled by these superfluous images any more. In a similar manner other illusions were prevented.

One of the last illusions to disappear was his belief that an effort was required to remember black. His logic on this point was overwhelming, but after many demonstrations he was convinced that no effort was required to let go, and when he realized this, both his vision and his mental condition immediately improved.

He finally became able to read 20/10 or more, and although more than fifty-five years of age, he also read diamond type at from six to twenty-four inches. His night blindness was relieved, his attacks of day blindness ceased, and he told me the color of the eyes of his wife and children. One day he said to me:

"Doctor, I thank you for what you have done for my sight; but no words can express the gratitude I feel for what you have done for my mind."

Some years later he called with his heart full of gratitude, because there had been no relapse.

LYING AS A CAUSE OF MYOPIA

I may claim to have discovered the fact that telling lies is bad for the eyes. Whatever bearing this circumstance may have upon the prevalence of defects of vision, it can easily be demonstrated that it is impossible to say what is not true, even with no intent to deceive, or even to imagine a falsehood, without producing an error of refraction.

If a patient can read all the small letters on the bottom line of the test card, and either deliberately or carelessly miscalls any of them, the retinoscope will indicate an error of refraction. In numerous cases patients have been asked to state their ages incorrectly, or to try to imagine that they were a year older, or a year younger, than they actually were, and in every case when they did this the retinoscope indicated an error of refraction. A patient twenty-five years old had no error of refraction when he looked at a blank wall without trying to see; but if he said he was twenty-six, or if someone else said he was twenty-six, or if he tried to imagine that he was twenty-six, he became myopic. The same thing happened when he stated or tried to imagine that he was twenty-four. When he stated or remembered the truth his vision was normal, but when he stated or imagined an error he had an error of refraction.

Two little girl patients arrived one after the other one day, and the first accused the second of having stopped for an ice-cream soda, which she had been instructed not to do, being somewhat too much addicted to sweets. The second denied the charge, and the first, who had used the retinoscope and knew what it did to people who told lies, said

"Do take the retinoscope and find out."

I followed the suggestion, and having thrown the light into the second child's eye, I asked:

"Did you go to Huyler's?"

"Yes," was the response, and the retinoscope indicated no error of refraction.

"Did you have an ice-cream soda?"

"No," said the child; but the tell-tale shadow moved in a direction opposite to that of the mirror, showing that she had become myopic and was not telling the truth.

The child blushed when I told her this and acknowledged that the retinoscope was right, for she had heard of the ways of the uncanny instrument before and did not know what else it might do to her if she said anything more that was not true.

The fact is that it requires an effort to state what is not true, and this effort always results in a deviation from the normal in the refraction of the eye. So sensitive is the test that if the subject, whether his vision is ordinarily normal or not, pronounces the initials of his name correctly while looking at a blank surface without trying to see, there will be no error of refraction; but if he miscalls one initial, even without any consciousness of effort, and with full knowledge that he is deceiving no one, myopia will be produced.

Suggestions for Myopic Patients

***By* EMILY A. BATES**

IN THE morning when you awaken, before getting out of bed, sit up and **palm**. *Memory helps.* While palming, the **memory** of a flower or of the color of it, of a white cloud with the sun shining behind it, of the blue of the sky, or of any pleasant thing that you can remember perfectly, something that you have seen perfectly, helps. If nothing else can be remembered you can imagine part of the test card and when you imagine some of the letters with your eyes closed and imagine the form of each letter, not trying to remember any particular letter any length of time, because that is a strain, your mind will be relaxed when you get out of bed.

After arising, practice the **sway**. *Always* ***blink*** *while swaying.* After the sway do the **long swing**; let your head and eyes alone, allow your body to do the moving. Pay no attention to stationary objects which appear to be moving as you swing. After practicing the long swing, keep up the blinking while dressing, but do not blink fast. The eyes move gently with every blink and that is a rest. You will notice that heretofore you have stared.

If the **test cards** can be used for practice before going to business, so much the better. Place the "C" card to the right of you, a little more than arm's length away. Place the black card to the left of you, also a little more than arm's length away. Then place the number card to the left six feet away, and the inverted "E" card to the right of you six feet away. Now start the sway. Pay no attention to anything, but just keep looking right ahead of you at the wall. Blink and keep up the sway. Notice that all cards appear to be moving opposite to the movement of your body. Blink. *Never stop blinking,* still noticing that the cards move opposite to the movement of the sway. *Do not sway too fast; take it easy.* Better vision comes without effort. Notice that when things become too blurred that you are staring, that you have forgotten to blink.

When it is noticed that the cards appear to be moving opposite to the movement of the body, then start the long swing, flashing a letter of the "C" card as you swing to the right, then noticing a letter on a line of the black card as you swing to the left. Be sure to move your body and not only your head and eyes. Don't forget to blink. Then while keeping up the long swing, flash a numeral on the number card to the left and then as you swing to the right, flash an inverted "E" on any line of that card. Every day see if you can flash a smaller numeral on one of the lower lines of the number card as well as an "E" pointing either to the right, left, up, or down on one of the lower lines of the "E" card.

The improvement in your vision all depends upon the time that you have to practice in the above way.

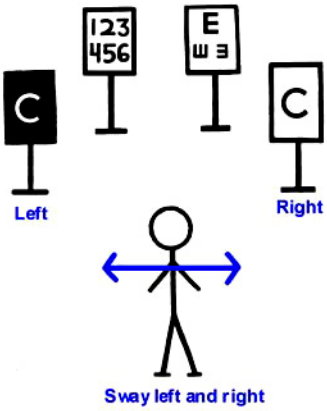
If **sun treatment** can be given on the closed eyelids by placing yourself in the sun, raising your head, and letting the sun shine on the closed eyelids for five minutes or longer, it will help to improve the vision when doing the long swing.

If palming is irksome, just sit comfortably and close the eyes, remembering something pleasant every time the eyes are being rested in this way.

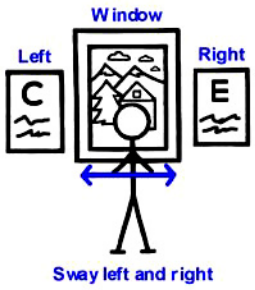
Alternate practicing with the distant cards by placing yourself at a desk. When writing for practice always place your small black card to the right or to the left of your desk and after writing a sentence or two, raise your head and look over to the card at any letter that you see easily without straining. It helps to close the eyes immediately afterward, remembering that letter. Write a few more sentences, again glancing at the card after raising your head in the direction of the letters and not trying hard to see any particular letter.



Palm and remember, imagine a flower, its color, white cloud with sun shining behind it, blue sky and any pleasant objects, scenery that is easily remembered clear, perfect.
See objects clear, in color, motion: wind blowing green grass, pink, blue, purple, red, orange... flowers, yellow black bee with golden pollen on its legs, rainbow colors in its clear wings flying about the garden.



Sway left and right in front of 4 eyecharts. Blink. Notice the charts appear to move past in the opposite direction to the movement of the body. (More movement is seen with the charts at close distances before 20 ft.) Shift without effort on a letter on the charts for a second, fraction of a second when swaying in the direction of a chart. No effort to see. No staring. Keep moving. Relax. Do the same with the Long Swing. Swing right and 'shift for a fraction of a second' 'flash' on the letter C on the chart on the right. Then swing left and 'flash' the letter C on the chart on the left. Then, flash a number on the card on the left when moving left and flash a inverted E on the E card when moving right. Practice flashing, seeing clear smaller letters at various distances.



Charts can also be placed on the left and right sides of a open window. Sway and swing left and right and shift, flash the letters on the left and right charts as described above. Shift on distant objects outside the window. Practice day and night.

When large test cards are not used for practice, place two small cards on the window sill if possible and while swaying shift from one card to the other.

Announcements

It has come to our attention that certain parties not connected with Dr. Bates in any way are desirous of publishing a periodical called "Better Eyesight." We wish to say that any such use of this title is not with the permission of Dr. Bates or the Central Fixation Publishing Company and that any magazine issued under this title, other than the present one, is not published in the interests of the Bates Method. The title "Better Eyesight" is protected against illegal usage.

After June, it will be necessary to raise the price of bound volumes of "Better Eyesight." They are now listing at $3.00 per volume and begin with the year 1923. They contain much valuable information and we would suggest that subscribers secure any volume or volumes which they may desire before the price is raised.

We desire to inform our subscribers that the "Better Eyesight" magazine will be discontinued after the June, 1930, issue. This will enable Dr. Bates and Mrs. Bates to devote more time to the writing of new books on treatment alone for which there has been a very great demand during the past year. Subscriptions for the remaining months, however, are being received. We request that all those who desire to be notified upon the publication of new books kindly send us their names and addresses, which will be kept on file.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

MAY, 1930

Methods that Have Succeeded in Presbyopia

The cure of presbyopia, as of any other error of refraction, is rest, and many presbyopic patients are able to obtain this rest simply by closing the eyes. They are kept closed until the patient feels relieved, which may be in a few minutes, half an hour, or longer. Then some fine print is regarded for a few seconds. By alternately resting the eyes and looking at fine print many patients quickly become able to read it at eighteen inches, and by continued practice they are able to reduce the distance until it can be read at six inches in a dim light. At first the letters are seen only in flashes. Then they are seen for a longer time, until finally they are seen continuously. When this method fails, palming may be tried, combined with the use of the memory, imagination and swing. Particularly good results have been obtained from the following procedure:

+ Close the eyes and remember the letter o in diamond type, with the open space as white as starch and the outline as black as possible.

+ When the white center is at the maximum imagine that the letter is moving, and that all objects, no matter how large or small, are moving with it. Shift on the letter.

+ Open the eyes and continue to imagine the universal swing.

+ Alternate the imagination of the swing with the eyes open with its imagination with the eyes closed.

+ When the imagination is just as good with the eyes open as when they are closed the cure will be complete.

Presbyopia: Its Cause and Cure

***By* W. H. BATES, M.D.**

(Cures for Presbyopia Cure Cataract and other Eye Disease.)

PRESBYOPIA is the name given to the loss of power to use the eyes at the near point, without the aid of glasses, which usually occurs after the age of forty.

The text-books teach that this change is a normal one: but it is a noteworthy fact that many other eye troubles often date from the time of its appearance, or develop a little later. Many cases of glaucoma start about this time, and so do many cases of cataract and inflammation of the interior of the eye. Patients with presbyopia are very likely to have conjunctivitis. They are also subject to congestion and hemorrhages of the interior of the eye. One patient developed a lot of muscular trouble and a marked degree of double vision at the time he became presbyopic, and suffered three nervous breakdowns in quick succession. He was operated on for the muscular condition, and took prism exercises, but obtained very little relief. In another case a patient began to suffer, at the time she became unable to read without glasses, from a contraction of the muscles of the face, congestion of the conjunctiva and continual headaches. The strain was so great that she had to keep her eyes partly closed, and glasses did nothing to relieve her discomfort. Up to the time when her presbyopia appeared she had had none of these troubles.

The accepted explanation for the loss of near vision with advancing years is that it is due to the hardening of the lens, but it is quite impossible to reconcile the facts with this theory; for not only does presbyopia occur much below the age of forty and even in childhood, but it is often delayed beyond the age of fifty, and sometimes does not occur at all. There are also cases in which near vision is restored after having been lost. We are told that presbyopia comes early in the hypermetropic (farsighted) eye, and late in the myopic (nearsighted) eye; that premature hardening of the lens and weakness of the ciliary muscle (supposed to control the accommodation) may cause it to appear in youth; and that the swelling of the lens in incipient cataract may account for the restoration of near vision after it has been lost; but there are still many cases to which these explanations cannot be made to apply.

65 year old man cures unclear close vision

It is true that hypermetropia does hasten and myopia prevent or postpone the advent of presbyopia, and as myopia may exist in only one eye, without the patient's being aware of it, he may think that his vision is normal both for the near-point and the distance. There are cases, however, in which the vision has remained absolutely normal in both eyes long after the presbyopic age, and a considerable number of these cases have been brought to my attention. One of them, a man of sixty-five, examined in a moderate light indoors, was found to have a vision of 20/10. In other words he could see twice as far as the normal eye is expected to see. He also read diamond type at less than six inches, and at other distances, to more than eighteen inches. In reply to a query as to how he came to possess visual powers so unusual at his age, or, indeed, at any age, he said that when he was about forty he began to experience difficulty, at times, in reading. He consulted an optician who advised glasses. He could not believe, however, that the glasses were necessary, because at times he could read perfectly without them. The matter interested him so much that he began to observe facts, a thing that people seldom do. He noted, first, that when he tried hard to see either at the near-point or at the distance, his vision invariably became worse, and the harder he tried the worse it became. Evidently something was wrong with this method of using the eyes. Then he tried looking at things without effort, without trying to see them. He also tried resting his eyes by closing them for five minutes or longer, or by looking away from the page that he wished to read, or the distant object he wished to see. These practices always improved his sight, and by keeping them up he not only regained normal vision but retained it for twenty-five years.

"Doctor," he said, in concluding his story, "when my eyes are at rest and comfortable, my vision is always good and I forget all about them. When they do not feel comfortable I never see so well, and then I always proceed to rest them until they feel all right again."

The fact is that presbyopia is due to a strain. It is a strain similar to the one that produces hypermetropia, (farsight, unclear close vision) but differs from it in the fact that it affects chiefly vision at the near-point (close reading distance). This can be demonstrated with the retinoscope. When a person with presbyopia tries to read, the retinoscope will show that he has hypermetropia, but when he looks at a distant object the retinoscope will show either that his eyes are normal, or that the hypermetropia is less. Simultaneous retinoscopy is difficult in the case of a reading patient, for not only is the pupil small, but in order to find the shadow it is necessary for the patient to look in one general direction all the time, and this is not easy. It is also difficult to hold a glass at one side of the eye for the measurement of the refraction in such a way that the observer can look through it while the patient does not. With a sufficient zeal for the truth, however, these difficulties can be overcome.

Eyeglasses increase vision impairment and leads to development of eye diseases, problems.

The strain which produces presbyopia is accompanied by a strain, more or less pronounced, of all the other nerves of the body. Hence the many distressing symptoms from which presbyopic patients suffer. Glasses, by neutralizing the effect of the imperfect action of the muscles, may enable the patient to read; but they cannot relieve any of these strains. On the contrary they usually make them worse, and it is a matter of common experience that the vision declines rapidly after the patient begins to wear them. When people put on glasses because they cannot read fine print they often find that in a couple of weeks they cannot, without them, read the coarse print that was perfectly plain to them before. Occasionally the eye resists the artificial conditions imposed upon them by glasses to an astonishing degree, as in the case of a woman of seventy who had worn glasses for twenty years, in spite of the fact that they tired her eyes and blurred her vision, but was still able to read diamond type without them. This however is very unusual. As a rule the eyes go from bad to worse, and, if the patient lives long enough, he is almost certain to develop some serious disease which ends so frequently in blindness that nearly half of our blind population at the present time is believed to be over sixty years of age. Persons with presbyopia who are satisfied with the relief given to them by glasses should bear this fact in mind.

Presbyopia is cured just as any other error of refraction is cured, by rest. But there is a great difference in the way patients respond to this treatment. Some are cured very quickly, even in as short a time as fifteen minutes; others are very slow; but as a rule relief is obtained within a reasonable time.

One of my earliest cures of presbyopia was accomplished in less than fifteen minutes by the aid of the imagination. The patient had worn glasses for reading for ten years. When I showed him a specimen of diamond type and asked him to read it without glasses he said he knew the letters were black but they looked grey.

"If you know they are black, and yet see them grey," I said, "you must imagine that they are grey. Suppose you imagine that they are black. Can you do that?"

"Yes," he said, "I can imagine that they are black," and immediately he proceeded to read them.

In another case a patient was cured simply by closing his eyes for half an hour. His wife was cured in the same way, and when I saw the couple six months later they had had no relapse. Both had worn reading glasses for more than five years.

Old Gentleman cures his presbyopia by reading, writing fine, microscopic print.

While it is sometimes very difficult to cure presbyopia, it is, fortunately, very easy to prevent it. Oliver Wendell Holmes told us how to do it in "The Autocrat of the Breakfast Table," and it is astonishing not only that no attention whatever should have been paid to his advice, but that we should have been warned against the very course which was found so beneficial in the case he records.

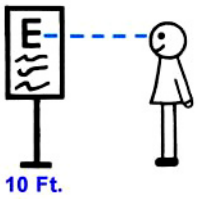
"There is now living in New York State," he says, "an old gentleman who, perceiving his sight to fail, immediately took to exercising it on the finest print, and in this way fairly bullied Nature out of her foolish habit of taking liberties at the age of forty-five or thereabouts. And now this old gentleman performs the most extraordinary feats with his pen, showing that his eyes must be a pair of microscopes. I should be afraid to say how much he writes in the compass of a half-dime, whether the Psalms or the Gospels, or the Psalms and the Gospels, I won't be positive."

Persons whose sight is beginning to fail at the near-point, or who are approaching the presbyopic age, should imitate the example of this remarkable old gentleman. Get a specimen of diamond type, and read it every day in an artificial light, bringing it closer and closer to the eye till it can be read at six inches or less. Or get a specimen of type reduced by photography until it is much smaller than diamond type, and do the same. (microscopic type/print) You will thus escape, not only the necessity of wearing glasses for reading and near work, but all of those eye troubles which now so often darken the later years of life.

Test Card Practice

***By* EMILY A. BATES**

Editor's Note—The following is taken from Mrs. Bates' (Lierman) book, "Stories From The Clinic". Although the majority of our subscribers have Mrs. Bates' book, we believe that these suggestions can always be re-read with benefit.



Read the test card daily in good light, sunlight is best. Shift on a letter and remember, imagine it clear, correct with the eyes open, then in the imagination with the eyes closed, then with the eyes open again. Repeat. Blink. Practice on smaller letters. Practice with both eyes together, one eye at a time, then both eyes together again. Practice with the chart at various distances 5 ft. to 200 ft. + Practice on fine print at 20 inches and closer to 3, 2, 1, inches from the eyes.

1. Every home should have a test card.

2. It is best to place the card permanently on the wall in a good light.

3. Each member of the family or household should read the card every day.

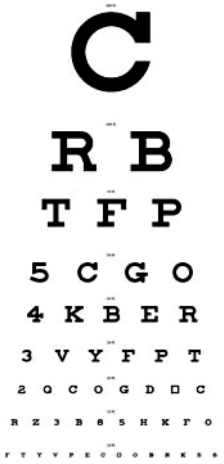
4. It takes only a minute to test the sight with the card. If you spend five minutes in the morning practicing, it will be a great help during the day.

5. Place yourself ten feet from the card and read as far as you can without effort or strain. Over each line of letters are small figures indicating the distance at which the normal eye can read them. Over the big C at the top of the card is the figure 200. The big C, therefore, should be read by the normal eye at a distance of two hundred feet. If you can read this line at ten feet, your vision would be 10/200. The numerator of the fraction is always the distance of the card from the eyes. The denominator always denotes the number of the line read. If you can only read the line marked 40 at ten feet, the vision is 10/40.



6. If you can only see the fifth line, for example, notice that the last letter on that line is an R. Now close your eyes, cover them with the palms of the hands and remember the R. If you will remember that the left side is straight, the right side partly curved, and the bottom open, you will get a good mental picture of the R with your eyes closed. This mental picture will help you to see the letter directly underneath the R, which is a T.

7. Shifting is good to stop the stare. If you stare at the letter T, you will notice that all the letters on that line begin to blur. It is beneficial to close your eyes quickly after you see the T, open them, and shift to the first figure on that line, which is a 3. Then close your eyes and remember the 3. You will become able to read all the letters on that line by closing your eyes for each letter.



8. Keep a record of each test in order to note your progress from day to day.

9. When you become able to read the bottom line with each eye at ten feet; your vision is normal for the distance, 10/10.

10. The distance of the Snellen test card from the patient is a matter of considerable importance. However, some patients improve more rapidly when the card is placed fifteen or twenty feet away, while others fail to get any benefit with the card at this distance. In some cases the best results are obtained when the card is as close as one foot. Others with poor vision may not improve when the card is placed at ten feet or further, or at one foot or less, but do much better when the card is placed at a middle distance, at about eight feet. Some patients may not improve their vision at all at ten feet, but at one foot. While some patients are benefited by practicing with the card daily, always at the same distance, there are others who seem to be benefited when the distance of the card from the patient is changed daily.

Experiment with the test card placed at a variety of close, middle, far distances.

Better Eyesight in Schools

By a Superintendent of Public Schools

Editor's Note -The following was written by a superintendent of public schools who not only helped his own eyes, but also helped the nurses to help the children. Permission was given these nurses to attend the clinic so that they could test the vision of each child and make records accordingly. Further advice was given by Dr. and Mrs. Bates and the work was carried on so that within a year's time it was noticed by those not interested in the Bates Method that there were less eye-glasses being worn by the school children.

UNDER the direction of our school nurse, a Snellen test of the eyes of all our pupils was made. A novel health experiment was begun, a campaign for "Better Eyesight." A second test was made in order to verify the value and progress in this phase of health work which showed marvelous, practical, successful results. Only the skepticism of principals, teachers and pupils, and the lack of faithfulness in carrying out its conditions, prevented the wonderful results achieved from paralleling those of an Arabian Night's story.

A Snellen test card was placed permanently in the class rooms. The children were directed to read the smallest letters they could see from their seats at least once every day, with both eyes together and with each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure of the eyeball. Those whose vision was defective were encouraged to read it more frequently, and in fact needed no encouragement to do so after they found that the practice helped them to see the blackboard, and stopped the headaches, or other discomfort, previously resulting from the use of their eyes.

Some years ago the same system was introduced into some of the schools of New York City with an attendance of about ten thousand children. Many of the teachers neglected to use the cards, being unable to believe that such a simple method and one so

entirely at variance with previous teaching on the subject, could accomplish the desired results. Others kept the cards in a closet except when they were needed for the daily eye drill, lest the children should memorize them. Thus they not only put an unnecessary burden upon themselves, but did what they could to defeat the purpose of the system, which is to give the children daily exercise in distant vision with a familiar object as the point of fixation. A considerable number, however, used the system intelligently and persistently, and in less than a year were able to present reports showing that of three thousand children with imperfect sight over one thousand had obtained normal vision by its means.

Not only does this work place no additional burden upon the teachers, but, by improving the eyesight, health, disposition and mentality of their pupils, it greatly lightens their labors.

Questions and Answers

Q—It is difficult for me to find time enough to gain perfect relaxation. What would you suggest?
A—You have just as much time to relax as you have to strain. **Practice relaxation all day long.** Whenever you move your head or eyes, notice that stationary objects move in the direction opposite to the movement of your head or eyes. When walking about the room or on the street, the floor or pavement appears to come toward you, while objects on either side of you move in the direction opposite to the movement of your body. Remember to blink frequently just as the normal eye does. Constantly shift your eyes from one point to another seeing the point regarded more clearly than all other parts. When talking with anyone, do not stare. Look first at one eye and then the other, remembering to blink. Shift from the eyes to the nose, to one cheek and then to the other, then to the mouth, the chin, and back to the forehead.
Notice when looking in a persons eyes: if their eyes move, your eyes move. If a person stares, eyes immobile, keep your eyes moving when looking into their eyes and you will prevent staring in your eyes and help the person obtain normal eye movement.

Q—Why is it that I have perfect vision only in flashes? Can these flashes become permanent?
A—You have not yet lost your unconscious habit of straining, When relaxation methods are practiced faithfully at all times, the flashes of improved vision become more frequent and last longer until the vision becomes continuously good.

Q—What causes **twitching eyelids**?
A—Strain causes twitching eyelids and this is relieved by rest and relaxation. Palming, sun treatment, swinging, blinking are very beneficial.

Q—Can you explain why I see yellow and blue spots after looking at the sun?
A—You are straining. Do not look directly at the sun until your eyes are more accustomed to it. Practice the sun treatment—sit in the sun with the eyes closed. Allow the sun to shine directly upon your closed eyelids, as you slowly move your head a short distance from side to side. Do this for half an hour or longer as often as possible whenever the sun is shining.
Modern teachers state to not look into the sun with the eyes open.
Look to the side, out to the bright sky, clouds. Blink, shift continually, easy, relaxed, move the head and eyes. Daydream something pleasant.

Q—Is working or reading under electric light harmful? Should a shade be worn?
A—It is not harmful to read by electric light if the eyes are used properly. Do not wear a shade or any other protection for the eyes. Practice sun treatment.

Q—When remembering a black period, I see a bright disk with a small black center. Is this seeing a period?
A—No. you are straining. The period that you imagine is very imperfect, because to remember the period and at the same time a very bright disk, is an unconscious strain. You cannot strain and remember the bright disk, and simultaneously relax and remember a black period. When your bright disk is prominent, everything else is remembered under a strain. You cannot strain and relax at the same time.

Announcements

We take pleasure in announcing that the following have recently completed courses of instruction at Dr. Bates' office and are qualified to practice the Bates Method:

Dr. Paul J. Dodge,
911 New Industrial Trust Building, Providence, R. I.
Dr. med. E. Schluter (prominent eye specialist),
Hamburg, Mundsburgerdamm 11, Germany

It has come to our attention that certain parties not connected with Dr. Bates in any way are desirous of publishing a periodical called "Better Eyesight." We wish to say that any such use of this title is not with the permission of Dr. Bates or the Central Fixation Publishing Company and that any magazine issued under this title, other than the present one, is not published in the interests of the Bates Method. The title "Better Eyesight" is protected against illegal usage.

After June, it will be necessary to raise the price of bound volumes of "Better Eyesight." They are now listing at $3.00 per volume and begin with the year 1923. They contain much valuable information and we would suggest that subscribers secure any volume or volumes which they may desire before the price is raised.

We desire to inform our subscribers that the "Better Eyesight" magazine will be discontinued after the June, 1930, issue. This will enable Dr. Bates and Mrs. Bates to devote more time to the writing of new books on treatment alone for which there has been a very great demand during the past year. We request that all those who desire to be notified upon the publication of new books kindly send us their names and addresses, which will be kept on file.

BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

JUNE, 1930

Final Magazine Issue

Stop Staring

It can be demonstrated by tests with the retinoscope that all persons with imperfect sight stare, strain, or try to see. To demonstrate this fact:

+Look intently at one part of a large or small letter at the distance or near-point. In a few seconds, usually, fatigue and discomfort will be produced, and the letter will blur or disappear. If the effort is continued long enough, pain may be produced.

To break the habit of staring:

(1) Shift consciously from one part to another of all objects regarded, and imagine that these objects move in a direction contrary to the movement of the eye. Do this with letters on the test card, with letters of fine print, if they can be seen, and with other objects.

(2) Close the eyes frequently for a moment or longer. When the strain is considerable, keep the eyes closed for several minutes and open them for a fraction of a second—flashing. When the stare is sufficient to keep the vision down to 2/200 or less, (most unclear) palm for a longer or shorter time; then look at the card for a moment. Later mere closing of the eyes may afford sufficient rest.

(3) Imagine that the white openings and margins of letters are whiter than the rest of the background. Do this with eyes closed and open alternately. It is an interesting fact that this practice prevents staring and improves the vision rapidly.

Imagination Essential to Sight

***By* W. H. BATES, M.D.**

IT IS a well-known fact that vision is a process of mental interpretation. The picture which the mind sees is not the impression on the retina, but a mental interpretation of it. To the mind objects seen appear to be in an upright position, but the picture on the retina is upside down. When the sight is normal the margins and openings of black letters on a white card appear whiter than the rest of the card, but this, of course, is not the fact, the whole background being of the same whiteness. One may seem to see a whole letter all alike at one time, but, as a matter of fact, the eye is shifting rapidly from one part to another. The letter may also seem to move although it is stationary.

When the vision is imperfect the imagination is also imperfect. The mind, in short, adds imperfections to the imperfect retinal image. A great part of the phenomena of imperfect sight are, therefore, imaginary and not in any way to be accounted for by the derangement of the visual apparatus. The color, size, form, position and number of objects regarded are altered, and non-existent objects may be seen. Some persons with imperfect sight literally see ghosts. A boy, or a grown person either, in a dark cellar, is often under such a strain that he thinks he sees sheeted figures, and one of my patients, in broad daylight, used to see little devils dancing on the tops of high buildings.

It is a great relief to patients to learn that these appearances are imaginary, and helps them to bring the imagination under control. And as it is impossible to imagine perfectly without perfect relaxation, any improvement in the interpretation of the retinal images means an improvement in the conditions which have led to a distortion of those images; for relaxation, as all regular readers of this magazine know, is the cure for most eye troubles. There is no more effective method of improving the sight, therefore, than by the aid of the imagination, and wonderful results have been obtained by this means. At times imagination almost seems to take the place of sight, as in the case of a patient who gained a high degree of central fixation in spite of the fact that the macula (center of sight) had been destroyed, or in those cases in which patients become able to imagine correctly letters which are seen only as grey spots without knowing what they are.

Memory, Imagination of letters on the Eyechart produces clear vision

How patients manage to see best where they are looking without a macula is hard to explain, but the imagination of letters which are not consciously seen is probably made possible by a certain degree of unconscious vision. When one looks at a letter on the Snellen test card which can be seen distinctly and tries to imagine the top straight or open when it is curved, or curved when it is straight or open, it will be found impossible to do so, and the vision will be lowered by the effort, to a greater or less degree. In one case the mere suggestion to a patient that he should imagine the top of the big C straight caused the whole card to become blank. When one looks at a letter seen indistinctly without knowing what it is and tries to imagine it to be other than it is, one is usually able to do so, but not without strain, evidenced by the fact that the letter becomes more blurred, or by the impossibility of imagining

that it has a slow, easy swing of not more than a quarter of an inch. This fact makes it possible to find out what the letter is without seeing it.

The patient begins by imagining each of the four sides of the letter taken in turn to be straight, curved, or open, and observing the effect of each guess upon the swing. If the right side is straight, for instance, and he imagines it to be straight, the swing will be unchanged; but if he imagines it to be curved, the swing will be lengthened or lost, or will become less even and easy. If he is unable to tell the difference between two guesses it is because the swing is too long, and he is told to palm and remember a letter of diamond type, with its short swing, until he is able to shorten it. Having imagined each of the four sides of the letter correctly, he becomes able to imagine the whole letter, first with the eyes closed and covered, and then with the eyes open,

When one knows what the four sides of a letter are, its identification, in some cases, is a simple process of reason. A letter which is straight on top and on the left side, and open on the two other sides, cannot be anything but an F. If, on the contrary, it is straight on the bottom and on the left side, and open on the other two, it must be an L. Such letters can be imagined with a lower degree of relaxation than the less simple ones, like a V, a Y, or a K. If the letter is not imagined correctly, the swing will be altered, and in that case the process should be repeated from the beginning.

Having imagined the letter correctly, the patient is told to imagine it first with the eyes closed and covered and then with the eyes open and looking at the card, until he is able to imagine it as well when looking at the card as when palming. In this way it finally becomes possible for him to imagine it so vividly when looking at the card that he actually sees it.

With most patients this method of improving the sight produces results more quickly than any other. Others, for some unknown reason, do not succeed with it. Temporary improvement is often obtained in an incredibly short space of time, and by continued practice this temporary improvement becomes permanent.

The patient who describes her case later on in this article looked at the Snellen test card at ten feet one day, and did not see any of the letters, even as grey spots. By the method described above she became able in half an hour to read the whole card. A little girl of ten could not see anything at ten feet below the large letter at the top of the card. She was told how to make out the letters by the aid of her imagination, and then left alone for half an hour. At the end of this time she had read the whole of an unfamiliar card. A child of about the same age whose left macula had been destroyed by atrophy of the choroid (middle coat of the eye) was able with the affected eye to see only the 200 letter, on the test card, and that only when she looked to one side of the card. She was treated by means of her imagination, and after a few months, during which time she came very irregularly, she obtained normal vision in both eyes. She is still under treatment.

A school girl of sixteen with such a high degree of myopic astigmatism that she could see only the large letter at ten feet became able in four or five visits, by the aid of her imagination, to read 20/20 temporarily, and at her last visit she read 20/15 temporarily. A college student twenty-five years old, with compound hypermetropic astigmatism (four diopters in each eye), could read only 20/100 with his right eye and 14/200 with his left, and had been compelled to stop his studies because of the pain and fatigue resulting from the use of his eyes at the near-point. In four visits his vision was improved by the aid of his imagination to 20/30 and he became able to read diamond type at six inches without glasses and without discomfort.

These and many other cases of the same kind have demonstrated that imagination is necessary to normal sight.

A Patient's Report

I began to wear glasses for shortsight when I was fifteen, and from that time I wore them constantly until I came to Dr. Bates. For the last two or three years I never took them off, except for close work, until I got into bed at night, and before I got out of bed in the morning I put them on again.

In spite of these precautions my sight became steadily worse, and for the last ten years I have spent my time and money going from one specialist to another both in this county and in Europe. Three of the most famous specialists in Switzerland told me that I had retinitis pigmentosa, a condition in which pigment is deposited in the retina, and which, I was told, always ended in complete blindness if the patient lived long enough. Nothing could be done to prevent this outcome, they said, but they advised me to wear dark glasses when I went out of doors on bright days, because by exposing my eyes to strong light I was spending my capital. For the last three years I did this, and for the last year, on very sunny days, I often wore dark glasses in the house also, because my eyes had become so sensitive to the light that I could sometimes find relief only by going into a darkened room. Even with dark glasses and drawn blinds, there was a kind of razzle-dazzle before my eyes which was so maddening that I almost longed for the blindness with which I had been threatened, so that I might be free from such distresses. When I looked out of a window onto a sunny street and then back into the room again, everything became perfectly black for a minute. For the last two years and a half I have not been able to go out alone in the city.

In this state of utter hopelessness, with my sight rapidly getting worse, I heard of Dr. Bates through a patient whom he was treating, and, in spite of what I felt to be the incredulity of my friends, although they were considerate enough not to express it, I lost no time in consulting him. The unusualness of his methods, while it excited the suspicion of others, was a recommendation to me. I knew what the old methods accomplished, or rather what they did not accomplish, and I wanted something different. It seemed to me that Dr. Bates was the very man I had been looking for.

My friends have now been converted, but, in spite of the fact that I am able to report substantial improvement in my vision, I still meet with much skepticism in other quarters. A doctor to whom my progress was reported by a friend wrote to her that if my trouble were imaginary Dr. Bates might help me through hypnotism or mind cure, but that if there were anything really the matter with my eyes he could do nothing by his methods. One who had met some of Dr. Bates' cured patients and, was inclined to believe in him, said, when, told that I was being treated for retinitis pigmentosa:

"Good gracious, he surely doesn't pretend to cure retinitis pigmentosa! That is an organic disease."

I said that he not only pretended to cure it, but had made substantial progress in my case. The doctor said:

"I think he'll help you, but I don't believe you are ever going to see without limitations."

The improvement in my vision since I have been under treatment has been indisputable. After two weeks the intangible suffering caused by light left me, and it has never returned. I can go out in the brightest sunlight without glasses of any kind, and, although my eyes feel weak and I squint a little, there is no real distress. I can look out of a window onto a sunny street, and when I turn back again into the room there is no blindness. When I first took off my glasses I had to bend over close to my plate when I was eating, in order to see what was on it. Now I sit in an almost normal position, with such a slight bend that I don't think anyone would

notice it. I also operate a typewriter while sitting in a normal position. For three years it has been very difficult for me to read or sew, with or without glasses. Now I do both without glasses, and instead of the distress which these activities formerly caused me, I experience a delightful feeling of freedom. And not only can I read ordinary print, but I can read diamond type and photographic reductions. About a year ago I began to lose my color perception, and up to two weeks ago I was unable to distinguish the rug from the floor in the doctor's office. Now I can see that the floor is red and the rug blue, tan and black. At the present writing I have just become able to observe that a couch cover in my apartment, which had always appeared blue to me, is green. I am still unable to see very much at the distance. But I am beginning to make out the features of the people around me and to read signs in the streets and street-cars, and when I look out of the windows on the Subway I see the people on the platforms. My field is still very limited, but I am conscious that it is slowly enlarging. The other day I pinned a piece of paper three inches from the test card, and was able to see it while looking at the card. After such improvement, in the brief period of five weeks, I do not feel inclined to credit the prediction of my medical friend that I am going to regain my sight only with limitations. I hope I am going to get normal vision.

Along with the improvement in my sight there has come also a remarkable improvement in my physical condition, the natural result of freedom from suffering. I used to be a very restless sleeper, and when I woke in the morning I was greatly fatigued. Now the bed is as smooth in the morning as if I had never stirred all night, and I am much more refreshed than I used to be, although not so much so as I hope to be later. Formerly I had to force myself to write a letter. Now it is a pleasure to do so, and I am clearing off all my correspondence. I could not attend to my accounts. Now I have them all straightened out. If I could receive nothing more from the treatment than this physical comfort and increased ability to do things, it would be worth while.

Suggestions

***By* EMILY A. BATES**

1. If the vision of the patient is improved under the care of the doctor, and the patient neglects to practice, when he leaves the office, what he is told to do at home, the treatment has been of no benefit whatever. The improved vision was only temporary. Faithful practice permanently improves the sight to normal.

2. If the patient conscientiously practices the methods, as advised by the doctor, his vision always improves. This applies to patients with errors of refraction, as well as organic diseases.

3. For cases of squint we find that the long swing is beneficial to adults and to children.

4. When a patient suffers with cataract, palming is usually the best method of treatment, and should be practiced many times every day.

5. All patients with imperfect sight unconsciously stare, and should be reminded by those who are near to them to blink often. To stare is to strain. Strain is the cause of imperfect sight.

The following rules will be found helpful if faithfully observed:—

6. While sitting, do not look up without raising your chin. Always turn your head in the direction in which you look.
+ Blink often.

7. Do not make an effort to see things more clearly. If you let your eyes alone, things will clear up by themselves.

8. Do not look at anything longer than a fraction of a second without shifting.

9. While reading, do not think about your eyes, but let your mind and imagination rule.

10. When you are conscious of your eyes while looking at objects at any time, it causes discomfort and lessens your vision.

11. It is very important that you learn how to imagine stationary objects to be moving, without moving your head or your body.

When the eyes move, shift, stationary close objects appear to move in the opposite direction. Distant objects appear to move with the eyes in the same direction. Practice seeing this with the eyes open and in the imagination with the eyes closed.

Moving the head and body with the eyes when shifting is the normal function of the visual system and improves/perfects shifting, central fixation, appearance of oppositional movement, keeps the neck, head, eyes relaxed, mobile and vision clear. When shifts are very small, tiny, the head movement may be very small or not occur but the head, neck, eyes remain relaxed, loose.

12. Palming is a help, and I suggest that you palm for a few minutes many times during the day, at least ten times. At night just before retiring, it is well to palm for half an hour or longer.

Questions and Answers

Q—(1) Should a house be brightly lighted by a direct electric light or a reflected white light?
(2) In many homes colored shades are used on the lights. Does that impair the sight? C. I. I.
A—(1) The more brightly the house is lighted the better for the sight.
(2)Yes. Avoid all forms of fluorescent lights.

Q—(1) Is it advisable to use specimens of diamond type other than the "Seven Truths of Normal sight?" Would it be well to get a New Testament in diamond type?
(2) I have thus far found the flashing method the most helpful. However, after closing the eyes, I have difficulty in opening them. The lids seem to stick together, as it were. What is the cause of such stickiness and the remedy?
(3) I was trying to read the "Seven Truths" lately by the flashing method, and for about twenty minutes obtained very little results.

Then, all of a sudden, upon closing my eyes, I saw the blackest object I have ever seen with closed eyes. I was startled, it seemed so real, and on opening my eyes I was surprised to find that I could read practically all of the "Seven Truths" clearly, at thirteen inches, without closing my eyes. I think the black object was probably the black rubber key of the electric socket in the fixture which I had unconsciously looked at from time to time during the exercise. I have not been able to do just this since. What is the probable reason for my failure?
(4) I find I see any reading matter more clearly in a bright light—sunlight or electric light—than in a dim or less bright light. Why is this?
(5) Today in trying to read the "Seven Truths" I found that I could do it at six or seven inches with few alternate closings of the eyes; but I found in accomplishing this I was partially closing my eyelids, (squinting) so that I must have looked much like the Patagonians in Fig. I in Dr. Bates' book, said to be probably myopic when the picture was taken. I found that I could not keep my eyes thus partly closed without some strain, but I could not see the print clearly when they were wide open. Often the print would look quite blurred when I first looked at it, but it cleared perceptibly and became quite black as I continued to look. I also found myself reading today twenty pages of fairly small print at about eight or nine inches in much the same way. W. C. C.

A—(1) Yes, if you wish to. The "Testament" would be a good thing to have.
(2) Difficulty in closing or opening the eyes is a common symptom of strain, and may be relieved by any method that relieves strain.
(3) Such intervals of relaxation are a very common phenomenon. They will come more frequently and last longer if you continue to practice.
(4) In a bright light the contrast between black letters and their white background is more marked than in a dim light. Persons differ greatly, however, in the amount of light they require for maximum vision. Some people see better in a dim light, because they think that condition a favorable one.
(5) It is a bad one.

Announcements

Space does not permit us to print the entire list of Dr. Bates' authorized representatives in the United States, Canada and Europe, which we should like to do for the benefit of our subscribers. The following, however, is a list of those who have taken courses of instruction in the Bates Method within the past few months. Those subscribers who wish to know if there is an authorized representative in their city may obtain this information by writing direct to Dr. Bates at 210 Madison Avenue, New York City.

Miss Clara M. Brewster
Studio 6, Aquila Court,
Omaha, Nebraska.

Miss Mary E. Wilson,
2538 Charming Way,
Berkeley, Calif.

Dr. Paul J. Dodge,
911 New Industrial Trust
Bldg., Providence, R. I.

Mrs. D. L. Corbett,
1712½ Fifth Ave.,
Los Angeles, Calif.

Miss Jane Button,
249 Harvey St.,
Germantown, Pa.

Mr. Fred Baechtold,
572 12th St.,
West New York, N. J.
Tel.—Palisade 6-7735

Mr. Harold E. Ensley,
112 West 104th St.,
New York City.

Dr. Med. E. Schluter,
Hamburg, Mundsburger-
damm 11, Germany.

Mrs. R. Norman Jolliffe,
171 West 71st St.,
New York City.

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Bound volumes of "Better Eyesight" containing the issues from July, 1929 to June, 1930, inclusive, will be ready about July 15th. Those subscribers wishing to have their own magazines bound may send them to us before July 10th and they will be bound at the same time our issues are being bound. The price for binding will be $1.00.

THE USE OF THE SUN GLASS

In using the sun glass, it is well to accustom the eyes of the patient to the strong light by having him sit in the sun with his eyes closed, and at the same time he should slowly move his head from side to side, in order to avoid discomfort from the heat. Enough light shines through the eyelid to cause some people a great deal of discomfort at first, but after a few hours' exposure in this way, they become able to gradually open their eyes to some extent without squeezing the lids. When this stage is reached, one can focus, with the aid of the sun glass, the light on the closed eyelids, which at first is very disagreeable. When the patient becomes able to open the eyes, he is directed to look as far down as possible, and in this way the pupil is protected by the lower lid. Then by gently lifting the upper lid, only the white part of the eye is exposed, while the sun's rays strike directly upon this part of the eyeball. The sun glass may then be used on the white part of the eye. Care should be taken to move the glass from side to side quickly. The length of time devoted to focusing the light on the white part of the eye is never longer than a few seconds. After such a treatment the patient almost immediately becomes able to open his eyes widely in the light.

Most Modern Natural Eyesight Improvement Teachers do not apply the Sunglass Treatment -(Mainly due to fear of the AMA.) Ophthalmologist Bates cured many vision problems, eye diseases, various types of blindness with the Sunglass and Sunlight, Sunning Treatments. Try plain Sunning, Sunlight first.

The Sunglass treatment is to be done by a Bates Method Experienced Ophthalmologist and only if necessary in cases of blindness, extreme vision impairment and only after closed eyes sunning, daily sunlight exposure; eyes open (never staring into the sun), yes; looking at, shifting on the bright sunny sky, clouds, trees and other Bates Method Treatments have been tried first. (See other sunlight treatments in this book.)

If these have not brought vision improvement, the Sunglass Treatment may.

Be aware that certain types of glass act as a magnifying glass. The Sunglass is a magnifier and sunlight passing through the Sunglass can burn the eye.

Only a professional should apply this method;

The glass is never still; the glass is moved continually side to side... causing the light to move quickly on the top white area of the eye. A short time; only a few seconds of light is placed on the eye. Do one eye at a time.

(Patch the eye not being treated with a thick white eyepatch to prevent the eye, pupil from moving into the light of the Sunglass. Keep the patch open on the outer side away from the glass to allow plain daylight into that eye to keep both brain hemispheres, eyes active.

Do not wear any type of eyeglasses, contact lenses, sunglasses, tinted, UV blocking lenses when using the Sunglass, Sun-Gazing, Sunning.)

Distance of the glass from the eye must be exact, a specific distance and the time the light is on the eye (white area, sclera only, through eyelids or eyes open) must be brief, a few seconds or the eye can be burned.

It is a certain type of magnifying glass;

Type, size, thickness, curvature... of the glass, distance, angle from the eye, strength of the sun affects the strength, intensity, concentration of the light ray beam, heat of the sunlight through the glass. The heat increases with the amount of time the light is on the eye. The correct amount is relaxing, healthy for the eyes. The light must never shine on/into the eyes pupil. Keep the light away from the pupil, iris. Keep the eye, pupil far down, under the lower lid to prevent the light beam from shining into the pupil. Do not move the eyes when the Sunglass light is on the eyes.

Start with eyes closed, look far down. Bring the glass, light beam close, but a safe distance from the eye. Move the light beam on the white area of the eye through the closed eyelids. The movement helps to prevent heat. Test the intensity of the light, heat, distance of the glass... on the forehead, closed eyelids first. Through closed eyes notice the size of the light spot on the eye and the blood vessels... in the eyes, sclera. Keep the light moving, move it quickly on the upper sclera for a few seconds. (Light is kept away from the eyes pupil.)

Then, repeat with the eyes open; still looking far down, eyes pupil under the lower eyelid, protected from the light. Do one eye at a time; lift the upper eyelid, eyes open and move the light quickly side to side, small circles... a few seconds on the white area, upper sclera of the eye. Then repeat the steps with the other eye.

(When the eyes are closed; do one eye at a time and then you may also move the light over both eyes; side to side, up, down, diagonally.)

The Sunglass is a glass. As described in other chapters; All glass, plastic..; eyeglasses, windows, sunglasses block out part of the sun's light spectrum causing unhealthy partial spectrum, unbalanced light to exit the glass and shine into the eyes, travel to the brain, body. This impairs health, function of the brain, body, eyes and clarity of vision. For this reason the sunglass is only used to get the cells, light receptors, capillaries... in the eye, retina, lens back to full life, activity, bring the vision back. Then the glass is not used. Plain sunlight not passing through glass is used by practicing Sunning, Sun-Gazing... as described in this chapter.

Read more directions for Sunning, Sun-Gazing, Sunglass Treatments in the PDF Natural Eyesight Improvement E-book; Ophthalmologist Bates 'Better Eyesight Magazine' describes this treatment.
See; Better Eyesight Magazine; April, May, June, August, October, December, 1926 and November, 1924 and

Stop Staring

It can be demonstrated by tests with the retinoscope that all persons with imperfect sight stare, strain, or try to see. To demonstrate this fact:

Look intently at one part of a large or small letter at the distance or nearpoint. In a few seconds, usually, fatigue and discomfort will be produced, and the letter will blur or disappear. If the effort is continued long enough, pain may be produced.

To break the habit of staring:

(1) Shift consciously from one part to another of all objects regarded, and imagine that these objects move in a direction contrary to the movement of the eye. Do this with letters on the test card, with letters of fine print, if they can be seen, and with other objects.

(2) Close the eyes frequently for a moment or longer. When the strain is considerable, keep the eyes closed for several minutes and open them for a fraction of a second—flashing. When the stare is sufficient to keep the vision down to 2/200 or less, palm for a longer or shorter time; then look at the card for a moment. Later mere closing of the eyes may afford sufficient rest.

(3) Imagine that the white openings and margins of letters are whiter than the rest of the background. Do this with eyes closed and open alternately. It is an interesting fact that this practice prevents staring and improves the vision rapidly.

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BETTER EYESIGHT

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Copyright, 1930, by the Central Fixation Publishing Company

Editor, W. H. Bates, M.D.

Publisher, CENTRAL FIXATION PUBLISHING COMPANY

Vol. XIV JUNE, 1930 No. 12

Imagination Essential to Sight

By W. H. Bates, M.D.

IT IS a well-known fact that vision is a process of mental interpretation. The picture which the mind sees is not the impression on the retina, but a mental interpretation of it. To the mind objects seen appear to be in an upright position, but the picture on the retina is upside down. When the sight is normal the margins and openings of black letters on a white card appear whiter than the rest of the card, but this, of course, is not the fact, the whole background being of the same whiteness. One may seem to see a whole letter all alike at one time, but, as a matter of fact, the eye is shifting rapidly from one part to another. The letter may also seem to move although it is stationary.

When the vision is imperfect the imagination is also imperfect. The mind, in short, adds imperfections to the imperfect retinal image. A great part of the phenomena of imperfect sight are, therefore, imaginary and not in any way to be accounted for by the derangement of the visual apparatus. The color, size, form, position and number of objects regarded are altered, and non-existent objects may be seen. Some persons with imperfect sight literally see ghosts. A boy, or a grown person either, in a

Go to the Movies

(Editor's Note.—Recently a great many letters have come from patients and others asking if the movies were injurious to the eyes. For the benefit of these inquirers we are reprinting an article which appeared in this magazine in October, 1920.)

Cinematograph pictures are commonly supposed to be very injurious to the eyes, and it is a fact that they often cause much discomfort and lowering of vision. They can, however, be made a means of improving the sight. When they hurt the eyes it is because the subject strains to see them. If this tendency to strain can be overcome, the vision is always improved, and if the practice of viewing the pictures is continued long enough, nearsight, astigmatism and other troubles are cured.

If your sight is imperfect, therefore, you will find it an advantage to go to the movies frequently and learn to look at the pictures without strain. If they hurt your eyes look away to the dark for a while, then look at a corner of the picture; look away again, and then look a little nearer to the center; and so on. In this way you may soon become able to look directly at the picture without discomfort. If this does not help, try palming for five minutes or longer. Dodge the pain, in short, and prevent the eyestrain by constant shifting, or by palming.

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Editor, W. H. Bates, M.D.
Publisher, CENTRAL FIXATION PUBLISHING COMPANY

Vol. VIII JUNE, 1929 No. 12

Cataract

By W. H. Bates

SINBAD the sailor told many stories of his voyages which have pleased some adults and many children. I wish to maintain that some of his experiences were true while many were not. On one of his voyages, when sailing in the tropics, a violent storm struck the ship and he was wrecked on the shores of an island in the Pacific Ocean. As usual, most of the sailors were drowned but Sinbad lived to return home and tell of the wonders he had seen.

It was related by him that the island was frequented by goats who were blind for a variable length of time. After a few days or weeks many of them recovered their sight, being cured in some way by a thorn bush which had large thorns. Sinbad watched them closely and discovered that each goat pushed each blind eye directly onto one of these thorns. After a few efforts the goat became able to see. How was it accomplished?

The cause of the blindness was the presence of an opaque body behind the pupil. This opaque body is a cataract. There are numerous operations for the cure of cataract but all are planned to move it to one side, above or below the optic axis so that the pupil appears perfectly clear and permits good sight. Eye doctors dur-

THE MEMORY CURE

When the sight is perfect, the memory is also perfect, because the mind is perfectly relaxed. Therefore the sight may be improved by any method that improves the memory. The easiest thing to remember is a small black spot of no particular size and form; but when the sight is imperfect it will be found impossible to remember it with the eyes open and looking at letters, or other objects with definite outlines. It may, however, be remembered for a few seconds or longer, when the eyes are closed and covered, or when looking at a blank surface where there is nothing particular to see. By cultivating the memory under these favorable conditions, it gradually becomes possible to retain it under unfavorable ones, that is, when the eyes are open and the mind conscious of the impressions of sight. By alternately remembering the period with the eyes closed and covered and then looking at the Snellen test card, or other letters or objects; or by remembering it when looking away from the card where there is nothing particular to see, and then looking back; the patient becomes able, in a longer or shorter time, to retain the memory when looking at the card, and thus becomes able to read the letters with normal vision. Many children have been cured very quickly by this method. Adults who have worn glasses have greater difficulty. Even under favorable conditions, the period cannot be remembered for more than a few seconds, unless one shifts from one part of it to another. One can also shift from one period, or other small black object, to another.

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Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I NOVEMBER, 1919 No. 5

REASON AND AUTHORITY

Some one—perhaps it was Bacon—has said: "You cannot by reasoning correct a man of ill opinion which by reasoning he never acquired." He might have gone a step farther and stated that neither by reasoning, nor by actual demonstration of the facts, can you convince some people that an opinion which they have accepted on authority is wrong.

A man whose name I do not care to mention, a professor of ophthalmology, and a writer of books well known in this country and in Europe, saw me perform an experiment upon the eye of a rabbit which, according to others who had witnessed it, demonstrated beyond any possibility of error that the lens is not a factor in accommodation. At each step of the operation he testified to the facts; yet at the conclusion he preferred to discredit the evidence of his senses rather than accept the only conclusion that these facts admitted.

First he examined the eye of the animal to be experimented upon with the retinoscope and found it normal, and the fact was written down. Then the eye was stimulated with electricity, and he testified that it accommodated. This was also written down. I now divided the superior oblique muscle, and the eye was again stimulated with electricity.

"PAGE TWO"

ON page two of this magazine are printed each month specific directions for improving the sight in various ways. Too many subscribers read the magazine once and then mislay it. We feel that at least page two should be kept for reference.

When the eyes are neglected the vision may fail. It is so easy to forget how to palm successfully. The long swing always helps but it has to be done right. One may under adverse conditions suffer a tension so great that the ability to remember or imagine perfectly is modified or lost and relaxation is not obtained. The long swing is always available and always brings sufficient relief to practice the short swing, central fixation, the perfect memory and imagination with perfect relief.

Be sure and review page two frequently; not only for your special benefit but also for the benefit of individuals you desire to help!

Persons with imperfect sight often have difficulty in obtaining relaxation by the various methods described in the book and in this magazine. It should be emphasized that persons with good vision are better able to help others than people who have imperfect sight or wear glasses. If you are trying to cure yourself avoid people who wear glasses or do not see well. Those individuals are always under a strain and the strain is manifested in their face, in their voices, in their walk, the way they sit, in short in everything that they do.

Strain is contagious. Teachers in Public Schools who wear glasses are a menace to their pupils' sight. Parents who wear glasses or who have imperfect sight lower the vision of their children. It is always well when treating children or adults to keep them away from people with imperfect sight.

Dr. W. H. Bates
7-28-1924

CRW - Dec. 26, 1924

Better Eyesight

A Monthly Magazine Devoted to the Prevention and Cure of Imperfect Sight without Glasses

Published by the Central Fixation Company, 300 Madison Ave., New York, as the official organ of the BETTER EYESIGHT LEAGUE, a national organization to relieve the sufferings and discomfort of those afflicted with imperfect eyesight, to disseminate the knowledge of the scientific cure and prevention of imperfect sight without the use of glasses, and to promote further research and investigation into the causes for imperfect eyesight and its improvement without the use of artificial lenses.

W. H. BATES, M. D., Editor

VOL. VII. JULY, 1922 No. 1

THE STORY OF VIOLET

By W. H. Bates, M. D.

Just what, in simple words, is Central Fixation? If you will read this story of a ten-year-old girl who discovered it for herself you will know, not in terms of theory or in scientific phrases, but in practical simplicity.

SOME years ago a young girl, aged 10, was brought to me for the cure of imperfect sight and squint. She was wearing quite strong glasses for relief.

The right or squinting eye, even with her strong glasses, had very poor vision. The best she could see with this eye with or without glasses was counting fingers at about three feet. Looking straight ahead of her with this squinting eye, with the other eye covered, everything was visible and, she said, perfectly dark, and what she did see at any time with this eye was off to one side. She was unable to read with this eye with or without her glasses.

MAKE YOUR SIGHT WORSE

Strange as it may seem there is no better way of improving the sight than by making it worse. To see things worse when one is already seeing them badly requires mental control of a degree greater than that required to improve the sight. The importance of these facts is very great. When patients become able to lower their vision by conscious staring, they become better able to avoid unconscious staring. When they demonstrate by increasing their eccentric fixation that trying to see objects not regarded lowers the vision, they may stop trying to do the same thing unconsciously.

What is true of the sight is also true of the imagination and memory. If one's memory and imagination are imperfect, they can be improved by consciously making them worse than they are. Persons with imperfect sight never remember or imagine the letters on the test card as perfectly black and distinct, but to imagine them as grey and cloudy is very difficult, or even impossible, and when a patient has done it, or tried to do it, he may become able to avoid the unconscious strain which has prevented him from forming mental pictures as black and distinct as the reality.

To make imperfect sight worse is always more difficult than to lower normal vision. In other words, to make a letter which already appears grey and indistinct noticeably more cloudy is harder than to blur a letter seen distinctly. To make an imperfect mental picture worse is harder than to blur a perfect one. Both practices require much effort, much hard disagreeable work; but they always, when successful, improve the memory, imagination and vision.

BETTER EYESIGHT

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Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. III SEPTEMBER, 1920 No. 3

EXPERIENCES WITH CENTRAL FIXATION

By M. H. STUART, M.D.

Moultrie, Ga.

We are greatly indebted to Dr. Stuart for sending us this remarkable story of his own cure and that of his patients, all of which was accomplished without personal assistance by means of the information presented in this magazine.

Some sixteen years ago, when working as a stenographer, I developed indigestion and became extremely nervous, one of my symptoms being a tension in the spinal cord between the shoulder blades which was extremely uncomfortable. In the late afternoon and evening I would become so nervous that I could scarcely sit still, and I have walked five miles into the country and back again to get relief. I tried dieting for the indigestion, but after two months failed to get any relief. A medical student then suggested that the trouble might be due to my eyes. I went to an oculist, who fitted me with glasses, and all my troubles ceased.

The glasses given to me were convex 0.25, axis 90. A few years later, when I was in New York doing post-graduate work at the Polyclinic, they were changed to concave

REST

All methods of curing errors of refraction are simply different ways of obtaining rest.

Different persons do this in different ways. Some patients are able to rest their eyes simply by closing them, and complete cures have been obtained by this means, the closing of the eyes for a longer or shorter period being alternated with looking at the test card for a moment. In other cases patients have strained more when their eyes were shut than when they were open. Some can rest their eyes when all light is excluded from them by covering with the palms of the hands; others cannot, and have to be helped by other means before they can palm. Some become able at once to remember or imagine that the letters they wish to see are perfectly black, and with the accompanying relaxation their vision immediately becomes normal. Others become able to do this only after a considerable time. Shifting is a very simple method of relieving strain, and most patients soon become able to shift from one letter to another, or from one side of a letter to another in such a way that these forms seem to move in a direction opposite to the movement of the eye. A few are unable to do this, but can do it with a mental picture of a letter, after which they become able to do it visually.

Patients who do not succeed with any particular method of obtaining rest for their eyes should abandon it and try something else. The cause of the failure is strain, and it does no good to go on straining.

BETTER EYESIGHT

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Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. II APRIL, 1920 No. 4

HOW I HELPED OTHERS

By VICTORIA COOLIDGE

When I had become able to read without glasses, and my headaches had become less and less frequent, and less severe each time, I was so enthusiastic over my experience that I was anxious to help others. My brother was my first patient. He was so much interested in what had been done for me that he wanted to try it himself; but I never dreamed of being able to help him, because his eyes were almost as bad as my own had been, his glasses being: right eye convex 3.25 D.S.; left eye, convex 3.75 D.S. combined with 0.50 D.C., 180 degrees. However, I knew the treatment could do no harm, so I decided that I would try to show him as nearly as I could what Dr. Bates had done for me. Imagine my surprise, then, when I found that he, too, by holding the fine print six inches from his eyes and looking alternately at the top and bottom of the letters, became able to read it just as I had become able to do so. He proved to be a model pupil as soon as he had demonstrated to his own satisfaction that he must leave off his glasses all the time if he wanted to make any appreciable progress. He has now done without them for about a year, and has made remarkable prog-

Perfect Sight Without Glasses

By W. H. BATES, M.D.

The author of this book presents evidence that all errors of refraction are caused by strain —and cured by rest and relaxation.

The complete method of treatment is described so clearly that the reader can usually discard his glasses and improve his vision.

For sale at this office and at leading bookstores.
Price $3.00 postpaid.

METHODS OF TREATMENT
described in
Stories from the Clinic
By EMILY C. LIERMAN

This book fully explains the author's experiences in treating clinic patients and her application of Dr. Bates' method of treatment to each individual case.

"Stories from the Clinic" is a contribution to the practice of Ophthalmology

Price, $2.00 postpaid

Central Fixation Publishing Company
18 East 48th Street, New York City

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. XIV | JUNE, 1930 | No. 12

Stop Staring

Imagination Essential to Sight
By W. H. Bates, M.D.

Suggestions
By Emily A. Bates

Questions and Answers

Announcements

$2.00 per year | 20 cents per copy | Back numbers 30 cents

Published by the CENTRAL FIXATION PUBLISHING COMPANY
210 MADISON AVENUE NEW YORK, N. Y.

Final Magazine - June 1930

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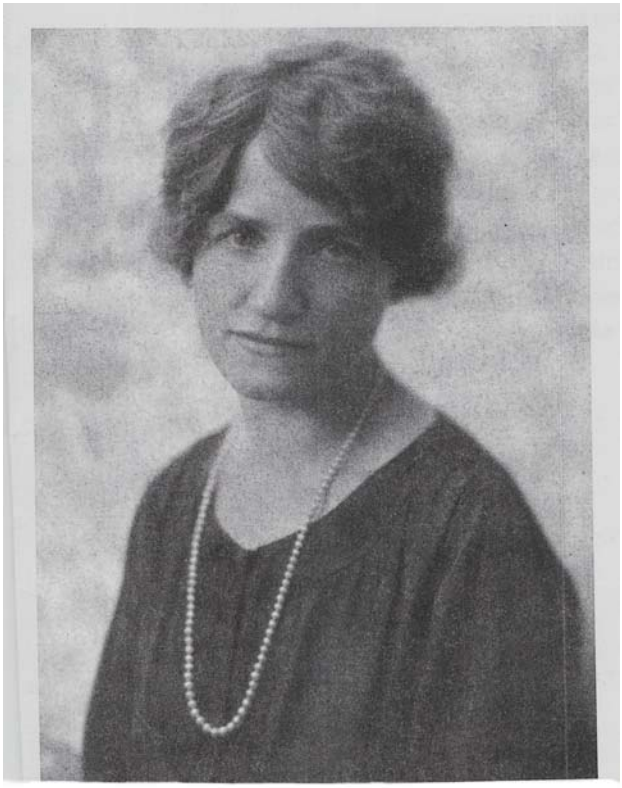
Stories From The Clinic by Emily C. Lierman, Bates

Emily C. Lierman worked with Ophthalmologist William H. Bates as his assistant, nurse.
Dr. Bates cured her eyesight.
They worked together for many years in Dr. Bates Clinic curing unclear vision, astigmatism, crossed/wandering eyes, cataracts, glaucoma, blindness and other eye problems by treatment with natural methods, without eyeglasses, surgery, drugs.

This began the Natural Eyesight Improvement revolution.

Ophthalmologist Bates 'Better Eyesight Magazines' were written by Dr. Bates, Emily Lierman/Bates and other doctors, workers at their clinic to describe the way their patients were cured.
Many stories are in the patients own words.
These are true life stories.
'Better Eyesight Magazines' contain 'Stories From The Clinic' - true stories written by Emily Lierman/Bates.
Emily Lierman/Bates placed all the Stories from the Clinic into one book.

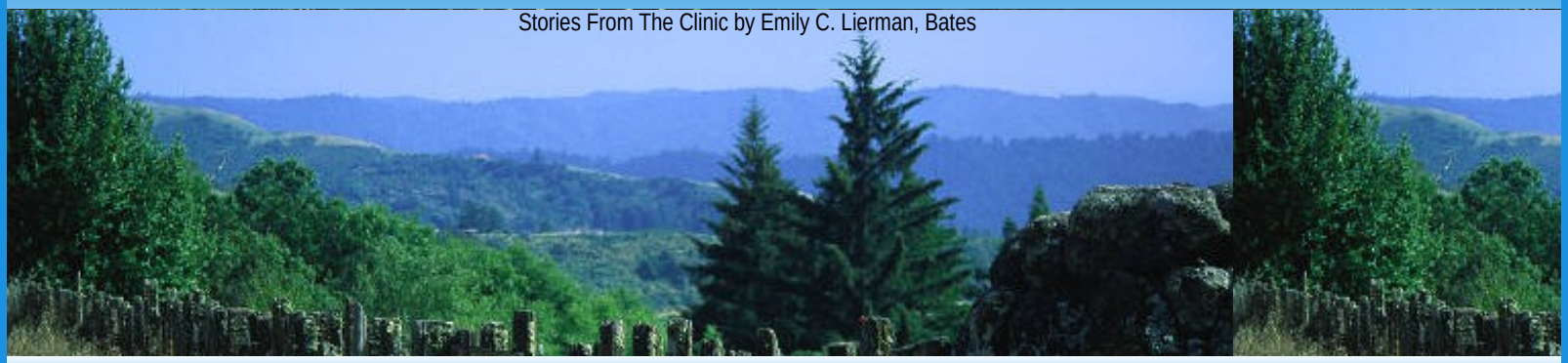


Emily C. Lierman, Bates

Her kind treatment of the children, senior citizens, all races, each individual patient in the Clinic, (a loving mom, nurse, Natural Eyesight Improvement teacher, Dr. Bates dependable assistant all combined into one) was a major factor in the many eyesight cures she and Dr. Bates accomplished.
Hearing, asthma, nervousness, headache, insomnia, various types of pain, movement, balance, coordination and other conditions were also cured by the natural eyesight cures.

The optical industry destroyed the magazines, stories, hid them from the public for years because these magazines, books tell the truth about the cause and natural cure of imperfect sight and eye problems, disease.

Colored pictures are placed in this book by Clark Night to help the reader learn the treatments described in the book.



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2 - BOOKS - WEB SITES BEST BATES METHOD NATURAL EYESIGHT IMPROVEMENT INFORMATION

3 - FREE NATURAL EYESIGHT IMPROVEMENT BOOK

4 - MENTAL STRAIN, EYE MUSCLE TENSION CAUSES UNCLEAR EYESIGHT. DANGERS OF LASER EYE CORNEA SURGERY, EYEGLASSES AND CONTACT LENSES.

5 - STRONG EYEGLASSES = VISION IMPAIRMENT VERSES REDUCED, WEAKER LENSES = VISION IMPROVEMENT



Emily C. Lierman Bates

STORIES FROM THE CLINIC

By EMILY C. LIERMAN



Emily C. Lierman, Bates
Cured People of Imperfect Sight by Natural Treatments.

CENTRAL FIXATION PUBLISHING CO.
NEW YORK CITY
Copyright, 1926, By EMILY C. Lierman

TO THE CHILDREN OF THE CLINIC
AND TO
W. H. BATES, M.D.,
THIS BOOK IS DEDICATED



William H. Bates, M. D.
Ophthalmologist. Discovered the Cure of Imperfect Sight by Natural Treatment Without Glasses.

Emily C. Lierman, her eyesight cured by Dr. William H. Bates, worked as a nurse/assistant with Dr. Bates for many years.
They married in 1928. Her name then changed to Emily A. Bates.

Emily Lierman/Bates is known for her kind, understanding way of treating, teaching patients to obtain clear eyesight and devotion to Dr. Bates work.

This book describes the natural treatments they applied, without use of eyeglasses, surgery, drugs to cure unclear close and distant vision, astigmatism, wandering/crossed eyes (squint), cataracts, glaucoma, blindness and other eye problems for a variety of patients in their clinic.
'Stories From The Clinic' were originally published in 'Better Eyesight Magazine' by Ophthalmologist William H. Bates, Central Fixation Publishing Co., New York City, U.S. A.



Fig. 8. The Usual Method of Using the Retinoscope
The observer is so near the subject that the latter is made nervous, and this changes the refraction.

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This is a Bates Method Natural Eyesight Improvement book.
Comments printed in blue are written by Clark night.
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STORIES FROM THE CLINIC

By

EMILY C. LIERMAN

CENTRAL FIXATION PUBLISHING CO.
NEW YORK CITY

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Emily C. Lierman

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PREFACE

The articles comprising this book were first published in the monthly magazine "Better Eyesight" during a period of five years.

Various eye defects are described in simple and intelligible language, so that those who are interested may follow the practical instructions and improve their own vision, or that of others.

The stories are drawn from my clinical experience in the cure of imperfect sight by treatment without glasses. I have been Dr. Bates' assistant for eleven years, and they were years of a great education in the knowledge of the eye, in health, and in disease.

To Dr. W. H. Bates, the discoverer of the method, I am indebted for his encouragement and help.

EMILY C. LIERMAN.



PRESS OF THOS. R. BROOKS, INC.
NEW YORK

INTRODUCTION

I feel honored in being asked to write an introduction to this excellent book, "Stories From the Clinic," by Emily C. Lierman.

The stories have come directly from Mrs. Lierman's experience, and consequently are of intrinsic value. The patients, their symptoms of imperfect sight, and the treatment are all described in language which is so clear that anyone can understand.

For more than nine years Mrs. Lierman was my assistant in the out-patient department of the Harlem Hospital. She showed a great deal of understanding in treating the patients, adapting my method to each individual case. The cures she obtained were of the greatest value. She was particularly interested in the school children, and was so kind and patient with them that they all loved her. Her cures of imperfect sight without glasses were numerous. The way she treated the patients and the results obtained were a contribution to the practice of ophthalmology. For example, an old lady with absolute glaucoma in one eye, totally blind with no perception of light, visited the clinic to obtain relief from an agony of pain. Many doctors had previously advised the removal of one or both eyes, which has been for many years considered by regular physicians to be good practice. It has also been taught that no operation or treatment can cure the blindness resulting from absolute glaucoma. Mrs. Lierman was told that it was a hopeless case, but was asked to try to relieve the pain. She immediately treated the woman, and much to my surprise not only relieved the pain, but also improved the eye until the patient became able to see at the distance, and to read fine print without glasses.

Of course, her work attracted attention and criticism. A prominent physician was sent one day to investigate. We told him the facts and a number of patients were treated for his benefit. He was very much interested in an elderly colored woman with cataract. This patient became able to read diamond type from six to fourteen inches from her eyes without glasses. The doctor, himself, was wearing glasses for distant vision and a stronger pair for reading. Mrs. Lierman treated him, also, with much benefit. From his personal experience and from his observation of the treatment of the patients by Mrs. Lierman, he was convinced that the method was one of great value. He had been sent to condemn, and remained to praise.

W. H. BATES, M.D.

DEFINITIONS

NORMAL VISION is perfect sight at all distances.
The Snellen test card is the standard for testing the vision. When the ten foot line of the card can be read at ten feet or further, and fine print can be read at six inches or less, one has normal vision.

MYOPIA or NEAR-SIGHTEDNESS: The vision for near objects is good, while the distant vision is imperfect.

HYPERMETROPIA or FAR-SIGHTEDNESS: The sight is not so good at a near point as it is for more distant objects.

PRESBYOPIA or OLD AGE SIGHT: The vision is imperfect when the patient tries to read fine print at a near point. The distant vision may or may not be good.

ASTIGMATISM is an imperfect curvature of the eye.
Usually the front part of the eye has one curve which is different from all the other curves.

CATARACT is an opacity of the lens in the pupil, which interferes with good vision.

RETINITIS PIGMENTOSA is a disease of the interior of the eye, accompanied by the formation of black pigment spots.

FLOATING SPECKS are not real, they are imagined.

IRITIS is an inflammation of the iris, or the colored part of the eye.

CHALAZION TUMOR is a swelling of one of the glands of the eyelids.

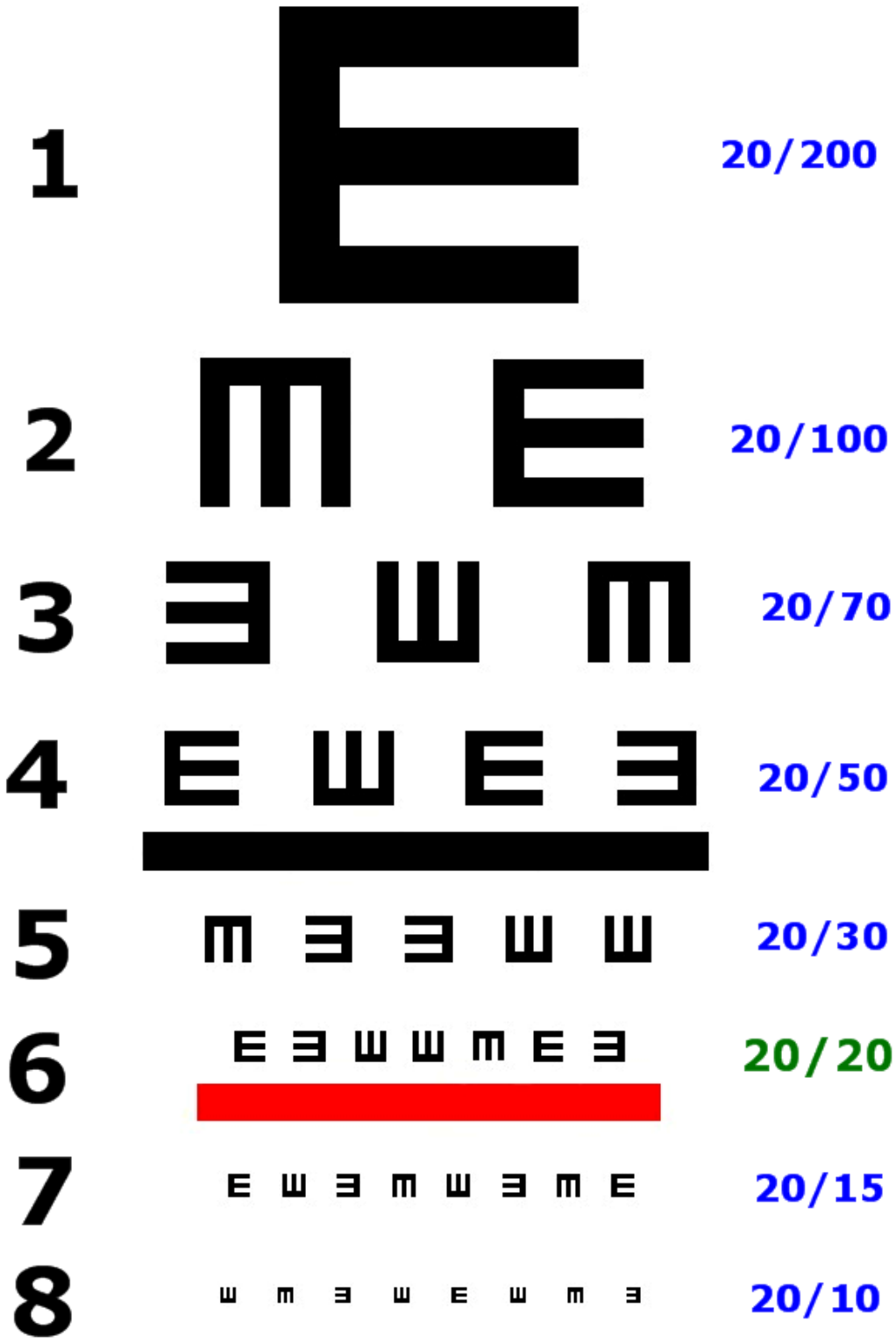
MEMORY, or IMAGINATION, is the ability to see or recall letters, or other objects, when the eyes are closed, as well as they can be seen with the eyes open.

The SNELLEN TEST CARD has letters or other objects printed in varying sizes. The smallest letter or picture seen clearly on the card is a measure of the vision.

POT HOOKS is the name used for test cards which have a letter "E" printed with the opening pointing up or down, in or out. The test letter is made of different sizes similar to other Snellen test cards. It is usually employed to test the vision of children or adults who do not know the alphabet. The smallest "E" which the patient recognizes "pointing" in the true direction, measures the amount of sight.

DIAMOND TYPE is one of the smallest types used in printing and helps to improve the vision if it is read every day.

Pothooks, Tumbling, Inverted E Eyechart



SUGGESTIONS

1 - If the vision of the patient is improved under the care of the doctor, and the patient neglects to practice, when he leaves the office, what he is told to do at home, the treatment has been of no benefit whatever. The improved vision was only temporary. Faithful practice permanently improves the sight to normal.

2 - If the patient conscientiously practices the methods, as advised by the doctor, his vision always improves. This applies to patients with errors of refraction, as well as organic diseases.

3 - For cases of squint we find that the long swing is beneficial to adults and to children.

4 - When a patient suffers with cataract, palming is usually the best method of treatment, and should be practiced many times every day.

5 - All patients with imperfect sight unconsciously stare, and should be reminded by those who are near to them to blink often. To stare is to strain. Strain is the cause of imperfect sight.

The following rules will be found helpful if faithfully observed:—

6 - While sitting, do not look up without raising your chin. Always turn your head in the direction in which you look. Blink often.

7 - Do not make an effort to see things more clearly. If you let your eyes alone, things will clear up by themselves.

8 -Do not look at anything longer than a fraction of a second without shifting.

9 - While reading, do not think about your eyes, but let your mind and imagination rule.

10 - When you are conscious of your eyes while looking at objects at any time, it causes discomfort and lessens your vision.

11 - It is very important that you learn how to imagine stationary objects to be moving, without moving your head or your body.

12 - Palming is a help, and I suggest that you palm for a few minutes many times during the day, at least ten times. At night just before retiring, it is well to palm for half an hour or longer.

AIDS TO PERFECT SIGHT BY TREATMENT WITHOUT GLASSES

Psalm 23
A Psalm of David



S. Matthew 4
Beatitudes



Psalm 119



INSTRUCTIONS

Dr. W. H. Bates has made many remarkable discoveries relative to the prevention and cure of imperfect sight without the aid of glasses during his thirty-eight years of research and experimental work. Among the most important of these discoveries, and one that he has proved again and again, is the following:

FINE PRINT IS A BENEFIT TO THE EYE—LARGE PRINT IS A MENACE.

It is impossible to read microscopic or very fine print by making an effort to see it. It can only be read when the mind and eyes are relaxed.

The above chapters are written in diamond and microscopic type. At first it may seem difficult to become accustomed to the fine print, but by looking at it without trying to read it, the print will become discernible.

Some people find it beneficial to imagine the white spaces between the lines, whiter than the margin. When one imagines the white spaces perfectly white, the print becomes very black and legible, apparently of its own volition.

Large print is detrimental to perfect sight because the eye tries to see the whole letter at once. When one is looking at an object, for instance, a chair, the object blurs if the whole is seen at once. You cannot possibly see the arms, legs, back and body of a chair all at once. You either see the back first or the seat. This is Central Fixation. Seeing best where you are looking.

We know that if these instructions are carefully followed, the above articles will prove extremely beneficial.

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W. H. BATES, M.D.

New York

AIDS TO PERFECT SIGHT BY TREATMENT WITHOUT GLASSES

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TEST CARD PRACTICE

1 - Every home should have a test card.

2 - It is best to place the card permanently on the wall in a good light.

3 - Each member of the family or household should read the card every day.

4 - It takes only a minute to test the sight with the card. If you spend five minutes in the morning practicing, it will be a great help during the day.

5 - Place yourself ten feet from the card and read as far as you can without effort or strain. Over each line of letters are small figures indicating the distance at which the normal eye can read them. Over the big C at the top of the card is the figure 200. The big C, therefore, should be read by the normal eye at a distance of two hundred feet. If you can read this line at ten feet, your vision would be 10/200. The numerator of the fraction is always the distance of the card from the eyes. The denominator always denotes the number of the line read. If you can only read the line marked 40 at ten feet, the vision is 10/40.

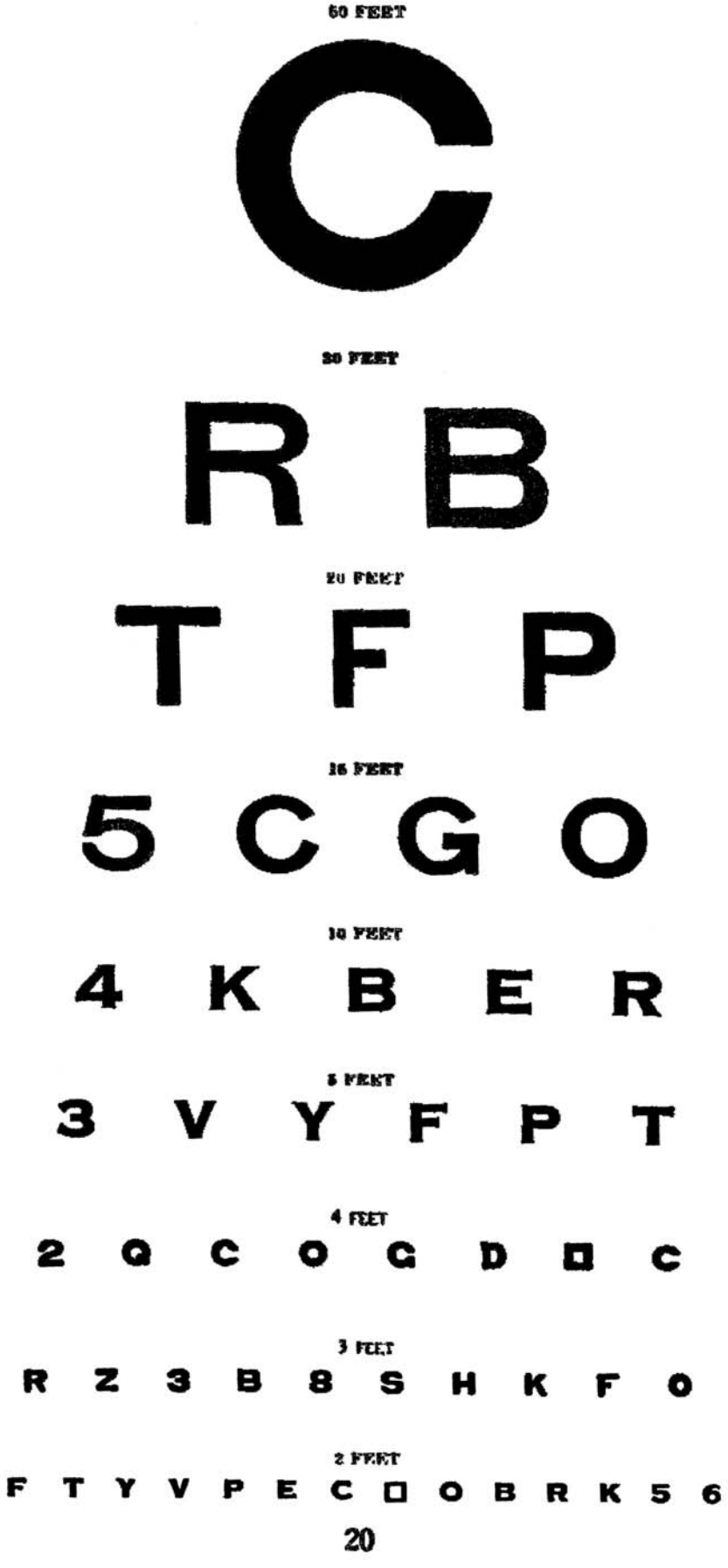
6 - If you can only see to the fifth line, for example, notice that the last letter on that line is an R. Now close your eyes, cover them with the palms of the hands and remember the R. If you will remember that the left side is straight, the right side partly curved, and the bottom open, you will get a good mental picture of the R with your eyes closed. This mental picture will help you to see the letter directly underneath the R, which is a T.

7 - Shifting is good to stop the stare. It you stare at the letter T, you will notice that all the letters on that line begin to blur. It is beneficial to close your eyes quickly after you see the T, open them, and shift to the first figure on that line, which is a 3. Then close your eyes and remember the 3. You will become able to read all the letters on that line by closing your eyes for each letter.

8 - Keep a record of each test in order to note your progress from day to day.

9 - When you become able to read the bottom line with each eye at ten feet, your vision is normal for the distance, 10/10.

10 - The distance of the Snellen test card from the patient is a matter of considerable importance. However, some patients improve more rapidly when the card is placed fifteen or twenty feet away, while others fail to get any benefit with the card at this distance. In some cases the best results are obtained when the card is as close as one foot. Others with poor vision may not improve when the card is placed at ten feet or further, or at one foot or less, but do much better when the card is placed at a middle distance, at about eight feet. Some patients may not improve their vision at all at ten feet, but are able to improve their sight at twenty feet, or at one foot. While some patients are benefited by practicing with the card daily, always at the same distance, there are others who seem to be benefited when the distance of the card from the patient is changed daily.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20

Fundamentals

By

W. H. Bates, M. D.

1. Glasses discarded permanently.

2. Central Fixation is seeing best where you are looking.

3. Favorable conditions: Light may be bright or dim. The distance of the print from the eyes, where seen best, also varies with people.

4. Shifting: With normal sight the eyes are moving all the time.

5. Swinging: When the eyes move slowly or rapidly from side to side, stationary objects appear to move in the opposite direction.

6. Long Swing: Stand with the feet about one foot apart, turn the body to the right—at the same time lifting the heel of the left foot. Do not move the head or eyes or pay any attention to the apparent movement of stationary objects. Now place the left heel on the floor, turn the body to the left, raising the heel of the right foot. Alternate.

7. Drifting Swing: When practicing this swing, one pays no attention to the clearness of stationary objects, which appear to be moving. The eyes wander from point to point slowly, easily, or lazily, so that the stare or strain may be avoided.

8. Variable Swing: Hold the forefinger of one hand six inches from the right eye and about the same distance to the right, look straight ahead and move the head a short distance from side to side. The finger appears to move.

9. Stationary Objects Moving: By moving the head and eyes a short distance from side to side, being sure to blink, one can imagine stationary objects to be moving.

10. Memory: Improving the memory of letters and other objects improves the vision for everything.

11. Imagination: We see only what we think we see, or what we imagine. We can only imagine what we remember.

12. Rest: All cases of imperfect sight are improved by closing the eyes and resting them.

13. Palming: The closed eyes may be covered with the palm of one or both hands.

14. Blinking: The normal eye blinks, or closes and opens very frequently.

15. Mental Pictures: As long as one is awake one has all kinds of memories of mental pictures. If these pictures are remembered easily, perfectly, the vision is benefited.

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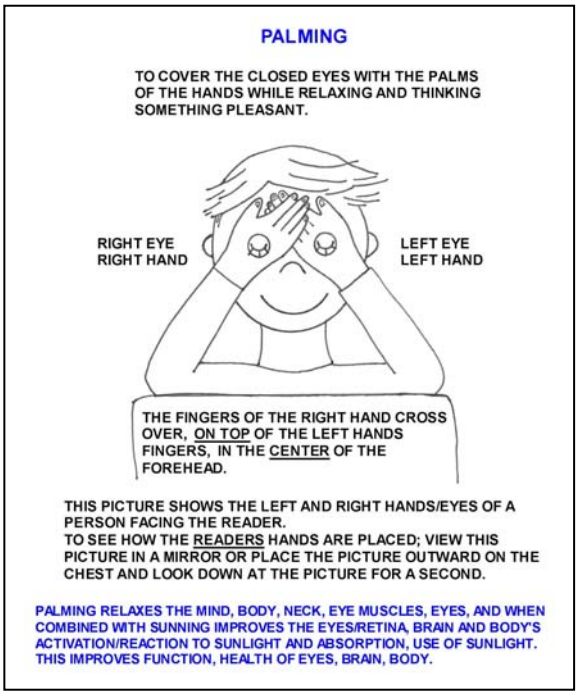
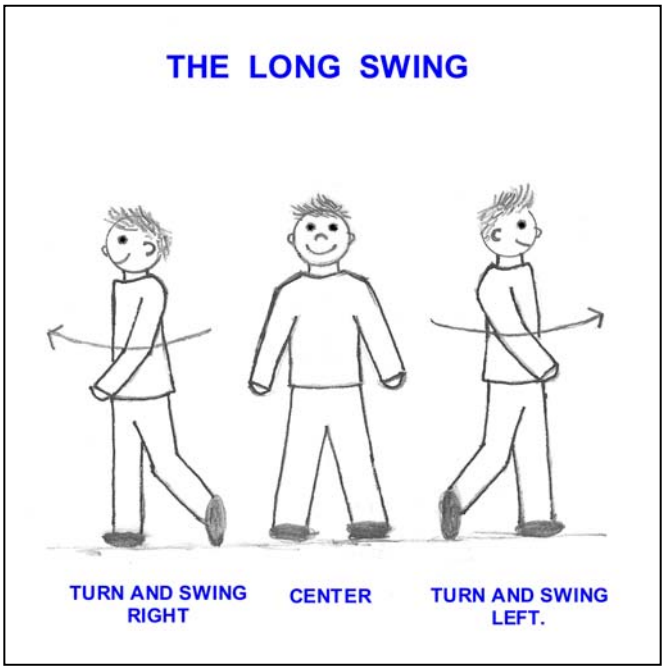
#2 – Central fixation - Place the object the eyes are looking at in the center of the visual field.
#5 and 9 – Oppositional movement.
#6 – Long swing - The head, eyes do move with the body, in synchronization, at the same time, in the same direction.
See diagrams, directions www.cleareyesight.info.
#8 - This can also be done with the finger 6 inches in front of the face/nose, between the left and right eyes.
#10, 11, 15 memory, imagination, remembering, imagining objects, mental pictures clear.
#13 – Palming and other activities, correct eye functions listed above and in this book are described with diagrams on www.cleareyesight.info
Free eye charts are available for download in Microsoft word and Adobe Reader.
Use the navigation bar as a chapter/contents index.

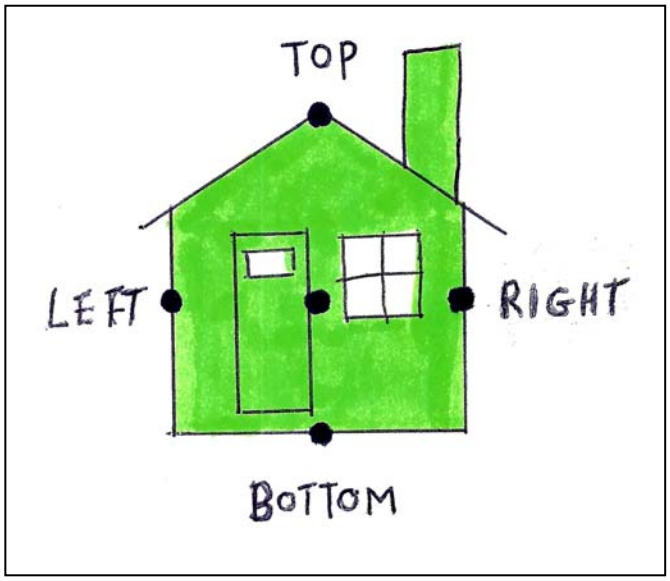
PALMING



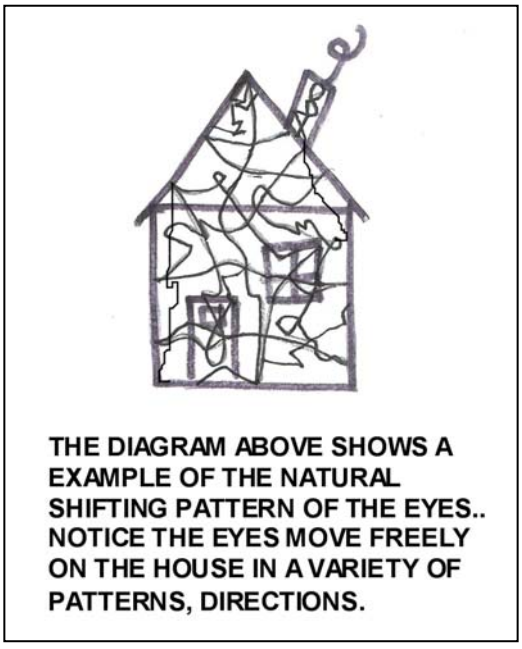
THE LONG SWING



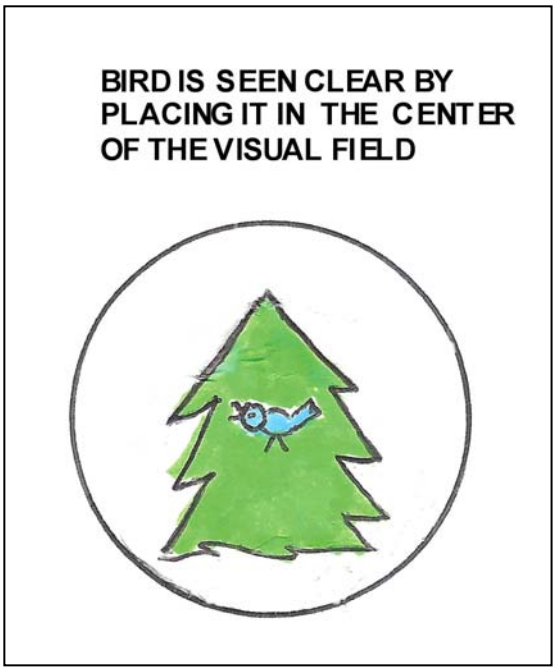
SHIFTING – EYE MOVEMENT – THE EYES/VISUAL ATTENTION/CENTER OF THE VISUAL FIELD SHIFT/MOVE FROM POINT TO POINT, PART TO PART ON A OBJECT AND FROM OBJECT TO OBJECT. SHIFT ON THE HOUSE, DOT TO DOT.



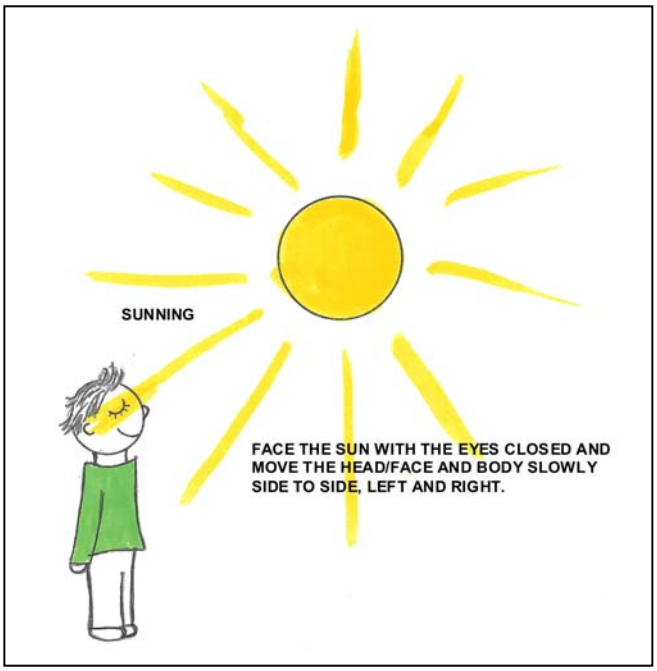
SHIFT IN ANY DIRECTION/PATTERN.



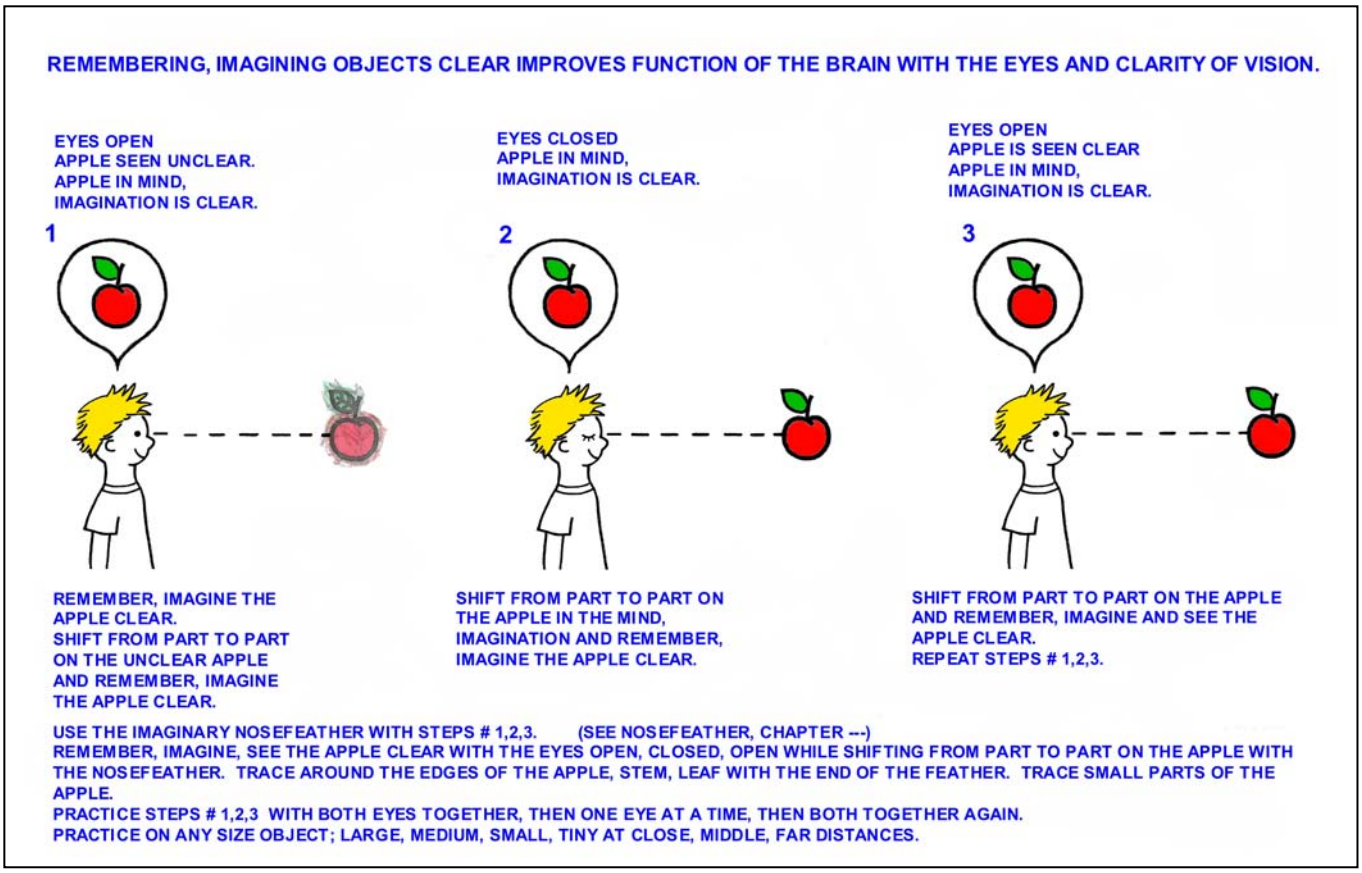
CENTRAL FIXATION



SUNNING



MEMORY AND IMAGINATION – CLEAR MENTAL PICTURES



SUN TREATMENT

Most ophthalmologists prescribe dark glasses to nearly all of their patients who suffer from the brightness of light. This practice, in my opinion, has been overdone. I remember one patient who was in the hospital for two years in a dark room, with both eyes bandaged with a dark binding day and night continuously. When she left the hospital she was in a very pitiable condition. She was practically blind in the bright sunlight. She went to a great many clinics and eye doctors and all they did for her was to give her stronger dark glasses. In time these dark glasses did not give her any relief. Instead of being helpful to her weak eyes, the glasses had the effect of making them more sensitive to the light than they had ever been before. It has been my experience that all persons who wear dark glasses sooner or later develop very serious inflammation of their eyes. The human eye needs the light in order to maintain its efficiency. The use of eye-shades and protections of all kinds from the light is very injurious to the eyes.

Sunlight is as necessary to normal eye as is rest and relaxation. If it is possible, start the day by exposing the eyes to the sun—just a few minutes at a time will help. Get accustomed to the strong light of the sun by letting it shine on your closed eyelids. Later, when you can look down sufficiently, by gently lifting the upper lid the white part of the eye can be exposed, while the sun's rays strike directly on it. It is good to move the head slightly from side to side while doing this, in order to prevent straining. One cannot get too much sun treatment.

STORIES FROM THE CLINIC

CHAPTER I

EXPERIENCES WITH SCHOOL CHILDREN

TOPSY

THE patients who come to our clinic do wonderful things, especially the school children. We can give each one of them, as a rule, only about five minutes of our time, and yet they are able to carry out their instructions at home, and to get results. This is a great tribute to their patience and intelligence.

Most of the children and adults are helped by palming, and remarkable cures have been obtained by this means alone. A little lad had been so injured in an automobile accident that he had only light perception in his left eye. It was some time before I could get him to palm regularly, but as soon as he became willing to do so many times a day, his sight began to improve rapidly, and he is now completely cured.

There are some patients, however, who cannot or will not palm. One of these was a little colored girl, with corkscrew curls, looking for all the world like Topsy of "Uncle Tom's Cabin." She had been sent to the clinic because she could not see the writing on the blackboard, and the school nurse told me later that she was unruly, and a great trial to her teacher. She was something of a trial to me, too, at first, for I could not get her to palm for a moment, and did not know what to do with her. Then I discovered that she had an excellent memory when she chose to use it, and I resolved to treat her with its aid. I was able to improve her sight considerably.

Soon her teacher noticed such a notable change in her deportment, that on the next clinic day the school nurse came with her, to see what had been done for the child. Then I asked the girl to remember, with closed eyes, a letter on the test card as gray instead of black. This effort produced such a strain that she could not stand still a minute, and when she opened her eyes there was no improvement in her vision. Then I asked her to remember the blue beads she had around her neck. She did so for a few minutes with eyes closed, standing perfectly still all the time, and when she opened her eyes she read another line of letters on the test card. Again she closed her eyes and remembered the blue beads perfectly. In a short time, by alternating the perfect memory of the blue beads, with her eyes closed and open, her vision soon improved to 10/10.

The nurse was impressed by this demonstration, which proved to her that perfect memory improves the sight and relieves nervousness. She returned another day and brought a child that she herself was unable to benefit. Sometime later she informed me that Topsy was cured, and busy every day at recess teaching the girls of her classroom how to rest their eyes, and testing their eyes with a test card I had given her. The janitor of the school hid it away every day for her, until she was ready to play the game

of curing eyes. With Topsy's help the janitor now gets along well without his glasses. I wish we had more like Topsy.

THREE SIMILAR CASES

George, Gladys and Charlie are three children who came for treatment at about the same time. They were of the same age, nine years, and all were suffering from headaches and had about the same degree of defective sight. They entered a very interesting three-cornered contest, in which each one tried to beat the others at getting cured. George and Gladys were colored and Charlie was a white boy of a most pronounced blonde type, with fair curls and blue eyes.

George was the first of the trio to visit us. He had been sent from his school to get glasses because of his headaches, and it was easy to see from his half-shut eyes and the expression of his face that he was in continual misery. My first impulse was to try to make him smile, but my efforts in that direction did not meet with much success.

"Won't you let me help you?" I asked.

"Maybe you can and maybe you can't," was his discouraging reply.

"But you are going to let me try, aren't you?" I persisted, stroking his wooly head.

He refused to unbend, but did consent to let me test his vision which I found to be 20/70 with both eyes, I showed him how to palm and rest his eyes. He continued to come to the clinic, but for three weeks I never saw him smile, and he complained constantly of the pain in his head.

Then there was Gladys, accompanied by her mother who gave me a history of her case very similar to that of George. Her vision was 20/200 and in a very short time I improved it to 20/40. At her next visit it became temporarily normal, and this fact made a great impression upon George. I saw him roll his black eyes and watch Gladys while I was treating her, and later, when he thought I was not looking, I saw him walk over to her and heard him say:

"You ain't going to get ahead of me. I came before you. I wanna get cured first. See?"

I separated the two children quickly, for I foresaw trouble; but all the time I was grateful to Gladys for having, however unintentionally, stirred George up.

Next week Charlie came. He looked very sad, and his mother who came with him was sad also. His headaches were worse than those of the other children and were actually preventing him from making progress in school. Promotion time was near, and both mother and child were anxious for fear the latter would be left behind. They hoped that by the aid of glasses this misfortune would be averted. Of course I explained to the mother that we never gave glasses at this clinic, but cured people so they did not need them. I tested Charlie's sight, and found it to be 20/100. I told him to close his eyes and remember a letter perfectly black, just as he saw it on the test card. He shook his head in dismay and said:

"I can't remember anything, the pain is so bad."

"Close your eyes for part of a minute," I said, "open them just a second and look at the letter I am pointing at, then quickly close them again. Do this for a few minutes, and see what happens."

What happened was that in a few minutes Charlie began to smile and said:

"The pain is gone." Alternately opening and closing the eyes helped him to relax and relieved the terrible eyestrain which caused his trouble.

I showed him how to palm, and left him for a while. When I came back his sight had improved to 20/70. I was very happy about this, and so was Charlie's mother, who was pleased to learn that he did not have to wear glasses.

Charlie continued to come regularly and became an unusual patient. One day he told me that he had been out sleigh-riding with the boys, and that the sun had been shining so brightly upon the snow that he couldn't open his eyes, and his head ached so that he had to go home and go to bed.

"Why didn't you palm for a while and remember one of those letters on the card?" I asked.

"That's right," he said, "I wonder why I didn't think of it."

The next time he came there had been another snowstorm, and he could hardly wait to tell me what had happened.

"I went sleigh-riding some more with the boys," he said, as soon as he could get my ear, "and the pain came back while I was having fun. But this time I didn't go home and go to bed. I remembered what you said, covered my eyes with the palms of my hands right in the street, and in a little while the pain all went away. I could look right at the snow with the sun shining on it, and I didn't mind it a bit."

From the start, the two colored children were greatly interested in Charlie, and thinking that a little more of the competition that had proved so effective in George's case would do no harm, I said, "See who beats." But they needed no urging on my part. Every clinic day, an hour before the appointed time, the black and white trio was at the hospital door. If a crowd was present the children forced their way through without much ceremony, and then started on a dead run for the eye room. There they practiced diligently until Dr. Bates and I arrived, and I fear they also squabbled considerably. There was no lack of smiles now, and as for George, he wore a grin on his face all the time.

Charlie was the first to be cured. In just a month from the time of his first visit his vision had improved to 20/10. Usually patients do not come back after they are cured, but this boy kept on with the practice at home and returned to show me, and incidentally his two rivals, what progress he had made. We had a visiting physician at the clinic that day, and I rather suspected Charlie of trying to show off, when he walked to the very end of the room, a distance of thirty feet from the card. To my astonishment and the great annoyance of George and Gladys, he read all the letters on the bottom line correctly. The colored children made haste to suggest that he had probably memorized the letters; so I hung up a card with pot hooks on it, such as we use for the illiterate patients, and asked him to tell me the direction in which those of the bottom line were turned. He did not make a single mistake. There seemed no room for doubt that his vision had actually improved to 30/10, three times the accepted standard of normal vision. Not more than one other patient at the clinic has ever been able to read the card at this distance. Charlie returned several times after this, not from the best of motives, I fear, and I took great pleasure in exhibiting his powers to the nurses and to visitors.

George and Gladys were cured very soon after Charlie, both of them becoming able to read 20/10. I was sorry that they could not have done as well as Charlie, but since their vision is now twice what is ordinarily considered normal, I think they ought to be satisfied.

It is about two years since George, my pickaninny boy, was pronounced cured, but he comes to see me now and then, just the same. About six months after he obtained normal sight, I noticed him standing in a far corner of the room apparently trying to hide. When I approached him finally and asked him if he were suffering again with his eyes, he answered:

"No ma'am, my eyes are all right, but I want to come and see you."

I said, "Oh, you just want me to love you a little bit, don't you?"

George looked very shy and rolled his big eyes as only a darky can, edging up to me until his kinky head rested on my arm,—just a little pickaninny boy hungry for love.

JOEY AND PATSY

An Italian boy named Joey, nine years old, was struck on the head in an automobile accident and injured in such a way that he became almost totally blind in the left eye. From Joey's brother Patsy it was learned that when the accident occurred Joey was at the head of his troops, conducting a well ordered retreat after a fierce conflict in which he had been obliged to yield to greater numbers. His face was to the foe and the automobile was behind him, yet Joey did not know that an automobile had struck him. He thought that more enemies were attacking him from the rear. Later when he found himself lying on a hospital cot and realized that he was hurt, his first remark was, "Let me at the guys who soaked me from the back."

Patsy told me later what an awful time he had convincing Joey that an automobile and not his enemies, had struck him. What a punishment it must have been to Joey to lie there on his cot! To suffer pain was bad enough, but more painful to him was the knowledge that his gang was without a leader.

A week later he was brought to the hospital clinic by his aunt. Dr. Bates examined him and found that he was suffering from an injury to the optic nerve of the left eye, as a result of which the vision in this eye had been reduced to mere light perception.

The child was then brought to me for treatment, and never have I seen a more forlorn little specimen of humanity. I did not know then that a gang of street boys had once looked up at him as their leader, and I never should have suspected it. There was not the shadow of a smile upon his face, and he had not a word to say. Both his face and his clothes were dirty. The latter were also ragged, while his shoes were full of holes. His teeth were wonderful, however, and beneath the grime on his small countenance one could catch glimpses of the complexion of perfect health, I told him to rest his eyes by closing and covering them with the palms of his hands, and after a few minutes he was able to see the largest letter on the test card with his blind eye at five feet. The vision of the right eye was normal. I told him to rest

his eyes by closing them six times a day for five minutes at a time, and to come back on the next clinic day.

The next time I saw him not only had he made no progress, but he was as blind as he had been at the beginning. His aunt said: "You scold him. Tell him you will keep him here, because he will not palm or do anything he is told to do at home."

I answered, "You do not wish me to lie to him, do you?"

Joey, so sad and worried, looked up into my face, waiting for me to defend him again, as his aunt replied: "Well, I will leave him here and not take him home again."

"All right," I said. "I live in the country, and perhaps Joey would like to go home with me and play in the fields and watch the birds build their nests. Maybe he will learn how to smile then as boys should."

It was good to see his dirty little face flush up with excitement and pleasure. I really meant what I said, but Joey did not give me a chance to take him to my home, because he did not come back after his eyes were cured. However, when I noticed that he began to take a little interest in what I was trying to do for him, I said, "Joey, you are going to love me a whole lot, because I love you already, but you must mind what I say, because if you don't you will go blind."

Joey consented to palm for a few minutes, and his sight improved so that he was able to see the large letter of the test card three feet away. He now made an effort to see the next line of letters but not only did he fail to do so, but he also lost the large letter. The strain had made him blind again.

How I wished I had more time to spend with him. But the room was full of patients, and more were coming continually. I had to attend to them. So I asked Joey, very gently, to palm and not take his hands from his eyes until I came back to him. After ten minutes or so I returned and asked what he could see. To my surprise he read five lines of the test card with the blind eye. Much encouraged I sent him home and he promised to palm six times a day. He stayed away almost a week and I worried about him, for I knew he would forget what I had told him to do. Then one day he returned with his brother Patsy. My, how Patsy did talk! Joey had not a word to say, and did not smile until I asked him. Patsy said that Joey did not practice, and that his father hit him on the head and threatened him with all sorts of things to make him do so. It was quite evident that he had not practiced. When I asked him to read the card, all he could see was the big letter at the top at three feet.

Poor little Joey! I gathered him in my arms, patted his dirty face and told him that if he would count six fingers for me and practice palming as many times every day, I was sure Santa Claus would have some toys for him at Christmas time. Joey was all smiles, and stood with his eyes covered for a long time. When he again looked at the card he read the fifth line, which is called the forty line letters. In the meantime Patsy was telling me all about the rest of his family. His big brother was going to be married, he said, but not until another brother, eighteen years old, was out of prison. Patsy talked like a man and his voice sounded like a foghorn; but I saw that he had a gentle nature, and I enlisted him as my assistant for Joey. I asked him if he would not try to get Joey to palm more, and told him that he must always speak kindly to him. The father was warned not to hit Joey on the head again, because that made the hemorrhages worse and Joey would go blind. Bless Patsy's heart! He promised to help me all he could, and I am sure he deserves much of the credit for what I was afterward able to do for his brother.

Thereafter, Joey's progress was steady. He responded to kindness as a flower responds to the sun. But if I ever forgot myself and spoke to him without the utmost gentleness, if I even raised my voice a little, he would at once become nervous and begin to strain. One day I remonstrated with him because he had not done what I had told him, and a few moments later when he read the test card with his left eye, he said, "I can only see the large letter." I explained how important it was for him to see with both eyes, because he might be a great man some day. He smiled and palmed, and in a short time he again read five lines of the card.

At a later visit he was very conspicuous because he had had his face washed. I could see that he wanted me to notice this, as of course I did, giving him high praise for his improved appearance. He smiled and started to palm without being told, and his sight improved more rapidly than at any previous time.

His last visit was a happy one. He saw all of the bottom line at ten feet without palming. Dr. Bates then examined his eyes with the ophthalmoscope and found that the retina had cleared up, and that there were no more hemorrhages. The optic nerve had become normal.

One day Patsy appeared at the clinic wearing spectacles.

"Patsy, for heaven's sake, what are you wearing those things for?" I inquired.

"The nurse in school said I needed glasses and my father paid four dollars for them—but I can see without them."

His vision without glasses was 20/200. After resting his eyes by palming five minutes, his sight improved considerably.

"Do you want to be cured without glasses?" he was asked.

"Sure, I don't want to wear them."

"Well, you ask father's permission and I will cure you."

Fortunately, father had no objection, and now Patsy sees much better without glasses than he ever did with them. He says that the blackboard looks blacker than it used to, and that his lessons do not seem so hard.

Patsy continued to come with Joey for treatment until both were cured.

Christmas time was near at hand and when the day arrived for our Christmas party, the boys appeared at the clinic two hours ahead of time, to be sure that they would not be disappointed. Never did I see two kiddies happier or more grateful than they were, as they marched out of the room with their gifts and candies.

HYMAN

Hyman, a Jewish boy, aged ten, was not a patient, but his mother's escort. She was having her eyes treated because of headaches, but her trouble was not half so bad as that of her son. His poor eyes stared painfully behind his thick glasses, and in order to see through them at all he made the most awful grimaces. His head moved constantly in all directions, and later on I learned that he had chorea, or St. Vitus' dance. He was an unusually bright boy, and was never satisfied unless he saw everything that was going on in the clinic. Whenever he was in the room he would stay as close to me as possible, listening eagerly to every word I said and watching every movement I made. One day I said to him:

"Look here, young man, I don't mind having you watch me, but I don't think the patients like you to stare at them so much. If you want to know how I help people, why don't you let me treat you so that you won't have to wear glasses?"

"My teacher says I must wear glasses, because I cannot see the blackboard without them," he replied.

Later I told his mother that I was sure I could help not only his eye trouble, but also the nervous twitching of his head. She did not seem to understand me, and appeared to doubt my ability to do anything for him. She had been told by a doctor that perhaps some day he would outgrow his nervousness. The boy himself seemed to be equally skeptical, but was, nevertheless, much interested. He was evidently curious to know what I would do for him, and quite willing to let me entertain him.

I tested his sight with his glasses on, and found that he was able to read only 10/50, all the rest of the card being a blur. I took the glasses off, and noticed that he stared less without them. With his glasses on, his face looked hideous and wrinkled like that of an old man. When Dr. Bates examined the glasses, he said it was quite evident that they caused the St. Vitus' Dance. Straining to see through lenses that were not suited to him, produced this nervous condition.

I told the boy to cover his eyes with the palms of his hands so as to exclude all the light and to remember one of the letters of the test card perfectly black. He seemed to think this was a game of hide and seek, and kept continually looking through his fingers. My patience was tried considerably, but I did not let him know it. Instead I told him that I was especially fond of little boys, and wished to help him. He squared his shoulders and made an effort to keep his head still, but failed. Finally I succeeded in making him understand that if he wanted to stop the twitching of his head, he must keep his hands over his eyes until I told him to remove them. He became as serious as I was myself, and though I watched him while I was treating other cases, I did not once see him uncover his eyes, or peep through his fingers. No doubt the fifteen minutes that he spent in this way seemed like hours to him. When I was able to return to him I said very gently:

"Now take your hands from your eyes, look at me, and be sure to blink often to stop your staring."

He did so, and to my surprise his head was perfectly still. Then I told him a story—being careful to preserve the same gentle tone of voice—about a boy who lived in the country town where I live and who stole some delicious big apples from a farmer. He ate too many of the apples, and soon began to feel that there was something wrong with his stomach. The farmer caught him and punished him; so he suffered both inside and out, and came to the conclusion that stealing apples was not very much fun. I took as long as I could to tell this simple tale, for my object was to keep my patient from thinking of himself, or his eyes. He seemed to find it hugely amusing. His eyes beamed with fun while he listened to me, and his head never moved once.

"Now," I said, "do some more palming for me, and then we will read the card."

When he uncovered his eyes the second time, his vision had improved to 10/30. His mother's indifference vanished. She did not know how to show her gratitude for what had been done for her boy, but promised to see that he spent a sufficient amount of time palming every day. The next clinic day she told me that the twitching of the head had become less frequent. She was instructed to watch the boy, and have him palm at once whenever she noticed the twitching. This always relieved the trouble.

Hyman was anxious to be cured before vacation began, and was quite willing to do as he was told. He and his mother practiced reading their test card every day for an hour at a time. During the summer they came quite regularly and the mother was cured of her eyestrain and headaches. Hyman looked like a very different boy, and in the fall when school began he was apparently cured because the twitching had ceased, and his vision had improved to 10/10.

BETTY AND JOHN

Betty, aged 13 years, usually found a convenient comer of our room where she could watch the patients having their eyes treated. She had no trouble with her eyes, but always came with her school chum who was under treatment. She listened attentively as I encouraged the patients, but was never troublesome nor did she ask any questions at any time. Somehow, she obtained a Snellen test card and helped some of her playmates recover their vision. She brought several of them to me to make sure that they could get along without their glasses.

One of the children was a boy, twelve years old, named John, who had worn glasses for five years and was very near-sighted. The school doctor had ordered glasses for him at the age of seven. Dr. Bates examined them and discovered that the boy was wearing far-sighted glasses for myopia, or near-sight. When they were changed the year before, the optician who sold them had made a terrible error. No wonder Johnnie was willing to have Betty help him! She told me that he could only see the fifty line of the card ten feet away without his glasses. When I tested Johnnie he placed himself fifteen feet away from the card and read every line of letters without a mistake. He told me how Betty spent an hour with him almost every day for three weeks, until he became able to read the card at any distance Betty desired him to read it. I am sorry she stopped coming to the clinic. Her parents moved away, and I lost a very good assistant.

MARJORIE AND KATHERINE

MARJORIE

Then a mother came to the clinic with her two little girls. Marjorie, the older, had been to us some years previously and was cured. The younger child was sent home by the school nurse and told to see a doctor about her eyes. Dr. Bates told the mother to wait for me, that I would test the children's eyes. The mother kept looking at me, smiling all the while. She asked: "Don't you remember me? Don't you remember my little girl? I brought her to you and Dr. Bates six years ago. She had alternate squint when she was three years old, and Dr. Bates cured her without an operation."

Hundreds of cases had been treated and cured in that time, and this dear little girl had grown from a wee tot of three years to a big girl of nine. The mother waited patiently for me to say yes. I tried my best to remember, for my memory is usually good, but I failed this time. Before I knew it I answered, "Yes, surely I remember." How grateful this mother was because I did not forget her child, and how sorry I was because I told a fib. She just knew that I would not forget, so I could not convince her that I did. If Dr, Bates had had his retinoscope handy, he would have found that I was made near-sighted by telling the fib. When one tells an untruth, the retinoscope always reveals the fact.

Marjorie's eyes were as straight as mine, but everyone in the clinic who would listen to the mother that day, heard how we had cured her child of cross eyes.

KATHERINE

Her Sister Katherine, aged seven years, stood by, wondering what we were going to do with her. Both girls were dressed with the greatest of care, and Katherine looked very much like a big French doll with her head just covered with curls. Dr. Bates examined her and said she had myopia, but not a bad case. I placed her ten feet from the test card and she read every letter correctly down to the forty line. As I walked over to where the card was placed to assist my little patient, the mother got ahead of me, and in a soft tone of voice, encouraged Katherine to palm and remember the last letter of the forty line of the card. Katherine did so, but she had only covered her eyes for a minute when she removed her hands and opened her eyes to read again. I wanted to tell the child that she had not palmed long enough, but before I could say a word, she began to read the next line of letters as her mother pointed to each one. After each letter was read, her mother very gently told her to blink and that would help her to see the next letter without a strain.

When Katherine had finished reading all of the thirty line without a mistake, the mother did not stop, but kept right on to the next line, pointing to one letter and then another until she read all of the twenty line.

Then the mother advised Katherine to swing her body from side to side, and to notice that everything in the room seemed to move in the opposite direction. While her mother was advising her what to do, the child did the best she could to read the card. The mother smiled when she saw how amazed I was to see her improve Katherine's eyes without my help. I asked: "Where did you learn how to do it?" She answered: "From reading your articles in the 'Better Eyesight Magazine.' I have been a subscriber for a number of years."

Some months later I saw them again. Katherine's vision was 10/10 in each eye. It is interesting to report that the child was cured entirely by her mother.

STARING

Staring is one of the greatest evils. Children demonstrate this repeatedly.

A little Jewish girl had been coming to us for a year. On her first visit, she told us that the school nurse insisted that her eyes should be examined for glasses. Her mother was with her and begged me not to put them on the child, as she had a great dislike for them. She also believed that glasses could not possibly cure her. I was glad that I did not have to spend time convincing the mother that her little girl would not need them.

I tested the child's sight with the card and found that she had 20/70 with the right eye and 20/100 with the left. The girl stared constantly while she read the letters and I drew her mother's attention to this fact. I instructed the child to look away in another direction after she had read one or two letters of a line; she then improved her sight with both eyes to 20/50. Her mother was a valuable help to me in supervising the child's practice at home. No matter what the child was doing, or whenever she read a book or studied her lessons, the mother told her not to stare.

The directions for treatment at home and in school were simple. For instance, when she was asked to read something on the blackboard, she was not to look at the whole of a word or a sentence at one time. She was to look at the first letter of a word and blink her eyes. It would then clear up, and she could see the whole word without staring. In order to read a sentence without staring, she was to look at the first letter of the first word and then look at the last letter of the last word of the sentence, and to blink her eyes frequently while doing this.

How proud I was when she was promoted into a higher class without the aid of glasses! She was very grateful for what we had accomplished. Her school teacher, who had a very high degree of myopia, was so impressed by her marked improvement that she also became a patient of Dr. Bates, and is now enjoying good sight without glasses. Proof of her cure may be seen in the wonderful needle work which she is able to do.

MEMORY

A school nurse brought us a child who was causing her teacher a great deal of worry because she could not remember anything. It was thought that glasses might help her. She was very nervous, and her face plainly showed a strain. At ten feet the letters on the bottom line of the test card were only black spots to her. This little child did not like to palm, so I asked her to look at a letter on the bottom line, which was a C, and with her eyes closed imagine it had a straight top. She said she could better imagine that it curved. Then she found she could imagine two other sides, one curved and one open, and when she opened her eyes she saw the letter C distinctly. I also noticed that she had stopped frowning.

By the same method, she became able to read all the other letters on the bottom line, demonstrating that her imperfect memory had been due to eyestrain. She had unconsciously seen the letters, but the eyestrain had suppressed the memory of them. With her eyes closed the strain disappeared, and she became able to remember, or imagine the letters.

It should be emphasized that palming regularly is a great help not only to the sight, but also to the mind. What a pity it is that all school nurses do not know what can really be accomplished in a few minutes each day, for the relief of eyestrain in school children. Teachers are always grateful when their pupils are cured of eyestrain, for after the children are cured, it is much easier to teach them.

WHAT MEMORY DID FOR JENNIE

Jennie's mother was informed that her daughter needed glasses. I told the mother that Dr. Bates did not fit glasses at the clinic, and in order to get them she would have to come another day and see another doctor. The mother could not speak very good English. Her first question was: "I get der glasses fer nottink, yes?"

"No," I replied, "I am sorry to say, you must pay for them."

She started to leave the room, when I called her back and tested Jennie's sight. I felt sorry for the little girl, because she was very pretty, except for her eyes, which were partly closed most of the time.

"I don't like to wear glasses," she said. "I wore them for two weeks and then I broke them. Please help me so that I won't have to wear them again."

The mother seemed bewildered at first, and then she said, in a burst of confidence:

"You know, nurse, if der glasses was fer nottink, I should vorry. But all der time money, money for glasses, when all der time she breaks dem."

I told the poor mother not to worry, because her child could be cured and that she would not need glasses, if she would do what I told her.

"Sure, sure," she replied. "Det's all right, lady. You fix my Jennie's eyes, yes? Ven ve don't buy glasses ve got more money to buy someding for der stomach, yes?"

An Irish woman was standing by, and she roared with laughter. To keep peace in the room I had to use some tact and I thought it best to usher the Irish woman outside until I had treated the little girl, who turned out to be a very interesting patient. Jennie had never seen a test card before, and after palming was able to read the thirty line at fifteen feet. Below this, the card was a blank to her. I told her to follow my finger, while, with a rapid movement, I pointed to the large letter at the top of the card and so on down to the ten line. I directed her to palm, and pointing to the last letter on the ten line, which was an F, and quite small, I asked her if she could imagine some letter her teacher had written on the blackboard that day. She replied:

"Yes, I can imagine I see the letter O, a white O."

"Keep your eyes closed," I said, "and imagine that the letter I am pointing at has a curved top. Can you still imagine the O?"

"No," she said, "I can't imagine anything now."

"Can you imagine it is open, or straight at the top?" I asked.

She became excited and said: "If I imagine it has a straight top, I can still remember the white O."

"Fine," I said. "Can you imagine it has a straight line at the bottom?"

"No, if I do that I lose the O. I can imagine it's open much better."

"Good," I said. "It is open. Now imagine the left side open or straight."

She replied: "I can imagine it is straight. I think it is an F."

And when she opened her eyes she saw it plainly. The fact was that, although she had been unable

to see this letter consciously, she had unconsciously seen it for a fraction of a second, and could not imagine it to be other than it was, without a strain that caused her to lose control of her memory. And when she imagined it correctly she relaxed so that when she opened her eyes, she was able to see it. Jennie continued to come for treatment until she was cured. A month later her vision became normal and she had no more trouble. It would be very wonderful if all patients had as good an imagination. In that event the cure of imperfect sight would be much quicker.

ALICE

For a long time Alice, aged nine, had been complaining of headaches. She did not like to wear glasses, and her mother was also opposed to them. Her vision with each eye separately was 10/20. I told her that she could be cured easily, and directed her to palm for a little while. She began to weep, and then I asked her a few questions. I learned that she stood in fear of her teacher, but I soon realized that her fears were unfounded. She said: "In the mornings, before school, I feel perfectly well. After playing in the street with the other children, I also feel well, but when I go into the class-room and start to study, my head begins to ache. It also aches when I am doing homework, but not so badly."

Again I asked her to read the test card at ten feet, and unconsciously I raised my voice a little. Immediately I saw her start as though some one had scared the very life out of her. I guessed at once just what was the matter, and lowering my voice, I told her as gently as possible that there was nothing to be frightened about.

"What you are not able to read on the test card today, you will read next time," I said.

She was encouraged to palm, and I left her for a time by herself. Coming back in a few minutes, I told her to remove her hands from her eyes, and tell me what she could read. I made my voice as low as I could, not much above a whisper. I placed her fifteen feet from the card this time, and she read all the letters without a mistake. Her vision was more than normal, and she said that her pain was gone. She came to the clinic several times after that to report that her headaches did not come back. She had practiced palming her eyes many times a day and remembered to blink all the time she was awake.

Alice confided to me that an unruly scholar in her class disliked her teacher, and influenced Alice in the same way. I asked her if she could tell the number of scholars in her class-room.

"Yes, about sixty," she replied.

"My," I said, "if your mother had sixty children, wouldn't she be nervous and worried? Wouldn't you want to help her all you could? Suppose you make believe that the teacher is your mother, and try to help her all you can."

This had a good effect on Alice. The next time she came, her attitude toward her teacher seemed to have changed completely. At every subsequent visit she always had something nice to say about her wonderful teacher.

JIM AND OTHERS

While the work with the children is always interesting, we sometimes have a case so remarkable that it stands out from all the others.

Jim had imperfect sight and constant pain in the back of his eyes. He did not like to raise his head, because the light bothered him so much. Having tested his sight, which was 15/70, I placed him in a chair and told him not to open his eyes, even for a moment. After I had attended to a few more patients, I came back and asked him to open his eyes. What happened seemed like a miracle. He didn't look like the same boy. His formerly half-shut eyes were wide open, and without any trouble he read the bottom line of the test card at fifteen feet. When I praised him for what he had done, he smiled and asked, "When shall I come again?" I gave him the sun treatment, and told him to sit in the sun with his eyes closed whenever he found time.

At the next visit he read 20/10 with both eyes, and he told me that the light did not trouble him any more.

Later Jim brought a friend aged twelve, who had been wearing glasses for two years or more. When he came into the room he did not wait for his turn, in his eagerness, but placed himself right in front of me, took off his glasses, and said, "You cured Jimmie's eyes. Will you cure me too?"

"Surely," I said, "If you wait your turn." As soon as I could I tested his sight and found that he could see just as well without his glasses as with them—15/20. I told him to palm, and before he left the clinic that day, he saw distinctly some of the letters on the bottom line at fifteen feet. This was even more

remarkable than Jimmie's case, for patients who have worn glasses are usually much harder to cure than those who have never worn them.

Sometimes the mothers come with the children, and then I always try to enlist them as my assistants. If they are wearing glasses, I try to persuade them to cure themselves, so that the children will not copy their bad visual habits, and will not be subjected to the influence of people who strain. Not long ago, a mother who had trouble with her eyes, brought her child for treatment, and agreed to help the latter at home. I said that would be fine, and then I asked the child to help me cure her mother.

"After mother has given you a treatment," I said, "tell her to close her eyes and cover them with the palms of her hands, and to stay so until she feels rested. Be very quiet so that she will not be disturbed, and when she opens her eyes, you will surely find that mother can see better."

Both made rapid progress. At the first visit the child's vision, which had been 15/50, improved to 15/30, and in six weeks it became 20/15. The mother now exhibits to her friends with much pride her ability to thread a needle without glasses.

Only one thing about this work with the children made me sad, namely, that we could do so little of it. Many children came from other districts, and were, of course, turned away by the dispensary clerk. But even if the hospital rules did not require him to do this, we could not have admitted all who came. There was a limit to the number we could treat, and there was so little space in our eye-room that we were obliged to treat the overflow in the outside general waiting room. I wish that teachers and nurses in the schools could be instructed in the very simple art of preserving the eyesight of the coming generation.

KINDERGARTEN CHILDREN BENEFITED

A kindergarten teacher requested me to help one of her little charges who was afflicted with squint. She informed me that the little one was very poor, so I advised the teacher to bring her to my clinic.

To become more acquainted with me, and the way in which cases were managed there, this teacher, at my invitation, visited the clinic. It is interesting to note what she accomplished with her slight knowledge of our method.

She had a sunny disposition, and I could well imagine a good mental picture of the children, as they greeted her every day in the classroom. She was devoted to her little pupils, and she was also a great lover of nature. She explained to her class, in her lovable way, just how the flowers grow, and made them understand what happens before the first shoots push their noses above the ground.

This teacher's name is Cecilia B. Eschbach, and the kindergarten is connected with the Brooklyn Orphan Asylum. Some time ago I received the following letter from her:

Dear Mrs. Lierman:

In spite of North Wind's biting breath, the little children of the kindergarten know that Spring is here. Their gardens give evidence of it, for the crocuses are up, the daffodils have twelve fat buds; the hyacinths and tulips, too, have grown to quite a size. To create a situation for conversation about awakening Spring, I placed eight empty flower pots in a paper bag. The one who opened the bag was called the gardener. He chose eight children, and gave them each the name of a flower, to go with the pots.

Every child was familiar with the following flowers, and could name and identify the real ones: crocus, tulip, dandelion, daffodil, hyacinth, Easter lily, pink sweet peas, rose. The little gardener decided to give away his flowers, but could not remember the name of the eighth one. I said, "Palm your eyes, William.” He did so, and in a moment said, "Pink sweet peas."

The children have learned to palm their eyes with good results. Two, who have casts in their eyes, play the swinging game and keep looking at the ceiling. Sometimes we sing, or sway to the rhythm of the piano. They are improving.

Hoping this report will be of interest to you, and thanking you for your kindness, I am

Very truly yours,
Cecilia B. Eschbach.

THE LITTLE TEACHER

Jennie, aged ten years, will always be remembered by Dr. Bates and myself. She was a very intelligent little girl for her age. She had the most to say of any child I knew. Most talkers do not impress you, they rather tire you,—but not Jennie. Her left eye had caused her a great deal of suffering and pain for a long time, so she was ready to adopt any measure to be cured. Palming and blinking helped her. Her vision at the beginning was 10/10 in the right eye and 10/200 in the left.

After her first visit to us, she was ready to cure all those in school who had trouble with their eyes. On her second visit she told us of her experience with some of the teachers and pupils. At first she was punished for causing a disturbance in the classroom. Later, when her teacher saw her without glasses, reading her lessons from the blackboard with perfect ease, she began to ask questions.

The result was that Jennie was allowed to palm for a few minutes before each lesson and then the rest of the class followed suit. It was interesting to hear her describe the way she went about improving the sight of her teacher who wore glasses for reading. We could not find out how long the teacher had been wearing glasses, but Jennie said that after the treatment she was not seen wearing them again.

Jennie's vision improved steadily and she had no more pain, but even though she was cured she came to the clinic just the same. While I was ill and could not attend clinic for a few months, Jennie came in very handy. She was so small that she had to stand on a stool to reach the letters on the test card with her finger tips. Dr. Bates would ask her to point to the different letters he wanted other patients to see, which was a great help to the patients and to him as well.

One day a boy, sixteen years of age, appeared for an examination of his eyes. He was disagreeable, and sneered because he wanted to be anywhere but at the clinic. As the room was crowded with patients, Jennie took it upon herself to help. She singled out this lad and with a voice of authority said: "Now don't be afraid, little boy, the letters won't hurt you. Tell me how much you can see." At this remark the boy laughed as loud as he could and took it as a joke. She finally convinced him that she was serious, and before he left the clinic he had normal sight. The boy had myopia, and the vision in both eyes was 15/70. When he left the room his vision had improved to 15/10. He came a few times after that, but he had no more trouble in retaining normal sight.

Another day Jennie demonstrated her intelligence by treating a doctor who had come from the West to learn about the treatment. Of course she did not know she was talking to a doctor, for if she had, I fear she would have lost her nerve. The doctor stood where he could observe best the patient being treated. Jennie approached him gently, saying: "Now how do your eyes trouble you?" One can imagine the doctor smiling at the little girl desiring to do so much for a big man. Without returning the smile she walked to her stool, chin up in the air as though she were a princess, and as she pointed to a letter, asked the doctor if he could see it. The patients were amused, but Jennie was not in the least troubled. The doctor patient said no, he could not see the letter at which she was pointing, a letter of the 70 line. He stood 15 feet away from the card. She told him to palm, and he obeyed, in jest at first, but when he saw that the little girl was really trying to help him, he did as she told him. The result was that the doctor's vision improved to 15/15. Jennie taught him how to rest his eyes by palming and alternately closing and opening his eyes. This doctor now uses the Bates method in curing his patients of imperfect sight.

BENEFITS OF THE SUN GLASS

Another patient was Mary, a colored girl, twelve years old. She complained of such violent headaches that she could no longer attend school and stayed in bed most of the time. The school nurse had advised glasses, and she had come to get them. Mary kept her head lowered much of the time, but when I was about to treat her she tried to open one eye and look at me. The effort was so great that all the muscles of her face were contracted. As the light seemed to distress her, I decided to give her the sun treatment, that is, to focus the rays of the sun on the upper part of the eyeballs with a sun glass. I placed her on a stool where the sun could shine on her eyes, but when I tried to use the sun glass she was frightened to death. To reassure her I asked a patient, who had already had the treatment, to let me repeat it on her. When Mary saw her enjoy the sun bath, she readily submitted to it herself. Afterward her eyes opened wide and I was able to test her sight. Her vision was 10/50, both eyes. I showed her how to palm, and when, after ten minutes, she opened her eyes, her pain was gone and her vision had improved to 10/20. I was quite proud to have accomplished so much in one treatment.

Two days later Mary came again, and with her came the school nurse and a friend, both eager to

hear more of the miracle that had happened to Mary. Could it be possible, the nurse said, that the child had been cured as quickly as she said? I was surprised myself at the change in the patient's appearance. Her eyes were still wide open, and the constant grin on her face made her almost unrecognizable as the sad creature I had seen two days before. I told the nurse what had been done for the child and how she could help the other children in her school, by having them stand in the sun with their eyes closed, letting the sun shine on their closed eyelids for a few minutes every day. The nurse came a few times more to watch our methods, and told me that she was teaching all the children sent to her for examination of their eyes, how to palm. This always relieved them at once to some extent, she said. The more difficult cases, however, she sent to us without delay.

NYSTAGMUS

Another remarkable cure was that of a girl with nystagmus, a condition in which the eyes vibrate from side to side. Cases similar to hers come to us from time to time, and they are always benefited by palming. Her vision was 10/30. She improved quickly and soon obtained normal vision. When anything disturbed her, the vibration returned. This always happened, she told me, when the teacher asked her a question. At the same time she lost her memory. The teacher allowed her to cover her eyes to rest them, and in a few minutes the vibration ceased and her memory improved. Before she came to the clinic she often became hysterical and was obliged to leave the class-room. Later the hysterical attacks disappeared.

HYSTERICAL BLINDNESS

A puzzling case was that of a little girl, ten years of age. A patient of ours who came from the same school which she attended, told me that the child was stupid, and she certainly appeared to be so. I asked her if she knew her letters, and in trying to reply she stuttered painfully. I tried to reassure her by speaking as gently as I could, but without avail. I could not get her to answer intelligently. I tried having her palm, without results. I held the test card close to her eyes, and asked her to point out certain letters up to the fifty line, as I named them, but only in a few cases did she do this correctly. Completely baffled, I appealed to Dr. Bates. He asked the child to come to him and touch a button on his coat which she did. He asked her to touch another button, but she answered:

"I don't see it."

"Look down at your shoes," he said. "Do you see them?"

"No," she answered.

"Go over and put your finger on the door-knob," he said, and she immediately complied.

"It is a case of hysterical blindness," the doctor said.

The child attended for some time regularly and became able to read 10/10 correctly with both eyes. Palming, blinking, swinging, and using her imagination for letters of the test card and other objects, were a benefit. She stopped stuttering and soon lost her reputation for stupidity. She became a good Samaritan in her neighborhood, for on many a clinic day she brought with her some little companions to be cured of imperfect sight. She never had any doubts as to our capability to cure her little friends, and so far we have not disappointed her. I hoped she would not bring anyone who was beyond our power to help, for I would have been sorry to see that sublime faith, which we had inspired in her, shattered.

THE TWO GRADUATES

Two of our patients graduated at the end of the school term. After the final examinations they told me that they had been greatly helped in their tests by the memory of a swinging black period. One of them was told by the principal that if she failed to pass, it would be because she refused to wear glasses. She gave the principal Dr. Bates' book, which was one of her precious possessions, and after that, though he watched her closely, he did not say anything more about her eyes.

"I made up my mind to pass without the aid of glasses," she said, "and 'put one over' on the principal, but you can bet I never lost sight of my precious swinging period. The book has become a family treasure," she continued. "When one of us has a pain in head or eyes, out of the bookcase comes the book. It is natural to see mother palming after her house work is done. She enjoys her evenings

with her family, because palming rests her and she does not get so sleepy before bedtime."

The other graduate said: "I did not have to think of a black period when the test was easy, but when I had to answer questions in the more difficult subjects, I certainly did find the period a life-saver. I know I would have failed without it."

HOW MARIE HELPED HER MOTHER

Marie, ten years old, told us that she had headaches, and the pain in her eyes was so bad at times that she was put to bed for a few days. Her mother directed her to ask us for glasses. The doctor in school had ordered her to get them.

At first I found it hard to make her smile. Her head and eyes pained her so much that she found it an effort to look pleasant. Then, too, she did not want glasses,—she said they frightened her.

I placed her in a comfortable position and showed her how to palm. After I had treated several patients, I asked Marie to remove her hands from her eyes and to look up at me. She did so and smiled. That was encouraging. Adults, especially some women I know, imagine that there is something wrong when one smiles. Marie smiled because the palming cured her pain.

Her sight was tested and I found that her vision with each eye was normal. While she was standing, I taught her how to swing her body from side to side. I did the swinging motion with her to be sure she was doing it right. At first she complained of dizziness, which showed that she was making an unconscious effort to see things stationary. When I told her to take it easy and swing more gracefully, the dizziness left her and she became more relaxed and enjoyed it.

"I could keep this up all day," she said. "I like it because all my pain is gone." She was instructed to continue the palming and swinging at home and to come again the next clinic day.

When Marie returned, she brought her mother, who was anxious to know what there was about palming and swinging that could cure eye strain. Was it a faith cure or did we perform a miracle? She said that Marie had suffered for a long time with pain in her eyes, which prevented her from attending school regularly. Now, for the last few days Marie, after school, had played with the children in the street instead of going to bed. She had studied her homework without being told, after palming her eyes for ten minutes or longer.

The mother was eager for me to know what palming had done for her also. "At first my husband and I thought Marie was joking," she said. "We did not think that such a simple thing as covering the eyes with the palms of the hands could relieve pain. Ever since my children were born I have suffered with backaches and my eyes have been troubling me. Marie suggested that I should try the palming. As a result my eyes are rested and my backache has left me. Now, won't you please tell me about the swing, too?"

I went through the motions with her until she was able to do it. The last time I saw her she told me that she was not half so cross with her babies since she learned how to swing her body, and see things moving. Palming helped her to read to her husband. She said Marie did not complain of pain any more, but was more willing to help about the house and never retired until bed time. Relief from strain, relaxation through palming and swinging the body from side to side, cured both this tired mother and Marie.

THE HIGH SCHOOL BOYS

During the last year many school children have been benefited and cured of their imperfect sight at our clinic. Some had been wearing glasses, but a larger number had not worn them. The latter were cured quickly and in a few cases needed only one treatment. The records show that all those who were wearing glasses obtained better vision without them. There were no exceptions. For the benefit of those who are interested in eye clinic work, I shall tell about a number of high-school boys, all from the same school, who came for treatment.

A director of a Boys' Physical Training Department in one of our largest high schools in New York City heard of our clinic. About nine-tenths of the boys under his care were wearing glasses. Others struggled along without them, even though they had imperfect sight. The boys were between the ages of 13 and 17 years. Late in the fall of 1924 one of them, by the name of Arthur, came with a note from the physical director. We accepted him gladly and he began treatment under the supervision of Miss Mildred

Shepard, my assistant. His vision on the first day was 20/100 with each eye. It was noticed that his eyes were partly closed as he looked at the test card. When placed in a bright light, he had difficulty in keeping them open, and his forehead was terribly wrinkled. Anyone observing him for the first time would have thought that Arthur never smiled. I thought so myself as he appeared week after week, during the winter months, and through the spring. Recently I treated him and helped him to read 10/10 on a strange card. I also received a shock. He smiled. By closing his eyes to rest them, and flashing each letter, he read 10/15 without a mistake. I wanted to stop his treatment then, because there were about twenty others waiting. Arthur begged, however, for one more chance. We gave him the sun treatment and then he returned to the test card and read 10/10. It was at that time I found that Arthur could really smile. Palming, blinking and swinging, with sun treatment, cured him.

The next case was William, whose vision was 10/200 with each eye. I do believe that William practiced faithfully at home and elsewhere but he is just one of many cases of myopia who are slow in obtaining a cure. He is not discouraged, and knows that he will eventually have normal vision if he keeps on. His sight improved to 10/40, or one-fourth of the normal, in six months.

The physical director wrote to me again, asking if he might send more of his boys who were anxious to get rid of their glasses. We have not the room nor the time to take care of even a small percentage of those who are crying out for help. I read the letter to Dr. Bates. He did not answer right away, but just looked at me. Then he said: "Now, you know how much I love school children, and you also know how much I disapprove of glasses." I said: "All right, that settles it." My answer was: "Send them along. There's no limit to the number."

Twenty or more came in response to my letter, and all of them were nice boys. How glad I was that I wrote what I did. After they had received their first treatment, and I had spent more than three hours with them, Dr. Bates appeared at my room to ask if I were tired. His voice sounded most sympathetic, but I was perfectly relaxed, and not a bit tired. As I instructed the boys to palm and swing, I practiced with them. As their vision improved, so did my nerves become more relaxed. I was nappy, but not tired. Treating the boys was not easy, but since every one of them did as he was told, the task was made lighter.

Samuel had worn glasses about two years. He had a great deal of pain in his eyes and his sight was getting worse. The optician who had fitted him with glasses said that he would have to wear them the rest of his life. His vision without glasses was 10/200 with his right eye and 10/100 with the left. He stared continuously, a practice which, I believe, was the main cause of his pain. The first thing I did was to teach him to blink. This relieved his pain. Palming and the swing improved his vision in both eyes to 10/50 on his first visit. Every time he was treated, his vision improved for the test card. At times he did not do so well and he would apologize.

When I became better acquainted with Samuel he said: "You see. Mother is not forced to do it, but she peddles things, and helps my father to earn more money. In this way Mother will see that I can go to college." I told him that he should be proud of such a wonderful mother. I look up to her with great respect and honor, because of her courage and sacrifice. Heaven bless such mothers! Samuel had to have four months treatment before he could read with normal vision, but he was determined and won out.

Abraham had symptoms of St. Vitus' dance with much pain in both eyes. His vision was: right 10/15 and left 10/10. He had no organic disease of his eyes but the ophthalmoscope showed eyestrain. After three treatments the symptoms of St. Vitus' dance had entirely disappeared and he had no more pain. His vision also became normal, 10/10.

Morris hated glasses and wore them but a short time. He had normal vision in his right eye, but only perception of light in the left. I held the test card up close to his left eye, and told him to cover the right one. By alternately blinking and flashing the white of the card, he became able to see the letters as black spots. He was instructed to practice with the test card every day, seeing the letters move opposite to the movement of his body. While doing this, he was to keep his right eye covered. After the third treatment he read the bottom line of the test card at three feet, or 3/10 with the left eye. He had been told by many doctors that nothing could be done for the left eye, because it was incurably blind. Dr. Bates examined him with the ophthalmoscope and said the trouble was called amblyopia exanopsia, or blindness from effort. Dr, Bates stated that such cases are usually pronounced incurable. Morris believes that with constant practice there is no reason why he should not obtain normal vision in his left eye.

Benjamin had never worn glasses. For a long time the constant pain in his eyes made it difficult for him to study. The ophthalmoscope revealed only eyestrain. His right vision was 10/10, left vision 10/20. After palming a short while and with the aid of the swing, the vision in his left eye improved to the normal 10/10. He had four treatments altogether. On his last visit I helped him to read 20/10 right eye

and 20/20 left. He was instructed to practice with very fine print daily, and this, I believe, had most to do with relieving his pain permanently. He was more than grateful for the relief he obtained. He had a little brother named Joseph, who was wearing glasses. Timidly he asked me if I would help him, too. "Surely," I said. "Bring him along next time."

Joseph had been wearing glasses for three years, but his sight was not poor without them. Without glasses his vision was 10/15 with each eye. Blinking while he was swaying improved his vision to the normal in five minutes' time. He promised not to put his glasses on again, and came to me for four more treatments. These were really unnecessary because his sight stayed normal, 10/10. If our method had been in general use in the schools, this boy and others would not have been forced to wear glasses.

Hyman wore glasses four years for progressive myopia. His vision with his right eye was 10/100 and 10/70 with the left. After his first treatment he was able to read 10/50 with each eye. Constant daily practice, by palming and improving his memory, brought his vision to the normal, 10/10. This boy required only five treatments.

Charles wore glasses about four years, although he had no organic trouble, merely eyestrain. His vision was 10/30 with each eye. He was told to close his eyes, and while palming to remember a small square printed on the test card. He was directed not to remember all parts at once, but to remember or imagine one part best at a time. His vision then improved to the normal, or 10/10. Sun treatment was also given him. Charles was cured in one visit.

Harry had worn glasses one year. His vision was 10/30 with the right eye and 10/70 with the left. Regular daily practice and the sun treatment improved his vision to 10/10 in three visits. He vows that he will never wear glasses again.

Tobie was a fine, lovable chap, a trifle younger than the others. He was not so sure that he liked to see his name in print—I told all my wonderful boys that I was going to write about their cases—but he did not object when he realized that it would be a help to others. His vision was 10/50 with the right eye and 10/70 with the left. Palming and sun treatment improved his sight to normal, after three treatments. The other boys were cured mostly with one treatment. It was only a matter of teaching them how to use their eyes right.

THE STORY OF LILLIAN AND HER SISTER ROSE

My work was not confined to the clinics but extended to other places as well. Occasionally when I visited a department store to make a purchase, the girl who waited on me might be suffering from the results of eyestrain, pains in the eyes or with headaches. It always gave me pleasure to give them immediate relief with the aid of palming, swinging, or in some other way. I could write many stories about the help I gave these girls, whose gratitude was indeed worth while.

I live in the suburbs and commute. The trainmen know me very well, and always come to me to have a cinder removed from their eyes, or to be helped when their sight is poor.

Every day during the fall, winter and spring at our station I meet a cheerful group of girls, who attend high school in another town. Some of them I have known since they were babies, and while I am in their company on the train, I forget sometimes that I am grown up and join them in their fun. Several of these girls wear glasses, and I offered to cure them any time they were willing to discard them.

No more was said on the subject until one day, just before school closed for the summer, one of the girls appealed to me to help her. She was Lillian, aged 16, who had a higher degree of myopia than any of the others. I insisted that she consult her parents first. If they were willing and would cooperate with me, I would try my best to cure her before school opened again in the fall.

Lillian was very much excited, and begged the other girls to discard their glasses also. One said her mother feared that such a wonderful cure could not be accomplished. Another girl thought she would wait awhile. I still feel that they did not believe in me. The day after school closed, Lillian called at my home with her sister, Rose, aged 13, who had a decided squint of her left eye. Lillian had not spoken of Rose, as she was afraid of imposing upon me, but when Lillian came to me, Rose made up her mind that she would be cured also.

I fastened a test card to an oak tree outside of our house, and placed my patients ten feet from the card. I started Lillian first because I wanted above all else, to cure her as I had planned. With glasses on she read 10/15, and with glasses off 10/70. I taught her to palm and to remember something perfectly, while her eyes were closed, such as a white cloud, sunset, or a flower. She did this for a few

minutes and then, without a stop or making a single mistake, she read two more lines on the test card. Her vision had improved to 10/40, both eyes. Then I tested each eye separately. Her vision, fortunately, being the same in each eye, it was easy to proceed with the treatment. By closing her eyes, and remembering the last letter she was able to see on the card, she became able to read another line, 10/30. When she made the slightest effort to read the smaller letters on the card, they would disappear. I explained to her that when she stared, she made her sight worse, and that was her main trouble. I told her to keep her eyes fixed on one letter without blinking, and see what happened. Immediately she began to frown, her eyelids became inflamed and she complained that her eyes hurt her. She said, "Now I know why I have headaches and pain."

On her second visit her vision improved to 10/20. I had taught her the long swing, moving her head slowly from side to side from left to right, looking over one shoulder and then the other. She had to be reminded, as all patients do, to stop staring and to blink her eyes often, just as the normal eye does. All through the summer, Lillian practiced faithfully, getting a great deal of encouragement from her sister Rose and her loving mother and father. She came to me for treatment about once a week. A few weeks before school opened, we began treatment indoors with electric light instead of outdoors in the sunlight. I did this purposely because I knew that the light in school was not so bright as outdoors. When she first read the test card by electric light Lillian became very nervous and frightened. All she could see was the large C on the 200 line at ten feet. Palming for a few moments helped her to relax enough to read several lines. Swinging and looking at one letter, then shifting her eyes somewhere else and looking back at the next letter, helped her to read 10/15.

At each visit she improved and now reads 10/10 all the time. Before she began treatment she had to hold a book at three inches from her eyes, while reading,—this with glasses on. Since she was seven years old she had worn glasses constantly, and during all that time she suffered with headaches every day. She told me that from the day I removed her glasses and started the treatment, she had neither headaches nor pain in her eyes. So grateful is she that I am almost swallowed up with caresses when she sees me.

Some friends whom she had not seen for a year called to see her family, and to enjoy a day on their farm. Lillian had worn glasses for so many years, that she was not at all surprised when her friends did not know her. She stood in the doorway ready to greet them, but they thought she was a stranger. Her whole facial expression had changed. The eyelids, which were formerly swollen from strain, were natural looking, and her large brown eyes were quite different from the tiny, marble-like eyes that tried to see through the horrible, thick glasses she had worn previously. When her friends finally recognized her they had to hear all about the treatment and cure.

If Lillian had not been so faithful with the treatment, I could not have made such rapid progress. There were many days during the summer when she became discouraged and worried for fear she would have to put on her glasses again. Her mother was a great help to me in many ways. She was careful to hide Lillian's glasses so that she could not possibly wear them again even if she wanted to.

On the first day of school I met her with the usual group of girls on the train, and as she passed she pressed my hand and said, "Wish me luck." I asked her to telephone me that evening, and she did, saying:

"When my teachers saw me they were surprised at the great change in my appearance. I told them all about the treatment and what you did for me. When I asked to be placed in the last row of seats in each classroom, they were amazed. You see when I wore my glasses I always had to sit in a front seat near the blackboard. Today I was able to read every word on the blackboard in each class room from the last row of seats where I was sitting. I also read from my books at eight inches from my eyes without any discomfort whatever."

I praised Lillian and said that I was glad for her. I am more than happy to have given her my time evenings, when I needed rest after a day of hard but enjoyable work.

At each visit, while Lillian was having a treatment, her sister Rose watched and listened attentively to everything that was said. She had convergent squint of the left eye, and when she became excited or tried to see at the distance, that eye would turn in, so that only the sclera or white part was visible. At the age of three, it was noticed that her left eye turned in, and when she was four years old, glasses were prescribed for her. I tested her sight and with both eyes she read 10/100. Then—with each eye separately, she read 10/70 with the right and 10/100 with the left. I told her to palm her eyes and to remember the last letter she saw on the test card. She kept them closed for at least a half hour, and when she again read the card, her vision with both eyes had improved to 10/20. I tested each eye separately again. This time she read 10/20 with the right eye, and 10/40 with the left eye.

I thought the improvement in the vision of her eyes was wonderful, and Rose was delighted with the

results of her first treatment. Her sister Lillian was thrilled as she saw that left eye straighten as the vision improved. She came to me with Lillian once every week for treatment, and carried out to the letter everything I told her to do at home.

She was directed to wear a cloth patch over her good eye all day long, and to do her usual, duties for her mother as well as she could, with her squint eye. What a faithful child she was, and how she did hate that patch! I asked her every time she came how she got along with it. "Well, Mrs. Lierman," she said, "I don't like that black patch at all. I want to take it off many times every day. I don't like to have my good eye covered, but I know I must wear it if I want to be cured. I do want to, so I just think of you and how much better my eye looks, and then I don't mind a bit."

On her second visit her left eye improved to 10/20 and her right eye became normal, 10/10. Never did I have a more enthusiastic patient. On her third visit she gave me a package sent by her mother, who tried in her kind way to show her gratitude to me. The package contained delicious home-made sweet butter. Rose continued her visits, and in two months her sight became normal, and her eyes perfectly straight. She practiced faithfully and the result was that, one week before school started, she was able to remove the patch permanently, without any return of the squint.

The first day at school was very exciting to Rose. She said that the teacher did not recognize her until she smiled. When Rose smiles you cannot help but know and love her. Her aunt says that a miracle was performed.

Thereafter Rose had no trouble in reading the blackboard from the last seat of her class-room, where she asked to be placed, and she saw the book type much clearer than she ever did. Rose had been attending school for a week or so, when her teacher noticed that a pupil, aged 12, could not read the blackboard from the front seat where she was sitting. The teacher told the girl to have her eyes examined by an eye doctor and to be fitted with glasses. Rose overheard the conversation and promptly met her schoolmate at the door. Rose told her how she had been cured without glasses, and that she would be willing to show her how to be cured also. The next day at recess instead of joining the class outdoors for exercise, Rose and her schoolmate went back to the class room. With the aid of a Snellen Test Card, which Rose had taken with her that day to school, she improved the sight of the little girl from 12/70 to 12/15, by palming, blinking and swinging. Every day the two little girls worked faithfully with great success and in less than a week both children occupied rear seats from which they were able to read the writing on the blackboard without difficulty.

THE PARTY

I am anxious to tell about fifteen school girls, all from one class of Public School No. 90, New York City, Their ages ranged from nine to fourteen years. On January 5th, 1922, they first appeared. That day Dr. Bates and I had to plead for admission into our own room.

In addition to these school girls, about thirty adults, also were waiting for treatment, and all of them made a rush for us when we arrived. I found that the teacher of the girls, who was very near-sighted, was being treated by Dr. Bates at his office. The progress she was making encouraged her to send to the clinic those of her class who were wearing glasses. When I asked who came first all hands went up at once.

I could see from the start that I should have my hands full. The girls' faces wore a strained expression and, because of their actions and their manner my heart went out, not only to them, but to their poor near-sighted teacher.

Three out of the fifteen girls had squint, and two of the three were sisters. These sisters, Helen, aged 10, and Agnes, aged 12, both had squint of the left eye. Helen read 15/20 with both eyes, with glasses on. With glasses off she read 15/40. After palming and resting her eyes, the right improved to 15/20, and the squinting left eye improved to 15/30 without glasses. On January 17th, she read 15/15 with each eye separately. Agnes, whose squint was worse than Helen's, had 15/70 in the left eye on January 5th, and on January 17th improved to 15/20. The right eye improved from 15/40 to 15/15 from January 5th to January 17th.

Frieda, who also had squint of the left eye, improved from 15/40 to 15/15 in the same length of time. Her right eye had normal sight. All the rest of the fifteen, I discovered, were near-sighted.

Mary the youngest and best behaved was nine years old. On the first day she came she was suffering from terrible pain in her eyes and head. After she had closed her eyes and rested them for a short time

the pain went away and her sight improved from 15/40 to 15/20. Mary, however, failed to practice at home as she was told; nevertheless, the pain did not return even though her sight had not further improved.

Muriel and another Mary had progressive myopia. Muriel became so frightened the first day she came that she ran out of the clinic as fast as she could. She feared that the doctor would apply drops or hurt her in some way. Next day at school, Mary told her what she had missed by running away. Later, after three visits to the clinic, Muriel became more enthusiastic, and even made better progress than Mary. Muriel's sight improved from 15/70 to 10/10. Palming, resting her eyes, did this for her. She practiced faithfully at home.

Mary's vision was 15/15 with glasses. Without them 15/30. Twelve days later her sight had become as good without glasses, as it had been previously with them. She also practiced faithfully, and her father became interested and helped Mary at home with her chart. The remainder of the fifteen had about the same degree of myopia, and all were eager to be cured. It was encouraging to see them improve after they had rested their eyes for just a few minutes.

When I had finished with these cases, Dr. Bates called my attention to a girl from the same school, who had opacity of the cornea of the left eye. She was twelve years old, and had had this trouble since she was a year old. She had no perception of light at all in that eye when she came. On her second visit to the clinic, she could see light in the left eye for the first time. On January 17th, twelve days later, she began to see the letters of the test card. Six weeks later her vision became normal, with the disappearance of the corneal opacity. Dr. Bates was astounded, for he never saw such a case recover before. It was the long swing that helped her most.

Is it a crime to help the sight of these poor children? Should they be forced to keep on wearing glasses to benefit the man who sells them? I am willing, and want to devote the rest of my life to this wonderful work, but we need help instead of criticism. Some mothers are helping the children in their homes. Teachers who are being cured of imperfect sight without glasses, have a very beneficial influence upon the children. But the prejudice of some of the authorities, based on ignorance of the truth, is a stumbling block. If they would only investigate the facts, we would all be better satisfied.

The second visit of these children to the clinic is one to be remembered. On January 7th, Dr. Bates and I arrived somewhat late to be greeted by an excited nurse. I knew that something unusual had happened, because this particular nurse had an even disposition. How my heart ached to hear her say, that, never in all her life, had she come in contact with such bad girls! One of them had invaded a doctor's room and placed herself in the operating chair. A team of horses could not move her. Others yelled so loud that the doctors could not hear themselves talk. Well, I cannot explain in writing just how I felt. I treated each one with tears in my eyes and a lump in my throat. I had planned to share between them some test cards to practice with at home, but I sent them home without them that day.

On January 14th, they informed me that the school doctor said they must put on their glasses again, regardless of the fact that the sight of all of them had improved. The mothers felt quite differently about it, however, and they declared that their children should not put on their glasses again, no matter what the school nurse or doctor ordered. After that, my girls became willing assistants, and were more determined than ever to be cured. I will confess that I had no easy time of it, but when they saw that I meant real business, rapid progress was made, which interested Dr. Bates very much. I promised them a real party at our office, with ice-cream 'n everything, just as soon as they all could read 20/20 on the test card, whereupon one of them yelled, "Oh, boy, me for normal sight!"

They asked for test cards, which I was glad to give to them for practice at home. Instead of playing on the streets after school they went to each other's homes to practice for an hour or more. Then I was taken ill and was absent from my precious clinic for two months. My pain was bad enough, but my heartache for this group of girls, who might lose interest in being cured without glasses while I was away, was a greater pain.

During my illness I stayed at one of the large hotels in New York City. One afternoon while I was convalescing, my nurse answered the telephone in my room. She turned toward me and with a frightened look, she said: "The operator says there are a lot of wild Indians in the lobby asking for permission to visit Mrs. Lierman."

Well, I had no more pain, no more heartache, for I knew they must be my rascals from the clinic. I answered: "Please have them come up."

When they filed in, one would have thought they were angels, and that they always had been angels. How glad I was to see them, and oh, how glad they were to see me!

Yes, they had good news,—they practiced faithfully, and if I would only get well soon and come back, they would show me that nearly all of my precious jewels had normal sight.

I did return to them at the clinic very soon after that, with the aid of crutches, and was mighty glad to get back. The fifteen girls were all there, and each one in turn stood twenty feet away from the test card, and read the twenty line for me. When my strength returned, we arranged for the party which was to be some time in April.

We spent an hour at the clinic before the party, and when we arrived, a surprise was awaiting us. Thirteen kiddies were all arrayed in their Sunday best, and two of them presented us with bouquets of roses and carnations. These flowers came from grateful mothers, and I am certain that it meant a sacrifice to them. The coming event must have had a good effect upon their sight, for twelve of them read 20/20 that day with each eye separately on strange cards.

Two were not there. One of them stayed away because she had put her glasses on again. The teacher informed me that she did not do so well in her studies, nor with her reading on the blackboard, after she had put on her glasses. Later, when the girl took off her glasses again, she was immediately benefited by the treatment, and soon obtained normal sight. She became more accurate in all her studies. I was told that previously, while wearing glasses, she read figures incorrectly, and usually made serious mistakes. This particular girl was one of the most nervous and unruly of any girl patient I have had. She worried her school teacher, because she found it hard to be truthful. During her treatment, Dr. Bates and I noticed, that, as her vision improved, she became less nervous and her teacher said there was a marked improvement in her conduct in school.

After clinic was over, two taxicabs drove the kiddies with the doctor and myself, through the East Drive of Central Park. The flowers were budding here and there, and it was like a moving picture show to watch the kiddies. One of them asked me if skunk cabbages grew in the park, and who fed the squirrels in the winter time. Another, though born in New York City, had never been to Central Park nor to the country. The party was a decided success.

Right in the midst of our fun two persons called from Washington, D.C., for an interview with Dr. Bates. There he was, a boy all over again, playing parlor-games, and laughing heartily with the kiddies, as though he had not a care in the world. I allowed the visitors, who came such a long distance to see him, to have only five minutes of his time; otherwise it would have been a great disappointment to him to be denied the company of the children. A game of forfeits was played, and when Dr. Bates was called upon to forfeit something, he gave his retinoscope. It was held over the head of the kneeling child, who was the arbiter of the fate of the owner.

"What should the owner do to redeem it?" was asked, and the answer was: "The owner must go to the next room and read the Snellen test card at ten feet, from top to bottom without a mistake." The doctor promptly obeyed; while two of the children went with him, to see that it was read correctly.

I could go on telling more of the funny things that happened on that wonderful occasion, but I would like to add what the children said, as they filed out of the room: "Thank you for the party, but thank you most of all, Dr. Bates, for joining us in the fun."

I should like to say also that I have discovered that Dr. Bates is very fond of ice-cream. I can prove it because he did not refuse the third helping.

CHRISTMAS AT THE CLINIC

To me, Christmas is the most wonderful day in the year. To hosts of boys and girls throughout the world, it is the happiest day. But there are other little folks—all too many of them—who do not know its meaning, and whom Santa Claus seems to have quite forgotten.

This fact was brought home to me very forcibly during my first few years at the clinic. Just before Christmas, a boy of seven years came with his sister, a little girl of five, for treatment. Both the children were thinly clad and far from clean, and seemed to feel perfectly at home near a warm radiator. There was nothing wrong with the girl's eyes, but the boy had a severe inflammation of the eyelids, along with a slight squint of the right eye, I was not surprised to find later that this inflammation was caused by uncleanliness. Before treating him I asked him what he expected from Santa Clause. He looked up at me and said:

"Oh, he ain't never came to our house. I only sees him in the store windows."

"But you do have a Christmas tree on Christmas eve, don't you?" I asked.

"Nope," said he, "we never had none."

I began to think I wanted to use my influence with Santa Claus on behalf of this neglected child, but my present thought was to treat him. No, I did not begin with palming this time. I washed his eyes and

face with water, and judging by the color of the towel, when the operation was over, I should say that he had not been washed for a week or more. I tested his sight, and with both eyes he read the ten line at fifteen feet. Then I covered his good eye, and with the squinting eye, the right, he read the seventy line (15/70). I taught him how to palm, and while his eyes were covered, I told him the story of the Babe of Bethlehem. This worked like a charm, and in a very short time his right eye improved to 15/30. I promised him that Santa Claus would surely have a present for him at Christmas time if he would cover his eyes to rest them many times every day.

The progress he made was good. A week later he read 15/15 with the right eye, and only at intervals did the eye turn in when he began to strain, I learned later that his father was in jail for theft. He had to mother his little sister and baby brother, who sat in a high chair most of the day, while his sickly mother went out to work. Yet he found time to practice. Before Christmas he had normal vision in both eyes, though the right eye turned in at times the least little bit. As for the inflammation, it had completely disappeared under the influence of the sun treatment and the daily use of water.

The day before Christmas I purchased a Christmas tree with some trimmings, and filled a basket with good things to eat. I also had a little gift for each child in the family. On Christmas eve I brought them to his home. The poverty I found there wrung my heart, but I had the pleasure of knowing that the children at least would have a happy Christmas. The sight of the Christmas tree filled them with rapture too great for speech, and the gratitude of the mother was pathetic. She was thin and careworn, she hardly ate her share of the hot meal I helped her prepare. Not once did she speak of her husband, but I have a suspicion that she loved him.

Shortly afterward the boy's visits to the clinic ceased, and on going to his home again, I found the scanty belongings of the family upon the sidewalk, all covered with freshly fallen snow. I tried to find them, for I wanted so much to help them if I could, but my efforts were in vain. Next day I returned and was told by the neighbors that the mother was in a hospital and that the children had been placed by a charitable society in an institution.

I never saw nor heard of my patient again, but he inspired me with the idea to make my big family at the clinic happy. Since then, every child and adult who came to us was remembered in some way at Christmas time, although we were not permitted to have a tree at the hospital. Incidently, I found that speaking of Santa Claus was an invaluable aid in helping the eyes. Mothers often warned me that their children would not obey my directions. I would listen, of course, and then I would talk baseball or Santa Claus, according to the season of the year. The scheme never failed to bring good results. I have known the most restless of small boys to sit on a stool, or stand in a corner, for ten minutes or longer without moving, while I would tell the story of "The Night Before Christmas." It is also astonishing how much interest a small boy takes in baseball. Nine times out of ten when I ask a boy to imagine something perfectly, he will say:

"I can imagine a baseball very well."

I think if Babe Ruth knew how my boys admired him, he would provide more seats for them at some of his games, and I think, too, that he wouldn't mind playing Santa Claus and providing baseballs for some of my patients, as he has for many other boys. I am sure nothing would make them happier, even though baseballs are of little use in a city that does not provide enough playgrounds for its children.

Santa Claus, as I said, is a fair rival of baseball, and appeals to girls and boys alike. I begin during the month of September to talk of the visits he makes to the clinic every year, and the result is magical.

Joseph, nine years old, was quite unmanageable at first, and could not be enticed to palm, nor even to stand still long enough for me to test his sight. At one time I got tired of coaxing him, and told him to wait until others had been treated. His mother, a very nervous woman, wanted to thrash him, but the little fellow didn't seem to mind that a bit. He had been sent by a school nurse for glasses. His eyes were so sensitive to light, that he could only partly open them. When I was able to get back to him I said:

"If you will read this card for me and do as I tell you, I will have you come here the day before Christmas, when Santa Claus will give you something nice."

The suggestion worked splendidly. He read the card with both eyes together and with each eye separately, getting most of the letters on the forty line at fifteen feet. He palmed when I showed him how, and before he left, his sight had improved to 15/20. After he had palmed for ten minutes or longer, his mother remarked how wide his eyes opened. Joseph came quite regularly after that, and was grateful for the gift Santa Claus brought him at Christmas time. Even though he was cured in a few weeks, he continued to come, just to say "Hello" to the doctor and myself.

Shortly before Christmas I treated a little girl whose age I cannot exactly remember, I should imagine that she was nine or ten years old. Her wistful eyes looked up into mine, and I surmised that

she was very poor and lonely. She told me that her mother and father were both dead, and that a kind neighbor, who already had nine children, was mothering her too. I knew just what I would like to have Santa Claus give her, and tried to figure out just how much I could stretch my Christmas fund, so that I could buy clothes and shoes for this little girl. It could not be done, because I was poor myself. However, I doubt if these useful things would have made her as happy as did the dolly and the necklace which I ultimately gave her, and which cost only a trifle. She was so overcome with joy that she could scarcely talk.

There was nothing seriously wrong with her eyes, but she was under a nervous strain which caused her sight to blur at times. This I soon corrected, and she was very happy when told that she did not need glasses.

OUR LAST CHRISTMAS AT THE HARLEM HOSPITAL CLINIC

We are no longer at the Harlem Hospital Clinic, and I keep wondering if my beloved kiddies will be taken care of at Christmas time, or whether they will be neglected. I miss them very much. Each year we have a tree at our new clinic, distribute gifts as in the past, and extend our good cheer as far as it will reach. But my heart goes out to the dear ones we have left behind in that other clinic.

I shall try to paint a mental picture of our last Christmas with them. Little Patrick had been coming to us for eight weeks or so before Christmas. His difficulty was in seeing the blackboard in school. His teacher had sent him to us for glasses and offered to pay for them herself, as was explained in a note which Patrick had with him. He was such a dear little fellow, and one of the best behaved boys in her class, she said; his family was very poor, but they were good people, and for that reason she wanted to pay for the glasses.

On Patrick's first visit, Dr. Bates examined his eyes and said he was near-sighted. With the test card his vision was 15/100 with each eye. He did not like to palm, but he kept his eyes closed for over half an hour as he was told. On that day his vision improved to 15/20, which was unusual. I told him to rest his eyes by closing them often every day. The second week in December he read 15/10 on the test card with each eye.

When Patrick was told to come for his Christmas gift—and perhaps an orange with some candies—he begged for permission to bring his baby sister and three brothers. I believe it was an unselfish thought on his part, because he could not very well accept a gift when his sister and brothers had none. He was invited to bring his family to the Christmas party, and when I saw him that day he was radiant with smiles.

Our room surely looked as though Santa Claus had left his pack there. In one corner of the room several dozen dolls were arranged, waiting with their arms outstretched for the little girls. An operating table was loaded with games and toys for our boys. Large Florida oranges, enough for every one, both young and old, filled another corner of the room. Cornucopias, decorated with tinsel and filled with candies, were hung all about, a pretty sight to see. Dr. Bates, himself, arranged them on the windows and screens, and wherever they possibly could hang. The doctors and nurses from other clinics of the Harlem Hospital came to our room and admired the arrangements. Dr. Bates was very much excited about it all, and his face lighted up with smiles as the children and adults entered the room. He watched the expressions of the little ones, and his heart was filled with joy, because his clinic family was so happy.

For several years it had been our pleasure to greet Dr. Neuer in our room at the Christmas party. It was his delight to take one of the dollies and go from room to room, displaying that doll with all the joy of giving. Children suffering with tuberculosis, of whom many were cured by him, were never forgotten at Christmas time. When his eyes began to trouble him he came to Dr. Bates, and was cured without glasses. He did not mind in the least standing with the rest of our clinic patients, and when Dr. Bates invited him to his office, he said the dispensary was good enough for him. Shortly after our last Christmas party there, he was taken seriously ill with pneumonia, and died. He was beloved so by the poor that we know they will miss him, for he was a good Samaritan. He gave his life for his best friends,— his clinic patients.

For ten years I have watched the happy faces of girls and boys at Christmas time. Tired mothers, with sick babies in their arms, also received their share of useful gifts. Dr. Bates, though he was always busy, found time to hand each of his patients a gift, and to wish them a Merry Christmas.

Bridget, the Dispensary scrub woman, who had heard some weeks before that our patients were to

have a treat again, decided, all of a sudden, that her eyes needed treatment. Just to please her we prescribed some harmless eyedrops, for there was really nothing the matter with her eyes. She was big, fat, and good-natured, and walked around as though she owned the place. Bridget wanted to be our patient at least until Christmas time, so we allowed her to fool us.

On the day the gifts were distributed, a colored woman brought her little girl to be treated for an infection of her eyes, and was waiting to be attended. Instead of being pleased at all the pretty toys she saw, she looked very sad and downhearted. After Dr. Bates had treated the little girl, he sent her to me for a dollie. The mother begged me not to give her one, because she had two younger children at home who would not have any Christmas on account of their poverty. The little girl was taken care of by me, while the mother was sent home post haste, to bring the little brother and sister. She returned with her brood, and the tears came to her eyes when a doll was given to each of her girls and a mouth-organ to the little boy. Mother's arms were filled with oranges and candy, and there were no more tears. This little family had always been well provided for while the husband and father was living, but he was killed while at work, and the mother, being in ill health, found it very hard to keep her family together. Before she would accept a gift from us, I had to convince her that she was not accepting charity, and that real friends were merely sharing their gifts with us at the clinic.

CHRISTMAS, 1923

I wish everyone who contributed to our Christmas Fund could have been with us on the Christmas of 1923. We had our first tree. Not only did our clinic patients enjoy it, but our private patients as well. I fear, too, that on more than one occasion, a private patient was kept waiting much longer than he cared to wait, while Dr. Bates hovered around that Christmas tree. Dr. Bates does not like to neglect his work, but that tree needed his attention, he thought, even though he was keeping his patients waiting. His orders were not to purchase anything cheap. The clinic family is precious to him and must have the best of everything. When it came time to distribute the toys and candies to the children, I saw him peeping in at the doorway, and this added pleasure of having a tree for them did him a world of good. The children all love him because he does so much for them.

At the Harlem Hospital we were not permitted to have a tree in our section, but the Christmas spirit prevailed in our room there just the same. Deep down in my heart, I wished each year to have a tree, in addition to gifts for our patients at the clinic. With the reserve left over from the year before, which was big enough to bring happiness for all, we were able to have gifts, and a tree that reached from the floor to the ceiling.

Everyone connected with our office helped to trim the tree, which stood in a corner of the reception room where it could be seen by all. Pretty dolls for the little girls peeped from beneath the lower branches. Games and mechanical toys were placed where every boy could choose the one he liked best. There were toys also for the smaller children, suitable gifts for the men and women and boxes of candy for everyone. At this time one of our patients was suddenly taken away from his wife and two little children. He had tuberculosis and was sent to an institution. Before he left he told me that he did not mind his suffering at all, but he was thinking of the cheerless Christmas that confronted his wife and children. However, it was not so cheerless as he expected it to be. A friend of mine supplied them with a turkey, and our Santa Claus did the rest. You never saw such a happy family. We were doubly repaid for our labor of love because at the time every patient responded to the treatment. Some were cured before Christmas time, but they were invited to come and share in the Christmas cheer just the same. Many of them came.

Something happened which was not at all expected nor planned. The son of a multi-millionaire, who was being treated by Dr. Bates at this time, came at his appointed hour. He stood and looked at the tree with great approval. It was aglow with colored electric lights. Then he spied the toys and shouted with joy. All of a sudden he disappeared. He was found later with Dr. Bates, asking the doctor questions that had nothing to do with the treatment of his eyes. Some of his questions were:

"Which toy is mine, doctor? Can I have the one I like best? Did Santa really leave this one or that one for me?"

His aunt, who was with him, was mortified. She made all sorts of apologies, imploring the doctor not to listen to him. "Why," said she, "He has money in his pocket now, to spend as he sees fit."

The doctor apparently paid no attention to her. His eyes were fixed on the little rich boy, who could

appreciate a toy meant for a poor little lad. Dr. Bates informed him that the clinic Santa Claus would be pleased to have him select the toy he liked best, for we really had more than enough to go around.

There were fishing ponds, and mechanical boxers, supposed to be Jack Dempsey and his opponent. The latter was a great delight to the little fellow, so we did not have to guess which one he wanted.

A dear old man from the Blind Man's Home was very grateful for a package given him by a private patient.

One little girl, after she had chosen her dolly, said she didn't know that Santa Claus loved her so much.

I want to thank my friends who made all this possible, and to wish that their every Christmas be a merry one.

CHRISTMAS, 1924

We had a lively time at the clinic last Christmas season, 1924. Many poor souls were made happy at that time, because of the generous contributions received throughout the year for the clinic fund.

I still keep up the old custom of telling a Christmas story to my younger patients. Every time they come for treatment, I tell them to palm their eyes, and then I try to improve their memory and imagination, which always improves their sight. It is necessary to remind a child of pleasant things, and what is more wonderful to the child mind than a Christmas tree laden with toys and candies? While I am treating boys and girls at the age of twelve or older, I talk about ice skating or sleigh rides, hills of snow, the pure whiteness of the drifts, or I tell them to imagine they are making snow balls. This helps to improve their vision for the test card and relieves tension or pain. Young men and women who work in shops usually find it a benefit to imagine that objects about them are moving all day. I tell them to blink slowly, but constantly, and shift their eyes while blinking. This stops the stare which causes so much body fatigue.

If I have had a hard day, treating the most difficult cases, I find it a great help to palm and remember some of my childhood days. I think back to the night before Christmas. Mothers will find it a great help in improving their own sight if they make a daily habit of spending ten or fifteen minutes with their children, palming and resting. Children can easily form mental pictures while palming, especially remembering the Christmas decorations in store windows, the funny mechanical toys, and animals that move about when they are wound up. Recalling or imagining such things, while their eyes are closed, helps to relieve the mind of school studies, which sometimes cause strain. Adults, especially mothers, listen to me while I am describing such things to the children in the clinic. When it comes time to treat the older patients, I find it quite easy to have them remember how surprised their children were on Christmas morning, when the tree and toys were discovered.

It was necessary to find out the ages of the children so that we could purchase suitable and useful gifts for them. There were sewing baskets for the older girls, and handkerchiefs, three in a box, for mothers and fathers. For the little girls, we had the dearest dollies which we purchased at a reasonable price. Little boys received games and toys of all sorts, and enough money was given to a mother to buy a pair of baby shoes for her youngest.

One mother, who came quite regularly for several months before Christmas, was made very happy the day of our festival. She was invited to bring all of her children. There were seven and not one boy among them.

Dear old Pop from the Blind Men's Home of Brooklyn, was too feeble to be with us, but we remembered him just the same. Good smoking tobacco and some wearing apparel were sent to him and he was overjoyed.

While we were distributing the gifts, I suddenly remembered about the little rich boy who enjoyed a poor boy's gift the year before. I was a little sorry not to have another rich boy at this time. There were a few toys left, and no more boys to receive them. The last little girl had received her doll and departed. There was one doll left behind. She was perched among the lower branches and looked rather lonesome. There was no one to claim her. I was rearranging the lights on the tree while all was quiet. When I turned away from the tree, I saw a little rich girl from the West, admiring the lonesome dollie. Her mother stood behind her wondering what would happen next. Dr. Bates also appeared on the scene, and when he nodded his head toward the little girl and then the doll, I understood what he meant. Both arms of the little girl reached out for a poor girl's gift. She held that dollie as though it were the only one in the world. I have learned so much about private and clinic patients, and I am glad to find that all boys and girls feel the same whether they are rich or poor, their hearts beat alike at

Christmas time.

Many thanks to my friends who make our clinic family happy at Christmas time.

CHAPTER II

MYOPIA OR NEAR-SIGHT

THE AMBULANCE DRIVER

ONE of the ambulance drivers connected with the Harlem Hospital called on us. He was wearing very heavy glasses and his eyes, as he strained hard to see, looked to be about the size of pinheads. He had heard of Dr. Bates and his treatment, and was eager to obtain some relief from eyestrain. Oculists told him that nothing more could possibly be done for him. His sight was gradually failing, and he feared that he would soon lose his position. Dr. Bates examined his eyes, and told him that he had a very high degree of myopia, but that he could be cured if he would take the trouble.

Our room never was so crowded with patients as it was that day, and he had to wait some time before receiving any attention. However, while I was busy with a boy, who enjoyed palming because it improved his sight so quickly, the ambulance driver got busy too. Shifting and swinging helped little Jack, and he found that it was a great relief to try the different methods which helped him to relax. This interested the man very much, as the smile on his face indicated. I was eager to help him, too, and glad when the opportunity came. He stood directly behind my boy patient, and imitated as well as he could just what Jack was doing.

When he first entered the room, his vision was 10/200 without glasses. Before I had a chance to treat him, he had improved his sight to 10/70 all by himself. He listened while I continually repeated to the boy, not to stare. When I told the little fellow to look no longer than a second at one letter, because if he did his sight would blur, the man followed the directions. When I began to treat the latter he told me that he never knew he stared. He found out that when he did not close his eyes often, as the normal eye does, his vision blurred, and he could not see any letters at all on the test card at ten feet. That day I improved his sight to 10/40.

OTHER CASES OF MYOPIA

We have had a number of patients who were cured of myopia in one or two visits. Since some were not bad cases, it did not take long to cure them.

A woman of middle age, who had worn glasses two years, told me something, which I think might interest our readers. She had very little to do at the time; to amuse herself, she would stare at an object until it became distorted. She stared so persistently that the object became two instead of one. Later she was able to see the object triple, and to anyone who would listen to her she boasted about her ability to do this. Then, one morning, after she wakened from a sound sleep, she could not see the hands of her clock. The figures were blurred. Everything in the room seemed to be covered with a veil. She tried her usual experiment and stared just as hard as she could, thinking that it would help her to see things clearly. Instead, her vision became worse, and she called on an oculist. He told her that she would probably have to wear glasses for the rest of her life. He fitted her with glasses and advised her never to be without them. Six months later she had to have stronger lenses. When I first saw this patient, I thought that her eyelids were stationary. I looked at her for fully three minutes, without seeing her blink once. Then she told me what I have already written. I said I believed that she had brought on all this trouble herself. She surprised me by saying: "Well, if I could make so much trouble with my eyes, surely I can undo it with your help."

She did exactly what I told her to do, and more. She practiced conscientiously, and she never talked about her eyes to anyone until she was cured. She palmed for an hour every morning, from six until seven o'clock. She traveled morning and night for one hour on a railroad train, and never opened her eyes the whole time. Her friends did not trouble her after she asked them not to speak about her eyes. She practiced whenever she had time, with a newspaper or book type. She worked with a typewriter every day, and found that her memory helped in her work.

Sometimes she remembered a large, white imitation pearl of her earring, or she would remember the sparkle of a little diamond in her ring. A black period was out of the question entirely. If I mentioned a period to her, she would begin to stare. She said it reminded her of the blurry things she saw when her eyes first troubled her. She surely demonstrated that to remember an error is a strain.

Six weeks after I first treated her, she was cured without glasses. She now sees things clearly at the distance, but only when she blinks, which is just what the normal eye must do to keep the vision normal. Her friends have a good time with her, when she is in the mood, for she is constantly reminding them to blink.

A young man had worn glasses steadily for ten years. With his glasses on he read 10/15, and without them 10/30. His face became distorted as he tried to read the letters of the test card. He complained that the white of the card was a dazzling white, and gave him great pain when he made an effort. After palming for a few minutes, the wrinkles temporarily disappeared. I placed him in the sun, and as he looked down, I raised his upper eyelid, and focused the bright rays of the sun on the white part of each eye with the sun-glass. This took but a minute. We returned to the test card, and without a mistake, he read every letter. I told him to sit in the sun as much as possible, and let it shine on his closed eyelids, and to palm every day at intervals for at least an hour.

He never came back for another test, and I hope his cure was permanent.

A little girl, nine years old, who was quite near-sighted, had very poor sight even with her glasses on. I was told that while her vision was bad before she had put on glasses, her eyes had become much worse during the last year. She had worn them only one year, and I believe that they made her worse. The first day her vision without glasses was 7/200 with both eyes, and with each eye separately. I told her she would have to stop wearing glasses if she wanted to be cured. The child was afraid to do that, because her school teacher told her she should always wear them. Of course I became less enthusiastic about the cure of her eyes.

I gave her a treatment that day and improved her vision to 7/70 by having her palm for ten minutes or so, and then look at a letter on the test card at which I was pointing. I did not expect to see her again at the clinic, because she was disregarding my wishes by wearing her glasses, but she was there the next clinic day, holding her glasses in her hand. She said she had worn them every day only during school hours. At other times, after her home-work was finished, she practiced with the test card and palmed her eyes as much as possible.

I was surprised to find that her vision had improved even though she wore her glasses. Dr. Bates and I have been surprised more than once to find a patient get well, although they had worn their glasses for emergencies. This little girl attended the clinic four times, and her vision improved to 8/40.

PROGRESSIVE MYOPIA

One of the worst cases of progressive myopia I have had was that of a girl aged twenty-three. The glasses she wore were so thick, that her eyes appeared to be very small. In Philadelphia, where she lived, Dr. Bates' book, "Perfect Sight Without Glasses," is quite popular. It was through a friend who had the book that she heard of Dr. Bates. She was her mother's only support, which made it very hard for her to leave a good position as typist. She had come to our city mainly, to see Dr. Bates, who, she was sure, could cure her eyes after others had failed.

Being poor, Yetta could not afford to come for private treatment, so she came to the clinic. The clerk at the desk informed her that she could not receive treatment because she did not live in the district of the hospital. She was admitted that day, however, for just one treatment, and the privilege of an examination. Dr. Bates examined her eyes and said that her trouble was progressive myopia in a very severe form. He asked me what could be done, in order that we might treat her at the clinic. When a severe case like this comes to us, I long for a Bates Institute. I asked the girl if she could establish a residence near the clinic, so that we could treat her, and she agreed to try.

Yetta's vision without glasses was 2/200. I improved this the first day to 2/100, which was double what she had before. Her case required more time than I could give her, so she was instructed to palm her eyes for long periods all through the day in her room, and also in the evening, and to come just as soon as she could. She was told never to wear her glasses again. What a shock this was to her! How could she possibly get through the streets without them, she asked. I told her I could not undertake the task of trying to improve her vision unless she did so. I knew the hardships she would go through

without her glasses, and I was sorry. As she left the room, I could see how helpless she was, but before she reached the end of the corridor, on went her glasses again. She had lost her courage very quickly, but I did not lose faith in her. Any girl who would leave her mother, home, and position, to have her eyes cured, would not give up altogether, even though she was tempted to put on her glasses again. Two days later she returned, and displayed her admittance card, showing that she now lived in the vicinity. Yetta was anxious for me to know that she had obtained a position as an attendant where she also had a home. She told me that she had broken her glasses. This was the best thing that could have happened, because I knew she would be all the more determined to be cured.

This time I placed the test card three feet from her eyes, and all she could see was the 200 line letter. The short swing, and blinking helped her, and in a few minutes her vision improved to 3/100. She came every clinic day, and was always ahead of time. Her progress was slow but sure, and her face, which looked all the world like a stone image with slits for eyes, now had a natural appearance.

She enjoyed the movies for the first time in her life, and was happy because she could go along the streets without fear of an accident. At a later visit, she flashed letters on the ten line of the test card at ten feet. She asked me if I went to church. The question was rather unexpected, but I told her I attended church, and was proud of the fact. I consider the clinic my church also. Hundreds of poor souls entered our room there, just craving for a kind word or two. The Jewish people stood beside the colored folks, the Germans with the Irish, Spaniards with Italians. Some were Catholic, others Protestant. Many other kinds of religions were represented, but the one God was worshipped by us all. A kind word and a smile were necessary, so we gave them to our patients in abundance. The Jewish girl explained that the reason for asking me the question, was that she had noticed that the kindly feeling which exists in most churches, also prevails in our clinic.

CURED IN ONE VISIT

While our clinic now is not so large as it was at the Harlem Hospital, we have very interesting cases, and many of them are school children.

A little chap, aged seven, was one of my bright boys. His father was a carpenter who helped make the partitions in our office. We were treating patients long before our present office building was completed. He, therefore, had the opportunity to see some of the patients as they came to our clinic, and also when they left the office after their first treatment. He remarked that some cases appeared so much improved after only one treatment that it seemed as though a miracle had been performed. Since he was poor, I offered to help him or any of his family, if they should ever need treatment for their eyes.

"Oh!" he said, "I have two little boys, but there is nothing wrong with their eyes."

On April 12, 1924, just a year after I had spoken to him, his son, Frederick, came with his mother. While I was talking he was very attentive and his big blue eyes looked into mine. I think he was speculating whether I was all right or not. He seemed to feel at home with me right from the start so I had no difficulty in improving his vision. His mother told me that the school nurse had sent him home with a note saying that he needed glasses. His father refused to get them and suggested that the mother bring him to me. As Frederick answered my questions, he looked directly at me, and there was no sign of a frown or strain of any kind, but I did notice that he listened without blinking for two minutes or longer. As the normal eye blinks unconsciously every few seconds, I soon realized what his trouble was, and that he could be cured in a short time. Dr. Bates examined him with the ophthalmoscope and said there was nothing organically wrong with his eyes, merely eyestrain.

Since the letter test card troubled him at first, I had him read the card with E's pointing in different directions. As he looked at the card, his facial expression changed entirely. His forehead was a mass of wrinkles as he tried to see in what direction the E's were pointing. His vision with both eyes was 10/20. He read 10/20 with the right eye, and 10/30 with the left. I left him for half an hour after I had told him to palm and to be sure not to open his eyes until I said so. When I returned to him, I tested his vision again, and he read 10/10 with each eye separately. He blinked after seeing each letter, with no sign of a wrinkle or change in his face. His mother purchased a test card and promised to help him every day at home, before and after school. She was told to bring Frederick to the clinic again in a few weeks.

On May 3, 1924, I saw him again and he appeared very happy. His mother proudly told me that his report card showed the highest marks in all his school work. I wondered why Frederick did not look toward his mother while she was praising him. I did not have to wait long, however, to learn the reason. She had warned him before they arrived that she would tell me how careless he was with his stockings,

and he did not wish me to know. Yes, Frederick had only one fault, said his mother,—making holes in the knees of his stockings. Of course, I said, this was a terrible crime but putting glasses on him would have been a worse crime.

Frederick gained a point when his mother smiled on him. The school nurse who had ordered him to get glasses noticed that Frederick did not frown any more. He could see the blackboard at any distance without trouble. The little fellow had been cured in one visit.

(Dr. Bates uses the word "Squint" to refer to Crossed and Wandering Eyes.)

CHAPTER III

SQUINT OR CROSS EYES

SQUINT - Case No. 1

A LITTLE mulatto boy, aged four years, was the most unruly youngster who ever came for treatment. While testing his sight with the test card, I had a most trying time. When he tried to look straight ahead, his right eye turned in so far that one could hardly see the iris. His young grandmother, who came with him, expressed deep sympathy for me and assured me that I would have a hard time trying to manage him or to help him. I asked him his name several times before he answered:

"I ain't got no name."

Later he said it was Francisco, Frisco for short. Frisky would have suited him much better. I could see that he was straining and was extremely nervous. I decided to be very patient with him, but for some time the only answers I could get from him were: "I don't wanna" and "I won't."

All sorts of apologies came from his grandmother, but I assured her that I was not discouraged with him. I made up my mind to help the little chap, and in some way relieve him of that awful tension and nervous strain, which I felt was the cause of all his devilishness. Finally I said to him:

"If I had a bad eye and a good eye, I would not make my good eye do all the work. I would make the bad eye work hard so that I could see better."

This interested the child, and he asked: "Have I got a bad eye?"

"Yes," I said, "and the reason it is bad is because it is lazy, and you won't let it be good. All you can say when I try to tell you how to make it behave is, 'I don't wanna.' Nice boys with good eyes don't say that." Thereupon he shouted in a loud voice which startled the rest of the patients: "Make my bad eye do some work; I want good eyes like you have."

I immediately showed him a test card called pot hooks. Little folks at the age of two or older like this card because all they have to do is to point a finger up or down, left or right, whichever way the E may be pointing. When they cannot see the way the E is arranged, then we have them cover their eyes just as grown-ups do, to obtain relaxation; only we pretend to play hide and seek. As I held the card two feet away I covered his left eye with the palm of my hand, and asked him to show me how the E's were pointing. At that distance he was able to see the 100 line letters. He could see straight ahead with the right eye only just long enough to see those letters; then his eye turned in again.

At first I could not induce him to palm, so I told him to close his eyes as though he were sleeping. He was very obedient about doing this, and his grandmother stood by in astonishment while his eyes were closed. I praised him for closing and resting them, and I said if he would do this many, many times every day, his right eye would become straight like the left and would not be bad any more. Then I told him to cover his left eye with his hand and look at the card, which I had fastened on the wall five feet away. This amused him, and he acted as though he were in for a good time. I told him to look at the 200 line letter, and then quickly close his eyes; then to look at the 100 line letters and close his eyes quickly again. In this way, Frisco did not have a chance to strain, because his eyes were not open long enough at any one time to stare. He was able to see these letters as well at five feet as he did at two, and this encouraged me. When he opened his eyes a third time he showed me with his hand how the next line of letter E's pointed.

He attended regularly three days a week for a few months, and was always very obedient. Each time he came he was able to keep his eye straight, not only while practicing with the card, but also while talking to me. His sight improved at each visit. His grandmother purchased a Snellen Test Card and assisted with the treatment faithfully at home. Six months later he was able to read the ten line letters

at ten feet away with each eye, and had learned to read the alphabet and first grade words.

I did not hear from Frisco for a year or so, when one day he and his grandmother surprised me. Dr. Bates and I had just arrived and found a large group of patients waiting. From among this group I saw a pretty mulatto woman, stretching her head above the rest, smiling at me. Her eyes were dancing and she seemed eager to talk to me. Standing beside her was a little chap. I did not recognize my little Frisco of a year ago,—he looked so different. His large beautiful eyes, now perfectly straight, gazed into mine, and he smiled as he noticed that I had finally remembered who he was.

His grandmother then said: "I have come especially to thank you for what you have done for our boy. When we first came to see you, no one in the world wanted him but me. He was so disobedient to his mother and so cruel to his baby sister. He would hurt and destroy everything he touched, and my daughter and I feared that he would grow up a criminal. Since his eye became straight he is a quiet, lovable boy and he is now living at home with his mother and father."

Then I greeted Frisco and he made a gentle little bow to me saying that it was a pleasure to see me again. I thought that was a fine little speech, as he was only five years old. Grandma said I had transformed him, but I assured her that it was her love and her untiring efforts to help in the cure of his eyes that had made the great change in him. Frisco's last words to me were; "I love baby sister now. I don't pinch her any more. I just kiss her."

SQUINT - Case No. 2

Doris and Arthur were cousins. Both had convergent squint. The only difference between them was that Doris's right eye turned in, while Arthur's trouble was with the left eye.

Doris was four years old when she was brought to us. At the age of two it was noticed that her right eye turned in. Although glasses were immediately obtained for her, they did not correct her squint. When I first saw her, the vision of the squinting eye was 10/40, while that of the other eye was 10/20. Later, the sight of each eye became 12/10.

Doris did not know the alphabet; so in treating her I had to use a card covered with the letter E arranged in different ways, and she was able to tell me in which direction they were pointing, left, right, up or down. I found it rather hard at first to get her to palm for any length of time. One day the mother told me of a dear baby brother at home, and I told Doris to think of her brother when she closed and covered her eyes. She very willingly did this and kept perfectly still. When she thought it time to open her eyes, usually after a minute or so, she called out questioningly, "open them?" If I answered, "No," she would keep them closed until I said, "Ready." During the first few treatments the right eye would not keep straight for more than half a minute, but later it stayed straight all the time, while she read the chart down to the ten line. In the beginning after a treatment it turned in again, but not so badly as before, and if she was reminded to make it look straight she could do so very readily.

The child's mother was a great help in the treatment, both at home and at the clinic. She derived much good from the treatment herself. She was a most unselfish parent, absolutely devoted to her children; but this devotion caused her to get excited and nervous, so that when she arrived at the clinic her eyes were staring almost out of her head. She soon became able to relax and the condition of her eyes improved.

Arthur's left eye turned in. His vision for the test card was right 10/20, left 10/50. His age was twelve years. His mother wanted me to know that he was a very bright boy, obedient and lovable. When he looked at the chart it was sad to see the left eye turn in until the iris was almost hidden. Arthur was quite different in many ways from any child I had ever treated for squint. All the rest showed signs of nervousness or were cross and dissatisfied. But not so with Arthur. He always did as I told him and his lovable face always wore a smile. He made rapid progress and his mother, who came with him, was very happy over the good results obtained in a very short while. At his first visit, after reading a line of letters on the chart, he was told to remember the last letter while he closed and covered his eyes. When he looked at the card again he was able to read another line. His vision became normal, 10/10, in just six weeks' time and his left eye no longer turned in. His mother told me that he got on much better at school than he did formerly. He did his exercises daily because he was eager to get well.

At Christmas time unusual gratitude was shown by the mothers to both the Doctor and me, because their children had obtained normal vision.

SQUINT - Case No. 3

Another patient had been wearing glasses for twelve years for the correction of squint, but was not benefited. When she began wearing them her mother tried to console her by saying that perhaps in another year the squint would be cured; but instead it only got worse. Her playmates made unkind remarks about it, and when she found her sight was getting worse for reading she became utterly discouraged.

I tested her sight, and she read 15/40 with her left, or better eye. When I asked her to read the card with her squinting eye she turned her head half way round to the left in trying to see. The vision of her right eye was 15/70. She was told to palm, and her mother was astonished when in a few minutes she opened her eyes, and, with her head perfectly straight, read 15/40 with her right eye without a mistake. When palming is done right it improves squint very quickly. Two days later, she read 15/15 with each eye separately, and her right eye was perfectly straight. She had followed my instructions to palm at least six times a day for as long a period as was comfortable for her. Three days later she came to the clinic smiling and expressed her gratitude for what had been done for her.

"I can read a book for hours at a time," she said, "without headaches or discomfort. I visited another clinic where I had received treatment and asked the doctor who had treated me to let me show him what I could do. I showed him how I could palm, and then I read the test card for him with each eye separately. The doctor said it was remarkable, because he had told me that I could never again get along without glasses and to be sure to have them changed every year or so."

After six months her vision was still normal.

SQUINT - Case No. 4

Cross eyes are indeed an affliction. This was plainly shown by the look of disgust which appeared on the face of the young colored mother who brought her nine year old boy to me for treatment. He had the most wistful expression. He kept looking up into his mother's face and his actions were that of a deaf and dumb person. When he looked at his mother with his right eye, the left eye turned out. When he looked at her with his left eye, the right eye turned out. He had alternate divergent squint. My heart went out to James, as his mother related to me the fact that her other three children had normal sight, while James looked so repulsive with his crooked eyes. A chill went through me when I heard her say, "I wish he had never been born." Then with more disgust in the sound of her voice she said, "I can't help it, but I hate him." Can anyone imagine a mother disliking her own child so much? All because his eyes were crooked. Complaints came to her from the school he attended. His teacher declared that he was stupid.

All this time the little fellow looked up at his mother apparently without moving an eyelid. Her question was, "What can be done with him or for him? Can you give him glasses or operate to cure his eyes?" I told her that glasses would never cure his squint, and neither would an operation. I asked her to watch carefully, and see what James was about to do for me.

First, I held him very close to me and patted his woolly head. He pressed a little closer. He liked the beginning of his treatment. I told him to say the alphabet for me, but he could not remember all the letters. He stood ten feet from the test card. I asked him to read, starting with the largest letter at the top. He read a few letters correctly, but I soon found out that he did not know many letters. His mother remarked: "The teacher in school thought his mind was affected because of his eyes, and that there was little hope of curing him." I had my doubts about the teacher saying such a thing, but I did not say so to the mother. What a pity it was to have the dear little fellow hear all this,—he looked so worried and restless. Perhaps he wanted to run away somewhere because his eyes caused others so much trouble.

I taught him to palm, telling him to remember a small Bible-class pin I was wearing on my dress. In a few minutes I tested his sight with the E card, which is used in cases where children do not know their letters. At ten feet he saw the fifty line. Again I told him to palm, and asked his mother not to speak to him while he was resting his eyes. In the meantime I attended to other patients. After a few moments I glanced at him and saw two big tears rolling down each cheek. He was weeping silently. His mother was just about ready to find fault with him, but I intervened and led her gently out of the room to a bench outside the door. I whispered to James that I loved him a whole lot, and if he would learn to read his letters at home and could read half of the test card correctly the next time he came, I would give him a nickel. I saw him smile, and when I was able to treat him again, I found that his sight had improved to the forty line of the E card. I have been wondering ever since, whether it was the mental picture of the

Bible-class pin on my dress which he was asked to remember, or the clear vision he had of that nickel I had promised him, that improved his sight for the forty line of letters.

Two days later James appeared again with his mother, and both were smiling. He could hardly wait to tell me that he knew his letters perfectly. His big brother had taught him at home, and he hoped I would be as pleased as his teacher was, when he read all his letters on the blackboard for her that day.

It was amusing to see James looking toward my purse which was hanging on the wall in the clinic room. I produced a strange test card which he had not seen. When he began to read the card I placed him fifteen feet away, which was five feet further than the first day. He was so excited that his squint became worse and he could not read. Dr. Bates saw this, and said that his trouble was mostly nervousness. I told James to palm again, and reminded him of the letter E with its straight line at the top and to the left, with an opening to the right. Then he became able to see the letters after a few moments' rest. I called Dr. Bates' attention to the sudden improvement in his eyes as he read one line after another, until he reached the thirty line, when suddenly his eyes turned out again, but after he had rested his eyes they became straight. I gave him the promised nickel that day, and made him very happy.

After he had been coming to the clinic for a month, James was able to keep his eyes straight most of the time. The attitude of his mother toward him was decidedly better and she promised to help him with the treatment of his eyes at home.

SQUINT - Case No. 5

As I entered the clinic one afternoon I saw two mothers standing side by side, each holding a little boy by the hand. The children were both about the same age, five years, and both were cross-eyed; but there the resemblance ceased. One seemed happy and contented, and it was quite evident that he was much loved and well-cared for. Both mother and child were clean and neat, and often the boy would look at the mother for a smile, which was always there. The other boy was plainly unhappy and neglected. I could read the mind of the mother, who was anything but clean, as she stood there grasping his hand a little too tightly. Even without her frequent whispered threats of dire things to happen if the child did not keep still, I should have known that she considered him a nuisance, and not a precious possession as the other boy plainly was in the eyes of his mother.

I was at a loss to know which child to treat first, but decided upon Nathan, the clean one, and tried to keep the other interested while he waited. Nathan had beautiful black curls, and would have been pretty but for the convergent squint of his right eye, which gave him a peculiar appearance. His vision was very poor. With both eyes together he could read at ten feet the fifty line of the test card, and with the squinting eye he read the seventy line. I showed him how to palm, and while he was doing so I had time to talk to his mother. She said that his right eye had turned in since he was two years old and that all the doctors to whom she had taken him had prescribed glasses. These, however, had not helped him. I asked Nathan to read the card again, and was delighted to find that the vision of the bad eye had become equal to that of the good one, namely 10/50. **I had difficulty in keeping his head straight while I was testing him, for like most children with cross eyes he tried to improve his sight by looking at the object of vision from all sorts of angles. After he had palmed for a sufficient length of time, however, he became able to correct this habit.** The extraordinary sympathy which existed between mother and child became more apparent during the treatment, for no matter what I said or did the child would not smile until the mother smiled.

Nathan came to the clinic very regularly for a year, and for the first six months he always wore a black patch over his left, or better eye. Atropine was also put in this eye to prevent its use in case the patch was not worn constantly. Nathan did not like the patch, and his mother had to promise all sorts of things to keep it on. After it was removed the atropine was continued. Dr.' Bates had told me what to expect when the patch was removed, and so I was not shocked to see the good eye turn in. I knew the condition would be temporary, and that in time both eyes would be straight. Treatment was continued for six months, and then the boy became able to read 15/10 with both eyes, and always with both eyes straight.

The other little boy, to whom we must now return, was called George, and his condition was worse than that of Nathan, for both his eyes seemed crossed. At ten feet he read the fifty line, but complained that he saw double. I showed him how to palm, and while he was doing so his mother told me how very bad he was, adding that I must spank him if he did not mind me.

"I think he gets enough of that already," I said, but I was careful to say it with a smile, fearing that

she might lose her temper and say more than I would like.

George had been palming five minutes, when I asked him to uncover his eyes and look at the card. He was much surprised to find that he could read the forty line without seeing the letters double. I asked his mother to be a little patient with him and help him at home, and I gave her a test card for him to practice with.

"Madam," she replied, "I am the mother of six, and I haven't time to fuss with him."

"No wonder the kiddie is cross-eyed," I thought, and seeing I could get no help in that quarter, I appealed to George.

It was near Christmas time and when I revealed to him the possibility of a Christmas present if he came to the clinic regularly, and did what I told him, he became interested. I did not know how much could be done for his eyes in the eight weeks that remained before the holidays, but I felt sure that with his co-operation we could at least make a good start. This he gave me in full measure. Never did I have a more enthusiastic patient. He attended the clinic regularly three days a week, and often when I came late I would find him waiting with other boys for me on the hospital steps.

After he had been practicing faithfully for two weeks, palming six times a day, and perhaps more, according to his own report he was able to keep his eyes straight while he read all of the test card at ten feet. When he had done this I asked him to spell a word with four letters, and instantly his eyes turned. I had him palm again, and then I asked him to count up to twenty. His eyes remained straight, because he could do this without strain.

Two days before Christmas, George was at the clinic bright and early, and with him had come three of his brothers to get their share also, "if there were any presents left," as George explained. Fortunately a little fairy had prepared me for such an emergency, and I had gifts for everyone. That day George was able to keep his eyes straight both before and after treatment, and to read 10/10 with each eye separately.

The third case of squint was little Ruth, aged three. Dr. Bates suggested to her mother, who was nearsighted, that she should have her own eyes cured, because her condition had a bad effect on the child. She consented, and soon obtained normal vision. Ruth was so tiny that I had to put her on a table to treat her. As she could not, of course, read the letters on the test card, I held before her a card covered with E's of various sizes turned in different directions. Her mother was quite positive that she couldn't understand what I wanted her to do, but Ruth, as often happens in such cases, had more intelligence than her mother gave her credit for.

I asked the child to tell me whether a certain E pointed upward, or to the right or left, by merely indicating the direction with her finger, and it did not take an instant for her to show her mother how bright she was. I showed her how to palm, and in a little while she indicated correctly the direction of the letters on several lines. When the letters grew indistinct, as I moved the card further away, she became excited and wanted to cry, and her left eye turned in markedly. She palmed again and while she was doing so, I asked her all about her dolly, whether her eyes were blue, or some other color, and what kind of clothes she wore. When she removed her hands from her eyes, both were straight.

Her mother was instructed to practice with Ruth many times a day at short intervals, so that she would not tire of it. Each time I tested her sight her eyes remained straight. I was much interested to learn from her mother that if Ruth's daddy raised his voice in the slightest degree when he spoke to her, her eyes were sure to turn in. This merely confirmed my own experience that it is necessary to treat children who have defects of vision with the utmost gentleness if one wants to cure them. Ruth came to us for about nine months altogether and when I last saw her, both eyes were straight.

CHAPTER IV

EYESTRAIN

PALMING

EYESTRAIN is very common among school children. The only remedy offered for the last hundred years or more has been glasses. An Italian boy was sent to us by his teacher to be fitted with glasses. Dr. Bates examined his eyes with the retinoscope and said he was only suffering from eyestrain.

I tested his sight with the test card and then told his mother, who accompanied him, that he could be cured without glasses. This interested her greatly. She had wonderful sight herself, for she could read the smallest letters on the card at more than fifteen feet. I gave her doctor's diamond type card, which

she read, with perfect ease, at four inches and also at twelve inches from her eyes.

She told me that her age was thirty-eight and that she was the mother of ten children. With a great deal of pride, she said that they were all born in this country, and that they were all alive, too. Here was a real mother, I thought, proud of her big family. I enjoyed hearing her talk and encouraged her to do so. Like many of her race and sex, she had beautiful teeth and smooth olive skin. Although she was poor, her clothes were neat and clean, and Joseph was just as neatly dressed as she was. She looked at him smilingly and said: "Think of it, Joey, you don't have to wear glasses." Before this little talk Joseph seemed scared to death, as if something terrible were going to happen to him, but when his mother began to show confidence in me, he smiled and looked happy, as all normal boys do.

Both watched me very closely as I explained the method of palming to them. By palming is meant to close the eyes and cover them with either one hand or both and shut out all light; then to think of something that has been seen perfectly, or clearly, something pleasant such as a flower, a sunset, or a white cloud in a blue sky, and let the mind drift from one pleasant thought to another. Boys like to remember a baseball while palming. Little girls like to think of their dollies. Mothers like to remember the color of their babies' eyes. When palming is done correctly it relaxes the mind and body and relieves eye strain.

At fifteen feet Joseph read the fifty line before palming. After palming ten minutes, he obtained normal sight that day. When he read the card with each eye separately his left eye seemed to be the better of the two, because he made a few mistakes in reading the ten line letters with his right eye. He was encouraged to palm again for a few minutes, and then he became able to read 15/10 just as well with his right eye as he could with the left.

His mother stood where she could see all this, and beamed with happiness as she saw her little boy's sight improve. I started to explain to her the necessity of Joseph's resting his eyes as soon as he wakened in the morning, because he might have strained his eyes during sleep, also to rest his eyes again at noon, after school, and before bedtime. She listened very attentively and then she said: "Maybe you think you tell me something new, but I don't think so. All the time when I nurse my babies, I put up my one hand to my eyes as I close them, and I keep quiet while my baby is nursing. Then my baby goes to sleep quicker and easier and I am rested too." Surprised, I asked her who taught her to do this, and she answered, "Why, nobody did, I found that out myself." She was thankful, however, that Joseph did not have to wear glasses, and promised to help him every day until his eyestrain was entirely relieved.

She returned a week later with a good report of his progress. The test card I gave him for home treatment was used by the whole family. His mother tested the sight of all her children and found that two of her little girls also had eyestrain. She taught them to palm and cured them herself. Here was a busy mother with ten American citizens to help support and educate, and yet she found time to teach them how to obtain normal sight. I saw Joseph and his mother but twice, but he had suffered no relapse, nor did any complaint regarding his eyes come from the school which he attended.

The last time I saw the boy, he was anxious for me to know that his father, who had no trouble with his eyes at all, came home from his work one evening and thought the family were all playing peek-a-boo with him. The mother had them all busy palming, which was a strange sight to him.

Most people, like myself, have not the time to palm daily. However, if I suffer from eyestrain, which sometimes happens after a strenuous day, I find the memory of palming is all that I need to obtain relaxation. The memory swing, which Dr. Bates explained in one of our "Better Eyesight" magazines, has helped a great many patients. So it is with the memory of palming. In other words, remember how relaxed you were, and how free from strain the last time you were able to palm successfully, and this will help you through the day while at work, or at the theatre, or any place where it is impossible to place the palms of your hands over your eyes.

CONCENTRATION IS BAD

Almost all the patients who come to us at the clinic, and especially adults, think it necessary to concentrate in order to see more clearly. They regard concentration as part of our method of treatment, and until they learn better I cannot make any progress with them.

A young girl of eighteen or nineteen years of age had worn glasses for seven years, and had consulted oculists and opticians without getting any relief from the pain in her eyes. With her glasses her vision was 15/20, and without them 15/50 with each eye. She was unable to read fine print without

glasses. When she closed her eyes I noticed a twitching of her eyelids. She was told to open her eyes and look at a letter on the card, then to close them and remember the blackness of the letter, thinking first of the bottom and then of the top, alternately. When a few minutes later she removed her hands from her eyes she could not see the letter which she had seen before.

I wondered why her sight did not improve, but I understood when she said: "I did what you asked me to do. You told me to remember the letter O, I concentrated and held on to it and tried hard not to remember anything else. But now my pain is worse than before."

"You did not understand me," I said. "I did not wish you to hold on to the letter O, I asked you to remember the blackness of it, and see or imagine one part best at a time."

She tried again, covering her eyes with her hands, and I said to her: "Remember the letter O as you saw it, but first remember the top. Now what happens to the bottom?"

"It fades from black to gray," she said.

"Now remember the bottom blacker than the top."

"The same thing happens to the top," she said. "It fades to a gray color." Then she added: "Please let me keep doing this for a while, it seems to take my pain away."

In a few minutes I had to ask her to remove her hands from her eyes, as I could not spend any more time with her, and I wanted to know if I had helped her. When she looked at the card again, she saw the O very plainly, and also read two more lines, the forty and the thirty. The twitching of her eyelids had ceased, and she smiled.

The patient came regularly and after three visits she read the ten line at fifteen feet. She became able to read diamond type at eight inches from her eyes. But when I held the type at six inches and asked her to fix her eyes on one corner of the card and stare at it, the whole surface became a blank. The pain in her head and eyes returned. Sometime later this girl wrote me a letter of gratitude thanking me for curing her. At the end of her letter was a postscript: "Now I know why a school for concentration failed. They were all wrong."

One day a little Irish mother came with her boy of eleven, who had terrible pain. Dr. Bates and I both listened to her story, the gist of which was:

"The school nurse siz me boy needs glasses. Tis trouble he's having wid his eyes."

The boy constantly kept his eyes covered with a white cloth, and at first glance I thought he was crying, because the part of his face that I was able to see was much flushed. Dr. Bates examined his eyes with the retinoscope and then told me I could cure him very quickly, as he had no organic trouble. Then his mother began to talk again.

"Oi haven't any time to be foolin' 'round here, ma'am," she informed me. "Oi got to git back to me washin'. It's glasses he needs, ma'am, I tell ye."

When she finally stopped for want of breath, I said: "Now wouldn't it be fine and dandy to cure him so that he wouldn't need glasses?"

As I said this, down came the cloth from the boy's eyes. He was interested and returned my smile.

"Just you leave him to me and I will help him," I said to his mother. "And never mind leaving your work for him again. He can come here by himself."

"Sure ma'am, is it dreamin' ye are, or is it a bit o' blarney yer givin' me?" she inquired.

"No," I said. "It isn't dreaming or blarney. Be a good mother and watch your boy and see what happens."

I tested the boy's sight with the Snellen test card and found that his vision was 15/40 with each eye. Then I gave him a stool and showed him how to palm. Some minutes afterwards I told him to remove his hands from his eyes and look at the card. He stared at it as if some wild animal were after him. I discovered that his mother was threatening him, talking to him in a low tone. Evidently she thought she would please me by forcing him to do what I wished. By this time I knew that the boy was afraid of his mother, and I quietly invited her to take a comfortable seat outside the room. The boy informed me that his name was Joe, and as I smoothed his hair and gave him a few pats, the most affectionate look came into his eyes. Then we got down to business again. I told him to palm and reminded him of a baseball.

"Imagine you are throwing the ball," I said. "Blink your eyes to stop the staring and imagine that you are catching it. Now look at the card."

He smiled when he saw the letters come out blacker and more distinct than before. The redness of his face, which at first I had thought was from fever, left him, and his eyes of Irish blue were clear and wide open. I had to keep reminding him to blink his eyes all the time, He read the thirty line at fifteen feet and part of the twenty line, which I thought was doing well for the first visit. It occurred to me to see what would happen if he concentrated or stared. I told him to look at the first letter on the forty

line, Z, and keep his mind fixed on it, no matter what happened. As he did this he began to frown, his forehead became wrinkled, and his face reddened again.

"I don't like to do that, nurse," he said. "All the other letters disappear and my head hurts."

I told him to palm and remember the letter Z, thinking first of the top, then of the bottom. When he looked at the card, he saw the letters clearly once more, and read all of the twenty line at fifteen feet. When he arrived at the ten line, however, the first letter bothered him. He twisted his head in all directions. He stared at the letter and finally decided to palm again. After a few moments I asked him to open his eyes, and told him that there were three of the same letters on the card, but that they were scattered here and there on the different lines. Again he started to read the card, and as he saw the first letter on the one hundred line, which was a D, he said: "Now I know that the first letter on the ten line is a D."

Shifting his eyes from the one hundred line to the ten line letter had helped him to see it.

His last visit was a very interesting one. At the beginning of the treatment I explained to him how important it was to practice palming at least six times a day. He did not feel that he could spare the time, because he earned a little money running errands for the neighbors. At a later visit I had a talk with him about this and said: "If your eyes are cured you can earn more money during vacation time, but you cannot if they trouble you."

He agreed to practice at home many times a day. My rose garden in the country was in full bloom, and I promised to bring him a bouquet the next clinic day. Not having enough flowers for each patient, I wrapped Joe's bouquet in paper and asked Dr. Bates to carry it. Joe spied me first as we passed the long line of benches which were filled with poor people, all of them with eye trouble. His hair was combed, which was unusual, and he was spruced up generally. He was smiling, too, and his eyes were shining with great expectations. But when he saw that my hands were empty, the smile vanished, and a look of disappointment came into his eyes. I know what it means to be disappointed, so I whispered to him at once that Dr. Bates was bringing the bouquet for him, and the sun shone for him once more. I was well repaid for those flowers, for that day Joe made wonderful progress.

He had to wait some time before I could treat him and he never took his eyes off me. I could feel his gratitude, and my impulse was to gather him in my arms and hug him tight; but I refrained, thinking he might resent the familiarity. He read the ten line at fifteen feet, in less than a minute, and he told me that he did not suffer any more pain in his head. He also said that his studies seemed easier to him when he remembered not to stare or think too hard of one thing.

MENTAL PICTURES

So many patients tell me, when they first start treatment, that they have no mental pictures. They cannot seem to remember or visualize anything while palming. If the mind is under a strain, no amount of palming will improve the vision either temporarily or permanently.

A little girl, not quite three years old, had convergent squint of her left eye as a result of an attack of measles. In testing her vision I held the card up close and she was able to tell me which way all the E's of the E card were pointing. The squint was not so pronounced. But when I held the card five feet away from her eyes, the left eye turned in almost completely, that is to say, one could hardly see the iris.

I placed her little hands over her closed eyes and told her to think of her best dollie and tell me how it was dressed. I didn't expect her to tell me much because of her age, but the little tot surprised me. She lisped in her baby talk that her best doll had a pretty pink dress, and that her shoes were black and had straps on just like her own shoes. Her mother held her as she stood on top of a table, and when she looked at the test card five feet away, her left eye remained straight temporarily, while she read 5/30 without a mistake. Her mental picture of the doll was perfect. Describing the shoes and dress helped.

At one time I had four boys under treatment. They were between the ages of nine and twelve, and all were near-sighted. They stood in a row and while they palmed I talked about baseball. I described the ball, and they explained to me just how the ball field was arranged. After I had tested each one in turn and improved their vision, they were encouraged to palm more. Their mental pictures were of first and second base, a home run, seventh inning, and similar baseball features. The four boys obtained normal sight in less than two hours that day. Two of them had 10/50 before treatment and improved to 10/10. The other two had 10/40 and 10/30 before treatment and improved to 15/10.

A young mother was being treated for headaches. Ever since she could remember she had suffered

severe pain in the back of her head and eyes. Glasses were put on her when she was a small child, but they did not relieve her pain. One of her neighbors told her how Dr. Bates had cured her of eyestrain, so she came feeling that she, too, could be benefited.

Palming did not give her any relief at first. She had attacks of hysteria, but I was always able to quiet her when I asked her about her children,—two girls and a baby boy. While we were talking she was palming. I noticed that the corners of her mouth drooped, and as she talked she had no control of her tears. I had a strong desire to place my arms about her. When I discovered that her baby boy was much loved in the family, I questioned her about him.

I said: "Tell me the color of baby's eyes. I love little boys. Describe him to me."

A smile was noticeable as she answered: "His eyes are brown and his hair is blonde; and you ought to see the two dimples he has when he smiles. I must not forget to tell you that he has two teeth, and when he smiles you just have to smile with him."

I watched her as she talked. The drooping corners of her mouth had been supplanted by a smile. Before I had time to tell her to remove her hands from her eyes, she did so herself. With a sigh of relief she looked at me and said: "I have no pain now, I feel so good I want to laugh and sing." A mental picture of her baby boy, remembering and explaining all about him was a relaxation, a benefit to her. She attended the clinic six months before she obtained normal vision permanently. She had a high degree of myopia when she first came, and her vision was 10/200 with both eyes.

During the first few weeks her pain would return, but each time it was less severe. When she became able by herself to form mental pictures, her pain would disappear and her vision improve. At times, when her mental pictures were imperfect, her vision was lowered, and this always caused an attack of hysteria. Later her vision steadily improved, her pain disappeared, and toward the end of six months she obtained normal sight, 10/10.

During the six months of her treatment she had to be encouraged frequently by her husband or sister to palm every day. The swing of her body from side to side, while blinking and remembering something pleasant, always helped her pain. To take care of her children and do her household duties was quite enough for any woman, but she made time to practice and was well repaid.

After the World War we treated many of the boys on their return from France. One of them had been gassed. His mind was very clear and he related some interesting things that happened over there. I noticed, however, that when he described something unpleasant or horrifying, he stared and the sclera or white parts of both his eyes became bloodshot. His vision was normal both for the distance and the near point when he did not stare or become excited. He said the only thing that kept him from going insane while he was at the front, was the knowledge that his little son, who was born after he arrived in France, was waiting for his return. He saw his pal shot to pieces almost by his side. His mental pictures were not pleasant ones, but when a photograph of his wife and baby arrived, he carried that picture with him all the time.

I showed him how to palm and told him how necessary it was to think only of pleasant things while palming. He told me many things about his little boy, and how proud he was of him. I kept him busy talking while he palmed for a half hour, and then I asked him to remove his hands from his eyes. His eyes were no longer bloodshot. The sclera was as white and clear as that of my own eyes. I told him to return for more treatment, deciding to use the sun-glass if necessary. He said that if his mental pictures did not help in his home treatment, he would surely return. I never saw him again.

IMAGINATION RELIEVES PAIN

Eyestrain is a discomfort not only to the sufferer but also to his family and friends. A girl, aged twelve, had intense pain in her eyes and head. Her tired-looking mother told me that the child kept her awake at night with her moaning. She had taken her to another doctor in the hospital, and he, failing to relieve the pain, had sent her to Dr. Bates, thinking that her eyes might need attention. Dr. Bates examined the child, and without telling me what the trouble was, told; "Here is a good case for you; cure her quickly."

The poor child could scarcely open her eyes, and her forehead was decidedly wrinkled, I tested her sight, and at twelve feet she read the fifty line on the test card, which had figures on it instead of letters. While reading the card she said that her pain was not so bad. I told her to close her eyes and asked her to imagine that she saw the blackboard at school, and that she was writing the figure 7 upon it with white chalk. She could do this, she said, and then I asked her to open her eyes and look at the

black 7 of the thirty line. She saw it very distinctly, and I noticed that her eyes had opened wide and that the wrinkles in her forehead had disappeared. The mother noticed this too, and exclaimed: "See how wide open her eyes are!"

Evidently the pain had gone, for after a moment, the little girl cried out in great excitement: "Oh, that pain is coming back!"

I told her to close her eyes at once and remember the figure 7, Noticing how much she had been helped by her imagination, I told her to imagine the black figure blacker than she had seen it with her eyes open. She did this, and when she opened her eyes in a few minutes the pain had again disappeared and her vision had improved to 12/20.

After telling her mother that the cause of all the child's trouble had been eyestrain, and that if she would palm and use her imagination she would be well in a few weeks, I sent her home. Imagine my surprise when two days later she came to the clinic, with her eyes wide open, grinning from ear to ear, and having a gay old time with a school friend whom she had brought with her. She told me that only once, during the first evening after she came to the clinic, had she suffered any return of the pain. Then she had closed her eyes and covered them with the palms of her hands, because she remembered seeing other patients in the room doing so on her first visit. First she imagined that she saw a figure 7, black on a white background. Then she imagined white roses and daisies with yellow centers, and green fields. She went to sleep soon after and did not wake up till morning. She had had no pain at all since that night, and when I tested her sight I found it normal, 10/10, with both eyes together and each eye separately. I was happy to have accomplished in two days what I expected would require two weeks. The patient was instructed to keep on practicing and to report at least once a week at the clinic, but she did not come again.

A boy named Harry, aged eleven years, also came to us with pain in both eyes. He had been sent to us from the public school for glasses. Reading made him nervous, he said, and he did not wish to read anything on the test card but the large letters. I had him stand fifteen feet from the card, and asked him to read the letters slowly and to see only one at a time. Noticing that he was extremely nervous, I lowered my voice and talked to him as I would to a child much younger. This seemed to have a soothing effect, for immediately he seemed less nervous and shy, and he was able to read the forty line with his left eye, and the fifty line with his right eye at fifteen feet. I showed him how to palm. This seemed to afford him much amusement, but he did it faithfully because he wanted to please me, not because he thought it would help his sight.' When he opened his eyes he read the twenty line with the left eye, but the vision of the right had not improved, and he complained that the pain was still as bad as ever.

I told him to palm again, and while his eyes were covered I asked him if he ever saw a large ship getting ready to sail. He said, yes, he had seen some of our warships on the Hudson River. I asked him what he could imagine he saw on one of these vessels. He became intensely interested, and was no longer inclined to be restless.

"Why," he said, "I can imagine a rope ladder on the side of the ship and sailors walking on the deck, and I can imagine black smoke coming out of the smokestack." Before I told him, he uncovered his right eye and read all of the letters on the forty line and some of the thirty line. He said that the pain had gone, and that the letters looked blacker to him and the card whiter than before. He attended the clinic regularly, and became able to read 15/10—better than normal—with both eyes. He still complained about a little pain in the right eye, but when he palmed and imagined that he was playing baseball, or doing other pleasant things, his pain stopped and he always left the clinic smiling. For about six months or so after Harry was cured, he continued to visit me and became a very good assistant. He deserves a great deal of credit for the good work he did in relieving eyestrain among school children after he was cured.

PAIN

An Austrian woman, aged thirty-seven years, complained of pain in her eyes and head. At the age of two years she had become totally blind after a fever, and had remained so for a year and a half, during which time she suffered continual eye pain. When her sight returned, strong glasses were prescribed but they did not relieve her pain. Neither did the glasses given to her later by various physicians. Finally an optician, finding that glasses did not help her, suggested that she try Dr. Bates and our clinic.

At her first visit her pain was relieved by palming, and her vision improved from 10/70 to 10/40. She was so pleased that she smiled and kissed my hands. At times the pain had made her sick at her

stomach, she said, and she was unable to retain her food.

She was instructed to continue the palming at home, and to keep it up for an hour at a time whenever possible. For a while she got on very well. Her vision improved to 10/20 and whenever she felt the pain coming on she palmed, invariably obtaining relief.

Then came a day when I found her with tears in her eyes. She had had a sleepless night and had suffered so intensely that her family was frightened. Her eyes felt as though sand were pouring out of them onto the pillow. I asked her if her eyes were still paining her, and she answered tearfully, "Yes."

I felt that if I could relieve the tension and get her mind relaxed she would feel better. I placed her comfortably on a stool, and while her eyes were covered I began to talk to her about her children. She soon forgot her pain in telling me what beautiful eyes her baby had, and how thrilled the family had been when the first tooth appeared. I encouraged her to keep on talking, and told her to imagine that she saw her baby smile, while her eyes were covered. When she uncovered her eyes, the most remarkable change had come over her face. All traces of pain had disappeared, and she smiled. She agreed with me that when she did not worry and thought only of pleasant things, her mind was at rest and she suffered no pain.

One day after she had been coming to the clinic for a year or more she was arranging to send some money to Austria and trying to fill out the necessary papers. As she was about to write her mother's name, everything before her became a blank and she experienced an intense pain accompanied by a burning sensation in her eyes. She was so frightened that she wanted to cry, but suddenly she thought about the clinic and how her pain had been relieved by the palming. She covered her eyes with the palms of her hands for a little while, and then the pain became less and the questions on the paper began to clear up. When she tried to write, however, everything became a blank once more. Again she palmed, and this time her sister, who was with her, reminded her that she must palm for a longer time if she wanted to get results. She tried it again while her sister encouraged her to remember something perfectly with her eyes closed. When she removed her hands from her eyes the print before her appeared perfectly distinct, she wrote the necessary answers without any difficulty, and had no more trouble with her eyes that day. To think that she had been able to improve her sight and relieve her pain without our assistance delighted her.

PAIN RELIEVED BY SUN TREATMENT

Among others waiting for treatment was a young colored girl, aged seventeen, who tried in vain to keep her eyes open. She made all sorts of grimaces and her mouth was distorted as she kept trying to see things about her. One of our private patients who came to visit the clinic was standing beside me and as she observed this colored girl, remarked: "Isn't she disagreeable-looking?"

My visitor was surprised when I answered: "She is in pain and cannot possibly look natural."

I was eager to treat this girl because I felt that it was possible to relieve her suffering. She did not return my smile but I forgave her. I could not induce her to even glance at the test card because she said the light caused so much pain in her head and eyes. I told her to close her eyes. Then I took her hands and placed one over each eye to shut out all the light. She was reluctant to keep her eyes covered, but when I explained that this was palming and that it would help her to be cured, she behaved very well and sat quite still for fifteen minutes. I did not use the test card again for her that day, but the palming helped her so that she could open her eyes in a natural way with less pain. She was instructed to rest her eyes by palming frequently.

Two days later she appeared again and said that palming did not always help her. I decided to try the sun treatment and see if that would help. I placed her on a stool at a window where the sun shone in, and told her to look down as far as possible, to be sure that she would not glance up at the sun during the treatment. I raised her upper lid, and with a sun-glass flashed the strong rays of the sun on the white part of the eye. This required only a fraction of a minute and the effect was instantaneous. The first thing she did was to look up at the sun and then at me. What a change came over her face! For the first time she smiled and showed her pearly white teeth. All she said was: "Pain is all gone, ma'am."

She returned again every sunshiny day for more sun treatment, but she no longer complained of pain. The sun treatment had cured her. When I tested her eyes later with the test card, she read 10/10 with each eye separately.

QUICK CURES

Patients who are cured quickly of imperfect sight are those who become able to improve their memory and their imagination quickly and without effort. A little girl named Madeline, aged ten years, came with her mother, who was very anxious to have her child cured without glasses. The mother had been notified by Madeline's school teacher that her daughter could not read correctly what was written on the blackboard from her seat, which was about ten feet away. She was one of the daintiest little girls I have ever seen. I can imagine her as one of the white fairies written about in our little magazine, which I believe a great many children enjoy. I feel sure that there are many mothers among our subscribers, and that they realize the relaxation and rest which is given to the child-mind, as the mother reads about the good fairies just before the sandman comes.

This is how Madeline was cured in one visit. She stood ten feet from the test card, and read all the letters correctly down to the twenty line, 10/20, but the letters were not clear and black to her. She was told to palm for ten minutes or so. Then she read the card again, and this time the letters appeared clear and black.

The mother was told to notice how she stared when trying to see one of the smaller letters of the fifteen line. I told Madeline that she must blink all the time to prevent staring, which always lowered the vision. As she glanced at the letters each time she moved to the left, and then to the right, not forgetting to blink, her vision improved to 10/10. She was placed in another room, fifteen feet from another card, which she had not seen, and without a stop she read all the letters of the card. Desiring to find out if I could improve her vision further with the aid of her memory, I told her to close her eyes and palm, and to remember something she had seen without effort or strain. She answered: "I cannot think of anything just now, and the more I try the less am I able to do as you wish." I asked her then to tell me what lesson she liked best at school. "Oh! I just love arithmetic," she said.

While she palmed, I gave her some figures to add. I started with easy ones at first, like nine, three and eight. She added as quickly as I announced them. Then I made the lesson more difficult, but she did not once make a mistake. All this time she was smiling and enjoying the whole thing. We kept this up for fifteen minutes, and then while her eyes were still closed, I moved the test card as far away as I could place it, which was eighteen feet. Madeline was told to remove her hands from her eyes and stand and swing as she did before. She read every letter on the card correctly. Her vision had improved to 18/10 by the aid of her memory for figures.

Madeline was cured quickly because she was able to remember figures perfectly. Her mental pictures of them were perfect. Her mind was relaxed, and by the aid of the swing and remembering to blink often, as the normal eye does, she had no more eyestrain.

Not long ago a little boy, aged seven years, was brought to me. His nurse, who was extremely fond of him, did not want glasses put on the little fellow, He told me emphatically that he would not wear them,—no one would dare put them on him, he said.

His little forehead was wrinkled as he tried to read even the largest letters of the test card at ten feet. I asked the nurse to sit where she could watch him at the start, and then see the change that I was sure would come to his face after he was taught to read without effort or strain. With each eye separately he read 10/50. As he tried to read further he wriggled and twisted his little body around in the big arm-chair where I had placed him.

"Now," I said, "little man, just close your eyes and place your hands over them and shut out all the light. Sit still, if you like."

"Oh," said he, "I like sitting still if I keep my eyes covered, but I don't like doing it too long."

I said: "All right, keep them covered for a little while and I will read you a fairy story that tells something about the elephant, too."

That was all that was necessary. My patient sat perfectly still as I read the whole fairy tale. The nurse remarked that for a long while he had not been able to sit still for more than five minutes at a time.

After the fairy story was finished, I told the little chap to stand, feet apart, with eyes still closed, and I guided him in moving his body from right to left until he became able to do so gently by himself. Then he was told to open his eyes and keep moving or swinging his body to the right and then to the left. He was directed to blink his eyes while doing this.

He exclaimed with great surprise: "My! the card and letters seem to be moving opposite."

I said: "That's right, my boy; now follow my finger as I point to the letters." He did, and to our surprise he read the whole card without a mistake, 10/10. The wrinkles in his forehead were gone. I told the nurse to help him many times every day with the test card just as I had. She promised also to

bring him back to me if he had any relapse. So far I have not heard from her. I do believe that my little boy was cured in one visit.

CRIMINALS

Some years ago I was asked to go to Sing Sing prison at Ossining, N. Y., to assist in examining the eyes of some of the prisoners. I firmly believe that if some of the prisoners had had no eyestrain, their minds would not have turned to crime.

A foreigner who was imprisoned for arson, told me in a few words how sorry he was that he set a building on fire for the sum of five dollars. He could not get work, he said, because he had bad sight. As a new baby was coming into his home where there were already three, he was desperate and, not realizing how wrong it was, he did as he was bidden. Here was a foreigner who could hardly speak English, who was willing to do most anything for a wonderful five-dollar bill, in order to help his wife.

Four years had already been spent in prison. Through the kindness of Warden Osborne, who was at that time doing such wonderful work inside the prison, he was allowed to live in a cell where there was a little bit of sunshine now and then. From being in a dark cell for a whole year, before Mr. Osborne came, the sight of his right eye was practically destroyed.

There were so many patients in the room, sent there to be examined by Dr. Bates, that we had very little time to devote to each one individually. I arranged a test card on a desk and placed this man about five feet away. In just a few moments the sight of his good eye improved from 5/200 to 5/50.

He was so overjoyed that he fell on his knees before me and held my two wrists very tightly. He pleaded with me to help him out of prison if that were possible. He was eager to go to the new baby who had arrived after his sentence. Some people might say: "Oh, yes, he told you a hard luck story." Nevertheless I can understand enough to convince me that, if conditions had been better for him when he came to this country, he might never have committed this crime.

Sometimes as I go along the streets or ride in a car early in the morning to my work, I watch a policeman as he walks his beat looking in at each store window. He is told to do so to protect the storekeepers. I wish there were policemen who understood the fitting of glasses, to invade the stores of those opticians who fit people with wrong glasses. They should be brought to justice.

I have found that many patients who come to us at the clinic are wearing the wrong glasses for their eyes. It is not always eyestrain which causes trouble, but the mistake of the optician who commits a terrible error.

I would like to tell about a recent case, a girl, eleven years of age, who had myopia with glasses on, and almost normal vision without them. As I do not test the strength of eye-glasses of the cases which come to me, I was not at all sure whether the child was wearing them for fun or not. The first question that came to my mind was, whether she was wearing someone else's glasses. I asked Dr. Bates to test them.

At 15 feet I asked her to read the test card, and with glasses on she read 15/100. I took off her glasses and she stared at the card, that was all. I told her to do the usual thing, just close her eyes to rest them for a moment or so. When she opened her eyes again and looked at the card, she read without a stop from the 200 line letter down to the last letter of the 20 line. She looked at me in great surprise and smiled. The discovery that she made seemed to give her a thrill.

I asked her who fitted her for glasses. She said that the school nurse had called to see her mother and complained that the child could not see the blackboard, nor read the test card when her eyes were examined in School. Her mother immediately took her to an optician to be fitted for glasses. She said that the optician had charged her mother $4.50 for glasses and for the examination of her eyes. To my mind this was not only an error but a crime.

When I told her it was a great mistake for her to wear those glasses, she promptly put them away in the case and begged me to help her some more. She obtained normal sight that day, but did not return again for treatment. A schoolmate who was with her the day she came, told me that she did not wear glasses any more. She sat in the back seat of her class-room, showing off to her teacher for all she was worth, reading the blackboard better than she ever did in her life. She also told me that the patient informed the teacher about our clinic and taught her how to palm. She is surely spreading the work of Better Eyesight in the classroom, and can do more than I because she is right there.

MENTAL STRAIN - Case No. 1

There are many people generally considered insane, who are really under a severe mental strain, which can be relieved by relaxation. A young man, aged 27, had large staring eyes, which would make anyone uncomfortable to look at him. I asked what his trouble was. He smiled and said: "Now, that's just what I am trying to find out. Nobody seems to want me. Everybody thinks I am crazy."

I answered: "You are wrong; I don't think you are crazy." Just the same this poor fellow did make me sort of creepy. I was just a little afraid of him, but dared not show my fear.

He had much to say, but the main thing he wanted me to know was that he was not insane. When he calmed down a bit, I said: "Now let me say something. I know that you are staring so badly that if you don't stop it you can easily become insane or blind."

I wanted him to understand that I could not help him nor anyone else, if he continued staring his eyes out of his head. I asked Dr. Bates to examine his eyes and to tell me what treatment was best for him. The doctor reported that there was nothing organically wrong with his eyes, but that he was under a terrible mental strain. I understood very well what was before me when Dr. Bates said: "I think you had better knock on my door if the patient tries you too much."

After I had taken his name and address, I asked him where he was employed. His eyes protruded and he stared without blinking, as he answered: "Didn't I tell you that no one wants me? I cannot get any work. America is at war. Does Uncle Sam want me? No, I have been to all the recruiting stations here in New York, and all of them have refused me. I want to fight for my country, but they won't give me a chance."

He actually wept and I could not refrain from crying too. His mind was affected, yes, but when he was calm all he could think of was Uncle Sam and how he wanted to fight for him. I had not been acquainted with him half an hour when I understood easily enough why the United States could not use him. He demonstrated to Dr. Bates and to me very clearly that one cannot have normal vision with a mental strain. I placed him ten feet from the test card and told him I wanted to test his vision. He answered: "I hope you will be able to improve my sight, because I think my nervousness will also improve."

He read a few lines of the card, but when he reached the fifty line, he leaned forward in his chair, wrinkled his forehead, and his eyes began to bulge. At that moment a small mirror from my purse came in very handy. I held it before him and the expression of his face changed immediately from strain and tension to a look of amazement. He waited for me to speak, and what I said affected him deeply. He covered his face with his hands and wept. I kept quiet but touched his shoulder lightly to reassure him. When he raised his head a few moments later, he said: "Maybe that is why they refused me. I guess they saw what you saw. No wonder they thought I was crazy."

I feared more hysteria, so I said that if he would let me help him, no doubt the U. S. Army would be glad to admit him into the service. After his first visit, he left the office, feeling much encouraged. I could not improve his vision beyond the fifty line that day, and decided not to test each eye separately. All I could record was 10/50 with both eyes.

A week later he came again. Apparently he had forgotten to practice. His vision was still 10/50 with both eyes. I directed him to cover one eye and read the card with the other. His vision with each eye separately was the same, namely, 10/50. He told me that I had encouraged him so much that he tried again to enlist.

I said: "You cannot expect to win out unless you take time to practice. This you must do all day long. When you tire of palming, keep your eyes closed and imagine something perfectly."

While I was telling him all this, he had his eyes covered with his hands, and was moving his body from side to side, very slowly. What he did next certainly frightened me. Without removing his hands from his eyes he asked in a loud voice: "Do you mind if I sing 'America' while I am reading the card?"

I answered: "No, but perhaps the other patients might object. Just wait a moment and I will ask the doctor."

Dr. Bates said that if singing was his way of relaxing, by all means let him sing. That was all that was necessary. He sang every word without a mistake, and after each verse he would stop long enough to read the card. After the first verse he read two more lines, 10/30. When he finished the hymn, he also finished reading the whole card without a mistake. He blinked his eyes as he moved his body from side to side, and I noticed a great change in the expression of his face. I directed him to sing "America" when he practiced reading the test card at home, every day. He left us in a very happy mood and promised to practice as he was told.

We did not hear from him until a year later when we received a letter from him, written from Bellevue Hospital, but mailed by a friend outside. In his letter he stated that he was all right, although he was confined. He also explained why he was sent there. It seems that when he applied at a recruiting station for enlistment, they found his vision imperfect. When he insisted that if they would only let him sing "America" his vision would at once become normal, the officers of the recruiting station considered this statement so absurd that they believed he must be crazy. He was at once sent to the insane ward of Bellevue, where he was promptly admitted. While there, he wrote a play of three acts, all about the doctors, the nurses, and patients. It was well written, and after he had persuaded some of the doctors to read it, they recommended his discharge.

He called to see us and I found his vision normal, 10/10. His mental strain was relieved and did not return except temporarily, when he became excited and talked rapidly.

MENTAL STRAIN - Case No. 2

Just before the war, a Jewish woman, sixty-three years of age, begged me to help her eyes.

"Please don't bother trying to cure me," she said, "that is too much to expect, and anyhow I am an old lady, so what does it matter?"

Her eyes were half shut, because the light troubled her, and she felt more comfortable with the lids lowered. She told me that she was suffering great pain in both her eyes and her head, and when I had her look at the test card at ten feet, it was all a blur to her. I showed her how to palm, but the position tired her, and she said she was not accustomed to praying so long—she was quite a sinner. As she weighed over two hundred pounds, and was sick in both mind and body, I asked her how much she ate every day.

"Oh, I don't eat much—nothing to speak of at all," she said. "In the morning I eat eggs, or something like that, rolls, butter, and coffee. Then about ten o'clock I have a few slices of bread with more butter and more coffee. At noon I have soup, bread, butter, and more coffee. For supper I have bread, butter, meat, vegetables, and more coffee. That's all."

She took more food in one day than I did in three, and when I told her she ate too much, it appeared to frighten her, for she stayed away for two weeks. Eating, no doubt, was one of the few pleasures she had in life, and she did not wish to be deprived of it.

When she returned, I persuaded her to palm, and this improved her sight to 10/50. It also relieved her pain markedly, and when I told her that she would obtain more help for her eyes and her body generally, if she would eat less, she agreed to do so.

In spite of her pain and misery, my patient had always been full of humor, and her witty remarks had been a source of much amusement to me; but one day, just after the declaration of war, I found her in a corner of our room, weeping. When I asked her to read the test card for me, she said with tears, "Please, Nurse, I can't see anything today. My two sons have enlisted, one as a marine and the other as an aviator, and they are never coming back, I am afraid. I cannot sleep. My heart is breaking."

From the beginning I felt that she was a devoted mother, and as I am always drawn to good mothers, I felt a great pity for her grief. In order to get her mind off her pain, I encouraged her to talk about her boys.

"How proud you must be to have two sons to fight for your country and for you," I said. "I wish I had ten sons, I would give them all for my country."

These remarks were not very consoling, I admit, in the presence of a sorrow like this, and the stricken mother refused to be comforted. But when I said, "You wouldn't be proud of them if they were cowards, and Uncle Sam wouldn't want them if they were criminals in jail," she straightened up and said:

"You are right, they are brave boys, and I am proud of them."

I tested her sight again with the card, and found it better than ever before.

"You have the true medicine," she said. "I am coming again. I do not know why I can see so well now, after being so blind a few minutes ago."

I squeezed her arm above the elbow, and asked: "Do you feel that?"

"Yes," she replied.

"Well, that is just what you are doing to the muscles of your eyes, and the strain blinded you. When you relaxed, the pressure was relieved, and the sight improved. It was the pressure that lowered the vision."

At a later visit, she brought a package to me, explaining that she had no money, but wanted to express her gratitude. I took the package home, and when I opened it, I found a loaf of delicious real bread—not Hoover bread. My neighbors were very envious of me, because the only bread they could obtain during the war had a flavor like that of sawdust. At the time, I appreciated that bread more than a five-dollar bill.

Every time the patient came to the clinic, we talked about her boys for a few minutes, and it certainly had a good effect upon her eyesight. When the war ended, and the boys came home, every one who would listen heard of the great things they had done "over there." One would have thought one was attending an annual convention of some sort instead of an eye clinic.

During the war and for some time after, the patient came more or less regularly to the clinic. Palming always helped her, but as she complained that it made her arms ache to hold her hands over her eyes, I simply had her close her eyes without palming. This also helped her. One day I placed her further from the card than usual, and asked her how much she could see. She replied:

"Now you know I am an old woman, and I guess my eyes are getting old too. I cannot see so far."

I told her to close her eyes and rest them; forget that she had eyes, and think of black velvet, or her black hat. A few minutes later she read 10/20 and her eyes had a natural appearance. She became very much excited and asked me what I did to her.

Dieting also helped her eyesight and nerves very much, but she could not always bring herself to forego the pleasure of eating what she wanted. She forgot most of the things I told her to do at home, but I don't think she ever forgot a meal, nor did she realize the quantity of food she consumed when she gave free rein to her appetite. If she had always done as she was told, I am sure she would have been completely cured. As it was, her improvement was remarkable. Not only did she become able to read 10/20, but at the time she stopped coming to the clinic, she said that the pain and discomfort in her eyes had entirely ceased. She was sleeping better, and her general physical condition was much improved.

Her case made me realize more clearly than ever the relation of mental strain to defective vision. I could not help her until I found out what was worrying her, and when, by means of a little sympathy, I was able to get her mind off her trouble, or make it seem less to her, her nerves always relaxed. It was very interesting, the way a pleasant conversation, without other treatment, improved her vision. The experience was afterward a great help to me in treating other patients. In the rush of work at the dispensary, it often seemed as if I could not take the time to talk to the patients, to get acquainted with them, to let them tell me about their troubles. I know now that this is not a waste of time, but a very necessary part of the treatment.

THE WOMAN WITH ASTHMA

When eyestrain is relieved, all other strains may be relieved. Asthma belongs to a large class of diseases with symptoms which may result from nervous or mental disturbances instead of from organic disease. Asthma has been called "functional neurosis." It was not strange, therefore, that this patient should note an immediate improvement in her breathing after palming, and that this treatment, in combination with hygienic measures, should have permanently relieved the trouble. Many similar cases could be reported, and even when organic disease has been present, the subjective symptoms have been mitigated.

During one of the summer months a woman with asthma came for treatment. She was forty years of age, but looked older. It was evident from the wrinkles in her forehead and her half-shut eyes that her vision was imperfect. She told me that she had continual pain and I could see that she had great difficulty in breathing. Her spirit was unbroken but her nervousness was something of a problem to me. She talked to any one in the room who would listen to her, and in order to preserve peace in the clinic, I had to keep her as much as possible by herself. I was sorry to do this, because her good humor was contagious and made the patients forget their pain and other troubles. We could not have the work brought to a standstill, even for such a desirable end as this.

The state of her eyesight did not seem to trouble her. It was her asthma about which she was concerned. When I asked her to read the test card, she said: "Please, ma'am, help me to breathe first; I have asthma and want you to help me; never mind my eyes."

"You are in the wrong room for asthma treatment," I replied. "Let me do something for your eyes, and then I will send you to another room where a doctor will treat you for asthma."

She smiled, evidently pleased that I had not sent her away, and proceeded to read the card, as I had asked her to do. Her vision was 10/30 in each eye. I told her to palm and on no account to remove her hands from her eyes until I returned to her. It was fully a half hour before I was able to do this, and when I told her to uncover her eyes, she asked: "What makes me breathe so easily?"

"The palming has helped you," I replied.

Her vision improved to 10/15 with each eye and she reported that the pain in her chest and back had gone. I gave her some advice about her diet, told her to drink plenty of water, and asked her to come to the clinic three days a week.

On the next clinic day, to my disappointment, I did not see her. I concluded that she did not care to bother about her eyes, although she was temporarily cured. I also doubted her willingness to give up the foods and beverages I had told her not to take, including meats and pastries. I had advised her not to drink strong tea and other liquids much stronger than tea. New patients were continually coming, however, so the poor woman with asthma went completely out of my mind. Two months later she rushed into the clinic like a cyclone. Most of these poor people do not think about waiting for their turn, so I have to forgive them when they break the rules. This woman did not think it necessary to wait until I had finished with the patient I was treating. As soon as she saw me she yelled in a loud', excited voice: "Please, ma'am, I didn't forget you! I didn't forget myself, either! I felt so good after you treated me, I just palmed and palmed every day for hours and I began to breathe so much better. My health improved and I went out and got a job right away. During the day my madam allowed me to rest my eyes, and I ate very sparingly. Sure, ma'am, it was no joke either, for I just love to eat good and lots of it; but I remembered what you said, and so I behaved myself. I must have starved the asthma away."

"I am very glad to hear all this," I said. "Now let me see what the palming did for your eyes."

Her vision had improved to 10/10 in two months. She accomplished the result, not I. When I praised her, she replied: "God bless you! You don't know how happy I am. I am working and supporting myself now for the first time in four years. But what surprises me most is that I have not been drowned by this time with all the water I have been drinking."

CHAPTER V

PRESBYOPIA

PRESBYOPIA - Case No. 1

DURING the war a great many women received treatment for their eyes. Many of them were employed in factories where American flags were manufactured and some of them could not see to do their work properly. Some had trouble in threading their needles, others complained that they saw double. One woman told me that she sometimes stitched her fingers in the blue field of the flag along with the stars. All of them asked for glasses, of course, but with the exception of a few, they were glad to be cured without them.

Among the patients was a woman about fifty who was very anxious to be cured. She spoke with a pronounced Irish accent, which amused the patients. Her distant vision was quickly improved by palming and flashing the letters on the Snellen test card. Then I gave her a card with fine print, and told her to hold it six inches from her eyes. Even though she did not see the letters, it would help her to alternately rest her eyes by closing them for a few minutes. She obtained good results immediately, and was enthusiastic in her appreciation.

"Sure, ma'am, may the good angels bless you for that!" she exclaimed. "I think this very minute I would be threadin' a needle if I had one. Me old man and the young ones at home will think it foine to have meself threadin' a needle."

It seemed that members of her family had been called upon to do this for her, and had found the task somewhat irksome.

The next clinic day she came again, and, although it was afternoon, she greeted me boisterously with the Irish salutation:

"Top o' the mornin' to you!"

"Top o' the mornin' to yourself," said I.

The patients all smiled at her remark. It does me good to see these poor unfortunate people smile a little, and I think it must cheer them, too.

She soon became able to thread her needle without any trouble, and she wanted everyone in the room to know it. The last time I saw her she said:

"Sure, ma'am, me eyes are very sharp now, for the minute I set eyes on me man when he comes home at night, I can tell by the twinkle in his eye whither he has had anything stronger than water or tay."

PRESBYOPIA - Case No. 2

A woman, forty-eight years of age, told me that the first time she came to the clinic she thought she had entered the wrong place. Half a dozen people had their eyes covered with the palms of their hands, and she thought it was a prayer meeting. It was she who sewed her fingers to the flag with the stars.

"What I need is glasses," she said, "and that's what I am here for." But I soon convinced her that the glasses were unnecessary.

By having her alternately close and open her eyes I improved her sight for the Snellen test card from 15/40 to 15/20. Then I gave her the fine print to read, which was at first only a blur. I told her to palm, and imagine that she was sewing stars to the flag. When she opened her eyes her sight was worse. The very thought of those stars increased her strain and made her vision worse. This convinced her that her trouble was due to, strain, and that what she needed was to get rid of the strain. I asked her then to imagine more agreeable objects at the near point, such as a flower or the face of a friend. She at once became able to read the fine print, and her sight for the distance also improved. After four visits to the clinic, her vision both for the distance and the near point had become normal. It was quite easy for her to thread a needle and to do her work without glasses.

PRESBYOPIA - Case No. 3

A woman of seventy-four, who had been coming to us for some time, worked every day in a place where she mended the children's clothes and did other sewing. She complained that her glasses did not fit her, and she could no longer see to sew with them. I gave her the card with the fine print:

"Do you mean to tell me," she asked, "that I will ever read that?"

"It is possible," I said.

Her smiling face was good to see, as she tried to follow my instructions. The print was larger on one side of the card than on the other, and I asked her to read the name printed in the larger letters. She could not do so at first. I told her to close her eyes, count ten, then open them and look at the card while she counted two, then repeat. In a few minutes she saw the name on the card and also the telephone number. She did the same thing with the diamond type on the reverse side, and after a while she became able to see some of the letters. Later she obtained further improvement, and after some months had no further difficulty in sewing the buttons on the children's clothes without her glasses. Covering her eyes with the palms of her hands while remembering perfectly, flowers or other pleasant things, always improved her vision. Once during a treatment I asked her to remember a daisy in a green field when she was in the country.



"There weren't any daisies but me while I was there," she answered. "I was the only daisy."

PRESBYOPIA - Case No. 4

Frequently we find that colored people have difficulty in remembering their ages, especially when they are middle-aged or older. The colored woman in the present instance did not know her birthplace. One of the nurses was making a record of her age, name, and address, and then she asked her where she was born.

"Ah dunno where ah was born. How should ah know? It am so long ago—anyway it was a very hot place, dat's what ah knows."

Dr. Bates guessed her age to be about sixty or sixty-five years. Her eyes did not trouble her for reading, as she did not know how to read. But she complained that her eyes burned like fire, and that she could not see at a distance, nor thread a needle. Palming helped her, and the sun treatment relieved the burning of her eyes instantly. She had given up sewing several years ago, because, as she

explained, "Ah just thought man eyes were givin' out."

After one month's treatment she could thread a needle easily, and her clothes were stitched instead of being held together with safety pins. Her vision improved so that she could read 10/10 on the pot hooks card, which has the letter E pointing in different directions. By that time she had been coming about eight weeks altogether.

PRESBYOPIA - Case No. 5

A colored mammy had pain in the back of her eyes. She had visited a doctor before she heard of Dr. Bates, and was told that her eye trouble came from indigestion. After trying a diet for six months which was prescribed for her, with the result that the pain in her eyes still continued, she came to us with very little hope of being cured. When I had taken the record of her name and age, which she said was 52, I asked her if she had ever worn glasses.

"No, ma'am," said she. "And you never can make me wear them; I hate them, I do.

"You know, my mother had only one bad habit until she died, and thank the Lord it wasn't wearing glasses. She lived a good simple life, but my, how she did love her corn-cob pipe! But she never wore glasses."

With the test card I tested Mammy's sight which was 10/30 with each eye. I moved the card one foot further away and this caused such a strain that she could see only the 40 line. Then I told her to palm and asked her to describe one of the letters which she had seen on the card. As she did not answer me immediately I thought she had not heard, so I repeated my request. She answered, "Do you know, ma'am, for a minute I couldn't remember a single letter," I explained to her that such was often the case and not to worry about it.

I pointed to the letter E and asked her to close her eyes and describe it. This she did by saying that it had a straight line at the top, also at the left and bottom, and that the right side was open. Before she opened her eyes I moved the card fifteen feet away.

Mammy had been palming about five minutes, still remembering the letter E of the forty line of letters. I stood beside the card with my finger pointing to the first letter next to the bottom line, called the fifteen line; then I said, "Before you open your eyes, please remember that you must not try too hard to see the letter at which I am pointing. If you do not see the letter immediately, do not worry about your failure to do so, but close your eyes again and remember the E for a few minutes." She opened her eyes and called correctly the letter R at which I was pointing. We were both very happy at the result, but I had her close her eyes again and remember the R better than she saw it. In less than five minutes she stopped palming and read all of the fifteen line correctly. I produced another card which she had not seen, and she was able to read the same line of letters as well. This proved that her vision had become normal.

Mammy thought she was cured, but I had my doubts as to her being able to read the fine print. When I held one of Doctor's fine print cards with diamond type six inches from her eyes, one would have thought that I had intended to strike her, for she drew back her head suddenly as the little card came in view. She shook her head sadly and said, "I shall never be able to read that fine print for you. That is too much to ask."

I answered, smiling at her: "No, you don't need to read it for me, read it for yourself."

She said she was willing if I would show her how. I told her to move the little card slowly from side to side, flashing the white spaces between the lines of letters without trying to read. She kept this up for ten minutes or longer and then she screamed as the letters began to clear up. Before Mammy left the clinic she read every word of the fine print card.



Move the card slowly, side to side.

MY YOUNG ASSISTANT

One evening while treating some patients in my home, I discovered that I had a new assistant. Baby Ethel, aged three, who had been living with us for over two years, came into the room and sat in a big armchair. She observed the treatment and listened to every word that passed between the patients and myself. Ethel has large blue eyes, and when she becomes excited or interested, her pupils dilate and the iris seems to change color.

When I told one of the patients to palm for ten minutes, Ethel placed her hands over her eyes also. She kept perfectly still for about two minutes, and then we heard a pitiful sigh. I watched, and presently two little fingers of her right hand began to separate, and she peeped. When she saw me smile, she quickly removed her hands from her eyes, and for a while she sat quietly. Presently she left the room to join other members of my family.

After the patients had departed, I discovered Ethel in a room, ordering my husband to palm. Her patient certainly needed to palm, and also to practice other things to improve his imperfect sight. Sometimes those whom we love are not easily persuaded to do the things that benefit them, but here was this little three-year-old very seriously giving him a treatment. She was pointing with her little finger to an imaginary test card on the screen door. She commanded; "Take down your hands and read the card. Do you see the R? Now close your eyes and 'member it," she ordered. Her patient responded in all sincerity. "Now open your eyes and read some more." He mentioned several letters and then she said: "Swing your body, side to side, and see letters swinging opposite."

He stood and swung as he was told, as her mother and I looked on in amazement, not daring to laugh, knowing that the little lady was very sensitive.

"Now," said she, "sit down and read some more letters."

He read faithfully, following her little finger as she touched various parts of the screen door. All of a sudden she complained!

"You are staring. You shouldn't stare; that is bad."

"Well," he asked, "what must I do, then?"

"You must blink your eyes. Just let me show you how."

She stood before him, blinking and swinging her body from side to side, looking as serious as a judge. At this moment, to my sorrow, we all laughed. I could not restrain myself a moment longer. That broke the spell, and my little three-year-old assistant began to cry. But since then her efforts have not been in vain, for I notice that her patient continues the treatment.

While we were sitting in our garden one day, an aeroplane passed overhead and, as it traveled on, my husband was able to see it miles away, until it became a small black spot in the distance. He then closed his eyes for a while, and afterward he read a newspaper for a half hour or so. It has been a long time since he was able to read for that length of time.

Whenever our friends called on us, Baby Ethel was always ready to show them how to palm and swing. She directed her mother to palm if her head ached, or if she suffered any pain. Ethel was sincere about it all, because, as she explained it, "Dr. Bates helps big people and little people that way in his office."

She knew Dr. Bates very well, and would talk to him about reading the test card to help children's eyes. She had perfect sight. Her eyes were never still, and she blinked unconsciously all day long. If only adults would follow her example there would be less eyestrain. I am very grateful to Baby Ethel for what she accomplished for my husband. Does not the Bible say: "And a little child shall lead them"?

CHAPTER VI

VARIOUS INTERESTING CASES

FOREIGN BODIES

A WOMAN who could not speak a word of English tried very hard to tell me of her suffering. Her son, aged fourteen, was with her and he repeated to me in English what she told him in Greek. Twice she had had the muscles of her left eye cut in order to relieve her pain. She was discouraged, the boy said, because two operations had done her no good.

Dr. Bates examined her left eye very carefully and when he turned the upper eyelid inside out, he discovered two small eyelashes growing in. This had caused all her suffering, because every time she closed her eye the end of these eyelashes rubbed the cornea of her eye. Under the supervision of Dr. Bates, I promptly removed the two lashes with a pair of tweezers and immediately her trouble was over. I cannot describe my happiness when patients show their gratitude after their sufferings are relieved.

Dr. Bates told me that day about a patient who came to him who had been treated medically by other doctors for syphilis. When he did not respond to the treatment the medicine was changed. Then they gave him treatment for rheumatism. The pain still continued, so he called on Dr. Bates. The doctor

examined his eyes and found a foreign body, a cinder, lodged in his cornea. This was removed and, for the first time in weeks, the poor man was relieved entirely of pain. My experience in clinic work makes me believe that in some places charity patients are not always thoroughly examined.

OPERATIONS AT THE CLINIC

Many of our office patients have asked me if Dr. Bates approved of operations on the eye, or if he ever operates for cataract or other conditions. Others wish to know if there is a little Christian Science mixed with our method of treatment. I do not know anything about that, but I do know that Dr. Bates does operate on the eye when it is absolutely necessary.

I remember a dear old Italian woman, eighty-three years of age, whose daughter was just about to become a mother. The daughter had already made arrangements with the hospital upstairs and the newcomer was expected any day. The daughter was anxious that her mother should not suffer while she herself was away from home, so she appealed to Dr. Bates to operate on her mother. An operation was necessary, for the lower eyelid of her left eye was inflamed and swollen from an abscess of the left tear duct. For a long time the old lady had been coming faithfully to the clinic, but her condition gradually became worse, so that there was nothing else to do but to relieve her by an operation.

Of course such cases could have been sent to the hospital, but if it were at all possible to send the patient home after the operation, Dr. Bates would perform it himself, and so take away the fear and dread that some of these poor patients have of a strange doctor. This old Italian woman, who had the kindliest and sweetest expression of any woman I have known, smiled as though we were arranging a party for her. She did not seem to mind it in the least as we placed her on the operating table. Most patients sigh and show traces of fear, which is natural, for I dread operations myself, and I understand their feelings, but she looked at me with kind eyes and smiled. I returned that smile in full measure. She in turn glanced at her daughter, who stood on the opposite side of her, and as she smiled at me again she said something in Italian. Her daughter promptly translated what her mother said, and as I remember, these were the words: "She say, you nisa da lady, you bigga da heart. She lovva you, she no afraid." I pressed the mother's hand gently.

She had the same smile and the same loving words for Dr. Bates when he began to operate. Not once did I hear her moan. When she wished to be reassured, all she did was to press my hand. Such courage is indeed admirable. The operation was accomplished without pain under cocaine anesthesia, and the patient was able to walk home an hour after the operation without assistance. Two days later she again came to the clinic with her grandchild, a girl about ten years of age. She stood among the patients waiting for attention and when I asked her how she felt, she told her grandchild to explain that she had slept peacefully the night after the operation, better than she had for a long time. She had no more pain and the eye was almost healed. The grandchild informed me that upstairs was a new baby brother and that mother was doing fine. Grandma wanted me to know that she had placed a candle in church, which was blessed for Dr. Bates and me in appreciation of what we had done for her. Grandma soon got well and that was the last we saw of her.

Another day a young woman who was troubled with chalazion tumors was also operated on. I cannot say that she behaved as well during the operation as did the old Italian lady, but we had a lively time while the operation was going on. The poor thing was extremely nervous, but she tried hard not to show it. She suffered no pain, but talked a blue streak. She informed us that her husband was employed on a ship making regular trips back and forth to Panama, and that we were going to receive the most wonderful fruits that we had ever tasted in our lives. I believe that if this woman had owned the whole of Panama we might have had it,—so many different things were never promised to us by one single patient. Doctor and I were working fast all the while, but just the same I wanted to giggle. Then she asked me if the doctor wore Panama hats during the summer, but Dr. Bates himself got ahead of me and promptly answered; "Indeed, never in my life could I afford a Panama hat."

"Well," said she, "kindly tell me your head size and I will see that you get one." Then she asked me if I would like to have one also.

"Of course," I replied.

We were finally told that within two weeks or so we would be presented with our Panama hats. This operation was in the summer of 1921, and we are still waiting for our Panama hats. But I really feel that the poor woman had the best of intentions, and I hope that her husband is still making his regular trips to Panama.

Later a young man entered the clinic with a small baby in his arms. Anxiety and worry showed in his face and he looked as if he had not slept for a week. As the baby was crying continuously, Dr. Bates immediately stopped work with other patients to attend to the little one. The young father, with tears in his eyes, told the doctor that for five days and nights the baby never stopped crying. Its mother had taken the child to another clinic, where the doctor told her that the child had a cold in his eye, and that drops applied in the eye would soon cure it. As Dr. Bates placed the child on his lap, the father asked: "Please, doctor, don't tell me that the baby has a terrible disease of his eye, and that he might lose it; please tell me that you can help him."

I held the baby's head in my hands, and as the doctor carefully examined the eye he found a foreign body, a piece of steel, firmly embedded in the cornea. In less than five minutes it was out, and the baby stopped crying. As the father passed out the door, he said: "Thank you, doctor, from the bottom of my heart."

Dr. Bates turned to me, saying: "Did you hear that? That 'thank you came from the man's heart, and it is worth a great deal to me because he meant it."

AN ACCIDENT

A big Negro, six feet tall, came into our room very quietly, and sat in a corner with his head down. Evidently he was trying to hide the right side of his face. When I came close to him, I found that he had a very good reason for doing so,—there was a big cut over his right eyebrow which had been stitched up by one of the house surgeons the night before. We have to meet all kinds of people, and all kinds of cases, and we must not be afraid. Knowing that this huge bulk of dark humanity had been in a fight, I was very cautious as I approached him, but was relieved to note real kindness shining out of his good eye as he looked at me. I said:

"Poor fellow! How did this happen?"

In a kindly but very unsteady voice, he answered: "Well, ma'am, don't you feel sorry for me, ah was in a fight. You see ah had too much hootch."

It was not necessary for him to tell me he had been drinking,—I could smell it. So could everybody else in the room. Never would I have had the courage to approach him anywhere else but in the clinic, that is certain. He would have scared me to death if I had chanced to meet him in the street. Dr. Bates looked at his bad eye, or, I should say the place where the eye ought to be, and after the man had palmed for a little while, the eyelid opened. Dr. Bates prescribed eye-drops and salve. The patient was a happy individual when he learned that his sight was not destroyed, and that the eye would soon be well again. As the man left the room, I tried to say something encouraging to him, and his answer was this:

"Now, ma'am, don't you worry 'bout me; you oughter see de other fellow; he's in de hospital; yes, ma'am."

IRITIS - Case No. 1

A young man complained of pain in his eyes and head, and sensitiveness to light. He told Dr. Bates that he had been to other clinics where they diagnosed his case as iritis. Getting no relief from eye drops which were prescribed, he came to us to see if we could help him.

Dr. Bates examined his eyes and agreed with the other doctors that the patient had iritis. Not knowing what the discussion was between this young man and Dr. Bates, I started to treat this case of iritis without realizing that the eye was diseased. I noticed, however, that the eyes were inflamed.

I placed the young man ten feet from the test card and asked him to read as much as he was able. He complained that the electric light near the test card caused a severe pain in his eyes. I placed him in the sun and used a sun glass. I flashed the strong rays on the white part of his eyes, after I had raised his upper eyelid and had him look down. Again I placed him ten feet from the test card, and this time he began to read the letters without complaining about the light. He finished reading the forty line, when he declared that the pain had returned.

I taught him how to palm and left him for half an hour. When I returned to him I was much surprised to find that the inflammation of his eyes had disappeared. His vision also improved to 10/10 with each eye separately. All this time Dr. Bates was busy with other patients and was paying no attention to the young man or me. I was very happy when the doctor told me what I had accomplished.

He said: "Did you know that this man had iritis?"

I replied, "No."

Then he proceeded to explain the customary experience with the treatment of iritis; namely, that these cases required usually three or more days before the pain in the eyes was relieved. In most cases it might require two weeks of treatment before the sight could become anything near normal. Always eye-drops were prescribed to be used frequently during the day, sometimes at night, in addition to general treatment which continued often for several years. To relieve a case of iritis in the short time of one hour was extraordinary—and this without local treatment or internal medicine.

"Never in my life," the doctor said, "have I seen such a bad case of iritis obtain perfect sight so quickly and acquire such relief in the condition of the eye."

IRITIS - Cases No. 2 and 3

Iritis is usually very painful, and causes a patient to feel much depressed. A matron of a Working Girls' Home telephoned me to ask if it were possible to treat a young girl under her care. This girl was Florence, who was not the type generally found at the clinic, but as she was an orphan, we made an exception in her case and admitted her. Both her eyes were bloodshot, and she continually tried to shield them from the light. Even ordinary light was painful. The trouble began in her right eye, about a month before I saw her. Shortly afterwards, the left eye became inflamed. She was treated by a number of competent eye doctors, who said she had iritis. They gave her drops to put into her eyes, but the pain persisted. Later, one of these doctors advised her to have her teeth and tonsils examined, but instead of doing this, she came to me.

Dr. Bates examined her eyes with the opthalmoscope. Then he asked me to examine them also, and tell him what I saw. When I looked into the pupil of the right eye, I could see the whole area covered with small black spots. It resembled the top of a pepper box. Her left eye was also affected, but not so much as the right.

Her pain was so intense that I did not test her vision with the test card immediately. She was told to palm and remember something pleasant. While palming, she described to me how her room was arranged. She remembered the figured draperies on her windows, which matched those on her chairs and bed. She removed her hands and opened her eyes before I told her, but the pain had disappeared, and she wanted me to know it.

I then placed her in the sun, being sure that her eyes were closed. The strong light of the sun was focused on her closed eyelids for a moment only. She drew away from the light quickly,—which is the usual thing for such patients to do. I encouraged her to let me try again. She closed her eyes and I led her into the sunlight once more. She liked the treatment.

Florence was advised to blink often, and to palm her eyes early every morning and during the day when possible. Six days later, I saw her again. The ophthalmoscope showed a decided improvement in the pupil of her right eye, there were only a few small spots in one side of it, and the left pupil was entirely clear. Florence stated that she had been working unusually hard, and also late at night. Therefore, she feared that the vision of her right eye would not be so good. She read 10/15 with the right eye on a strange card, but the letters were not clear. After she had rested her eyes by palming and practicing the sway, the letters cleared up, and she also read 10/10. Her left eye had normal vision. Then I gave her the sun treatment. The third time I saw her, which was also her last visit, both eyes had normal sight, and her pain had disappeared entirely.

Later we had another case of iritis, a woman much older than Florence. She was almost insane with pain in both her eyes. For an hour or more I could do nothing with her, because of her extreme nervousness. I placed the palm of my right hand over her closed eyes, as she leaned her head against me. Fortunately, she had her little girl, Betty, with her. While I palmed the poor mother's eyes, I held a conversation with Betty, solely for the benefit of her mother.

Mother love is one of the greatest things in the world. Betty was telling me how her mother had suffered all day long, and at night she had walked the floor because she could not sleep with the pain. As I held her close I could feel the mother relax. Then she began to talk about Betty's good qualities, and what a help she was. I placed the mother in the sun, still keeping the palm of my hand over her eyes. Then I held my sun-glass in a position so that the strong light of the sun would focus directly on her closed eyelids when I removed my hand. Knowing that the sunlight had been painful to her during her illness, I did not tell her what I was about to do. I planned to use the sun-glass very quickly, and not give her a chance to strain. I did this successfully, although I feared I would not, as some patients strain so in their agony of pain, that it is difficult to use the sun-glass for the first time. After the first

treatment this patient enjoyed it.

The vision in both eyes was 10/40, but none of the letters was clear. After the use of the sun-glass, I encouraged her to palm while Betty and I started another conversation. The subject was all about her baby brother. Betty would exaggerate once in a while about some of the things brother did, then her mother would correct her, and explain things differently. This was just what I wanted. Anything but the memory of her pain and discomfort would be a help. When she left the clinic she was temporarily relieved of pain.

Betty was invited to come with her mother at her next treatment. An eye specialist was visiting us, and after his examination with the ophthalmoscope, he pronounced it a bad case of iritis. He was quite positive that the patient could not be cured in less than six weeks. My patient came every day for one week, and at the end of the second week she was entirely well. During the time that her pain was being relieved, her vision also improved. The only methods I used were sun treatment, palming, and perfect memory.



I did not realize how great a help Betty was during her mother's treatment, until after her mother was cured. When patients suffer intense pain, I seem to feel it, and unconsciously I lower my voice, and speak as softly as I can. I believe that we all respond to kindness, which we need most of all when we are ill. Betty repeated to her mother at home a great deal of what she heard me say at the clinic. She tried to use the same tone of voice, and smoothed her mother's throbbing forehead, even during the long nights when sleep was an impossibility. Truly, Betty was my assistant in the cure of her mother's eyes.

RETINITIS PIGMENTOSA - Case No. 1

When this case was brought to my attention, I knew very little about the disease of the eyes known as retinitis pigmentosa, except how to relieve it. I had been told that in this condition spots of black pigment are deposited in the retina, that parts of the retina are destroyed, and that the nerve of sight is diseased. Eye books which describe the disease say that it usually begins in childhood and progresses very slowly, until it ends in complete blindness. The field of vision is contracted, and, because they cannot see on either side of them, patients frequently stumble. In most cases the vision is worse at night than in the daytime. The books say further that no treatment is known which helps these cases. Nevertheless, Dr. Bates reported in the New York Medical Journal of February 3, 1917, a case of retinitis pigmentosa which had been materially benefited through treatment by relaxation. By the use of the same methods, I have been able to improve the sight in similar cases.

In October, 1917, Pauline, aged twelve, was under treatment for retinitis pigmentosa. At five feet from the card she could read only the seventy line, and her eyes vibrated continually from side to side, a condition known as nystagmus. She was very shy and extremely nervous, and appealed to me for glasses, so that she could see the blackboard. I have noticed that eye patients often suffer from extreme nervousness, but this poor child had the worst case of nerves I ever saw, and the slightest agitation affected her sight if, in asking her to read a line on the test card, I raised my voice and spoke rapidly, her face would flush, and she would say, "I cannot see anything now." But as soon as I lowered my voice and spoke gently her sight cleared up.

I told her to cover her eyes with the palms of her hands and remember the last letter she had seen on the card. This improved her sight so much that before she left the clinic that day she was able to see all of the fifty line at five feet. What thrilled me most of all was the fact that the dreadful movement of her eyes had stopped. Pauline came quite steadily to the clinic, and each time her vision improved. At last she was able to read the writing on the blackboard from her seat in the classroom.

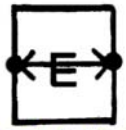
Then I did not see her again for six months. When Pauline returned she told me that she had left school because she hated to study. She had also been ill during the summer. Her mother had taken her to a hospital for treatment. While there an eye specialist had looked at her eyes, and the inspection made her so nervous that they started to vibrate again from side to side. He said to her: "You ought to have your eyes treated; they are very bad."

"I am having them treated at the Harlem Hospital Clinic," she answered, "I know how to stop that vibration."

Then she palmed for a while and when she uncovered and opened her eyes, the doctor looked at them again.

"Why, they seem all right now," he said. "You had better go to that doctor until you are cured. He can do more for you than I can."

I was very much pleased to find that in spite of having stayed away so long Pauline had not forgotten what I had told her, and was able to stop her nystagmus. I tested her sight again and found that it was no worse than when I had last seen her. In fact, in some ways, it was better. She became a steady patient again and was anxious to have me help her more. I told her to palm as usual, and left her for a while. Later she read the thirty line at fifteen feet. When she looked first to the right of the card and then to the left, and noted that it appeared to move in a direction opposite to the movement of her eyes, she read two letters on the twenty line. At a later visit she read the whole of the twenty line at fifteen feet.



Look left and right of the card and see oppositional movement.

After a long absence Pauline again made her appearance, not for treatment, but to pay me a friendly visit.

Five years had passed since I first treated her, and it was a joy to learn that she had stayed cured. She waited until our patients had all gone and then she told me of her experiences. She is poor in mind as well as in purse and education, therefore we will excuse her for her diction:

"Gee, nurse," she said, "I'm awful glad to see you again. Gee, you don't look a day older. Don't yer ever get tired treatin' us poor people? I made a lot o' money this last year. Worked in a doll factory and made eighteen per with overtime. Yeah, I was engaged to be married, but I changed me mind and gave him back his ring. Oh, gee, you ought ter see the sparkler it was too! But I'm honest I am, so I didn't keep it. Ain't that the right thing to do?"

I said, "Surely."

"Me mother says if I ain't careful I'll be an old maid. My guy was a real estator too, he sells houses and lots. Well anyhow I lost him."

RETINITIS PIGMENTOSA - Case No. 2

The next patient I treated for this dreadful disease was an old man of seventy. When I first saw him he was standing with many others, waiting patiently for Dr. Bates to speak to him. Because of his unusual appearance, I at once singled this dear old man out from the crowd. Most men of his age who come to our clinic are unkempt, dirty, and ragged—pitiable objects generally. But this man was well groomed, his clothes, though worn and old, were welt brushed; his shoes were polished, his collar clean, his tie neatly adjusted. He had an abundance of snow-white hair, neatly parted and brushed, and his skin was like a baby's, pink and white.

I placed him five feet from the card, asking him to read what he could.

"I'm afraid I can't see so well, ma'am," he said; "My eyes bother me a good deal."

"I'll show you how to rest your eyes so that they won't bother you," I answered.

The best he could do at this distance was to read the fifty line. I told him to palm, and in a short time he saw a number of letters on the forty line. The next time he came I placed him ten feet from the card, and at this distance he read all the letters on the thirty line. He was so happy and excited over this that I too became excited. I forgot that I had other patients waiting for me and encouraged him to talk. I was glad afterward that I did so, for he had a wonderful story to tell.

"Do you know, ma'am," he said, "for two nights I palmed and rested my eyes for a long time before I went to bed,—and what do you think? I slept all the night through without waking up once. Now I think that's great, ma'am, because for years I have had insomnia. I would sleep only a little while; then I would get up and smoke my pipe to pass the time."

At a later visit I placed him twelve feet from the card and at this distance he was still able to read the thirty line. When he understood how easy it was to improve his vision by palming, he was pleased and excited.

"You know I'm so much better," he said, "that I didn't even notice that I was further away from the card than usual. Thank you, ma'am. God bless you, ma'am."

During the practice, when he failed to see a letter at which I was pointing, I said: "Close your eyes and tell me the color of your grandchild's eyes."

"Blue, ma'am," he replied.

"Keep your eyes covered, keep remembering the color of baby's eyes."

He did this, and after a few minutes his sight cleared up and he saw the letter. After we had finished

the practice I again encouraged him to talk, and he told me more about his insomnia.

"Do you know, ma'am," he said, "after I had had two nights' sleep without waking up, I didn't dare tell any of my family about it, for fear it wouldn't last and I would only disappoint them. So I waited. Now, do you know, ma'am, it is just two weeks that I have slept the night through without waking up once, and so I told my wife about it. She is so happy, ma'am, I just can't tell you, for it has been many years since I was able to get such rest."

I wish I could have had a picture of his face when he was telling me of the improvement in his eyesight and general health. It would have been a picture of gentleness, love, kindness and gratitude.

At another visit he looked up into my face and said: "I am seeing you better now, ma'am. You look younger." Dr. Bates heard this remark and laughed. In two months time this patient's vision improved from 10/200 to 12/30.

A CASE OF INTERSTITIAL KERATITIS

A school nurse who was puzzled about the condition of a child's eyes, feared that the little one would be hopelessly blind within a very short time. She brought her to the clinic.

After Dr. Bates had examined her he said her trouble was interstitial keratitis, caused by syphilis. Such cases do not recover usually without local application of atropine and general treatment. But the child received no local or other treatment while she was under my care.

At first I could not do anything with her. She would not look at the test card when I asked her, neither would she look at me, but I was not annoyed at her because I knew that the poor child was suffering. Speaking softly and kindly to her worked like a charm.

When she finally looked at the card she could see only the large letter on the top at ten feet, or 10/200. When I told her to keep her eyes closed for a little while, she obeyed. Resting them in this way helped. They became clearer and she read 10/70 with both eyes.

I told her again to close her eyes to prevent staring, and to remember the last letter she had read on the card. The last letter of the seventy line on the clinic test card was an E, and when she tried to remember the whole of the letter, she said that her eyes began to pain her. I told her to remember only one part of the E at a time. This she liked to do because it was easier than to remember all of the letter at once. I stood close to the test card, pointing to the letter below the E, and when I told her to open her eyes again she saw the letter instantly. This was the fifty line.

I was sorry that I had to send her home at that moment. I wished to treat her for at least a half hour longer, but others were waiting. She was advised to practice palming and resting her eyes regularly six times a day, and to return in two days for further treatment. Her first visit began two weeks before Christmas. Each time she was treated I mentioned the possibility of a gift for her if she would do her best in practicing at home.

Much to the surprise of Dr. Bates, she made rapid progress. He informed me that her case was so bad that he did not expect much improvement for a month or more. After two weeks' treatment she read 15/30 and her eyes looked much clearer. I noticed, also, that she no longer held her head down. Neither did she complain that the strong light hurt her eyes, as it did before her treatments began. It was not at all easy to treat this poor little girl because she sulked, and I had to spend at least five minutes every visit to encourage her, and make her understand that working with her eyes, while it was hard for her, was surely worth the trouble.

A doctor, who was a stranger both to Dr. Bates and to me, was in our room at the time, and he watched us closely as we encouraged and benefited each case. The only remark he made to me was: "Why don't you fit them with glasses and be done with it? In that way you can get rid of these poor individuals much more quickly. They don't pay anything, so why waste your time?" I was so upset when he said this that I lost my temper, but Dr. Bates rescued the visiting doctor and kindly ushered him out of the room.

ALBERT

Since we have had our private clinic, the charity patients come mostly from physicians. Others are sent by ministers of all denominations.

Albert, aged sixteen, was sent to us by a dentist's assistant who told me of his pitiable condition. His first visit was on December 6, 1924. Albert's sister, who is devoted to him, was present, being anxious to know if we could help him. When he appeared he was wearing a black patch over his left eye because

the light troubled him and he suffered intense pain. With the test card the vision of his right eye was normal, or 10/10, but the left eye had only light perception. This is a copy of his prescription for glasses, which he had worn for some time:

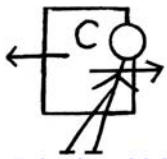
R + 0.50 D. C. 90
L + 2.00 D. C. 90

Dr. Bates examined him with the ophthalmoscope and found keratitis, or inflammation of the front of the eyeball of the left eye. The right eye was normal. While the examination was in progress, Albert's sister was weeping, though she tried unsuccessfully to conceal her tears. They had been to other doctors and were told that Albert would always have to wear glasses to save the right eye; that nothing more could be done for the left eye. The last oculist whom they consulted said that the left eye had cataract, and as there was no sight, it was useless to operate. What a shock it was to his family!

I placed Albert in the sun with closed eyes, raised the upper lid, and with the sun-glass I quickly focused the strong light of the sun on the white part of the eye as he looked down. Immediately he called out to his sister: "I see the light. I can see a sort of web inside of my eye when the light is focused on it." This made me very happy indeed. I knew then that Albert could be benefited. His sister was overcome. While the tears flowed down her cheeks she said: "If you can only save that eye, there is nothing in the world I would not do for him. Mother and I will take care of him. He need never work again. I can earn enough money for both of us and he can spend all his time taking care of his eye. He must not go blind." The girl was hysterical, of course, but she meant every word she said; she loved her brother. At her age other girls are usually planning a future for themselves, but she was willing to sacrifice herself so that her brother would not go blind. That is love indeed.

When we started treatment, Albert became enthusiastic and palmed his eyes for more than a half-hour. He was told to think of pleasant things while palming. Being a perfectly normal boy, he could easily think of such sports as baseball and other outdoor games. He liked to think of the movies and imagine scenes from the picture called "The Covered Wagon."

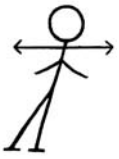
One could hear a pin drop when Albert first looked at the test card with his left eye, still keeping the right one covered. The test card was placed ten feet from his eyes, and, while swinging his body from side to side, he flashed the large C on the top of the card. I was careful not to have him strain to see more, so he was told to sit comfortably and palm again.



Swing (sway) left and right in front of the card. Flash the letter C. Notice the card moves in the opposite direction.

He was with me over two hours that day and I improved his left eye to 10/100 by alternately palming, swinging, and blinking. When we first removed the black patch, the sclera or white part of his left eye was bloodshot. It looked very much as though blood was ready to pour from it at any moment. When it was first exposed to the light a considerable watering of the eye resulted, which was stopped instantly by the sun treatment.

Before Albert left us after his first visit, Dr. Bates asked me if I had time to treat him every day, saying that Albert's trouble was so serious that only by frequent treatment could he be cured. I was glad to give the time for which I have been well repaid. Our dear boy is almost cured. Every night I prayed earnestly for Albert and I know that without God's help I could not have accomplished what I did. Albert believes that, too.



Every day of sunshine he improved a little with the test card. On January 17, 1925, all the redness of the sclera had entirely disappeared. Then his visits became less frequent. I told him to come once a week instead of daily. But Albert practiced at home every day for hours at a time. The condition of his eye improved steadily and by the end of February, 1925, the vision of the left eye was almost normal.

I am proud of Albert for another reason. He would not allow his sister to support him. He asked me if shoveling snow would make his eye worse again, I said no, as shoveling snow would be practicing the swing, and the exercise would be a benefit.

Then he said, "Please pray for snow. I want to work." Again our prayers were answered. That very night we had a big snow storm, and when Albert came the next day, he told me:

"I stood in line with my shovel and stretched myself as much as possible to look big. I got a job all right, and I will earn $5.00 a day while the snow lasts." We had one snow storm after another and Albert had plenty of work to do.

Albert's case was most remarkable because he did not at any time suffer a relapse. I believe, also,

that the sun was the main factor in the relief of his trouble. I cannot understand why so many eye specialists shield the eyes of a patient from the sun. Bandaging them not only frightens the patient, but makes him very uncomfortable. It is true that some patients demur when they first learn that they are to be treated with a sun-glass, but as soon as the light is thrown on the closed eyelids, they relax and smile and ask for more. The sun is our greatest blessing.

ATROPHY OF THE OPTIC NERVE - Case No. 1

In the year 1892 a patient came to the New York Eye Infirmary with well-marked atrophy of the optic nerve. According to all that we know of the laws of pathology, he should have been totally blind,—yet his vision was normal. The case was considered so remarkable that it was exhibited before a number of medical societies, but it was by no means an isolated one. On February 8, 1917, Dr. Bates published in the "New York Medical Journal," under the title, "Blindness Relieved by a New Method of Treatment," a report of a case in which the vision was improved from perception of light to normal. He has had quite a number of such cases.

In 1914 a colored woman was led into the clinic by a friend. She had heard of Dr. Bates, and had come to him in the hope that he might be able to restore her sight. The doctor examined her eyes, and found that she had atrophy of the optic nerve, complicated with other troubles. She could not count her fingers, nor had she any perception of light whatever. The doctor turned her over to me, saying:

"Help her, will you?"

She was the real "mammy" type of negress, very good-natured and motherly. She greeted me with a smile and said:

"May de good Lor' bless you, ma'am, ef you can gib me again de light ob day."

The words came from an humble heart, and her voice sounded hopeful. When I heard her speak I lost some of my courage. Perhaps I should not be able to do anything for her, and I dreaded to disappoint her. My work is not always easy; yet I like difficult cases to come my way, because when I can help them I feel that I have done something worth while.

"Won't you tell me how long you have been blind?" I asked.

"Yes, ma'am," she replied. "Ah hasn't seed nothin' for two years. Ah has been in de hospital all dat time an' de doctors say dat mebbe ah nebber sees again. Some friend ob mine says to me, 'You jes goes to de Harlem Hospital Clinic. Dere you find de doctor what makes you see.' So ah jes come; dat't all."

I told her to cover her eyes with the palms of her hands and asked if she could remember anything black. She replied:

"Yes, ma'am, Ah 'member stove polish black, all right."

"That's fine," I said. "Now keep remembering the black stove polish, and that will stop the strain in your eyes. When your eyes first began to trouble you, you strained to see, and every time you did that, your eyes became worse. Now let us see what will happen when you stop the strain."

I had stood her against the wall to make things easier for her, for we only had a few chairs at the clinic. I left her to treat other patients, telling her not to open her eyes, nor to remove her palms from them, not even for a moment. Presently I became aware of a strange sound, a sort of mumbling. I was greatly puzzled, but as I approached my blind patient, I discovered where the sound came from. She was saying in a low tone, "Black polish, black polish," just as fast as she could. I held a test card covered with E's of various sizes, turned in different directions, a foot away from her eyes, and told her to take her hands down and look at it. The doctor, the other patients, and myself were quite scared at the outburst that followed.

"Ma'am, dat's a E; dat's a sure-enough E. Ah is sure dat's a black E on some white paper."

This was a large letter on the first line, read by the normal eye at two hundred feet.

But the next moment it faded from her eyes. That was my fault. I was not quick enough. What I should have done was to have her close her eyes and palm again, the moment she saw the E. But I was greatly encouraged, not only because the patient had had a flash of vision, but because Dr. Bates had said he was sure I would help her to see again. I again told her to palm and remember black, and when, in a few moments, I asked her to take down her hands and look at the card she saw the E, blacker than the first time. I then told her to close her eyes for a minute and open them for just a second, alternately, while remembering the stove polish continuously. She did this for a while, and was able to see the E each time she opened her eyes.

"Now," I said, as I raised my hand and held it one foot from her eyes, "how many fingers can you see?"

"Three," she replied, which was correct.

I told her to rest her eyes by palming many times a day at home, and to come and see me three times a week. I also gave her some advice about her diet.

The next clinic day she saw the seventy line of letters at one foot, and they did not fade away as did the E the first time she saw it. I told her to palm again, and in a few minutes she counted my fingers correctly every time I asked her to, with only one exception.

"If dis here seein' keeps up, ma'am." she remarked, "Ah sure will be able to earn mah livin' again. De Lor' bless you, ma'am."

She continued to come and made slow but sure progress. Then came a time when she stayed away for several months. As I was very anxious to cure her, I worried about her considerably. Then one day she turned up again, apparently very much frightened about something, though her eyes looked better. I was glad to see her. She was very much upset, so I refrained from scolding her, and in the course of time I learned the reason for her absence. She had been under treatment for some other troubles, and some doctor or nurse had scared her into discontinuing her visits to our clinic. She had, however, continued to palm several hours a day with most gratifying results.

"Do you know, ma'am," she said, "Ah can see ebery house number as Ah goes visitin', and Ah goes out to a day's work once in a while."

She came regularly and her improvement continued. Sometimes I would find that she did not see so well as at her previous visit, but immediate improvement always followed palming. Her gratitude was pathetic, and every little while she would bring a package saying:

"Dis here is fo' you, ma'am. You sabe me from blindness. Yes, you did; an' Ah is mighty grateful."

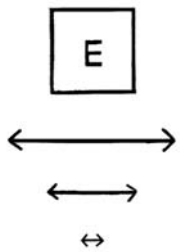
The packages contained gifts of various kinds—a cocoanut from the West Indies, grapefruit and cucumbers, a necklace made of tropical beans of various colors.

A short time later she washed a full set of Dresden china for her employer, without breaking a single piece, and earned four dollars and ten cents for her day's work.

Mammy had considerable trouble in keeping her eyes open while in the sun. With Dr. Bates' permission I gave her the sun treatment with the sun-glass, which always improved her vision, both near and distant. She began to see busses and automobiles a city block away, and then one day she told me the most marvelous thing that had ever happened to her.

"One day Ah was on de roof ob our house, an as Ah was bathin' mah eyes wid de warm sunlight wid mah eyes closed, Ah suddently opened mah eyes and dere, way up in de heabens, Ah sees a big white cloud, and de blue sky, and good Lor'! Ah calls mah frien' an shows it to her, an' she says Ah was correct sure nuf. Ah was thinking ob you ma'am, and de good Dr. Bates, an' Ah says, Lor' bless 'em."

The swing also helped in the improvement of her vision. She would stand twenty feet from the card and sway her body as far as possible alternately to the right and left. She could imagine objects in front of her moving from side to side, with great speed. Then she would shorten the swing until she imagined the card moving less than one inch from side to side. (A tiny, short swing, shift of the eyes from point to point) Her vision improved in flashes to 20/30 minus, and it is still improving. The long swing alternating with the palming is slowly but surely bringing about a cure. For the first time in many years, she is able to read, without glasses, the larger print of the newspaper.



Dr. Bates was very much interested in her improvement. He examined her optic nerves with the ophthalmoscope, and found that the circulation was returning, and that the optic nerves were becoming pink as they are in the normal eye.

ATROPHY OF THE OPTIC NERVE - Case No. 2

While it is true that one sees at the hospital a great deal of suffering, sorrow, and poverty, it is a pleasure to be able to relieve some of the suffering. For instance, the case of a blind negro, which really ought to have been sad, turned out, instead, to be very amusing. In spite of his affliction, the patient seemed to be in a happy mood and well pleased with himself. He was neatly dressed and his shoes, though shabby, were carefully shined, and over them he wore spats. His cravat was a brilliant red and his hat a light shade of tan. A cane, which his blindness compelled him to carry, completed a costume

which I am sure he considered to be that of a "swell" gentleman. When I approached him, he said in a gracious manner: "Glad to see you, ma'am. Glad to see you."

And yet he could not see me, as I soon found out. I held my fingers before his eyes and asked him if he could see them. He answered no. Further tests showed that he had no light perception whatever, and after an examination Dr. Bates said that his condition was due to atrophy, of the optic nerve. I showed him how to palm, and in a little while he pointed to an electric light in the ceiling, and said: "It looks light there."

At once I told him to palm again, and when he opened his eyes he saw the shadow of my fingers moving from side to side before his face. He did not laugh, but giggled, rather, just like a girl. In a few moments, however, the blindness returned. Again I told him to palm and while he was doing so I asked him if he could remember a black object, or something else that he had seen before he became blind, such as a beautiful sunset, or a white cloud in a blue sky. He thought a while, and then remembered that in the days when he had been a house painter he had used black paint. I told him to remember the black paint while he was palming, and then I left him to attend to other patients. When I came back to him, I held two of my fingers close to his face and asked if he could see them.

"Ma'am," he said, "I'm not at all sure, but I think I see two fingers."

The man must have been popular with the ladies, for he then remarked that one of his "lady friends" would be pleased if he became able to see her. He attended quite regularly for a time, and I noticed an increasing improvement in his vision. Sometimes this was not very marked, and then I knew that he had not been palming or resting his eyes sufficiently at home. He was greatly helped by the focusing of the sun's rays upon the white of his eyes with a sun-glass, a treatment that had a soothing effect. Soon he was able to dispense with his guide, and, when leaving the clinic, used his cane to avoid collisions with benches, nurses and patients. One day as he was leaving the room, Dr. Bates called my attention to him, and I noted that instead of tapping with his cane upon the floor, he was carrying it on his arm. With head erect he walked down the long corridor, opened the door, and left the hospital, as easily as a person with perfect sight. A little later he came without the cane. On his last visit he read the fifty line at ten feet with each eye.

One day as Dr. Bates and I were walking toward the Harlem Hospital, we saw this colored dandy walking with his "lady friend" as though he owned the earth. He was all dressed up in a black and white checked suit, with a red necktie and spats, and a "sparkler" on his little finger. His eyes were fairly rolling in his head as he strutted along.

Dr. Bates looked on and in his quiet, humorous way said to me, "Such dignity I long to possess!"

ABSOLUTE GLAUCOMA

In absolute glaucoma there is no perception of light, a condition considered to be incurable. It may or may not be accompanied by pain, and in the former case the only remedy previous to Dr. Bates' discovery, was enucleation, or removal of the eyeball. So far as Dr. Bates is aware, there is no case of absolute glaucoma on record in which any measure of sight has been restored by any method except the one described below.

The patient was a woman, aged seventy-nine. At first glance one could see that she was refined and of a gentle nature. I guessed that at one time she had been a woman of means. As she stood apart from the rest of the patients waiting to be attended, she took not the slightest notice of what was going on around her, and occasionally I heard her moan.

When Dr. Bates was able to examine her eyes, he found that she had glaucoma in both eyes, and that the right eye was blind, without even light perception. The vision of her left eye was 10/70. He asked me to do what I could to help her and stop her pain. Placing a stool before a table upon which she could rest her elbows, I showed her how to palm, which she did very readily. In just a few minutes the pain ceased and the eyeballs became soft. I told her to remove her hands from her eyes, but she still kept her eyes shut. I thought this was because I had not told her to open them, but when I said she might do so, she asked:

Are you sure the pain will not come back if I open them? For many days and nights I suffered such constant pain that I could not sleep. Now I feel such a sense of 'relief that I would really like to keep my eyes closed."

I don't think the pain will come back right now," I said, "and if it does you can palm again."

I held a test card about two feet from her eyes, and told her to cover her left eye, and look at the

card with the right. That day, we had several visiting doctors whom Dr. Bates had told about this case of absolute glaucoma. These doctors also examined her eyes and said the diagnosis was surely correct. They were all standing by with Dr. Bates when I asked the patient to look at the card, and the excitement was intense when she stated that she saw the large letter at the top of the card.

"Oh, Doctor," I said, "she sees it."

"Yes, I see it, I really see it!" added the patient, scarcely able to credit her senses.

It has long been the belief of eye doctors that glaucoma with blindness cannot be either improved or cured. It should be emphasized that this patient offered good evidence that glaucoma with blindness is not hopeless, and that it can be benefited or cured.

After a little more treatment I told her that she must keep her eyes shut as much as possible when she was at home, and to palm many times every day. I also told her never to look at any point or object more than a fraction of a second at a time and to keep constantly shifting. She went away pleased and grateful, for the pain had not returned.

The next time she came. Dr. Bates treated her and was able to improve the vision of the right eye to 10/200, while that of the left eye improved to 10/40. The third time the came she was treated by me. She was very happy and wanted to talk, which I encouraged her to do. She said she was living in a small furnished room and that I had no idea how worried she had been about going blind, because she had no one to look after her.

"But now," she added, "I have all sorts of hopes for the relief of my trouble, because you and Dr. Bates have done so much for me. Palming helps me so that I am now able to sleep at night. I like to do it for hours at a time, because it takes the terrible pain away."

She came regularly for six months and her improved vision was most encouraging. We continually reminded her to use her imagination to improve her sight and relieve the pain. Most of the clinic patients become confused when I ask them to do this, but this dear old lady did not find it a bit difficult. I told her to palm, and then imagine a florist's window filled with flowers. Next I told her to imagine that she had entered the shop and was observing the flowers, and I called to her mind the red rose and the white rose, the carnation, the violet, and other blossoms. Then I asked her if she could imagine the green fields in the country where the daisies grow, and she said: "Yes, and I can imagine that I am picking the daisies too."

Then I told her to remove her hands from her eyes. I was overjoyed when she saw a T on the thirty line at ten feet. The patient herself laughed out loud and cried: "I cannot believe it."

Avoid Negative: People, Talk, Thoughts, Emotions

She was steadily improving, so I was not prepared to find her one day looking very much depressed. The trouble was that she had had a visitor who talked to her—or at her, I should say—for two long hours; this had upset her nerves so that the pain had returned, and her vision had been lowered. I pictured to myself what it must mean to listen to a steady stream of gossip for two hours, and my sight at once became imperfect. I told her what a dangerous thing it was for her to allow herself to be tortured in this way, and said that if her friends insisted upon talking to her for such a length of time, she must keep her eyes closed as much as possible. Otherwise the strain would cause her to go blind.

For a time she got along nicely. Then I left the city for a much needed vacation, and while I was away I received word that she was getting worse. For her sake I came back to town immediately and, as she was not able to come to the clinic, I called upon her.

"Oh, nurse," she said, as soon as she saw me, "my right eye pains me so that I think of nothing but death."

Her thin face was lined with pain, and I could see that she was in agony. I began to talk to her about the days when she did not suffer and how she had stopped the pain by remembering the daisies. She began to palm without my telling her to, and became able to imagine a daisy waving in the breeze. I asked her to imagine that her body was swinging with the flower. She did this, and within a few minutes her pain left her and she smiled.



"Now, isn't it strange," she remarked, "but I forgot all about using my imagination."

She said that I had worked a miracle; but I explained that when she used her imagination she had to relax enough to relieve the strain in her eyes, and then the pain stopped.

We often hear the remark: "This person makes me sick," or "That person makes me nervous," but it remained for my glaucoma patient to make me realize that these observations are literal statements of fact. All about the walls of her little room, which was very clean and sunshiny, were photographs of her children and their families. With a great deal of pride she named each one in turn, but when she came to the picture of a man and woman, hanging a little apart from the rest, her tone changed.

"This is my daughter," she said of the woman, and I could see that she was very fond of her, but when she pointed to the man she said: "I cannot bear him. He makes me nervous and sick, because he is not a good man."

She began to strain at once, and had to do some palming to relieve her pain. Evidently it is important, if we want to avoid eyestrain, that we should keep away from the people we dislike, and think of them as little, as possible.

She became able to visit the clinic again, and her vision improved to 10/20 with the right eye and 10/10 with the left in five months' time. I never mentioned pain to her, and she never spoke of having any more pain. When her daughter called one day to say that her mother was leaving for the country, I felt that something worth while had been accomplished.

OPACITY OF THE CORNEA

Eye, Cornea Injury, Scar Healed

Myopic and far-sighted patients are numerous, and I always feel confident that in a short time I can improve their sight. I suffered a case of cold feet, however, when Dr. Bates placed in my care a young colored woman, aged twenty-seven. She had a scar on her right eye almost in the center of the sight. All the doctor said to me was, "Help this patient, please." It was my first experience with a case of this kind. I asked the girl how long the scar had been there and also what caused it. Being a Southern darky, she spoke with an accent, and this is the way she answered me:

"When Ah was twelve years old, mah granmah was settin' bah de fireplace a-smokin' a pot pipe an', as Ah was removin' a boilin' kettle ob water, ole granny upsets de pipe ob hot ashes an done burned mah eye. Lordy, ma'am! Ah thought mah eye was burned from de socket. De doctors says Ah would neber see again out ob dat eye."

I tested her sight, and with her left eye she read 15/40, while with her right eye she could barely see my fingers one foot away. I had not the slightest idea that I could improve the right eye at all. However, I told her to stand in a comfortable position and palm for a least a half hour. Then she was told to keep her right eye covered and read the test card with her left eye. The left eye improved to 15/15. With her right eye she was able to distinguish the 200 line letter at the same distance. Dr. Bates was amazed. He said that, although he had seen opacities of the cornea resulting from constitutional disease clear up, he had never before, in his thirty-odd years of experience, seen any improvement in an opacity resulting from an injury, even after years of treatment. This encouraged me so much that I told the patient to palm again, and before she left the clinic that day her right eye had improved to 15/70. She became hysterical when she found that she could see objects again with her right eye. For a while she came quite regularly to the clinic, and at her last visit her right eye improved to 15/50, while with the left she became able to read 15/10. Dr. Bates declared it was a miracle.

HOW PATIENTS BENEFIT OTHERS

Many reports have been received from those students of Dr. Bates who are conducting clinics. It is encouraging to know that this work is spreading rapidly. Clinics are being formed not only in America, but in Europe as well, and our representatives deserve the highest praise for their faithful work. A number of patients have taken a course from Dr. Bates, or myself, so they could teach others how to obtain normal vision. Mothers find it a great help to study the Bates Method. Some of them bring one of their children for treatment, and when they see the child obtain normal sight, they become eager to learn how to cure other members of their family. In this way the work has spread. If we could have a Bates Clinic in every town and city, people would be very much benefited.

There are many patients in the West, who are treating the poor without any compensation whatever. They may not have regular clinics, but it is clinic work just the same. We have over fifty patients in Cleveland, Ohio, and some of them are helping the poor there. A teacher in one of the public schools has cured many of her little charges who had defective sight. In her reports to Dr. Bates, she mentioned several eases of defective minds that she had benefited by palming, blinking and swinging. After a number of her pupils were relieved of mind strain, they were placed in regular classes.

This teacher had to be careful not to offend the authorities nor to mention that she was using any system or method. She had the pupils practice for a few minutes every day in her class-room. She could

appreciate eye education and common sense, because she was a cured patient.

A few grateful patients, well-known women of Cleveland, go about from place to place, helping unfortunate people who have imperfect sight. While I was visiting at the home of Mrs. H. D. Messick, I discovered that she was conducting regular clinic sessions in her home every week. Although she is a busy woman, she gives part of her time to treating patients who cannot come to Dr. Bates. She has done remarkably well with many difficult cases, some of which I would like to report:

A little girl, nine years old, had convergent squint of her left eye. Very little of the iris was visible when I first met her. I was surprised when I saw her again, about six months later. The left eye was almost as straight as the right, and with Mrs. Messick's help, her vision had improved to 10/10 at times.

A woman, with atrophy of the optic nerve of the right eye, and myopia in the left, was first examined by me in December, 1924. Her face was lined with pain, and she seemed to have no desire to smile. The right eye was nearly blind, and she could not see letters of the test card at any distance with that eye. Her vision was about 10/50 with the left eye.

She was directed to palm for about five minutes or longer, and then stand and swing her body from side to side, with a slow, easy sway. The vision of her left eye improved to 10/30, and she flashed the large C of the test card with her right eye. She was advised not to wear her glasses again, and to practice regularly every day. Mrs. Messlck's efforts in helping this woman were certainly not in vain.

The last report I received was most encouraging, and ought to be so to any patient afflicted as this woman was. The vision of her right eye was 8/40, and the left eye was, I believe, normal at the time of her writing. However, she could read quite a little with comfort, and did not complain of pain any more. Her facial expression changed for the better, and she was very grateful for what had been accomplished.

Another case that I started about the same time, was that of a fifteen-year-old boy, who was wearing glasses for myopia. His left eye was almost blind, and the vision of the right was 10/30. I taught him to palm and swing, and in less than half an hour his vision in the right eye became normal, or 10/10. When he covered his right eye, the vision of his left began to improve for the large letters of the card, although they were not clear or distinct. I told him that if he wished to be cured, he would have to practice faithfully every day, as he was directed. He promised to do his part. I just gave him a start, but it was Mrs. Messick who cured him.

I visited him some months later, and found his vision normal when he read the test card with each eye separately. He saw as well with the left eye as he did with the right. He displayed some marvelous drawings of ships, which were done after he was cured.

The letter I afterwards received from him is printed below:

August 26, 1925.

My dear Mrs. Lierman:

I am so grateful to you and Mrs. Messick for having helped me to follow Dr. Bates' method, that I am writing to tell of my experience with my eyes.

About December, 1924, we were examined by the school doctor. He told me my left eye was nearly blind.

Mother immediately took me to a well-known oculist in Cleveland, and after several visits to his office, he prescribed glasses for me, to be worn always. A week had passed when I met you at Mrs. Messick's. You told me to discard my glasses and practice palming and swinging, which I gladly did.

Some of the teachers knowing I had worn glasses and seeing that I didn't after I had met you, tried to persuade me to wear them; but I wouldn't, when I noticed how my eyesight was improving.

After seeing Mrs. Messick once a week, and practicing regularly at home five minutes in the morning and five in the evening, my left eye gradually improved to normal.

With deep gratitude for being spared the great annoyance of wearing glasses, I am

Yours sincerely,
Mac.

CHAPTER VII

PARALYSIS

PARTIAL PARALYSIS OF THE THIRD NERVE

GEORGE, aged five years, was sent to me by a physician, who diagnosed his case as paralysis of the third nerve of the right eye. A number of eye specialists said that he could not be cured. One gave him internal treatment for about six months and used electricity on the eye without much permanent benefit. When a nerve is paralyzed, its function is lost. In other words, the nerve is not able to bring about a contraction of the parts supplied by the nerve. To explain further, that branch of the third nerve distributed to the muscle which raises the lid, had lost its function. In general it has been believed for many years that a paralyzed nerve is relaxed. After many years of observation and experimental work, it was demonstrated that a paralyzed nerve was under a great tension. Treatment which relieved the tension and brought about a sufficient relaxation was a cure for the paralysis.

In Dr. Bates' book is an illustration of a patient with paralysis of the seventh nerve. One of the functions of the seventh nerve is to close the eyelid. When it is paralyzed, the eye remains open. Not only does the eye remain in this way, but the lips are separated. The patient is not able to close the lips sufficiently to whistle. By palming and swinging, a relaxation is obtained,—the patient becomes able at once to close the eyelid, and to close the lips sufficiently to whistle. These cases of paralysis do not need electrical or other stimulation. They are cured by rest. I believe that electricity is a valuable remedy, but it has lost much of its prestige by being employed in cases where it was not needed.

Georgie's mother has unusual intelligence and she came to us confident we could relieve or cure Georgie's eyes. This is the history of his case as she described it: When he was born his right eye was wide open, and the child was unable to close the eye. About three months later the eyelid closed, and the child was unable to open his eye. Several eye specialists in Brooklyn told the mother that the eye could not be cured.

From the very beginning, Georgie was a source of pleasure to me. He seldom spoke above a whisper and preferred to go through each treatment without speaking at all, if possible. At such times he was given the card with the letter E pointing in different directions. When I asked him which way the E's were pointing as I pointed to each one with my pencil, he would say left, right, up, down. But if he were not in the mood, he would raise his hand and indicate the direction in which the E was pointing. In the beginning this card was the only one used in his treatment, because he did not know all the letters of the alphabet. After he was admitted to the kindergarten school, he asked for the alphabet card, and also a figure card, which children favor a great deal for testing their sight. When Georgie's first test was made, he was unable to open his right eye. The left eye was normal, or 10/10.

I taught him to palm, and while he sat quietly, I began to talk to his mother. The conversation was solely for his benefit, so I talked about him. Like all mothers of her type, she praised her little boy and informed me of all the wonderful qualities of his mind, and that he was most obedient. I saw him smile, and for a moment he peeped a little through his fingers. After he had rested his eyes for ten minutes, I told him to keep his left eye covered, and look at the card with his right eye. His mother sat facing him, with her eyes wide open with astonishment, as she saw the eyelid open just a trifle. He was able to keep his right eye open long enough to read 10/70, then the eyelid dropped again. His mother obtained a number of different Snellen test cards and used them at home for the dally treatment of the paralyzed eye.

I treated Georgie again, one week later, and I immediately had him practice the palming. So many patients have failed to palm successfully, because they stare even with their eyes closed. Georgie palmed successfully because, at my suggestion, he remembered the things that were pleasant and easy to recall. If I could not think quickly enough of a story to tell him, I would show him something in my room, which pleased him. Then he would palm and describe it to me. At one time I showed him a box of bonbons, which were attractively arranged, and promised him some if he would sit and palm for a long time. His mother and I were amused, because he was unusually quiet when he remembered the candy. After he had palmed a while, I suddenly asked him what he was thinking about. He opened his eyes long enough to say the word "candy" and then closed them again. The vision of his right eye improved from 10/70 to 10/50 that day, and the eyelid was more open than before. The left eye improved to 12/10.

At every visit his vision was improved, while the paralysis diminished with the increased relaxation of his eye. I noticed that occasionally he would forget to blink, and then he would stare and strain, which

lowered his vision and increased the paralysis. His eyelid has opened more and his vision has improved since he became the owner of a little puppy. Whenever he played with the little dog, his mother noticed that both eyes would blink. This is evidence that things seen in motion are seen best. The vision of his right eye was improved to more than 10/10, while that of his left eye to 18/10, which is very unusual in a child six years of age. He had been under my treatment for about a year.

PARALYSIS OF AN EYE MUSCLE

One of our patients was an old colored mammy who came all dressed up with a faded red rose in her hat, which was gray with age. Her white apron was starched so stiff that it rustled every time she moved and she walked very slowly with the aid of a cane. When I asked her what her name was she answered, "Mah name is Annabelle Washington Lee."

Poor mammy had squint in her left eye and evidently was in pain. When I asked what her age was she answered: "Now, Ah don't know, ma'am, just 'zackly, but mebby Ah is fifty and mebby Ah is sebenty. But Ah do know Ah's cross-eyed and man head hab sech pain Ah can't sleep nohow."

Dr. Bates examined her eyes, stated that she had a hemorrhage of the brain, and suggested that resting her eyes would be the best treatment for her. Mammy had a strong desire to talk and before I could tell her that we had no time for conversation she said: "You know, ma'am, Ah sees you twice. Yes'm, Ah sees de letters twice, Funny, but you hab two heads."

Then mammy laughed. Finally she sat quietly with both hands covering her eyes as she was directed. I began to praise her to other patients who were not willing to palm more than a minute or two, when all of a sudden mammy's hands dropped to her lap and we found her fast asleep. The joke was on me all right. Mammy practiced palming faithfully at home, however, and the third time she came to the clinic, Dr. Bates examined her eyes again. He said that the hemorrhage must have been cured by palming or keeping her eyes closed a great deal, for the retina was entirely clear and there seemed to be no more trouble.

Mammy's eyes soon became straight and she no longer complained about seeing double. The last time I saw her she said: "Ma'am, de world is bery different since mah eyes is better and Ah wants to smile all de time."

Mammy would do anything for me but read the card. I really believed her when she said, "Ah is plum lazy and Ah jes don' care 'bout readin', nohow; Ah gets along bery well widout it."

The best she was able to do for me with the test card was 12/20 with each eye, whereas in the beginning her squinting eye was 12/70 and the other eye 12/40.

SARAH

Little curly-haired Sarah, aged twelve years, was a very interesting case. As she stood among patients who were waiting for treatment, I noticed how pretty she was. She was standing sideways with her right side toward me, and as I did not see her enter the room, I received a shock upon discovering that the left side of her face was distorted. She deemed so sensitive that I pretended not to notice anything wrong. Her left eye appeared ready to pop out of its socket any moment, and both upper and lower eyelids were terribly inflamed.

Dr. Bates explained the history of her case, and the cause of her affliction, and then left her entirely in my care. She told me that at the age of four, owing to an attack of cerebro-spinal meningitis, the left side of her body had become paralyzed. Until she came to us she had been receiving treatment from nerve specialists; both in England, where she was born, and also in New York. Electric treatments were given without success. Money was not spared; her family sacrificed every penny for medical treatment to bring about Sarah's cure. When one doctor failed, another was recommended by their friends. Finally the family bank account dwindled, and Sarah stopped treatment, believing that she could never be cured.

Later, as I learned to know her better, I noticed that she was ever conscious of her trouble and would always turn the good side of her face toward me. For one thing, Sarah was never downhearted. She was a good scholar and graduated at fourteen from the public school.

I tested her sight and found that she had normal vision, 10/10, with her right eye, and 10/50 with the left.

Placing her in a comfortable position, I showed her how to palm and told her not to remove her hands from her eyes while I was testing the sight of other patients. After a few minutes I noticed that while Sarah had her eyes covered her face became terribly red, and I wondered if she were comfortable. I spoke to her and she complained that she did not like to palm, that it made her nervous.

I thought that she was not doing it right and explained to her again how easy it was. To cover her eyes with the palms of her hands would help her to obtain the relaxation which was necessary to improve the condition of her left eye. She faithfully tried again but I noticed that she was getting more uncomfortable all the time. Since her vision failed to improve by palming, I tried the long swing, which proved successful.

I thought that in time Sarah would become able to palm with benefit and thus improve faster, but I was mistaken. For two years Sarah came to us at the clinic quite regularly, but in all that time I could hot induce her to palm. She insisted that it made her nervous. In all the years that I have been assisting Dr. Bates, this was my first experience with a patient who could not be made comfortable by palming.



Alternative treatments applied when palming was not successful.

However, the slow swing of her head was very helpful to her. **She held her left forefinger in front or to the left side of her face, about six inches from her eyes, and then slowly moved her head from shoulder to shoulder, blinking all the time.** At the first visit the vision of her left eye had improved to 10/30. Sarah was encouraged to practice the swing as many times during the day as it was possible for her to do so, and she was reminded to blink her eyes often, which she was not able to do at all with her left eye at the first visit. The upper lid of her left eye seemed stationary, and she could not close this eye even in sleep, a condition which gave her a strange appearance.

As I never had a case like hers before, I was deeply interested and studied hard to find every possible way to help her. She was a dear, bright little girl and was willing to do everything that we wished to help in the cure of her eye. I asked Dr. Bates for permission to try to improve the condition of her left cheek and mouth, as well as her eye, thinking that our method of relaxation might possibly do something for her face. Doctor smiled and said, "Well, you might try."

On Sarah's second visit to the clinic her left eye had improved to 10/15, which was most encouraging to me. She told me that she had tried to palm at home just to please me, but every time she tried, it made her strain. The swing, however, helped a lot. As time went on, I told her to shorten the swing and move her head slowly from side to side, seeing everything move opposite from the way her head was moving. This also gave her a great deal of benefit. She had had a month's treatment when I noticed that the upper lid of her left eye was beginning to move, and that the inflammation, which caused Sarah so much discomfort, had almost entirely disappeared. Her vision stayed about the same, left 10/15, right 10/10.

At each visit, we went through the usual treatment of seeing things move opposite, as she held her left forefinger to the left side or in front of her face. I sat before Sarah, going through the treatment with her, to encourage her to keep it up. During a period of eight weeks of this practice, her facial expression changed for the better. It was more noticeable when she smiled. When I first saw her, I observed that her mouth used to stretch over to the right side of her face.

Sarah seldom missed a clinic day, and she was very faithful in her treatment at home. Within a year's time, she became able to smile with her mouth almost straight. I decided to try out a few ideas of my own, and suggested to her that a mirror might be of benefit in helping her to speak and smile, with her mouth held straight all the time. This would help her to watch her mouth while she was talking or studying her lessons. I told her to go into a room by herself and practice for at least an hour every day. She was to study her lessons and recite poetry out loud, while looking at herself in the mirror. She was to see how straight she could keep her mouth during the performance.

As Sarah did not like palming, I had difficulty in getting her to imagine things perfectly with her eyes closed. I asked her to remember, while at school, how she appeared while looking in the mirror reciting her lessons. I was amazed at the result, and so were Sarah's friends, as well as herself.

She obtained the imagination of mental pictures by following my directions; for instance, I always asked her to repeat the alphabet very slowly every clinic day. After a while she became able to pronounce each letter of the alphabet with her mouth perfectly straight. She could never do this correctly unless she blinked her eyes for each letter. This may sound silly to the reader, but when Sarah did not blink before repeating a letter after me, she stared, and not only did she say the letter with her mouth crooked, but her left eye would bulge almost out of its socket.

Sarah noticed this wonderful improvement and very often had a surprise for me when she came. One

day we were late for the clinic, but there was Sarah, sitting patiently with the rest, eager to tell me of some wonderful trick she was able to do. When her turn came, she whispered in my ear, "What do you think I can do now? I can wiggle my left ear." It sounded so funny that I wanted to laugh, but' Sarah was serious about it and I dared not. Strange to say, when I asked her to do it for me, before she did the swing, without first closing and opening her eyes, she was unable to move her ear. But when she started to move her head slowly from left to right, and began to blink, she wiggled her left ear, which greatly amused the kiddies awaiting treatment. Two years had passed and Sarah still had hopes that we could cure her, and her mother and father were very grateful because of her improved condition.

On one visit she had a sty on the upper lid of the left eye. When I remarked it, she explained that she had been troubled with sties for many years, and at times they were very painful. I spoke to Dr. Bates about it, and he prescribed eye drops and salve, which gave her some relief, but the sties appeared again from time to time. At my suggestion, Sarah acquired the habit of closing her eyes frequently day or night, while she was awake, and was permanently relieved. She believed, as I did, that rest and relaxation helped in getting rid of the sties altogether.

At school one day, in the corridor, she passed a former teacher who had not seen Sarah for a year or more. She stopped and asked if she were not a sister to Sarah. "Why, no," the girl answered, "I am Sarah." The teacher looked at her in astonishment and said; "I did not know you, dear; your smile is so different, and your left eye looks so much better." Sarah told her about Dr. Bates and his method of curing people without glasses.

This teacher had had progressive myopia for many years, and suffered greatly with her eyes. What Sarah told her did not at the time convince her that she might also be cured, but about six months later sixteen girls from her class-room came to us at the clinic for eye treatment. When she saw that their glasses had been removed from their eyes, and that they had improved faster in their studies, she called to see Dr. Bates at his office. In less than a year's time, she herself was able to see without glasses.

Every clinic day Sarah repeated the letters of the alphabet faithfully, until she could say them with her mouth perfectly straight. Then one day she had another surprise for me,—for the first time in her life she had learned to whistle with her mouth straight! What a wonderful stunt that was for Sarah. This she could not do unless she first practiced the swing. Rest or relaxation always relieves tension of the body as well as the eyes. I wish to emphasize the value of rest and relaxation, obtained by the swing and by blinking, in relieving or curing all diseases of the eye, no matter what the cause may be.

My experience in the treatment of this case demonstrated that many popular theories of the cause of paralysis of the motor nerves are wrong. For example, it is generally believed that when a motor nerve ceases to function properly, the recovery cannot take place until some disease or organic condition is relieved. Sarah became able to close her eyes quickly almost completely, after practicing the swing, which she could not have done if the paralysis of the nerves had been of a permanent nature.

I am aware that cerebro-spinal meningitis is caused by a germ, which is an important factor in the destruction of the nerves controlling the muscles of the eye and face. I do not think that anybody will maintain that the swing had anything to do, directly or indirectly, with the germs of the disease, or with the results of the inflammation caused by the germs.

My experience with the treatment of other cases of paralysis of the muscles of the eyes, caused by infection, confirms my belief that the paralysis is not due so much to local changes in the nerves as it is to mental causes. Sarah was pronounced incurable by many prominent nerve specialists. I believe that one reason why local treatment did not help her was because she had no trouble with the nerves sufficient to produce the paralysis. The only treatment which helped her was mental relaxation obtained by the swing. It was the strain of her mind which produced all the symptoms of paralysis. When her mind was at rest she suffered no more trouble.

CHAPTER VIII

CATARACT

CATARACT - Cases Nos. 1 and 2

MANY times I have been asked, "Is it really possible to cure cataract by Dr. Bates' method?" I can prove that it is. In the March, 1920, number of "Better Eyesight," I wrote about a case of cataract under treatment at the Harlem Hospital Clinic. This case was a woman, seventy-three years old, who was determined to be cured without an operation. In October, 1916, she had visited another dispensary where an operation was advised. The doctors there told her, however, that she must wait until the cataract was ripe before the operation could be performed. Later she heard about Dr. Bates curing cataract without an operation, and tried out the method as well as she could all by herself. In March, 1919, she visited Dr. Bates in his office, and he helped her.

This woman made her living by mending clothes in an orphanage, so we were glad to treat her in the clinic where she did not have to pay. Three days a week she came, no matter how bad the weather was.

On her first visit, she read the forty line at four feet from the test card, then her vision blurred. She knew just what to do, and I did not have to tell her to palm. Just once she peeped at me through her fingers and said, "I'll fool the other doctors yet. My eyes won't have any cataract if I keep this up." She kept her eyes covered for about ten minutes, and when she read the test card again, her vision had improved to the twenty line, or 4/20. On another day she read 5/20. In June, three months after her first visit, her vision had improved to 8/15.

She became able to thread a needle without any trouble and never put on her glasses again. We did not see her during the summer, but she returned again in September of the same year. Her vision had improved to 8/10 with both eyes. I asked her if she had practiced with the test card while she was in the country. Her answer was: "I should say I did."

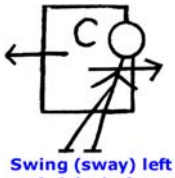
After a year she came to our private clinic. In the room were two school nurses and a young man, who were there to observe the cases under treatment. I was not sure that my dear old lady had retained her improved vision, because I had not seen her for so long a time. I placed the test card ten feet from her eyes, and she read every letter correctly, up to the fifteen line, without the aid of palming. At times she read 10/10, after resting her eyes with the aid of palming and blinking.

The test I made this day was the best, because she read a strange card which she had never seen before. Then I placed her in the sun and gave her the doctor's fine-print card, which she held six inches from her eyes. She looked at me in a funny way, and said, "Oh, I can read that easily." Then to the amazement of the others in the room, she proceeded to read the diamond type.

Some day I am afraid the little lady will get into trouble. Whenever she sees a child in the street wearing glasses, she becomes much excited. One day she stopped two women with a child on the street and found fault with them because the little girl, three years of age, was wearing glasses. "Why don't you take that child to my doctor; he can cure her without glasses!"

Those who know our dear old lady can very well understand her good intentions, but how about the mother and friend of this little girl? They must have thought at first that she was of unsound mind, but they treated her kindly and accepted the "Better Eyesight Magazine", which she offered them.

We had another case of cataract under treatment at the clinic, a man sixty-three years old. When he first came, he had to have someone lead him. After his fourth visit to the clinic, he was able to travel by himself.



Swing (sway) left and right in front of the card. Flash the letter C. Notice the card moves in the opposite direction.

When Dr. Bates examined him with the retinoscope on the first day, he could see no red reflex in either eye. I gave him a test card which he held very close to his eyes, and after he had palmed for a little while and imagined that he saw the test card moving opposite to the movement of his body, he could make out the big C of the card at two inches from his eyes, but it looked very much blurred to him. Before he left the clinic that day, he was able to read several lines of the test card, and the letters cleared up, a result which, of course, gave him a great deal of encouragement. What helped him so quickly was his certainty that we could improve his sight. He did exactly as he was told. Keeping up a steady swing of his body, slow and easy, without any effort, stopped the staring. Palming, and imagining that his body was moving, were also a rest and relaxation.

After he had been coming for a month or more, he was able to read all the letters of the test card, as he held the card very close to his eyes. Three months later he was able to read the large letters of the card two feet away, and the ten-line letters of the bottom line at three inches from his eyes. Whenever

he came, which was every Saturday morning, he had something encouraging to tell us. The signs in the subway, cars, and on the street grew clearer and more distinct. He was able to dodge people in a crowd. At the present time, even people with normal vision have to be careful to avoid injury both in the street and in the subway.

On his last visit he read very fine print at three inches, and saw the fifty-line letters more than a foot away. His vision improved by practicing with print even finer than diamond type. Throughout the treatments his jolly disposition proved an asset.

It is a great relief to be able to say to a clinic patient when he first comes to us: "You are welcome here for treatment, no matter where you live." Each district has a free hospital, and those who live in another district are not admitted: At the Harlem Hospital Clinic, the authorities turned away many poor souls who needed treatment for their eyes. While it was pitiful, it was necessary, because we could not take care of them all.

CATARACT - Case No. 3

A friend of mine once asked me if I ever got tired of clinic work, of treating obstinate cases. No, indeed, I do not. The harder a case is to benefit, the better I like the work. I never tire of my patients, though I get tired myself.

Mothers of the clinic are restful to me. I love to treat them. To see tenderness, expressions of love, come to their faces always brings a perfect mental picture of the Madonna to my mind. When Mother Jones comes, she gives me that picture.

Her first visit was on November 1st, 1924. She brought with her a note written by her pastor, stating that as Dr. Bates had cured many of his friends, he was sure we could do something for Mother Jones. Her age was sixty-seven and she was troubled with cataract in both eyes. Her vision had become defective about four years ago. Dr. Bates' examination with the ophthalmoscope showed a red reflex in the right eye, but none in the left.

After Dr. Bates had left the room, Mother Jones began to talk. As long as I live I shall always remember the sound of her voice. When I compared her with the Madonna, I was not trying to give the impression that Mother Jones is beautiful of face or form. She is of the ordinary motherly type. But the impression one receives while looking at her, listening to her tender voice, suggests something holy. She did not know of anyone who had been benefited by the Bates method, but her pastor had sent her, and that was recommendation enough. She is very poor, but her son and family are taking care of her. When I told her that the only way for her to be cured was to practice faithfully every day and to do exactly as she was told, she promised to do her part. When I tested her sight with the test card, she read 10/70 with both eyes together. Her vision with the right eye was 10/70, but she could not see the card at all with the left eye at ten feet.

She was instructed to palm and to think of something pleasant, something easy to remember. I left her by herself for about ten minutes, and when I returned she had not stirred, and her eyes were still covered with the palms of her hands. I told her to keep her right eye covered, but to open her left eye and tell me what she could see. I held the test card five inches from her left eye, and at that distance she saw the 200-line letter C. She sighed with relief when she discovered that her left eye was not really blind, but was made so by strain and tension. In this short time the benefit she received from palming proved to her that her cataract was caused by strain.

I placed her in the sun, and while her eyes were closed, I used the sun-glass on her eyelids. I could see her relax, and she smiled as she felt the warmth of the sun's rays. I led her back to her chair and told her to open her eyes and read the test card. Her vision had improved to 10/30, reading with both eyes. She was instructed to practice ten minutes many times every day, alternately palming, blinking, and flashing letters on the test card.

Mother Jones came once a week without missing a treatment, and each time her vision improved, with but two exceptions, when it remained the same as on the previous visit. On her second visit she read 10/30 after palming, and on the third treatment 10/20.

This dear mother appreciated the sunshine more than any cataract case I ever had. On dark and rainy days, she was always despondent and nervous, but the sound of her voice never changed. Once when she failed to appear for treatment, I feared she was ill, and I worried about her. I had noticed that her clothes were none too warm for the cold days, and thought perhaps that was the reason for her absence.

While I was reflecting upon my bank account, I received a letter from a private patient who is also

one of my adopted mothers. She comes from Ohio, where I have many friends. Her gratitude for the benefit she received from Dr. Bates prompted her to send a sum of money to be used in making my clinic family happy. A poor mother with a big family, dear old "Pop," who lives in a home for the blind, and Mother Jones shared in the loving thoughts of my mother from the West.

Mother Jones soon returned to thank me for the gift and to explain why she had been absent,—her son had become a father, and both the mother and baby were doing finely. After I expressed my congratulations over this great event, I produced a test card which she had not seen before, and placed it ten feet from her eyes. Some of our readers may doubt it, but I do believe that the little stranger had something to do with the improvement in the vision of her grandmother. She read 10/20 with her left eye.

Soon afterward, I was called upon to take charge of our private practice, because of the illness of Dr. Bates. Captain Price of London, who is practicing the Bates system successfully in his country, was in our office at the time and offered to help me and my assistant, Miss Mildred Shepard. I placed Mother Jones in his care. His record of her improved vision showed on February 7, 1925, right vision of the white C card, 10/20; left vision, 10/20. At her second treatment by Captain Price, her right vision was 10/15, left vision 10/15, when reading white letters on black card.

Ophthalmologists would certainly appreciate this record, if they would only study and practice the Bates system. What further proof is necessary to convince those of pessimistic minds that our method of curing people without glasses is a purely scientific one?

Mother Jones is still under treatment, but it will not be long before she will enjoy normal sight. She tells everyone how much better she sees and feels, since she has learned how to relax and relieve her eyestrain.

CATARACT - Case No. 4

Another interesting patient was a man, aged forty. On his first visit I found him palming, which was an unusual thing for a stranger to do. He evidently thought that if covering the eyes with the palms of the hands was good for others, it might help him also. I stood before him and asked: "Can I help you?"

He paid no attention to me whatever, and I soon discovered that he was quite deaf; so deaf that one had to raise the voice considerably to make him hear. When at last I succeeded in making him understand me, he asked: "Is it possible that you will be able to do anything for me?"

I answered: "I am going to try, with your help."

Then I said I wanted to know something about the history of his case, and this is what he told me:

At the age of six he fell down a flight of stairs, and struck his forehead on a newel post, severing an artery in the head. Later, when it was noted that his sight was deficient, physicians attributed the condition to this fall. During the thirty-four subsequent years he had been treated by many New York physicians, both at their offices and clinics. During that period he had been blind three times, and surgical treatment had been repeatedly necessary. As a boy he could never see a blackboard at school and could read but little. Between his twenty-first and thirty-fifth years his sight had been steadily declining, and several doctors had told him that this would continue until he became completely blind. He was now practically blind in one eye so far as useful vision was concerned. I tested his sight and found that he could count his fingers at about three feet with the right eye, and with the left he could see only the movement of his hand. Dr. Bates examined him, and found that he had an inflammatory cataract in the left eye, together with other inflammatory conditions.

I told him to palm again, and he complained that he saw all sorts of bright colors when he covered his eyes with his hands, and that these disturbed him very much. I directed him to remove his hands from his eyes and look at the large letter C on the test card, which I held a foot away from him. After he had tried a few times his vision improved, and he was able to remember the letter with his eyes closed; then the bright colors faded away, and after palming for fifteen minutes his vision improved from 1/200 to 1/50 in the right eye, while with the left he became able to count my fingers at three feet. The next clinic day he read 3/30 with the right eye and 1/10 with the left, while at the end of two weeks the vision of the right eye was 3/10 and the left 3/70. At the same time his general health was so much better that he asked me if I had time to let him tell me about it. I replied that I should be very glad to hear the story.

"For many years," he related, "I have suffered from insomnia, and in recent months it has been nothing unusual for me to remain awake the entire night. Frequently I stayed up all night, realizing the futility of trying to induce sleep. A short time ago this happened twice in a single week. When I did

sleep, my slumber was very light and disturbed by the wildest imaginable dreams—fires, murders, hair-breadth escapes. As a result of the insomnia and eyestrain I frequently had splitting headaches, sometimes every day, and sometimes even twice a day. From these I could secure relief only by the use of what I knew to be harmful medicines. Since I came to you I have been sleeping very much better, the dreams have become less disturbing, and the headaches have practically ceased."

Hearing this, I was encouraged to try to do even more for him, so I handed him a test card, and asked him to look at a small letter, close his eyes and remember it, and then imagine it blacker and clearer than he saw it. He was able to do this, and the constant twitching of his eyelids ceased. For a moment I forgot that he was deaf and said in an even voice:

"How do your eyes feel now?"

He heard me, and answered:

"They feel so rested just now I do not feel that I have eyes at all, but am seeing without them."

(Headaches, ear ringing, deafness, insomnia, nightmares, blur cured)

He came three days every week for three months, and then as he improved, he came less frequently. When I last saw him he was able, with his left eye, to read 3/10 at times, and with his right 5/10, while his hearing had improved so much that I was able to talk without raising my voice much above my ordinary conversational tone. At the same time he had been relieved of head noises, including a drumming in the ears, which, he said, had often continued from three to ten days. When he first came he could not go about alone, and walked like an intoxicated person. In the beginning when he left the clinic, I noticed that he bumped against the benches, and he told me that the condition had been attributed by physicians whom he had consulted to incipient locomotor ataxia. After his first visit, however, he never bumped into the furniture, and before he left us his walk was almost normal.

CATARACT - Case No. 5

An old mammy, who remembered the Civil War very well, but did not remember when she was born, had cataracts in both eyes. Her condition was so bad in the beginning that she could not see anything on the test card beyond three feet with either eye. When she was told to palm, she looked around the room, observing several patients who were palming, and then remarked:

"Good Lor', ma'am, dis here room looks like a prayer meetin', and beleeb me, Ah's ready to join in, too."

Eyestrain causes cataract, palming cures cataract.

Her vision improved at the first visit to 10/200, and in flashes she read 10/100. This amused as well as pleased her, and she would have it that palming, alone, did not improve her vision. She was sure I had done something mysterious to her, while she had her eyes closed, which caused this wonderful miracle. No amount of explaining to her would make her understand that eyestrain, which caused her cataract, was lessened by palming. Every clinic day she was there without fail, and her vision improved to 10/30. She had been coming to us for several months.

She had the saddest-looking eyes, and even when she smiled, she looked sad. I found out after we became acquainted, that she had a reason for her sadness. The story she told me was almost unbelievable, but I shall repeat just what she said:

(Black slave lady gives birth to baby. Baby is born with the same scars the mother has on her body from the slave owner's whip.)

"You know, ma'am, a long time ago Ah had a master, and he was good and kind. Den came a new master, and he was bad to de help. Dey was twenty ob us in help, and we did work on de plantation. After a while Ah was sick, and was becomin' weary, 'cause a li'l stranger was on de way. De sun was hot in de fields, ma'am, an' mah back was achin' powerful bad. De old master would sure hab sent me to bed, but de new one he just tells me to get a move on. One day Ah felt so bad an' hungry dat Ah falls down on mah knees. Ah jes' couldn't get up. De master beat me wid a lash right before de oder niggers to teach dem a lesson, and said Ah was jes' lazy. When mah little boy was born, he did hab de stripes ob de lash on his back de same as was on mah own back. One night Ah ran away wid mah baby, an' this was jes' before de niggers was freed bah Lincoln."

I wondered if my mammy had been told the story of Uncle Tom's Cabin, or if her story were partly true. She looked very old, and I judged, as did Dr. Bates, that she was about eighty years of age. It was remarkable what a good memory she had for some things. I asked her several questions on different days to confuse or to test her, but she was always correct in her answers.

She continued with the treatments until she became able to thread her needle without glasses, and then she stopped coming.

CATARACT - Case No. 6

An old-fashioned mammy negress, aged seventy-two, was being treated for cataract in both her eyes. An operation was advised, but she was fully convinced that we could help her so that she would not need an operation. At first she could just make out the seventy line of the card with each eye at ten feet. The first treatment improved her vision to 10/40. She was directed to do a great deal of palming and swinging every day, and a week later she read 10/20.

Incidentally, I can prove that eyestrain caused her cataract, for one day she was sufficiently relaxed to read some of the letters on the bottom line of the card, 10/10 temporarily. It was a joy to talk to her, because she was clean and neatly dressed. Her manner was apologetic, and she was grateful for the benefit she received. Another day I noticed that her eyes were swollen from weeping. She was eager to please me, and started to read the card, without success. She turned towards me and said: "Ma'am, I cannot read. The card is all blurred, and I cannot see one letter clearly." Then she began to cry softly, and told me her trouble.

"Many nights I have not slept," she said, "because my son was sent to prison. He is not bad, but he got into mischief."

She loved her boy very much, so she did not tell me the nature of the trouble. But oh, how she strained and suffered for him! I wish I could have told him all about it; I think he would have been sorry. While she palmed I comforted her and reminded her that everything might be much worse. She was under a tension all the while she palmed, but after a while she became more calm and I saw her relax. As she again removed her hands from her eyes to read the card, she exclaimed with relief:

"My, how the letters clear up! What did you do to me? I feel so much better now."

I told her that she did it all herself. At each visit she showed a little more improvement, until she soon became able to read and sew, and to read very fine type at six inches, in a poor light, as well as in a bright light. In less than one year the opacities of the lens disappeared.

Reading fine print in the sunlight and dim light, with relaxation, without strain cures cataract.

CATARACT - Case No. 7

AUNT MARY

For a year I have been treating a woman, aged sixty-eight, who has cataract in both eyes. In the beginning, I saw her about once a week, then later, I treated her less frequently because I had so little time. She lives with her sister and family in the country and every one who knows her, calls her Aunt Mary. She has all the reason in the world to be depressed or unhappy, because, with the exception of just a few years, she has been a cripple all of her life. Yet Aunt Mary greets you with a smile and makes you understand that she is happy.

A few years ago, her sight began to trouble her, and she was examined by an eye specialist. He said that cataract was beginning to form in each eye, and that nothing could be done until they became ripe, when she was to be taken to the hospital for an operation. Then I was consulted by her family and asked to call at her home and examine her eyes. With the retinoscope, I saw a clear, red reflex in the right eye, but none in the left. It was evident that her trouble was caused by strain, and her condition was becoming worse because she worried about the outcome.

We placed her in a comfortable chair in the garden where the sun was shining, and fastened a white test card on the trunk of a tree. As she looked at the card, she began to squint, because the bright light bothered her. Teaching her to blink often, helped her to look at the card with less discomfort. She could read 10/200 with the right eye and 1/200 with the left, which means that at ten feet the only letter she could see with the right eye was the large letter C on the top of the card, and with the left eye, she could not see it further than one foot. With some difficulty, Aunt Mary was able to raise one of her arms, so that she could cover her eyes with her palm. She had a good imagination, so while her eyes were covered, we talked about various kinds of flowers she had seen. We also talked of white clouds and a blue sky. As I mentioned one object after another, her mind did not dwell on one thing very long. I spent about an hour with her the first day, and her vision in that time improved to 10/40 with the right eye and 10/200 with the left. Improving her imagination of things she had seen, with eyes closed as

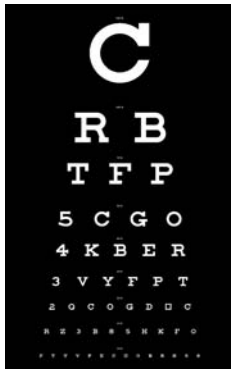
well as with them open, was the only method I used that day.

There was quite an improvement in her eyes when I saw her again. The vision of her right eye improved to 10/30 and 10/70 in the left. It was impossible for her to stand and swing, so I placed myself before her in an arm chair, moved my body and head to the right, then to the left with a slow movement, and asked her to do the same. While we were doing this, I could not understand why she did not see nor imagine things about her moving opposite to the direction in which her head and eyes were moving. Then I noticed that she was staring while trying to follow my directions, even though she was blinking. It did not take her very long to learn how to shift her eyes, and after that she made steady progress.

Dr. Bates became interested in Aunt Mary's case and offered to call with me the next time I treated her. He examined her eyes with his ophthalmoscope and said there was not enough opacity of either lens to lower the vision. She was very much encouraged when Dr. Bates told her that her cataract had improved. He also remarked about her cheery disposition, and how her faithfulness in keeping up her daily treatment would help greatly in the cure of her eyes.

There is an enclosed porch where she practices on rainy days, or when it becomes too cold to sit in the garden. Her loving family do all they possibly can to make her comfortable, so there is every chance that she will be cured of her eye trouble.

Aunt Mary did not like to practice with the white C card because the white background bothered her and made her strain. She likes to practice with the white letter card on a black background, so we use the black card mostly during the treatment. In her sunny room hangs a picture which is beautifully colored, but she could not see it clearly. She explained that it seemed to be always in a mist. I gave her fine print to practice with, and she has become able to read it at six inches from her eyes in a fairly good light.



Her confidence in me makes me all the more anxious to cure her. In the last few months, she has realized the fact that no operation for the removal of cataract will ever be necessary, if she continues to practice. She surprised me one day by reading 10/20 with both eyes, and after sun treatment she read 10/15. Surely, at this time, if her cataracts were as bad as they were in the beginning, when I first saw her, her vision would not have improved, neither would she have responded to the sun treatment. Recently, I examined her again with the retinoscope, and I saw a red reflex in the left eye, as well as in the right.

A neighbor, who is twenty years younger than Aunt Mary, and has presbyopia or old age sight, was surprised to find out that Aunt Mary had better sight than she had. The fact that her vision was better than a woman so much younger made her anxious to practice more. The last time I visited Aunt Mary, she read the bottom line of the test card at ten feet, or 10/10, with her right eye and 10/20 with the left. She reads the fine print now at all times, also the newspaper and her Bible without any trouble. When she strains to see at the distance, things seem to blur before her eyes, but when she palms and sways her body, as she sits in her chair, the mist clears away, and she sees better.

When I first became acquainted with her, I noticed how difficult it was for her to move about with her crutches. To get up from her chair was an effort. Not so long ago, I offered to help her change her position, but she managed very nicely herself and got up with the aid of her crutches without any effort at all. I believe the constant practice of the body swing has not only improved the condition of her eyes, but also her general condition.

JOCKY

The following report of the relief of congenital blindness Involves not only cataract but disease of the retina with no perception of light. According to the accepted teachings of ophthalmology, there would have been no relief for the child, and he would have been condemned to a life of blindness, a burden to himself, his family, and the state.

It was during the year of 1920 that Jocky, aged three, became my patient. A man and a woman on the last lap of life's journey accompanied him, and I learned later they were his grandparents. His father and mother had died of influenza soon after he was born.

After the doctor had examined the boy's eyes, he asked me to watch carefully to see if the little fellow would follow his hand, as he passed it from side to side close to his eyes. Poor Jocky paid no

attention whatever to the proceedings, for he did not see the hand at all. He could see nothing. He was blind, and had been so from birth. Dr. Bates could not perceive a red reflex in either eye with the ophthalmoscope. Breathlessly the grandmother exclaimed:

"Isn't there any hope at all, Doctor, please? Oh, say there is!" Poor woman! There seemed indeed little room for hope. The pupils of the child's eyes were filled with a white mass plainly visible to the naked eye. Dr. Bates said that before birth an inflammation of the iris and the interior coats of the eyeball must have occurred. This had not only caused the formation of the cataract, but destroyed the sensitiveness of the retina, so that the removal of the cataracts would have done no good. The Doctor did not promise anything—he never does. He always studies each case that comes to him and then directs me what to do. He explained to the grandparents how necessary it was for Jocky to rest his eyes. Then I showed the grandmother how he could do this.

It was not easy for Jocky to rest. He was never still. Every nerve in his body seemed to be straining. But with infinite patience his grandmother taught him to palm and encouraged him to make a game of it.

"Where is Jocky now?" she would ask.

Then he would cover his closed eyes with his chubby hands, shut out all light, and say: "Jocky gone away."

When his grandmother observed that the little fellow was really beginning to see things placed before him, she worked unceasingly with him every day.

Jocky enjoyed playing the game of palming, and the two would keep it up for hours. Even by himself, when he became tired of his other games he would cover his closed eyes with the palms of his hands and journey elsewhere in his imagination. When he removed his hands from his eyes, he could always see better, and this naturally encouraged him to continue the game. He also enjoyed joining hands with his grandmother, or grandfather, and swinging. The practice helped his sight very much. He did not know his letters at first, but his grandmother soon taught him, with the help of the test card.

After a few months of this treatment Jocky had made the most astonishing progress. The area occupied by the cataracts grew smaller and smaller, until one pupil was half clear and the other partially so. Jockey began to go out by himself and to play with other children. At the clinic, after he had palmed awhile, his grandmother would ask him to go and find the good nurse who had been so kind to him when he first came, and he would go straight to her. Then she would ask him to find Dr. Bates and he would go straight to him. This always thrilled the nurses and doctors who were watching. He would also go to a little girl-patient with cross eyes, and the two had great fun swinging together.

Some time later a clinic attendant informed the grandparents that Jocky could not come to the clinic any more, because he did not live in the district of the Harlem Hospital. Our little Jocky, however, was not forsaken on that account. He became a steady visitor to the doctor's office, where he was always made welcome.

No patient who ever attended the clinic was more missed than Jocky when his visits ceased. As he lived a distance away he did not come three days a week, like the other children, but when he was present he was a ray of sunshine. His cunning ways endeared him to everybody, while his wonderful progress inspired confidence in the treatment and encouraged young and old to practice more industriously. He understood what we were trying to do for him, and tried to help us all he could. Whenever he saw Dr. Bates coming towards him, he would put his hands over his closed eyes, and say, over and over:

"Jocky gone away, Doctor. See! Jocky gone away."

CHAPTER IX

BLINDNESS

A BLIND BOY

He was only twelve years old, and blind. His name was Lewis and he was of Jewish birth. If Lewis had been born blind he would not have had so many plans about the future, nor would he have been so sad.

During the month of March, 1923, he was operated upon for mastoiditis. Dr. Bates found with the ophthalmoscope that the boy had atrophy of the optic nerve of both eyes. from the history of the case he believed that the cause of the trouble was probably associated with an abscess of the brain, from a

disease of the left ear.

After an operation for the relief of the brain abscess, a cerebral hernia appeared above and behind the left auditory canal. The hernia was about two inches long by one inch wide, and projected outside the skull to a distance of one inch. The mother told us that for several months before the boy was seen by us the size of the cerebral hernia had not changed. Before the operation and the mastoid trouble, he was a perfectly normal, healthy boy, full of life and hope. I should not wonder if he were planning to be a bank president or a radio expert, from the discussion we had together, after we became acquainted.

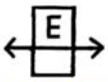
The morning of the boy's first visit to us, a telephone message came from a teacher at the school for the blind, who wished Dr. Bates to see Lewis. The appointment was made and within an hour the boy arrived with his mother. Her eyes were staring at the doctor's face as he examined Lewis' eyes, straining every nerve of her body, fearing the verdict might be, "No more hope." After the examination, Dr. Bates came to my office and told me about the case and asked: "Wouldn't you like to see him? I think you could help him to see again!" It is the faith that Dr. Bates has in me that keeps me going. His encouragement has helped me to benefit cases that would otherwise have seemed hopeless to me.

When I entered the room where Lewis was, I saw a forlorn looking boy sitting all huddled up in his chair, staring out of his sightless eyes. His mother talked a blue streak to me.

"Oi, mine boy that he should be blind! Blees do you dink he can vunce more see? Vun year he vus blind, can see nuttink. Before dat he vus beeg and helty."

Of course the mother heart was crying out for help, and it was pitiable to hear her. I tried to explain that we would do everything possible for her boy, but I could not get a word in edgeways. I closed my eyes for a few moments and prayed for help.

I then spoke to Lewis as though he could see me and placed a test card in his hands, advising him to keep his eyes closed and relax in his chair as much as possible while he was doing this. I told him that it was necessary not to worry nor to think of his blindness. He could think of a sunset, he said, also a white cloud in a blue sky. With just a few minutes of this treatment, he opened his eyes and saw that the card was white.



Move the card side to side, Flash the letters. Rock, Swing, Blink, Sunlight,

I had him close his eyes again quickly and asked him to remember the whiteness of drifted snow. He said he could remember or imagine that he saw the snow, but he could imagine a white cloud much whiter. I said, all right, keep remembering the white cloud, but imagine it is moving. He said he could do that easily. After a half hour or more, Lewis opened his eyes and flashed a big black spot on the top of the card. I said: "If you will move a card slightly from side to side, you will be able to see what the black spot is on the top of the card." Another half hour passed by, both of us doing our best, when all of a sudden my patient said, "It is a letter C!"

Then the mother screamed: "Ach Gott, mine boy sees!" She threw her hands in the air, murmuring all the while that her poor boy could see. Then she became hysterical and disturbed all the patients in the treatment rooms. I placed my arm gently around her and led her into my office, and then we both cried. My heart was with this poor mother, but my thoughts were of the boy, too. We had left him all alone and I was worried. I told her to offer a little prayer of thanks to Him who had heard my plea. I said, "Your God is my God, too, so ask Him to help us." I left her to see what Lewis was doing and I found him faithfully palming his eyes.

Although weary and tired after I had worked with Lewis over two hours, I was repaid a thousandfold when he read every letter of the 70 line and 50 line as he moved the test card slowly from side to side, close to his eyes, blinking all the time. He was instructed to stand and swing his body from side to side to lessen the tension of his body; also to blink his eyes all the time to stop staring; then to practice with the test card, many times a day, moving it slowly from side to side as he flashed the letters of each line on the card.

On his second visit he read the smallest letters on the card, the 10 line, but to do this he had to hold the card so close that it touched his nose. On his third visit he read the bottom line, holding the card an inch or more away from his nose. The sun treatment always helped him, and he was advised to stay in the sun as much as possible. The cerebral hernia, which on his first visit was very much inflamed or red in appearance, had lost most of its redness, and the size of the hernia was less.

On his last visit I placed him in front of a large mirror, and he saw it plainly. He could also see me standing behind him as he looked into the mirror. The sad look in his eyes was no longer there. Lewis informed me that a friend had given him a radio set, which he enjoyed when he was not practicing with the test card. His smile was a treat to see, and his mother was more than grateful because of the hope we had given her in restoring the sight of her boy.

A HOSPITAL PATIENT

During the hot summer days while we were still treating patients at the Harlem Hospital Clinic, a little girl named Estelle, about eight years of age, was brought in and placed in the children's ward. She had met with an accident which destroyed the sight of her left eye. Not being a clinic case, she was taken in charge by another doctor, who came to our room a few weeks later and asked Dr. Bates when he expected to take a vacation.

Dr. Bates answered: "I take a vacation every day. Why do you ask?"

The other doctor answered: "But I am serious; when do you go away for a rest?"

Dr. Bates replied: "When I am treating my patients it rests me, so I don't have to go away. Is there anything I can do for you?"

"Yes," said he. "There is a little girl in the children's ward upstairs, and while I am away I should like to have you take care of her case. When I return I shall remove the injured eye, for it is in bad shape and the sight is completely destroyed."

Dr. Bates agreed to care for the little girl, and asked me to help him. We called on Estelle, and the nurse in charge of the ward led the way to the tiny cot in a far corner of the room. Rows upon rows of cots we passed and on each lay a young child. Some of them were the dearest little pickaninnies imaginable. A number were crying with pain, while others looked wistful.

My heart ached for them in their loneliness, away from their mothers, I glanced at the doctor's face and I could see that he, too, felt sorry for the little ones.

Finally the nurse stopped beside Estelle's cot, and the poor child looked very much frightened as the doctor and I came along. We could see only part of her face because the whole left side was covered with a bandage. Before Dr. Bates could say a word she began to cry and beg the new doctor please not to hurt her, as the other doctor did. The nurse began to remonstrate with her, but the doctor soon quieted her when he promised in his gentle way that he would not hurt her in any way. She stopped weeping instantly when the doctor asked her if she would like to see how really funny she looked in a mirror. Was there ever a girl or woman who did not want to see herself in a glass? Estelle answered: "But I haven't any mirror."

"Oh!" said the doctor, "Mrs. Lierman always carries one in her purse."

I produced it quickly, before the child lost interest. As she held the mirror and looked at her bandaged face, I noticed that the nurse was bored; doubtless regarding this as a waste of time. She had other duties, of course, but Dr. Bates believes in taking his time, and he surely did on this occasion. He directed the child to remove the adhesive plaster herself, and in this way the bandage was removed without discomfort or pain. After he had examined the eye, which was almost healed, he turned to the nurse and asked: "Why on earth is this child kept in bed?" The nurse answered: "Because of the injury to her eye."

"So I see," said the doctor, "but the rest of her body is not sick or injured. Why can't she get up and walk around here?"

The nurse replied: "But I am obeying the doctor's orders."

"All right," said Dr. Bates. "I have charge of her case now, and I think she ought to be out of bed."

Before the nurse could explain that the child would have to be dressed, he put out his arms toward Estelle and she reached toward him with a smile. He lifted her gently out of bed, and as she readily gave him her hand, both walked slowly down the length of the ward. But, coming back, she ran. Of course her steps were uncertain, for she had been in bed for two weeks, and was weak, but she had full confidence in the big doctor who held her hand so tightly. What a funny sight she was, in bare feet, a smile, and practically nothing else. The nurse looked on disdainfully, but I must confess that I giggled.

The other children in the ward became interested in the game of the doctor and Estelle. There was a grand exodus of most of the children from their beds, who were anxious to join in the fun. During this time Estelle was so happy that she screamed with delight, while the other children added their voices to the riot. For fully ten minutes the nurses had a lively time getting their young patients settled again.

Back to the other end of the ward, ran poor little Estelle, with Dr. Bates trotting beside her. Returning, the doctor stopped by a cot where a baby lay swathed in bandages from head to foot. She had been horribly burned. Neither of her tiny hands was free to hold a doll or toy. Over in a corner of the room was a box containing all sorts of toys.

At the doctor's suggestion Estelle produced a dolly from the box and held it up so that the poor baby could see it. Her moans changed to smiles and in an instant two little girls forgot their pain.

To go back to Estelle's trouble. She told us how she had been playing on the sidewalk near her home

when she slipped and fell against the curbstone. A piece of broken glass lay in her path, and it penetrated through her upper closed eyelid and cut the eye so badly that the sight was destroyed completely. Dr. Bates treated the eye later so that it did not have to be removed. Even though she could see out of only one eye, no one observing her would have suspected that the sight was destroyed in the left eye. Both Estelle and her mother were very grateful to us, and at every visit Estelle would fill the doctor's pockets with fruit and candy, which she was eager to share with the big doctor who never hurt her.

SHOCK CAUSES BLINDNESS

On July 16, 1923, we treated a man whose blindness was caused by a sudden shock. As I stood before him and asked him what his trouble was, his eyes looked up toward the ceiling and immediately I knew that he could not see me. He had been sent to us in the hope that Dr. Bates would be able to restore his sight. Previous to his visit on that day, I had received a telephone message from a woman employed by the Compensation Bureau of the City of New York, telling me that he was blind and, in the opinion of eye specialists who had been consulted, incurable. Dr. Bates examined his eyes with the ophthalmoscope and found that he had atrophy of the optic nerve and that he was under a terrible tension.

With each eye separately he could see the 200 line letter of the test card at one foot temporarily. He could do this only in flashes, because he stared continuously, which blinded him. The variable swing improved his vision to 6/200 and his field as well. He came daily to the office for treatment, and on the 21st of July he read 9/20 after he had palmed his eyes for a long time. Sun gazing outdoors helped his vision also. His general depression became less and he informed me that he was feeling much better after each office visit. For a long time he did not have much to say, but after he had become better acquainted with us, he began to talk about his case. He had been working in the moving picture studios for some years, and apparently he had felt no discomfort in his eyes. In describing the accident, he said:

"I was standing on the top rung of a ladder readjusting electrical parts used in the studio for taking moving pictures. At the time there was just an ordinary light, such as is used in most offices. Without my knowing it, a strong Kleig light was suddenly turned on me and I received a sudden shock which caused blindness instantly. I was cared for, as are other employees in the studio, and then was taken home. Since then I have not been able to work. It seemed as though my troubles were multiplied when my little baby boy took sick and died. I had no money with which to bury him until my wife's parents came to our aid. Christmas came, with no hope of Christmas cheer for my other child, a little girl just three years old. We were in debt, but I had planned, when I was able to work again, to pay back the money which was used to bury my baby. My wife tried to console me and make me feel that things were not so bad, but I saw no hope ahead of me on account of my blindness."

We felt it the more imperative that our patient be given all the treatment possible in order to restore his sight, and we worked diligently all through the fall and winter, with good results.

During the month of May we had many rainy days with little sun. This patient demonstrated to us that the sun is necessary for the eyes, for during all the months of almost daily treatment he had not had such poor vision as he had while there was no sun. His vision was lowered to 10/50, and he became very much discouraged. After the sun had shone for a day, he came to the office feeling light-hearted and happy. He was given the sun treatment and immediately his vision improved to almost normal—he could read 10/10 at times. The doctor questioned his ability to dodge automobiles at the crossings. His answer was that he could get along very well on bright days when the sun was shining, but that he still feared the traffic on rainy days. While this conversation was going on, the patient was looking intently at the doctor's face as he stood about three feet away. He did not move an eyelash, but just stared all the while he talked; he had forgotten the very thing that helped him—blinking. All of a sudden he exclaimed:

"Doctor, now as I look at you, you haven't any head."

"No?" the doctor replied. "Seems to me, the other day somebody told me I did have a head. But you never can tell, some people don't always tell the truth."

Immediately the patient apologized and hastened to say: "Oh! but Doctor, when I come close enough to you, I can see that you have a head."

Dr. Bates has always advocated the movies. Whenever a patient stares, he advises him to go to the movies. We owe a great deal to the moving picture artists, for much of their work is done under

unfavorable conditions. The Kleig light, while it is powerful, is not injurious to the eyes of the actors and actresses when their eyes are properly used. Most of them work under a terrible tension, with the feeling that their eyes will be injured by the strong glare. A great many eye specialists no doubt have treated injury to the eyes apparently caused by the Kleig light. The light would be harmless if those who work in the studios could keep their minds relaxed, and if they could also understand and use our method—resting the eyes all day long.


Sun-glass

Dr. Bates discovered many years ago the benefit of strong light on the eyes, and I have seen many patients cured by the sun treatment alone. Some of these cases were seriously affected because of their inability to stand even the rays of the sun. It is curious but true, that this patient was benefited mostly by a magnifying glass which focused the light of the sun on the white part of each eye, as he looked down while the upper lid was raised. At the beginning of his treatment, the mere mention of light would cause him to frown and shrink with fear. Later he enjoyed sitting in the sun all day long. He was grateful for what had been done for his eyes, and insisted upon my writing to two of our most popular actresses of the screen, who were interested in his case.

TWO BLIND GIRLS

ROSALIE

In response to a doctor's request, I agreed to help two blind girls, Eleanor, aged sixteen, and Rosalie, seventeen.

Dr. Bates examined their eyes with the ophthalmoscope and found that Eleanor had myopia in the right eye and atrophy of the optic nerve in the left eye, a condition which is seldom, if ever, cured. Both eyes were badly inflamed.

Rosalie had retinitis pigmentosa in both eyes, and could not count fingers in an ordinary light. In a strong light she could at times count fingers if held close to her eyes. Rosalie would cure anyone of the blues because she wore a constant smile. She had black curly hair and olive skin. I held a conversation with her for a few minutes in order to get acquainted, and also to watch her eyes. The first thing that I noticed was that she stared and kept both eyes open all the while. I did not see her blink once. She had a habit of talking rapidly, and I observed that she moved her eyes from side to side at about the same rate that she spoke. This is called nystagmus. I held the pot hooks card with the letter E of different sizes, pointing in various directions, close to her eyes, and she said I was holding something white before her.

I asked, "Do you see anything else on the card?"

"No," she answered.

Then I placed the palms of her hands over her closed eyelids and told her that this was palming and that it was necessary to remember agreeable things. She said that she could easily remember her music. I could well believe that, because she already had a good reputation as a pianist, having won the district bronze medal, the highest reward she could obtain in her school. After she had palmed for ten minutes, I held the test card close to her eyes and asked her what she saw. She said that the white card was covered with black spots. Quickly I told her to palm again for a short time. After about five minutes she looked at the card again, and this time recognized the large E of the 200 line. We all rejoiced, because the rapid movement of her eyes from side to side had stopped temporarily.

Then I placed the card on my desk about a foot away from her, and had her palm again. When she opened her eyes later she saw the 100 line letters.

The next time she came I placed her two feet away from the card. After palming a short time she read the 70 line letters. She palmed again, and this time her vision improved to 2/50.

The chaperon for the two girls did not realize that it was possible for Rosalie to read the alphabet or to read figures, and, at my suggestion, she taught Rosalie. Her vision improved after six visits to 1/40 for the Pot Hooks, the letter, and figure cards. The nystagmus had disappeared permanently.

ELEANOR

Eleanor's vision with each eye was 3/100. Her vision was improved by palming and the long swing. She could make out figures much easier than letters, so I placed the figure test card at five feet from her eyes. While she was moving her body from left to right, she was told to glance at the figure at which I was pointing. She was cautioned not to look at the figure longer than a second, otherwise she would be tempted to stare, and her vision would be lowered. She practiced this for a few minutes and her vision with both eyes improved to 5/50. Her left eye, which had atrophy, was greatly relieved by the sun treatment.

Every time she came for treatment, which was usually once a week, her vision improved for another line of the test card. Changing cards helped to improve her vision also. After the regular C card was used, we tried the pot hooks card. Eleanor never had anything to say, but did just as she was told. When her vision improved and she became able to read small letters and figures, she would smile and become very much excited. In one week's time her vision improved to 6/20 with both eyes. Then I gave her small type, called diamond type, and asked her to hold it six inches from her eyes. She could see black spots on the little card, but nothing more. I gave her the sun treatment for a few seconds, and she immediately read the fine print.

Later I placed a black card with white letters ten feet away and noticed that Eleanor turned her head over to one side in order to read the letters. The distance of only one foot further caused her to strain while trying to read the strange card. I directed her to swing and blink as she flashed the white letter. In less than a half hour, she read the letters one line after another with her head perfectly straight. She was given the sun treatment about six times in one hour, and was encouraged to read the card after each treatment, and before she left me her vision had improved to 6/15.

I did not see her again for a few weeks, and I feared that she would not get along so well by herself. At her next visit, however, she surprised me by reading all the different cards with which she had practiced, and she held her head perfectly straight. Her vision had improved to 6/10. Eleanor plays the violin and sings. When I guided her in reading the card with her head straight, I always reminded her of her violin and how well she played those selections which she knew. This never failed to improve her vision.

Eleanor and Rosalie left the city and I did not see them again.

DEAR OLD POP
(The Previously Blind Barber)

WHAT PALMING AND EXERCISE DID FOR A BLIND MAN

I hope and trust that my friends will forgive me for not waiting until my patient could see better, or until I was able to accomplish more for him. In this particular case I feel very much like a child, eager to tell all about him even though he was not cured.

During the month of November, 1921, a dear old man came to our clinic, led by a younger man. They had been told by the clerk that the patient could not receive treatment there because he did not live in the district.

However, the nurse in charge did not send him away, but asked him to wait. After all our patients had been attended to, Dr. Bates had a talk with the old gentleman.

Upon examination it was found that he had all sorts of trouble with the nerves and muscles of his eyes. Dr. Bates asked me to examine him and suggest what we could do for him, where we could treat him. There he was, absolutely with no sight whatever, but with a smile that went straight to my heart. As the old man held his head up, waiting to hear what we had to say, I made up my mind to treat him at our office. Every moment of my time is taken up with the work, but there was my lunch hour before the clinic every Saturday that I could devote to his case.

I had not the slightest idea that we could give him even perception of light, for his eyes were in bad shape. No iris whatever nor pupil in either eye was visible. Instead, each eye had a thick, solid-looking white mass where the iris and pupil should be. That day we arranged that he should come to see me every Saturday, and I was to treat him for one hour. I made no promises, but said that I would do all I could for him, if he would do his part and carry out the treatment at home.

His age was seventy-four, and he lived in the Home for the Blind in Brooklyn. He was first stricken

with blindness in the left eye in the year 1889, and the trouble was neuralgia. In 1898 he was stricken with blindness in the right eye after suffering with chills and fever. From 1898 he could see slightly with the left eye, until 1920, when his sight gave out completely. He had been treated by noted eye specialists without success.

The first week in December he came to our office and without thinking he said, "I am very happy to see you," and I answered promptly, "And I am happy to see you, also." I found that he was under a terrible tension. The muscles of his arms, especially at the elbows, were so tense that I made up my mind that he must go through some calisthenics with me before we started with the treatment.

I called him "Pop" from the start, and he seemed to like it. Well, you should have seen the poor old fellow throw his hands over his head and try to touch the floor without bending his knees. Of course he got only half way, as his hands just about reached to his knees. Nevertheless, it was a good start. We were very serious in our exercises, and to make it appear doubly so to him, I went through the exercises with him, guiding him as best I could. I taught him how to palm and to swing his body from side to side as I stood before him, explaining that the swing would help him to relax. While holding his hands I reminded him always to loosen up at the elbows. I told him that anyone could see that he was blind because he stared so much. He never seemed to close his eyes, which made his condition worse. So the next thing I taught him was to open and close his eyes often, which we call blinking.

The next time I saw him he was overjoyed. "I have so much to tell you. At times I can see just for a second," he said. "The other day, as I went to the washroom I did not feel for the wash basin, but I saw it and walked over to it. Then in my happiness and excitement my vision left me. Why was that, please?" I answered, "You began to strain and caused your blindness to return." I encouraged him by saying, "Don't worry, you will be able to see more next time when you are able to stop the strain."

Then, to my surprise, I learned that this dear old fellow had been shaving men's faces by the sense of touch. Before he became blind he was an expert barber. He repeats again and again how he shaved a Spanish prince by the name of Don Carlos and also his staff, as well as other notable men.

Next time he came he was even more interesting. He could not wait to tell me how young he felt and how he loved to exercise. He gave me a demonstration of how he could touch the floor with his fingertips without bending his knees. I was just in the act of praising him for his ability to do such a remarkable trick for a man of his age, when all of a sudden there was an accident, and a button went flying to the opposite side of the room. It burst from the back of his trousers as he touched the floor with his fingertips, and poor old "Pop" was more embarrassed than I was.

However, we soon remedied the trouble and started in with our treatment. As he had no perception of light in the beginning, I was quite thrilled when he pointed to both windows of our room and showed me just where the curtains were fastened. Placing him in another part of the room, I was delighted when he pointed with his fingers to a sunbeam shining on the rug. With this progress to encourage me, I worked earnestly to give him his greatest desire—his eyesight. I cannot understand as yet just how he did see, but I noticed that the white mass in front of the iris was not quite so thick as formerly. At another time he told me that while he was shaving a man, he suddenly saw the man's face and that he also saw walking past him, another man, who had entered the room quietly. He told me that at another time as the matron of the home passed out of his room, he asked, "Isn't your gown a blueish gray?" "Yes," she answered, "it is a blueish gray color. Your sight must be coming back."

What poor old "Pop" is most anxious about is that he may have the pleasure of seeing my face some day. But, of course, I merely tell him that he must not hope too seriously to see my face, for it might make him blind again.

There was an air of true refinement about him, and I was always anxious for the hour on Saturdays to be with him and help him.

As I became better acquainted with him, I encouraged him to talk. He was always cheerful when he came and tried to follow me in everything I directed him to do. As he told me a little of his personal affairs, he was very careful not to arouse pity. Even though he lived in the Home for the Blind he felt quite independent. He stated that the only sadness he has had in his life was when his wife no longer wanted him. That was when he lost his eyesight and could not support her. Before she died, she lost all her earthly possessions. All he wished now was to have enough sight to enable him to work and really see the faces of his many friends.

Pop enjoyed standing and swinging his body from side to side, and as his eyes moved with the body swing, he relaxed and got flashes of a black stone he had in his gold ring. He said that the stone became perfectly black to him and then he was able to flash the gold setting. One day he entered the smoking-room at the Home and for the first time since he became blind, he saw the outline of all the men in the room a few feet away from him. I was happy to hear this because heretofore a person had

to be quite close before he could see his outline.

We worked together diligently month after month, hoping that he would surprise me some day and actually see. All things are possible and I have not lost hope. One day he said, "I know I am going to see again, for once in a while I see my whole hand, but it looks like a baby's hand. When I go out in the street, I can see the brass railing attached to our front steps. I can see a man's face now, when I am shaving him, but I see his face a gray color instead of pink or flesh color."

My chief concern was to keep up his interest and encourage him to practice faithfully. In order to earn a few pennies, he caned chairs in the work shop. While doing this work he stared, and that was a drawback, yet I had not the heart to stop him from earning his spending money. After a day of this kind of work he complained of seeing bright colors before his eyes, which indicated that he strained while caning his chairs. For quite a few weeks he was not employed in this way, so he practiced more faithfully than ever. I believe the sun treatment helped very much. This was given him, if it happened to be a sunny day, every time he came to the office. He was placed in the sun and while he was looking down, his upper lid was raised and the sun was focused on the sclera, or white part of the eye with the sun glass. At home, he would place himself in the sun and treat his eyes in the same way, only not with a sun glass. This treatment, in addition to palming and the body swing, helped a great deal.

Then came a wonderful change in his left eye, which in the beginning looked much worse than the right eye. The solid white mass which covered the pupil and iris gradually decreased. The upper part of the iris and pupil became visible in the left eye. The constant twitching of his eyes ceased. If I could have been with him more, and reminded him not to stare, I believe that the relaxation and rest would have restored his eyesight.

Week after week he kept coming, with always the same cheery greeting, "I am glad to see you, Ma'am." I became acquainted well enough with him to say, "Now, you big bluffer, you know right well you don't see me." This remark would always bring a hearty "Ha, ha" from him and then we would proceed earnestly with the treatment.

The last two months of the year 1924 I noticed that he was becoming more feeble, and that he was not so sure of his steps as he walked along with his guide, a boy of fourteen years. Recently he asked me a question which was indeed hard to answer. It was this: "When do you think I will see again? In six months or so?" Before I answered I watched him and thought perhaps that within six months he would be called to his Heavenly Home where there are no eye troubles, so I said, "Well, I don't know for sure, but wouldn't it be great if you would see again in six months?" It would be hard to tell of all the things he has promised me when that time comes. His favorite expression at the office, whenever he suddenly discovered a sunbeam on the carpet was, "Chee Rusalem, dat's great!" Then, in excitement, as his vision faded away the next moment, he asked, "Why don't I keep on seeing?" There was always the same answer, for there was only one reason, strain. When he held the test card five inches from his eyes after palming for a few minutes, he was able to see black spots on the card instead of letters. He showed me the outline of the large black letter C at the top of the card.

One day he exclaimed: "This week the Matron came into my room and while I palmed my eyes, she read something from a magazine to me. I laid down my pipe on a table before I palmed and after she left my room, I forgot all about my pipe. Later on, as I passed by the table, I saw the pipe plainly and picked it up. I called out to my friends in the next room and told them about this wonderful thing. **When I shave a man now I can really see his face sometimes."**

He called me his Shining Light, bless his heart. It thrills me to hear this and makes me want to do greater things.

THE BLIND GIRL

During the month of August, 1922, Dr. Bates and I were extremely busy and had to turn away many patients. A blind girl, aged 25, was waiting with her sister for attention. When I asked what I could do for her, she mentioned the name of a doctor's wife who had been treated successfully for cataract by Dr. Bates. A dozen or more patients who were in the waiting room at the time listened, for she talked loud enough to be heard. She said: "I came with great hope that you might help me to see." She then handed me a note written by the doctor's wife, which read something like this:

"You have benefited so many patients in your clinic, won't you please help this girl if you can? I met her in Prospect Park, Brooklyn, as she sat beside me on a bench, resting."

I am sorry to say that I frowned as I finished reading that note, for I did not see how I could possibly take another case, when I already had more than I could handle. The girl was not eligible for treatment

at the clinic because the authorities there would not allow us to take cases out of the hospital district. I was about to tell her that she would have to come some other time when I was not so busy, but I caught the anxious look in her face,—a look of hope, of faith. I solved the problem quickly and said, "I will take you this minute to our other office and see what I can do for you." At that moment, a gentleman sitting in the room sighed with relief, smiled, and said, "That was fine of you, knowing how rushed you are at present."

I disturbed Dr. Bates long enough to have him examine her eyes and to tell me whether there was any hope of her seeing at all. Dr. Bates said she had microphthalmos in both eyes. She had no red reflex from the pupils. A white membrane was visible in both pupils and the pupils were very small. She could distinguish light from darkness, but that was all. I asked her to tell me when her sight began to fail, or how long she had been blind. What a shock it was to me to hear her say, "I was born blind, so was my mother." What chance had I, if any, to ever help that poor girl to see even just a little of this, God's beautiful world? However, I started right in with the treatment, just as though she had sight. She had so much trouble with her poor eyes that I did not know where to begin. Her eyes moved rapidly from side to side, a condition called nystagmus. She also had a contraction of the throat muscles which caused a great deal of fatigue generally. Here was a big job ahead of me. I told her that I would do my best to help her if she would follow my directions.

Her sister, aged twelve, had normal vision and was called upon to help in the treatment. She proved later on to be a very good assistant. I asked the patient if her sense of touch was all right and she answered yes. Then I gave her an ordinary pin and told her to feel the size of it, then to feel the point and the head. She was told to palm and remember the touch of the pin.

She could remember the touch of the pin very well, she said, even though it was no longer in her hand. I was very much encouraged when, after a few minutes of palming, she removed her hands from her eyes and I noticed that the rapid movement of her eyes had stopped.

But when I asked her a personal question, the movement or nystagmus returned. I then told her to forget the question I had asked, and to cover her eyes again with her hands to rest them. While she was doing this I related what had been accomplished for an old blind man, who was at the present time under treatment. I explained how he once had good sight and now after several years of blindness and great suffering from eye operations, he was beginning to see. I watched my patient closely, and saw that she was interested in what I was saying. Again I told her to remove her hands from her eyes and I noticed the second time that her eyes were perfectly still. Her sister sat close by holding her breath in amazement and in an excited voice said to me: "This is wonderful. Anna has not been able to control that terrible movement of her eyes for years. I feel sure she is going to receive benefit from your treatment and care. I want very much to help you if you will tell me how."

It has always been my greatest desire to carry on Dr. Bates' ideas and methods and to follow faithfully his directions in all cases. I remembered something he said to me at one time. "If you have a pain, find out what causes it and cure the cause." So I felt in this case that perhaps if I could cure the nystagmus and the nervous contraction of her throat, I might be able to do more for her vision. Her sense of touch was good and her memory of the prick of the pin had helped while she rested her eyes. Now I decided to try the swing and see if that would help her throat. I told her to put up her forefinger and to hold it about six inches from her eyes, then to turn her head slowly from side to side toward the right shoulder and then toward the left. I explained to her that even though she could not see the finger, "she could imagine she saw it. She answered me just as I wanted her to, saying, "Oh, I can imagine the size of my finger, and when I turn my head to the right my finger seems to move to the left and vice versa."



I encouraged her to keep on moving her head from side to side and to blink her eyes to prevent staring, which had been a habit since birth. I noticed that after a few minutes or so she settled herself in a more relaxed position as she sat in her chair. Then I called her sister's attention to the fact that the contraction of her throat muscles quieted down until they stopped.

When I handed her a test card and asked her if she could see a letter on the card, she answered: "I cannot read letters, I do not know the alphabet. I can only read and write by the sense of touch with the Brail System." Here was another problem. Of course, there was the test card with large and small E's pointing in different directions, which could be used to test the sight, but I had other plans. I wanted Anna to learn to read and write and give up the Brail System entirely. Her sister was called upon to help. She was directed to cut out of cardboard, letters about the size and thickness of the big C on the test card. Then she was to paint them black and bring them with her the next time she came.

Her sister had good news for me when I saw them again. She had taught Anna some of the letters by the sense of touch. For instance, a letter T had a straight piece of cardboard at the top and another

straight piece through the center. A letter C was round with an opening to the right.

We had made a good start, I thought, on this, her fourth visit. I handed her a test card, blank side up. At first, she could not tell whether there was print on the card or not, because she was very much excited in describing how quickly she was learning the alphabet. This made her nervous and she strained. I got her busy with palming, and while she was doing this I told her a story. I find that all patients enjoy this, especially when they visualize or follow me closely in what I am saying. If I remember a good short story from a magazine, I tell that, or I might cite the case of a patient treated by me who obtained good results.

After Anna had rested and relaxed for ten minutes, I asked her to remove her hands from her eyes and look at the card. She remarked: "It appears all white to me. There seems to be no print on the card at all." I told her she was right. I then turned the card right side out, and as she did the long swing of her body, moving her head with her shoulders from side to side and blinking her eyes with the movement of her body, she pointed to the 200 line letter on the card in her hand and said, "That's a letter C."

Can any one imagine the extent of my happiness? For twenty-five years she had been blind, born so, and never had had more than a slight perception of light. Her sister forgot where she was and screamed, "My sister can see!" Anna and I cried with joy. We did not talk, just held each other's hands, I whispered to her ear,

"Anna, thank God with me, will you?"

"Yes, you bet," says she, "I'm doing that now."

We got busy again, and this time I told her to move the card from side to side, and imagine her body swinging opposite. She kept this up for several minutes and then she saw the R and B of the 100 line of letters.



On September 9, 1922, after one month's treatment, her vision had improved considerably for the test card. She had to hold the card about an inch from her eyes in order to see the letters. She was directed to place her finger under the letter which she tried to see, then to move her head slowly from left to right and in this way she saw the letters of the 70 line, one at a time. Before Anna left the office that day she said she had wonderful news for me. While walking in the street with her sister she saw moving objects for the first time in her life. In Brooklyn the trolley cars have an entrance in the center of the car. Anna was able to see this from the sidewalk and when a car passed by told her sister just what kind it was. She actually saw a letter-box fastened to a lamp post, and walked towards it without assistance to place a letter in the box. Later, Anna's sister cut out figures from one to ten, of cardboard, and she learned to distinguish them by the sense of touch.

On September 16, 1922, she began to read the 50 line letters of the test card at one inch from her eyes. The first on that line is a figure five. Anna puzzled over that for awhile and then she said, "The first one does not look like a letter at all; it looks very much like a figure five, sister has made cardboard for me."

I cannot express in writing how happy she felt when she realized that she had seen the figure five correctly. I placed myself in the sun and immediately she saw a beaded medallion on my gown and also remarked how my necklace sparkled in the sun.

The next thing was to teach her colors. As she never had more than a slight perception of light, the difference between bright red and bright green meant nothing to her. One day while walking with her sister, Anna stopped in front of a store where electrical supplies were displayed. In one section of this shop window was an electric heater and in the center of it was a red light. Anna drew her sister's attention to this and remarked, "Isn't that an angry looking thing?" When she related this to me she said, "I can get a pretty good mental picture of Satan now, since I saw that angry light."

By September 30th, she had learned all the letters of the alphabet and all the figures. Her sister patiently taught her various colors, so we had many things to work with in helping Anna to restore her sight. Much of our success in her treatment I owe to her sister Ella.

I had been in the habit of calling Anna my blind girl, or my blind patient, but I had to cure myself of the habit because Anna can now see. Her vision is not normal by any means. No one could expect that, not if one had seen Anna at the beginning of her treatment. People who have had fairly good sight and then acquired cataract and other diseases of their eyes have a fair chance or a better chance to regain normal vision than those who are born blind. I have seen many such cases entirely cured after they had intelligently carried out our treatment. But Anna, who was not only born blind, with cataract, but had

also acquired other diseases, was the greatest problem I ever had. I want to say this for her. If she had not had the faith in me or in my ability to benefit her, I could not have helped her. She always did as she was told. For instance, Anna was caning chairs for a living, a trade at which she could earn at least six dollars a week. But when I told her that she stared and strained her eyes while caning chairs, and that I feared she would be wasting her time and mine if she continued to do this work while under treatment, she gave it up. It was not easy for her to make this sacrifice, because she was renouncing her independence. Her great desire was not to be a burden on her family.

During the months of October and November, 1922, Anna made steady progress. She could read the test card up to the forty line at a foot or so from her eyes, but the smaller letters she read holding the card quite close to her face. She came every Saturday morning, accompanied by her sister Ella as usual. She was then going to the movies, and sitting about fifteen or twenty feet away. She could at times see the heads and faces of people on the screen. She had to keep up the body swing and also to blink constantly, otherwise everything before her became a blank. If she did not keep up the practice all the time, the staring and straining to see always lowered her vision.

During one of her treatments I had three visitors in our office whom I had invited especially to see the progress Anna was making. One of my visitors was a lady who happened to be in our waiting room the day Anna first appealed to me for help. This lady was a school teacher, a delightful person with a great deal of love for others. I placed her at a desk in one corner of the office, the desk separating her from the patient. To her left I placed a young man, a relative of hers who was also troubled with imperfect sight. To her right sat another young man who was at the time under treatment by Dr. Bates.

All objects seen by Anna on the street and elsewhere were viewed under favorable conditions, either in the bright sunlight or under strong electric light. While at the movie theatre, all lights being out, she was able to relax enough to see the objects thrown on the screen. Now, I was anxious to find out how much she could see as she entered the office, where I had purposely lessened the amount of light. As she stood in the doorway, I asked her if the saw anything unfamiliar in the room. Our visitors were perfectly still and intensely interested. Anna began to blink and swing her body from side to side, which was always a benefit to her. She looked about the room and then back again to the right where the visitors were sitting. She smiled and immediately walked unassisted to the desk, and as she kept up the blinking, she leaned over the desk and announced that the center figure was a lady with a light colored waist on,—there were two gentlemen also; one on either side of her. After praising her, I placed her in a chair to palm and rest her eyes for a little while. This was always necessary because in her eagerness to read or tell what she saw, she strained unconsciously and her vision blurred.

Ten minutes later I asked her to follow me about the room and describe what she saw. A Brazilian butterfly, in an oval frame hanging on the wall attracted her and at three feet she was able to see the color of it. As she had never seen a butterfly she tried to tell me what it might be. She remembered that at one time a butterfly had been described to her, so she said it might be one, although she was not sure. The memory of the form of an object explained to her really helped her to see it. She was placed before a mirror and immediately she saw what it was.

When I first saw Anna, I never dreamed that we could accomplish so much. In her home she helps with the housework and picks up things and places them where they belong. She sees the steam from the boiling tea kettle and reads the large head-lines and the next size type in the newspapers. When she first learned to write with crayon for me, she wrote something in a notebook which I hope to have photographed so that those who are interested may see what she learned to do. Perhaps not all blind patients could have accomplished what Anna did. Such an extraordinary mind as she has is very rare. Her cheerfulness, her hope of seeing, helped me to help her. Her smile was with her all the time and her gratitude to me and her faithful sister was unbounded.

She does not come for treatment any longer, but her letter of February 11, 1924, reads:

"My dear Mrs. Lierman:
It pleased me greatly to receive your letter
and I appreciate your interest in me very much.
I am not caning chairs any more, but am taking
a commercial course.
With kindest regards, I remain,
Sincerely,
ANNA BERNARD."

See following pages for index and link to website providing free Bates Method and other Natural Eyesight Improvement training;



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The Cure of Imperfect Sight by Treatment Without Glasses

By

W. H. BATES, M.D.



Dr. William H. Bates
Ophthalmologist M.D.
Eye, Ear, Nose & Throat.
Discovered the Principles
of Eye Function-Natural
Eyesight Improvement

CENTRAL FIXATION PUBLISHING CO.
210 MADISON AVENUE, NEW YORK CITY

Perfect Sight Without Glasses - Title 2nd Publishing of This Book



Dr. Bates original treatments, experiments, writings in his magazines, books are necessary to show, understand the true method, training from the mind of the original doctor.
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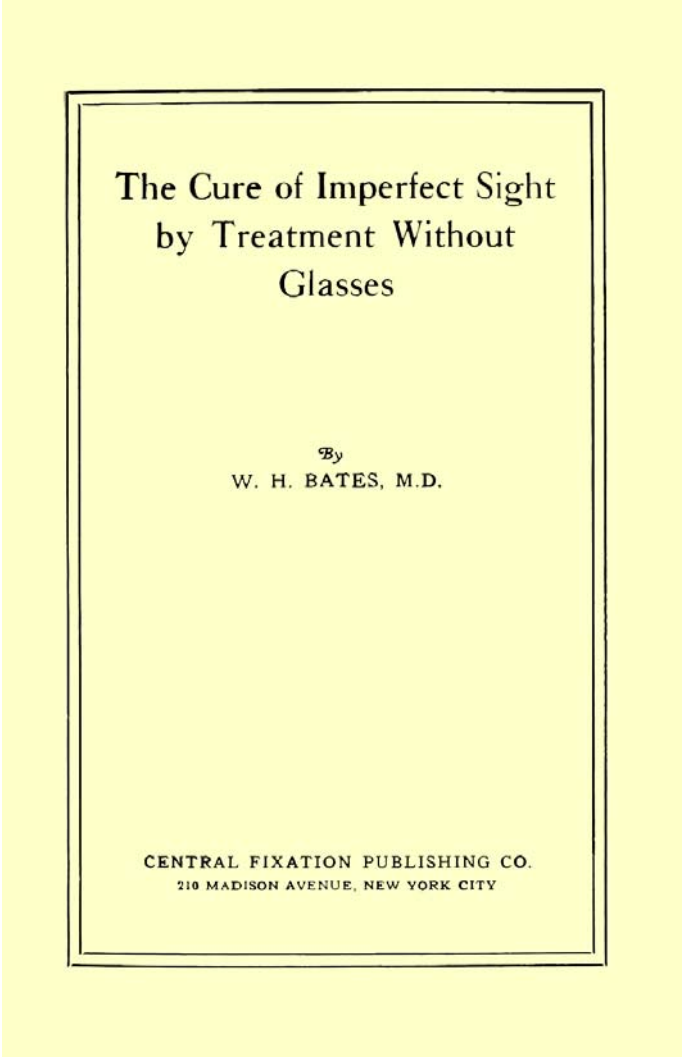
A few old methods taught in the books are removed or improved upon by Modern Teachers, Authors. There are many old, very effective methods in these original books that are not included in the modern books. 'Perfect Sight Without Glasses' and other later versions of Dr. Bates Book do have some spell corrections and additions. See 'Better Eyesight Magazine Illustrated with 500 Pictures' for the Modern Treatments, changes and Dr. Bates Original Antique Magazines, Books.

Blue Print in this book is by Author Clark Night to describe new versions of a few old treatments.



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Ophthalmologist
William H. Bates

Ophthalmologist William H. Bates – Discovered the natural function of the eyes, Natural Eyesight Improvement. He cured thousands of patient's vision without eyeglasses, surgery, drugs; unclear close and distant vision, astigmatism, crossed/wandering eye conditions, amblyopia, cataracts, cornea scars, retinitis pigmentosa and other conditions.

Author of; The Cure of Imperfect Sight by Treatment Without Glasses, Better Eyesight Magazine, Medical Articles. Kindle readers: Contact www.cleareyesight.info mclearsight@aol.com for free PDF E-Book copies of these books.

The PDF book has the Original Printed pages of this book and Better Eyesight Magazine. The PDF version, pictures are clear.

This is Dr. Bates original book. Later editions were changed. Open Eyed Sunning and a few other treatments were left out. Example of new treatment; Sunning (Sun-Gazing) is now done with the eyes closed, but the person can look at the bright sunny sky, away from the sun with the eyes open. Move 'Shift' the eyes. When sunning: Keep the head and closed eyes moving, shifting side to side.

Many Bates Method students prefer his original teachings in this book and in his 'Better Eyesight Magazines'. Sun-Gazing with eyes open is still practiced a specific way: briefly, with eyes, head moving. This is still a controversial activity.

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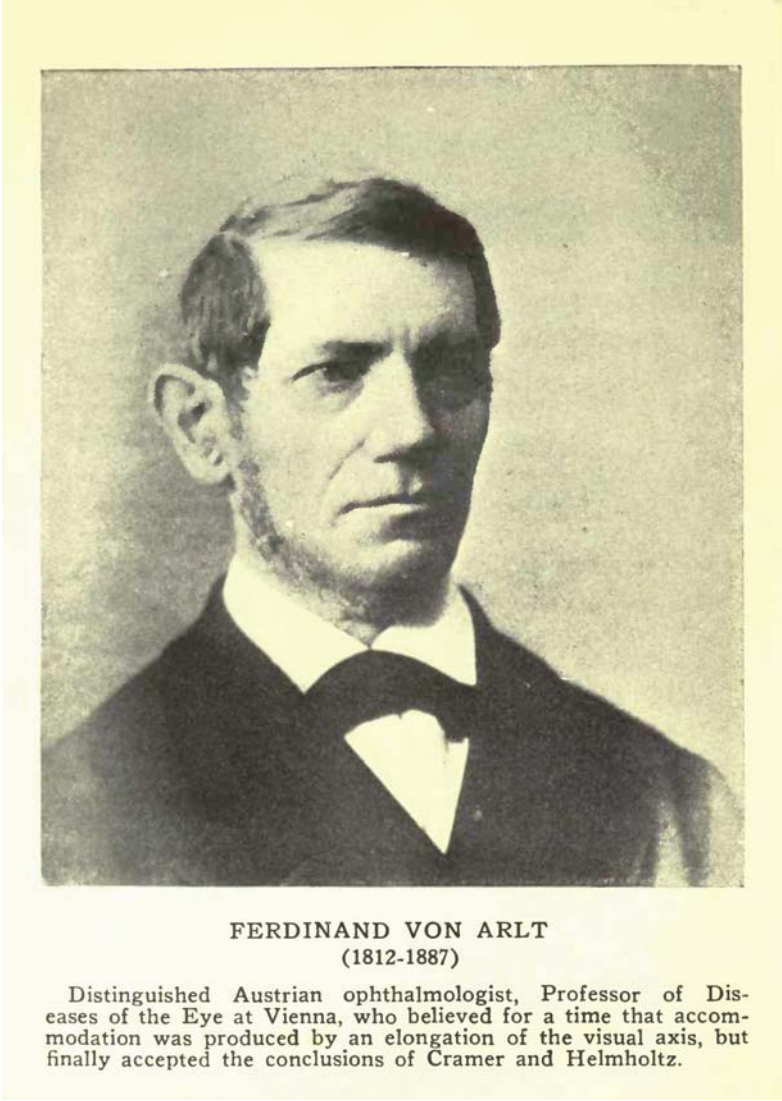
TO THE MEMORY OF THE PIONEERS OF OPHTHALMOLOGY
THIS BOOK IS GRATEFULLY DEDICATED



FERDINAND VON ARLT
(1812-1887)

Distinguished Austrian ophthalmologist, Professor of Diseases of the Eye at Vienna, who believed for a time that accommodation was produced by an elongation of the visual axis, but finally accepted the conclusions of Cramer and Helmholtz.

FERDINAND VON ARLT (1812-1887) Distinguished Austrian ophthalmologist, Professor of Diseases of the Eye at Vienna, who believed for a time that accommodation was produced by an elongation of the visual axis, but finally accepted the conclusions of Cramer and Helmholtz.

On a tomb in the Church of Santa Maria Maggiore in Florence was found an inscription which read: "Here lies Salvino degli Armati, Inventor of Spectacles. May God pardon him his sins.

" Nuova Enciclopedia Italiana, Sixth Edition.

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PREFACE

This book aims to be a collection of facts and not of theories and insofar as it is, I do not fear successful contradiction. When explanations have been offered it has been done with considerable trepidation, because I have never been able to formulate a theory that would withstand the test of the facts either in my possession at the time, or accumulated later. The same is true of the theories of every other man, for a theory is only a guess, and you cannot guess or imagine the truth. No one has ever satisfactorily answered the question, "Why?" as most scientific men are well aware, and I did not feel that I could do better than others who had tried and failed. One cannot even draw conclusions safely from facts, because a conclusion is very much like a theory, and may be disproved or modified by facts accumulated later. In the science of ophthalmology, theories, often stated as facts, have served to obscure the truth and throttle investigation for more than a hundred years. The explanations of the phenomena of sight put forward by Young, von Graefe, Helmholtz and Donders have caused us to ignore or explain away a multitude of facts which otherwise would have led to the discovery of the truth about errors of refraction and the consequent prevention of an incalculable amount of human misery.

In presenting my experimental work to the public, I desire to acknowledge my indebtedness to Mrs. E. C. Lierman, whose co-operation during four years of arduous labor and prolonged failure made it possible to carry the work to a successful issue. I would be glad, further, to acknowledge my debt to others who aided me with suggestions, or more direct assistance, but am unable to do so, as they have requested me not to mention their names in this connection.

As there has been a considerable demand for the book from the laity, an effort has been made to present the subject in such a way as to be intelligible to persons unfamiliar with ophthalmology.

THE FUNDAMENTAL PRINCIPLE

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking ; that you see other words, or other letters, just as well as or better than the one you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principle of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

THE CURE OF IMPERFECT SIGHT BY TREATMENT WITHOUT GLASSES

CHAPTER I

INTRODUCTORY

MOST writers on ophthalmology appear to believe that the last word about problems of refraction has been spoken, and from their viewpoint the last word is a very depressing one. Practically everyone in these days suffers from some form of refractive error. Yet we are told that for these ills,

which are not only so inconvenient, but often so distressing and dangerous, there is not only no cure, and no palliative save those optic crutches known as eyeglasses, but, under modern conditions of life, practically no prevention.

It is a well-known fact that the human body is not a perfect mechanism. Nature, in the evolution of the human tenement, has been guilty of some maladjustments. She has left, for instance, some troublesome bits of scaffolding, like the vermiform appendix, behind. But nowhere is she supposed to have blundered so badly as in the construction of the eye. With one accord ophthalmologists tell us that the visual organ of man was never intended for the uses to which it is now put. Eons before there were any schools or printing presses, electric lights or moving pictures, its evolution was complete. In those days it served the needs of the human animal perfectly. Man was a hunter, a herdsman, a farmer, a fighter. He needed, we are told, mainly distant vision; and since the eye at rest is adjusted for distant vision, sight is supposed to have been ordinarily as passive as the perception of sound, requiring no muscular action whatever. Near vision, it is assumed, was the exception,

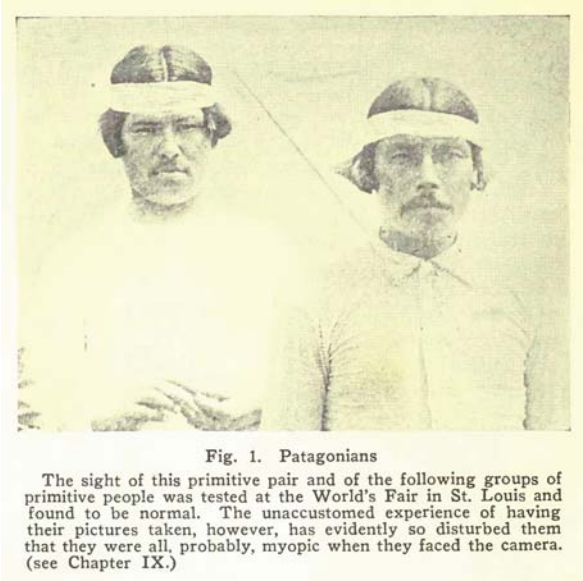

Fig. 1. Patagonians

The sight of this primitive pair and of the following groups of primitive people was tested at the World's Fair in St. Louis and found to be normal. The unaccustomed experience of having their pictures taken, however, has evidently so disturbed them that they were all, probably, myopic when they faced the camera. (see Chapter IX.)

Fig. 1. Patagonians. The sight of this primitive pair and of the following groups of primitive people was tested at the World's Fair in St. Louis and found to be normal. The unaccustomed experience of having their pictures taken, however, has evidently so disturbed them that they were all, probably, myopic when they faced the camera, (see Chapter IX.)

necessitating a muscular adjustment of such short duration that it was accomplished without placing any appreciable burden upon the mechanism of accommodation. The fact that primitive woman was a seamstress, an embroiderer, a weaver, an artist in all sorts of fine and beautiful work, appears to have been generally forgotten. Yet women living under primitive conditions have just as good eyesight as the men.

New Demands Upon the Eye

When man learned how to communicate his thoughts to others by means of written and printed forms, there came some undeniably new demands upon the eye, affecting

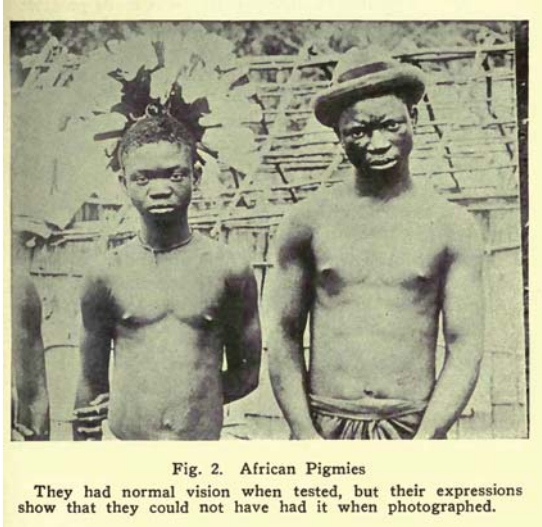

Fig. 2. African Pigmies
They had normal vision when tested, but their expressions show that they could not have had it when photographed.

Fig. 2. African Pigmies. They had normal vision when tested, but their expressions show that they could not have had it when photographed.

at first only a few people, but gradually including more and more, until now, in the more advanced countries, the great mass of the population is subjected to their influence. A few hundred years ago even princes were not taught to read and write. Now we compel everyone to go to school, whether he wishes to or not, even the babies being sent to kindergarten. A generation or so ago books were scarce and expensive. To-day, by means of libraries of all sorts, stationary and traveling, they have been brought within the reach of practically everyone. The modern newspaper, with its endless columns of badly printed reading matter, was made possible only by the discovery of the art of manufacturing paper from wood, which is a thing of yesterday. The tallow candle has been but lately displaced by the various forms of artificial lighting, which tempt most of us to prolong our vocations and avocations into hours when primitive man was forced to rest, and within the last couple of decades has come the moving picture to complete the supposedly destructive process.

Was it reasonable to expect that Nature should have provided for all these developments, and produced an organ that could respond to the new demands? It is the accepted belief of ophthalmology to-day that she could not and did not, 1 and that, while the processes of civilization depend upon the sense of sight more than upon any other, the visual organ is but imperfectly fitted for its tasks.

There are a great number of facts which seem to justify this conclusion. While primitive man appears to have suffered little from defects of vision, it is safe to say that

1 The unnatural strain of accommodating the eyes to close work (for which they were not intended) leads to myopia in a large proportion of growing children. Rosenau: Preventive Medicine and Hygiene, third edition, 1917, p. 1093. The compulsion of fate as well as an error of evolution has brought it about that the unaided eye must persistently struggle against the astonishing difficulties and errors inevitable in its structure, function and circumstance. - Gould: The Cause, Nature and Consequences of Eyestrain, Pop. Sci. Monthly, Dec., 1905. With the invention of writing and then with the invention of the printing-press a new element was introduced, and one evidently not provided for by the process of evolution. The human eye which had been evolved for distant vision is being forced to perform a new part, one for which it had not been evolved, and for which it is poorly adapted. The difficulty is being daily augmented. - Scott : The Sacrifice of the Eyes of School Children, Pop. Sci. Monthly, Oct., 1907.

Military Visual Standards

of persons over twenty-one living under civilized conditions nine out of every ten have imperfect sight, and as the age increases the proportion increases, until at forty it is almost impossible to find a person free from visual defects. Voluminous statistics are available to prove these assertions, but the visual standards of the modern army 1 are all the evidence that is required.

In Germany, Austria, France and Italy the vision with glasses determines acceptance or rejection for military service, and in all these countries more than six diopters of myopia are allowed, although a

person so handicapped cannot, without glasses, see anything clearly at more than six inches from his eyes. In the German Army a recruit for general service is required - or was required under the former government - to have a corrected vision of 6/12 in one eye. That is, he must be able to read with this eye at six metres the line normally read at twelve metres. In other words, he is considered fit for military service if the vision of one eye can be brought up to one-half normal with glasses. The vision in the other eye may be minimal, and in the Landsturm one eye may be blind. Incongruous as the eyeglass seems upon the soldier, military authorities upon the European continent have come to the conclusion that a man with 6/12 vision wearing glasses is more serviceable than a man with 6/24 vision (one-quarter normal) without them.

In Great Britain it was formerly uncorrected vision that determined acceptance or rejection for military service. This was probably due to the fact that previous to the recent war the British Army was used chiefly for

1 Ford : Details of Military Medical Administration, published with the approval of the Surgeon General, U. S. Army, second revised edition, 1918, pp. 498-499. 2 A diopter is the focussing power necessary to bring parallel rays to a focus at one metre.

foreign service, at such distances from its base that there might have been difficulty in providing glasses. The standard at the beginning of the war was 6/24 (uncorrected) for the better eye and 6/60 (uncorrected) for the



Fig. 3—Moros from the Philippines

With sight ordinarily normal all were probably myopic when photographed except the one at the upper left whose eyes are shut.

Fig. 3 Moros from the Philippines. With sight ordinarily normal all were probably myopic when photographed except the one at the upper left whose eyes are shut.

poorer, which was required to be the left. Later, owing to the difficulty of securing enough men with even this moderate degree of visual acuity, recruits were accepted whose vision in the right eye could be brought up to 6/12 by correction, provided the vision of one eye was 6/24 without correction. 1

1 Tr. Ophth. Soc. U. Kingdom, vol. xxxviii, 1918, pp. 130-131.

Lowering of American Standards

Up to 1908 the United States required normal vision in recruits for its military service. In that year Bannister and Shaw made some experiments from which they concluded that a perfectly sharp image of the target was not necessary for good shooting, and that, therefore, a visual acuity of 20/40 (the equivalent in feet of 6/12 in metres), or even 20/70, in the aiming eye only, was sufficient to make an efficient soldier. This conclusion was not accepted without protest, but normal vision had become so rare that it probably seemed to those in authority that there was no use insisting upon it; and the visual standard for admission to the Army was accordingly lowered to 20/40 for the better eye and 20/100 for the poorer, while it was further provided that a recruit might be accepted when unable with the better eye to read all the letters on the 20/40 line, provided he could read some of the letters on the 20/30 line.1

In the first enrollment of troops for the European war it is a matter of common knowledge that these very low standards were found to be too high and were interpreted with great liberality. Later they were lowered so that men might be "unconditionally accepted for general military service" with a vision of 20/100 in each eye without glasses, provided that the sight of one eye could be brought up to 20/40 with glasses, while for limited service 20/200 in each eye was sufficient, provided the vision of one eye might be brought up to 20/40 with glasses. 2 Yet 21.68 per cent of all rejections in the first draft, 13 per cent more than for any other single cause, were for

1 Harvard: Manual of Military Hygiene for the Military Services of the United States, published under the authority and with the approval of the Surgeon General, U. S. Army, third revised edition, 1917, p. 195.
2 Standards of Physical Examination for the Use of Local Boards, District Boards, and Medical Advisory Boards under the Selective Service Regulations, issued through the office of the Provost Marshal General, 1918.

eye defects, 1 while under the revised standards these defects still constituted one of three leading causes of rejection. They were responsible for 10.65 per cent of the rejections, while defects of the bones and joints and of the heart and blood-vessels ran, respectively, about two and two and a half per cent higher. 2

For more than a hundred years the medical profession has been seeking for some method of checking the ravages of civilization upon the human eye. The Germans, to whom the matter was one of vital military importance, have spent millions of dollars in carrying out the suggestions of experts, but without avail; and it is now admitted by most students of the subject that the methods which were once confidently advocated as reliable safeguards for the eyesight of our children have accomplished little or nothing. Some take a more cheerful view of the matter, but their conclusions are hardly borne out by the army standards just quoted.

For the prevailing method of treatment, by means of compensating lenses, very little was ever claimed except that these contrivances neutralized the effects of the various conditions for which they were prescribed, as a crutch enables a lame man to walk. It has also been believed that they sometimes checked the progress of these conditions; but every ophthalmologist now knows that their usefulness for this purpose, if any, is very limited. In the case of myopia3 (shortsight), Dr. Sidler-Huguenin of Zurich, in a striking paper recently pub-

1 Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917. 2 Second Report of the Provost Marshal General to the Secretary of War on the Operations of the Selective Service System to December 20, 1918. 3 From the Greek myein, to close, and ops, the eye ; literally a condition in which the subject closes the eye, or blinks.

Present Methods of Treatment Futile

lished, 1 expresses the opinion that glasses and all methods now at our command are "of but little avail" in preventing either the progress of the error of refraction, or the development of the very serious complications with which it is often associated.

These conclusions are based on the study of thousands of cases in Dr. Huguenin's private practice and in the clinic of the University of Zurich, and regarding one group of patients, persons connected with the local educational institutions, he states that the failure took place in spite of the fact that they followed his instructions for years "with the greatest energy and pertinacity," sometimes even changing their professions.

I have been studying the refraction of the human eye for more than thirty years, and my observations fully confirm the foregoing conclusions as to the uselessness of all the methods heretofore employed for the prevention and treatment of errors of refraction. I was very early led to suspect, however, that the problem was by no means an unsolvable one.

Every ophthalmologist of any experience knows that the theory of the incurability of errors of refraction does not fit the observed facts. Not infrequently such cases recover spontaneously, or change from one form to another. It has long been the custom either to ignore these troublesome facts, or to explain them away, and fortunately for those who consider it necessary to bolster up the old theories at all costs, the role attributed to the lens in accommodation offers, in the majority of cases, a plausible method of explanation. According to this

1 Archiv. f. Augenh, vol. Ixxix, 1915, translated in Arch. Ophth., vol. xlv, No. 6, Nov., 1916.

theory, which most of us learned at school, the eye changes its focus for vision at different distances by altering the curvature of the lens; and in seeking for an explanation for the inconstancy of the theoretically constant error of refraction the theorists hit upon the very ingenious idea of attributing to the lens a capacity for changing its curvature, not only for the purpose of normal accommodation, but to cover up or to produce accommodative errors. In hypermetropia1 - commonly but improperly called farsight, although the patient with such a defect can see clearly neither at the distance nor the nearpoint - the eyeball is too short from the front backward, and all rays of light, both the convergent ones coming from near objects, (Mis-print?: Near objects produce basically divergent light rays) and the parallel ones coming from distant objects, are focussed behind the retina, instead of upon it. In myopia it is too long, and while the divergent rays from near objects come to a point upon the retina, the parallel ones from distant objects do not reach it. Both these conditions are supposed to be permanent, the one congenital, the other acquired. When, therefore, persons who at one time appear to have hypermetropia, or myopia, appear at other times not to have them, or to have them in lesser degrees, it is not permissible to suppose that there has been a change in the shape of the eyeball. Therefore, in the case of the disappearance or lessening of hypermetropia, we are asked to believe that the eye, in the act of vision, both at the near-point and at the distance, increases the curvature of the lens sufficiently to compensate, in whole or in part, for the flatness of the eyeball. In myopia, on the

1 From the Greek hyper, over, metron. measure, and ops, the eye.

An Ingenious Theory

contrary, we are told that the eye actually goes out of its way to produce the condition, or to make an existing condition worse. In other words, the so-called "ciliary muscle," believed to control the shape of the lens, is credited with a capacity for getting into a more or less continuous state of contraction, thus keeping the lens continuously in a state of convexity which, according to the theory, it ought to assume only for vision at the near-point.

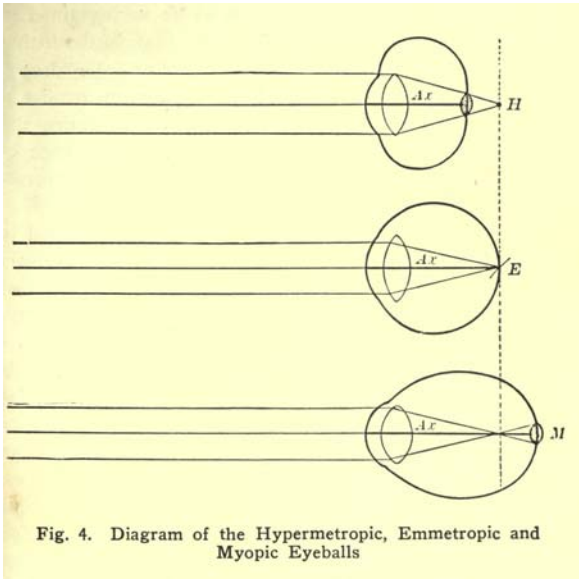

Fig. 4. Diagram of the Hypermetropic, Emmetropic and Myopic Eyeballs

Fig. 4. Diagram of the Hypermetropic, Emmetropic and Myopic Eyeballs. H, hypermetropia ; E, emmetropia; M, myopia; Ax, optic axis. Note that in hypermetropia and myopia the rays, instead of coming to a focus, form a round spot upon the retina.

These curious performances may seem unnatural to the lay mind; but ophthalmologists believe the tendency to indulge in them to be so ingrained in the constitution of the organ of vision that, in the fitting of glasses, it is customary to instill atropine - the "drops with which everyone who has ever visited an oculist is familiar - into the eye, for the purpose of paralyzing the ciliary muscle and thus,

by preventing any change of curvature in the lens, bringing out "latent hypermetropia" and getting rid of "apparent myopia."

The interference of the lens, however, is believed to account for only moderate degrees of variation in errors of refraction, and that only during the earlier years of life. For the higher ones, or those that occur after forty-five years of age, when the lens is supposed to have lost its elasticity to a greater or less degree, no plausible explanation has ever been devised. The disappearance of astigmatism, 1 or changes in its character, present an even more baffling problem. Due in most cases to an unsymmetrical change in the curvature of the cornea, and resulting in failure to bring the light rays to a focus at any point, the eye is supposed to possess only a limited power of overcoming this condition ; and yet astigmatism comes and goes with as much facility as do other errors of refraction. It is well known, too, that it can be produced voluntarily. Some persons can produce as much as three diopters. I myself can produce one and a half.

Examining 30,000 pairs of eyes a year at the New York Eye and Ear Infirmary and other institutions, I observed

1 From the Greek a, without, and stigma, a point.

Orthodox Explanations Fail

many cases in which errors of refraction either recovered spontaneously, or changed their form, and I was unable either to ignore them, or to satisfy myself with the orthodox explanations, even where such explanations were available. It seemed to me that if a statement is a truth it must always be a truth.

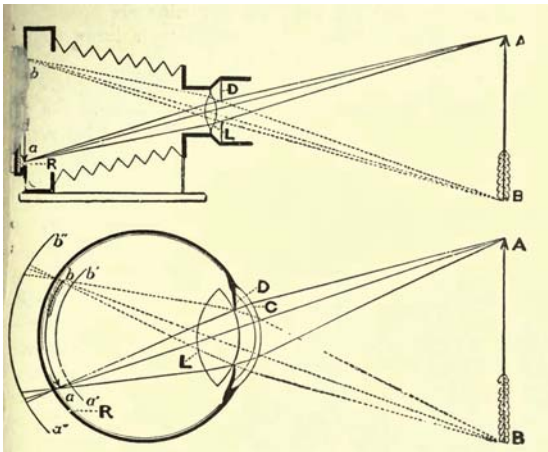

Fig. 5. The Eye As a Camera

The photographic apparatus; D, diaphragm made of circular overlapping plates of metal by means of which the opening through which the rays of light enter the chamber can be enlarged or contracted; L, lens; R, sensitive plate (the retina of the eye ; AB, object to be photographed; ab, image on the sensitive plate.

The eye: C, cornea where the rays of light undergo a first refraction; D, iris (the diaphragm of the camera); L, lens, where the light rays are again refracted; R, retina of the normal eye; AB, object of vision; ab, image in the normal or emmetropic eye; a′ b′, image in the hypermetropic eye; a″ b″, image in the myopic eye. Note that in a′ b′ and a″ b″, the rays are spread out upon the retina instead of being brought to a focus as in ab, the result being the formation of a blurred image.

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There can be no exceptions. If errors of refraction are incurable, they should not recover, or change their form, spontaneously.

In the course of time I discovered that myopia and hypermetropia, like astigmatism, could be produced at will; that myopia was not, as we have so long believed, associated with the use of the eyes at the near-point, but with a strain to see distant objects, strain at the near-point being associated with hypermetropia; that no error of refraction was ever a constant condition ; and that the lower degrees of refractive error were curable, while higher degrees could be improved.

In seeking for light upon these problems I examined tens of thousands of eyes, and the more facts I accumulated the more difficult it became to reconcile them with the accepted views. Finally, about half a dozen years ago, I undertook a series of observations upon the eyes of human beings and the lower animals the results of which convinced both myself and others that the lens is not a factor in accommodation, and that the adjustment necessary for vision at different distances is affected in the eye, precisely as it is in the camera, by a change in the length of the organ, this alteration being brought about by the action of the muscles on the outside of the globe. Equally convincing was the

demonstration that errors of refraction, including presbyopia, are due, not to an organic change in the shape of the eyeball, or in the constitution of the lens, but to a functional and therefore curable derangement in the action of the extrinsic muscles.

The Compulsion of Facts

In making these statements I am well aware that I am controverting the practically undisputed teaching of ophthalmological science for the better part of a century ; but I have been driven to the conclusions which they embody by the facts, and that so slowly that I am now surprised at my own blindness. At the time I was improving high degrees of myopia; but I wanted to be conservative, and I differentiated between functional myopia, which I was able to cure, or improve, and organic myopia, which, in deference to the orthodox tradition, I accepted as incurable.

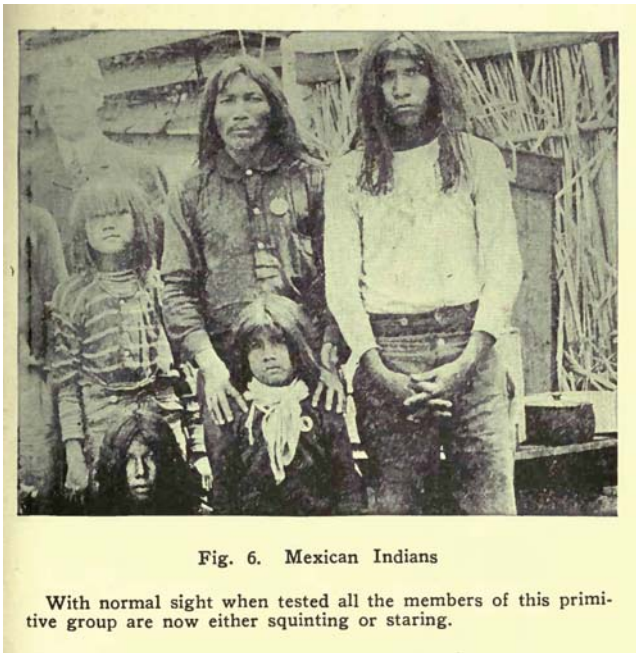

Fig. 6. Mexican Indians

With normal sight when tested all the members of this primitive group are now either squinting or staring.

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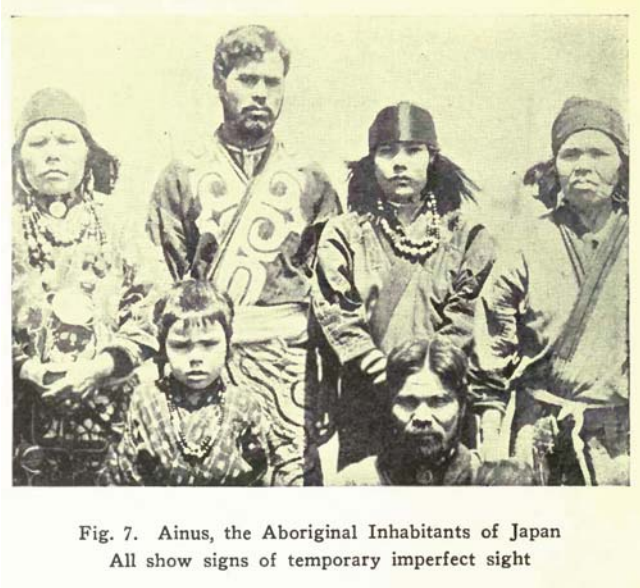

Fig. 7. Ainus, the Aboriginal Inhabitants of Japan
All show signs of temporary imperfect sight

Fig. 7. Ainus, the Aboriginal Inhabitants of Japan. All show signs of temporary imperfect sight

CHAPTER II

SIMULTANEOUS RETINOSCOPY

MUCH of my information about the eyes has been obtained by means of simultaneous retinoscopy. The retinoscope is an instrument used to measure the refraction of the eye. It throws a beam of light into the pupil by reflection from a mirror, the light being either outside the instrument - above and behind the subject - or arranged within it by means of an electric battery. On looking through the sight-hole one sees a larger or smaller part of the pupil filled with light, which in normal human eyes is a reddish yellow, because this is the color of the retina, but which is green in a cat's eye, and might be white if the retina were diseased. Unless the eye is exactly focussed at the point from which it is being observed, one sees also a dark shadow at the edge of the pupil, and it is the behavior of this shadow when the mirror is moved in various directions which reveals the refractive condition of the eye. If the instrument is used at a distance of six feet or more, and the shadow moves in a direction opposite to the movement of the mirror, the eye is myopic. If it moves in the same direction as the mirror, the eye is either hypermetropic or normal; but in the case of Hypermetropia the movement is more pronounced than in that of normality, and an expert can usually tell the difference between the two states merely by the nature of the movement.



Fig. 8. The Usual Method of Using the Retinoscope
The observer is so near the subject that the latter is made nervous, and this changes the refraction.

Fig. 8. The Usual Method of Using the Retinoscope. The observer is so near the subject that the latter is made nervous, and this changes the refraction.

Possibilities of Retinoscopy

In astigmatism the movement is different in different meridians. To determine the degree of the error, or to distinguish accurately between Hypermetropia and normality, or between the different kinds of astigmatism, it is usually necessary to place a glass before the eye of the subject. If the mirror is concave instead of plane, the movements described will be reversed; but the plane mirror is the one most commonly used.

This exceedingly useful instrument has possibilities which have not been generally realized by the medical profession. Most ophthalmologists depend upon the Snellen1 test card, supplemented by trial lenses, to determine whether the vision is normal or not, and to determine the degree of any abnormality that may exist. This is a slow, awkward and unreliable method of testing the vision, and absolutely unavailable for the study of the refraction of the lower animals, of infants, and of adult human beings under the conditions of life.

The test card and trial lenses can be used only under certain favorable conditions, but the retinoscope can be used anywhere. It is a little easier to use it in a dim light than in a bright one, but it

may be used in any light, even with the strong light of the sun shining directly into the eye. It may also be used under many other unfavorable conditions.

It takes a considerable time, varying from minutes to hours, to measure the refraction with the Snellen test card and trial lenses. With the retinoscope, however, it can be determined in a fraction of a second. By the

1 Herman Snellen (1835-1908). Celebrated Dutch ophthalmologist, professor of ophthalmology in the University of Utrecht and director of the Netherlandic Eye Hospital. The present standards of visual acuity were proposed by him, and his test types became the model for those now in use.

former method would be impossible, for instance, to get any information about the refraction of a baseball player at the moment he swings for the ball, at the moment he strikes it, and at the moment after he strikes it. But with the retinoscope it is quite easy to determine whether his vision is normal, or whether he is myopic, hypermetropic, or astigmatic, when he does these things; and if any errors of refraction are noted, one can guess their degree pretty accurately by the rapidity of the movement of the shadow.

With the Snellen test card and trial lenses conclusions must be drawn from the patient's statements as to what he sees ; but the patient often becomes so worried and confused during the examination that he does not know what he sees, or whether different glasses make his sight better or worse; and, moreover, visual acuity is not reliable evidence of the state of the refraction. One patient with two diopters of myopia may see twice as much as another with the same error of refraction. The evidence of the test card is, in fact, entirely subjective; that of the retinoscope is entirely objective, depending in no way upon the statements of the patient.

In short, while the testing of the refraction by means of the Snellen test card and trial lenses requires considerable time, and can be done only under certain artificial conditions, with results that are not always reliable, the retinoscope can be used under all sorts of normal and abnormal conditions on the eyes both of human beings and the lower animals; and the results, when it is used properly, can always be depended upon. This means that it must not be brought nearer to the eye than six feet; otherwise the subject will be made nervous, the refraction, for reasons which will be explained later, will be changed, and no reliable observations will be possible. In the case of animals it is often necessary to use it at a much greater distance.

Retinoscope Reveals New Facts

For thirty years I have been using the retinoscope to study the refraction of the eye. With it I have examined the eyes of tens of thousands of school children, hundreds of infants and thousands of animals, including cats, dogs, rabbits, horses, cows, birds, turtles, reptiles and fish. I have used it when the subjects were at rest and when they were in motion - also when I myself was in motion; when they were asleep and when they were awake or even under ether and chloroform. I have used it in the daytime and at night, when the subjects were comfortable and when they were excited; when they were trying to see and when they were not ; when they were lying and when they were telling the truth; when the eyelids were partly closed, shutting off part of the area of the pupil, when the pupil was dilated, and also when it was contracted to a pin-point ; when the eye was oscillating from side to side, from above downward and in other directions. In this way I discovered many facts which had not previously been known, and which I was quite unable to reconcile with the orthodox teachings on the subject. This led me to undertake the series of experiments already alluded to. The results were in entire harmony with my previous observations, and left me no choice but to reject the entire body of orthodox teaching about accommodation and errors of refraction. But before describing these experiments I must crave the reader's patience while I present a resume of the evidence upon which the accepted views of accommodation are based. This evidence, it seems to me, is as strong an argument as any I could offer against the doctrine that the lens is the agent of accommodation, while an understanding of the subject is necessary to an understanding of my experiments.

CHAPTER III

EVIDENCE FOR THE ACCEPTED THEORY OF ACCOMMODATION

THE power of the eye to change its focus for vision at different distances has puzzled the scientific mind ever since Kepler1 tried to explain it by supposing a change in the position of the crystalline lens. Later on every imaginable hypothesis was advanced to account for it. The idea of Kepler had many supporters. So also had the idea that the change of focus was effected by a lengthening of the eyeball. Some believed that the contractive power of the pupil was sufficient to account for the phenomenon, until the fact was established, by the operation for the removal of the iris, that the eye accommodated perfectly without this part of the visual mechanism. Some, dissatisfied with all these theories, discarded them all, and boldly asserted that no change of focus took place, 2 a view which was conclusively disproven when the invention of the ophthalmoscope made it possible to see the interior of the eye.

The idea that the change of focus might be brought about by a change in the form of the lens appears to have been first advanced, according to Landolt,3 by the

1 Johannes Kepler (1571-1630). German theologian, astronomer and physicist. Many facts of physiological optics were either discovered, or first clearly stated, by him. 2 Donders : On the Anomalies of Accommodation and Refraction of the Eye. English translation by Moore, 1864, p. 10. Frans Cornelis Donders (1818-1889) was professor of physiology and ophthalmology at the University of Utrecht, and is ranked as one of the greatest ophthalmologists of all time. 3 Edmund Landolt (1846-) Swiss ophthalmologist who settled in Paris in 1874, founding an eye clinic which has attracted many students.

Jesuit, Scheiner (1619). Later it was put forward by Descartes (1637). But the first definite evidence in support of the theory was presented by Dr. Thomas Young in a paper read before the Royal Society in 1800.1 "He adduced reasons," says Donders, "which, properly under

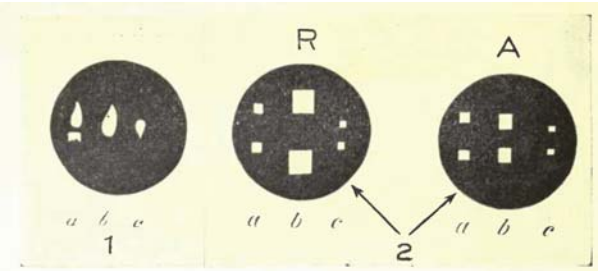

Fig. 9. Diagrams of the Images of Purkinje

No. 1—Images of a candle: a, on the cornea; b, on the front of the lens; c, on the back of the lens.

No. 2.—Images of lights shining through rectangular openings in a screen while the eye is at rest (R) and during accommodation (A): a, on the cornea; b, on the front of the lens; c, on the back of the lens (after Helmholtz).

Note that in No. 2, A, the central images are smaller and have approached each other, a change which, if actually took place, would indicate an increase of curvature in the front of the lens during accommodation.

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stood, should be taken as positive proofs." 2 At the time, however, they attracted little attention.

About half a century later it occurred to Maximilian Langenbeck3 to seek light on the problem by the aid of

1 On the Mechanism of the Eye, Phil. Tr. Roy. Soc., London, 1801. 2 On the Anomalies of Accommodation and Refraction of the Eye, pp. 10-11. 3 Maximilian Adolf Langenbeck (1818-1877). Professor of anatomy, surgery and ophthalmology at Gottingen, from 1846 to 1851. Later settled in Hanover.

Studies of the Images of Purkinje

what are known as the images of Purkinje.[1] If a small bright light, usually a candle, is held in front of and a little to one side of the eye, three images are seen: one bright and upright; another large, but less bright, and also upright; and a third small, bright and inverted. The first comes from the cornea, the transparent covering of the iris and pupil, and the other two from the lens, the upright one from the front and the inverted one from the back. The corneal reflection was known to the ancients, although its origin was not discovered till later; but the two reflections from the lens were first observed in 1823 by Purkinje; whence the trio of images is now associated with his name. Langenbeck examined these images with the naked eye, and reached the conclusion that during accommodation the middle one became smaller than when the eye was at rest. And since an image reflected from a convex surface is diminished in proportion to the convexity of that surface, he concluded that the front of the lens became more convex when the eye adjusted itself for near vision. Donders repeated the experiments of Langenbeck, but was unable to make any satisfactory observations. He predicted, however, that if the images were examined with a magnifier they would "show with certainty" whether the form of the lens changed during accommodation. Cramer,[2] acting on this suggestion, examined the images as magnified from ten to twenty times, and thus convinced himself that the one reflected from the front of the lens became considerably smaller during accommodation.

1 Johannes Evangelista von Purkinje (1787-1869). Professor of physiology at Breslau and Prague, and the discoverer of many important physiological facts. 2 Antonie C. Cramer (1822-1855). Dutch ophthalmologist.

Subsequently Helmholtz, working independently, made a similar observation, but by a somewhat different method. Like Donders, he found the image obtained by the ordinary methods on the front of the lens very unsatisfactory, and in his "Handbook of Physiological Optics" he describes it as being "usually so blurred that the form of the flame cannot be definitely distinguished." [1] So he placed two lights, or one doubled by reflection from a mirror, behind a screen in which were two small rectangular openings, the whole being so arranged that the lights shining through the openings of the screen formed two images on each of the reflecting surfaces. During accommodation, it seemed to him that the two images on the front of the lens became smaller and approached each other, while on the return of the eye to a state of rest they grew larger again and separated. This change, he said, could be seen "easily and distinctly." [2] The observations of Helmholtz regarding the behavior of the lens in accommodation, published about the middle of the last century, were soon accepted as facts, and have ever since been stated as such in every text-book dealing with the subject.

"We may say," writes Landolt, "that the discovery of the part played by the crystalline lens in the act of accommodation is one of the finest achievements of medical physiology, and the theory of its working is certainly one of the most firmly established; for not only have "savans" furnished lucid and mathematical proofs of its correctness, but all other theories which have been advanced as explaining accommodation have been easily

1 Handbuch der physiologischen Optik, edited by Nagel, 1909-11, vol. i, p. 121. 2 Ibid, vol. i, p. 122.

Observations of Helmholtz Accepted

and entirely overthrown . . . The fact that the eye is accommodated for near vision by an increase in the curvature of its crystalline lens, is, then, incontestably proved." [1]

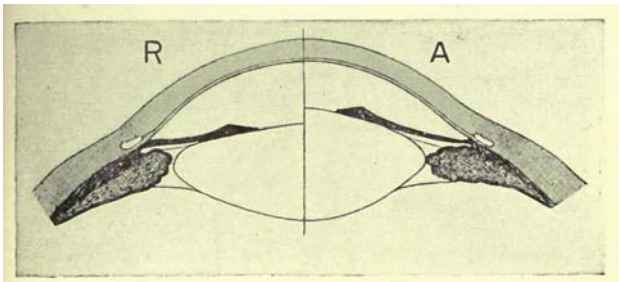

Fig. 10. Diagram by Which Helmholtz Illustrated His Theory of Accommodation

R is supposed to be the resting state of the lens, in which it is adjusted for distant vision. In A the suspensory ligament is supposed to have been relaxed through the contraction of the ciliary muscle, permitting the lens to bulge forward by virtue of its own elasticity.

Fig. 10. Diagram by Which Helmholtz Illustrated His Theory of Accommodation. R is supposed to be the resting state of the lens, in which it is adjusted for distant vision. In A the suspensory ligament is supposed to have been relaxed through the contraction of the ciliary muscle, permitting the lens to bulge forward by virtue of its own elasticity.

"The question was decided," says Tscherning, "by the observation of the changes of the images of Purkinje during accommodation, which prove that accommodation is effected by an increase of curvature of the anterior surface of the crystalline lens."2

1 The Refraction and Accommodation of the Eye and their Anomalies, authorized translation by Culver, 1886, p. 151. 2. Physiologic Optics, authorized translation by Weiland, 1904, p. 163. Marius Hans Erik Tscherning (1854-) is a Danish ophthalmologist who for twenty-five years was co-director and director of the ophthalmological laboratory of the Sorbonne. Later he became professor of ophthalmology in the University of Copenhagen.



Fig. 11. Thomas Young (1773-1829)

English physician and man of science who was the first to present a serious argument in support of the view that accommodation is brought about by the agency of the lens.

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Scientific Credulity

"The greatest thinkers," says Cohn, "have mastered a host of difficulties in discovering this arrangement, and it is only in very recent times that its processes have been clearly and perfectly set forth in the works of Sanson, Helmholtz, Brticke, Hensen and Volckers."1

Huxley refers to the observations of Helmholtz as the "facts of adjustment with which all explanations of that process must accord,"2 and Donders calls his theory the "true principle of accommodation."3

Arlt, who had advanced the elongation theory and believed that no other was possible, at first opposed the conclusions of Cramer and Helmholtz,4 but later accepted them.5

Yet in examining the evidence for the theory we can only wonder at the scientific credulity which could base such an important department of medical practice as the treatment of the eye upon such a mass of contradictions. Helmholtz, while apparently convinced of the correctness of his observations indicating a change of form in the lens during accommodation, felt himself unable to speak with certainty of the means by which the supposed change was effected, 6 and strangely enough the question is still being debated. Finding, as he states, "absolutely nothing but the ciliary muscle to which accommodation could be attributed," 7 Helmholtz concluded that the changes which he thought he had observed in the curvature of the lens must be effected by the action of this muscle; but he was unable to offer any satisfac-

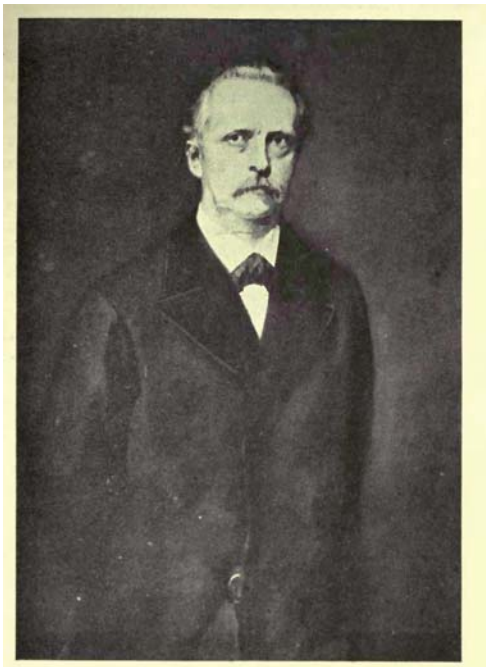
1 The Hygiene of the Eye in Schools, English translation edited by Turnbull, 1886, p. 23. Hermann Cohn (1838-1906) was professor of ophthalmology in the University of Breslau, and is known chiefly for his contributions to ocular hygiene. 2 Lessons in Elementary Physiology, sixth edition, 1872, p. 231. 3 On the Anomalies of Accommodation and Refraction of the Eye,

p. 13. 4 Krankheiten des Auges, 1853-56, vol. iii, p. 219, et seq. 5 Ueber die Ursachen und die Entstehung der Kurzsichtigkeit, 1876. Vorwort. 6 Handbuch der physiologischen Optik, vol. i, pp. 124 and 145. 7 Ibid, vol. i, p. 144.

tory theory of the way it operated to produce these results and he explicitly stated that the one he suggested possessed only the character of probability. Some of his disciples, "more loyal than the king," as Tscherning has pointed out, "have proclaimed as certain what he himself with much reserve explained as probable," 1 but there has been no such unanimity of acceptance in this case as in that of the observations regarding the behavior of the images reflected from the lens. No one except the present writer, so far as I am aware, has ventured to question that the ciliary muscle is the agent of accommodation ; but as to the mode of its operation there is generally felt to be much need for more light. Since the lens is not a factor in accommodation, it is not strange that no one was able to find out how it changed its curvature. It is strange, however, that these difficulties have not in any way disturbed the universal belief that the lens does change.

When the lens has been removed for cataract the patient usually appears to lose his power of accommodation, and not only has to wear a glass to replace the lost part, but has to put on a stronger glass for reading. A minority of these cases, however, after they become accustomed to the new condition, become able to see at the near-point without any change in their glasses. The existence of these two classes of cases has been a great stumbling block to ophthalmology. The first and more numerous appeared to support the theory of the agency of the lens in accommodation; but the second was hard to explain away, and constituted at one time, as Dr. Thomas Young observed, the "grand objection" to this idea. A number of these cases of apparent change of focus

1 Physiologic Optics, p. 166.



Herman Ludwig Ferdinand von Helmholtz (1821-1894) whose observations regarding the behavior of images reflected from the front of the lens are supposed to have demonstrated that the curvature of this body changes during accommodation.

in the lensless eye having been reported to the Royal Society by competent observers, Dr. Young, before bringing forward his theory of accommodation, took the trouble to examine some of them, and considered himself justified in concluding that an error of observation had been made. While convinced, however, that in such eyes the "actual focal distance is totally unchangeable," he characterized his own evidence in support of this view as only "tolerably satisfactory." At a later period Donders made some investigations from which he concluded that "in aphakia 1 not the slightest trace of accommodative power remains."2 Holmholtz expressed similar views, and von Graefe, although he observed a "slight residuum" of accommodative power in lensless eyes, did not consider it sufficient to discredit the theory of Cramer and Helmholtz. It might be due, he said, to the accommodative action of the iris, and possibly also to a lengthening of the visual axis through the action of the external muscles.3

For nearly three-quarters of a century the opinions of these masters have echoed through ophthalmological literature. Yet it is to-day a perfectly well-known and undisputed fact that many persons, after the removal of the lens for cataract, are able to see perfectly at different distances without any change in their glasses. Every ophthalmologist of any experience has seen cases of this kind, and many of them have been reported in the literature.

In 1872, Professor Forster of Breslau, reported 4 a

1 Absence of the lens. 2 On the Anomalies of Accommodation and Refraction of the Eye, p. 320. 3 Archiv. f. Ophth., 1855, vol. ii, part 1, p. 187 et seq. Albrecht von Graefe (1828-1870) was professor of ophthalmology in the University of Berlin, and

is ranked with Donders and Arlt as one of the greatest ophthalmologists of the nineteenth century. 4 Klin. Montasbl. f. Augenh., Erlangen, 1872, vol. x, p. 39, et seq.

Not To Be Deputed

series of twenty-two cases of apparent accommodation in eyes from which the lens had been removed for cataract. The subjects ranged in age from eleven to seventy-four years, and the younger ones had more accommodative power than the elder. A year later Woinow of Moscow1 reported eleven cases, the subjects being from twelve to sixty years of age. In 1869 and 1870, respectively, Loring reported 2 to the New York Ophthalmological Society and the American Ophthalmological Society the case of a young woman of eighteen who, without any change in her glasses, read the twenty line on the Snellen test card at twenty feet and also read diamond type at from five inches to twenty. On October 8, 1894, a patient of Dr. A. E. Davis who appeared to accommodate perfectly without a lens consented to go before the New York Ophthalmological Society. "The members," Dr. Davis reports, 3 "were divided in their opinion as to how the patient was able to accommodate for the nearpoint with his distance glasses on"; but the fact that he could see at this point without any change in his glasses was not to be disputed.

The patient was a chef, forty-two years old, and on January 27, 1894, Dr. Davis had removed a black cataract from his right eye, supplying him at the same time with the usual outfit of glasses, one to replace the lens, for distant vision, and a stronger one for reading. In October he returned, not because his eye was not doing well, but because he was afraid he might be "straining" it. He had discarded his reading glasses after a few weeks, and had since been using only his distance glasses. Dr.

1 Archiv. f. Ophth., 1873, vol. xix, part 3, p. 107. 2 Flint: Physiology of Man, 1875, vol. v, pp. 110-111. 3 Davis : Accommodation in the Lensless Eye, Reports of the Manhattan Eye and Ear Hospital, Jan., 1895. The article gives a review of the whole subject.

Davis doubted the truth of his statements, never having seen such a case before, but found them, upon investigation, to be quite correct. With his lensless eye and a convex glass of eleven and a half diopters, the patient read the ten line on the test card at twenty feet, and with the same glass, and without any change in its position, he read fine print at from fourteen to eighteen inches. Dr. Davis then presented the case to the Ophthalmological Society but, as has been stated, he obtained no light from that source. Four months later, February 4, 1895, the patient still read 20/10 at the distance and his range at the near point had increased so that he read diamond type at from eight to twenty-two and a half inches. Dr. Davis subjected him to numerous tests, and though unable to find any explanation for his strange performances, he made some interesting observations. The results of the tests by which Donders satisfied himself that the lensless eye possessed no accommodative power were quite different from those reported by the Dutch authority, and Dr. Davis therefore concluded that these tests were "wholly inadequate to decide the question at issue." During accommodation the ophthalmometer1 showed that the corneal curvature was changed and that the cornea moved forward a little. Under scopolamine, a drug sometimes used instead of atropine to paralyze the ciliary muscle (1/10 per cent solution every five minutes for thirty-five minutes, followed by a wait of half an hour), these changes took place as before; they also took place when the lids were held up. With the possible influence of lid pressure and of the ciliary muscle eliminated, therefore, Dr. Davis felt himself bound to conclude that the changes "must

1 An instrument for measuring the curvature of the cornea.

Another Puzzling Case

have been produced by the action of the external muscles." Under scopolamine, also, the man's accommodation was only slightly affected, the range at the near point being reduced only two and a half inches.

The ophthalmometer further showed the patient to have absolutely no astigmatism. It had showed the same thing about three months after the operation, but three and a half weeks after it he had four and a half diopters.

Seeking further light upon the subject Dr. Davis now subjected to similar tests a case which had previously been reported by Webster in the "Archives of Pediatrics." 1 The patient had been brought to Dr. Webster at the age of ten with double congenital cataract. The left lens had been absorbed as the result of successive needlings, leaving only an opaque membrane, the lens capsule, while the right, which had not been interfered with, was sufficiently transparent around the edge to admit of useful vision. Dr. Webster made an opening in the membrane filling the pupil of the left eye, after which the vision of this eye, with a glass to replace the lens, was about equal to the vision of the right eye without a glass. For this reason Dr. Webster did not think it necessary to give the patient distance glasses, and supplied him with reading glasses only - plane glass for the right eye and convex 16D for the left. On March 14, 1893, he returned and stated that he had been wearing his reading glasses all the time. With this glass it was found that he could read the twenty line of the test card at twenty feet, and read diamond type easily at fourteen inches. Subsequently the right lens was removed, after which no accommodation was observed in this eye. Two years later

1 Nov.. 1893, p. 932.

March 16, 1895, he was seen by Dr. Davis, who found that the left eye now had an accommodative range of from ten to eighteen inches. In this case no change was observed in the cornea. The results of the Donders tests were similar to those of the earlier case, and under scopolamine the eye accommodated as before, but not quite so easily. No accommodation was observed in the right eye.

These and similar cases have been the cause of great embarrassment to those who feel called upon to reconcile them with the accepted theories. With the retinoscope the lensless eye can be seen to accommodate; but the theory of Helmholtz has dominated the ophthalmological mind so strongly that even the evidence of objective tests was not believed. The apparent act of accommodation was said not to be real, and many theories, very curious and unscientific, have been advanced to account for it. Davis is of the opinion that "the slight change in the curvature of the cornea, and its slight advancement observed in some cases, may, in those cases, account for some of the accommodative power present, but it is such a small factor that it may be eliminated entirely, since in some of the most marked cases of accommodation in aphakial eyes no such changes have been observed."

The voluntary production of astigmatism is another stumbling block to the supporters of the accepted theories, as it involves a change in the shape of the cornea, and such a change is not compatible with the idea of an "inextensible"1 eyeball. It seems to have given them less trouble, however, than the accommodation of the lensless

1 Inasmuch as the eye is inextensible, it cannot adapt itself for the perception of objects situated at different distances by increasing the length of its axis, but only by increasing the refractive power of its lens.- De Schweinitz: Diseases of the Eye, eighth edition, 1916, pp. 35-36.

Voluntary Production of Astigmatism

eye, because fewer of these cases have been observed and still fewer have been allowed to get into the literature. Some interesting facts regarding one have fortunately been given by Davis, who investigated it in connection with the corneal changes noted in the lensless eye. The case was that of a house surgeon at the Manhattan Eye and Ear Hospital, Dr. C. H. Johnson. Ordinarily this gentleman had half a diopter of astigmatism in each eye ; but he could, at will, increase this to two diopters in the right eye and one and a half in the left. He did this many times, in the presence of a number of members of the hospital staff, and also did it when the upper lids were held up, showing that the pressure of the lids had nothing to do with the phenomenon. Later he went to Louisville, and here Dr. J. M. Ray, at the suggestion of Dr. Davis, tested his ability to produce astigmatism under the influence of scopolamine (four instillations, 1/5 per cent solution). While the eyes were under the influence of the drug the astigmatism still seemed to increase, according to the evidence of the ophthalmometer, to one and a half diopters in the right eye and one in the left. From these facts, the influence of the lids and of the ciliary muscle having been eliminated, Dr. Davis concluded that the change in the cornea was "brought about mainly by the external muscles." What explanation others offer for such phenomena I do not know.

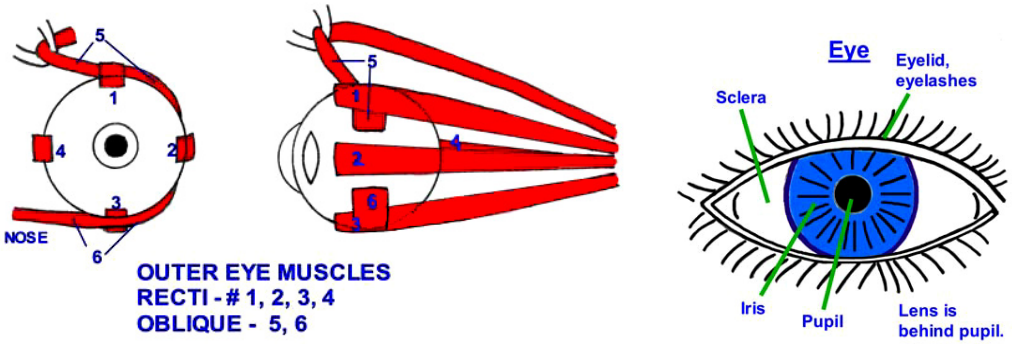
CHAPTER IV

THE TRUTH ABOUT ACCOMMODATION AS DEMONSTRATED BY EXPERIMENTS ON THE EYE MUSCLES OF FISH, CATS, DOGS, RABBITS AND OTHER ANIMALS

THE function of the muscles on the outside of the eyeball, apart from that of turning the globe in its socket, has been a matter of much dispute; but after the supposed demonstration by Helmholtz that accommodation depends upon a change in the curvature of the lens, the possibility of their being concerned in the adjustment of the eye for vision at different distances, or in the production of errors of refraction, was dismissed as no longer worthy of serious consideration. "Before physiologists were acquainted with the changes in the dioptic system," 1 says Donders, "they often attached importance to the external muscles in the production of accommodation. Now that we know that accommodation depends on a change of form in the lens this opinion seems scarcely to need refutation." He states positively that "many instances occur where the accommodation is wholly destroyed by paralysis, without the external muscles being the least impeded in their action," and also that "some cases are on record of paralysis of all or nearly all of the muscles of the eye, and of deficiency of the same, without diminution of the power of accommodation."2

If Donders had not considered the question settled, he

1 The refractive system. 2 On the Anomalies of Accommodation and Refraction of the Eye, p. 22.



The External Muscles of the Eyeball

might have inquired more carefully into these cases, and if he had, he might have been less dogmatic in his statements ; for, as has been pointed out in the preceding chapter, there are plenty of indications that the contrary is the case. In my own experiments upon the extrinsic eye muscles of fish, rabbits, cats, dogs and other animals, the demonstration seemed to be complete that in the eyes of these animals accommodation depends wholly upon the action of the extrinsic muscles and not at all upon the agency of the lens. By the manipulation of these muscles I was able to produce or prevent accommodation at will, to produce myopia, hypermetropia and astigmatism, or to prevent these conditions. Full details of these experiments will be found in the "Bulletin of the New York Zoological Society" for November, 1914, and in the "New York Medical Journal" for May 8, 1915; and May 18, 1918; but for the benefit of those who have not the time or inclination to read these papers, their contents are summarized below.

There are six muscles on the outside of the eyeball, four known as the "recti" and two as the "obliques." The obliques form an almost complete belt around the middle of the eyeball, and are known, according to their position, as "superior" and "inferior." The recti are attached to the sclerotic, or outer coat of the eyeball, near the front, and pass directly over the top, bottom and sides of the globe to the back of the orbit, where they are attached to the bone round the edges of the hole through which the optic nerve passes. According to their position, they are known as the "superior," "inferior," "internal" and "external" recti. The obliques are the muscles of accommodation ; the recti are concerned in the production of Hypermetropia and astigmatism.

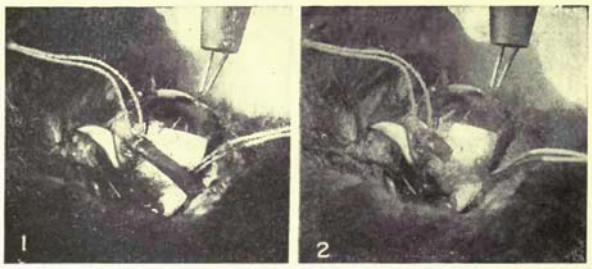
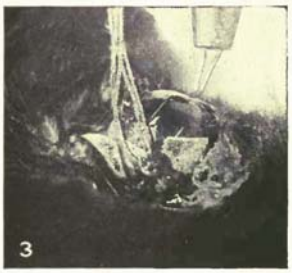


Fig. 13. Demonstration Upon the Eye of a Rabbit that the Inferior Oblique Muscle is an Essential Factor in Accommodation



No. 1.—The inferior oblique muscle has been exposed and two sutures are attached to it. Electrical stimulation of the eyeball produces accommodation, as demonstrated by simultaneous retinoscopy.

No. 2.—The muscle has been cut. Electrical stimulation produces no accommodation.

No. 3.—The muscle has been sewed together. Electrical stimulation produces normal accommodation.

Accommodation: Experiments on Animals

In some cases one of the obliques is absent or rudimentary, but when two of these muscles were present and active, accommodation, as measured by the objective test

Fig. 13. Demonstration Upon the Eye of a Rabbit that the Inferior Oblique Muscle is an Essential Factor in Accommodation. No. 1. The inferior oblique muscle has been exposed and two sutures are attached to it. Electrical stimulation of the eyeball produces accommodation, as demonstrated by simultaneous retinoscopy. No. 2. The muscle has been cut. Electrical stimulation produces no accommodation. No. 3. The muscle has been sewed together. Electrical stimulation produces normal accommodation.

of retinoscopy, was always produced by electrical stimulation either of the eyeball, or of the nerves of accommodation near their origin in the brain. It was also produced by any manipulation of the obliques whereby their pull was increased. This was done by a tucking operation of one or both muscles, or by an advancement of the point at which they are attached to the sclerotic. When one or more of the recti had been cut; the effect of operations increasing the pull of the obliques was intensified.

Oblique Muscles Inactive: No Accommodation

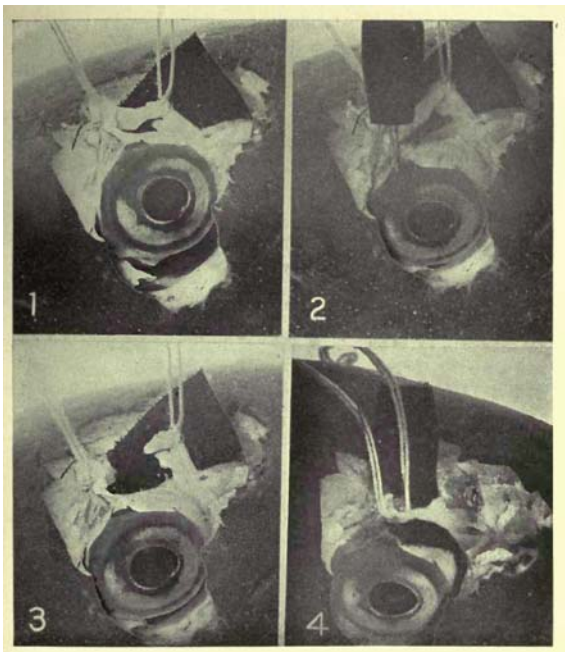


Fig. 14. Demonstration Upon the Eye of a Carp That the Superior Oblique Muscle Is Essential to Accommodation.

No. 1.—The superior oblique is lifted from the eyeball by two sutures, and the retinoscope shows no error of refraction. No. 2.—Electrical stimulation produces accommodation, as determined by the retinoscope. No. 3.—The muscle has been cut. Stimulation of the eyeball with electricity fails to produce accommodation. No. 4.—The divided muscle has been reunited by tying the sutures. Accommodation follows electrical stimulation as before.

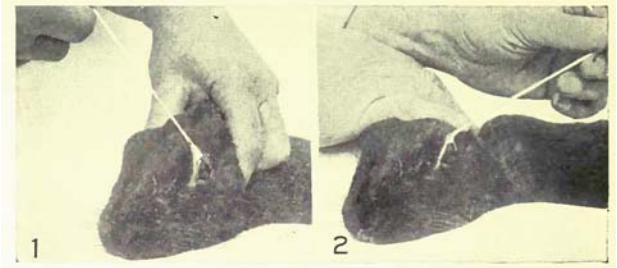


Fig. 15. Demonstration Upon the Eye of a Rabbit That the Production of the Refractive Errors Is Dependent Upon the Action of the External Muscles. The String Is Fastened to the Insertion of the Superior Oblique and Rectus Muscles



No. 1.—Backward pull. Myopia is produced.

No. 2.—Forward pull. Hypermetropia is produced.

No. 3.—Upward pull in the plane of the iris. Mixed astigmatism is produced.

Fig. 14. Demonstration Upon the Eye of a Carp That the Superior Oblique Muscle Is Essential to Accommodation. No. 1. The superior oblique is lifted from the eyeball by two sutures, and the retinoscope shows no error of refraction. No. 2. Electrical stimulation produces accommodation, as determined by the retinoscope. No. 3. The muscle has been cut. Stimulation of the eyeball with electricity fails to produce accommodation. No. 4. The divided muscle has been reunited by tying the sutures. Accommodation follows electrical stimulation as before.

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The Extrinsic Muscles in Refractive Errors

After one or both of the obliques had been cut across, or after they had been paralyzed by the injection of atropine deep into the orbit, accommodation could never be produced by electrical stimulation; but after the effects of the atropine had passed away, or a divided muscle had been sewed together, accommodation followed electrical stimulation just as usual. Again when one oblique muscle was absent, as was found to be the case in a dogfish, a shark and a few perch, or rudimentary, as in all cats observed, a few fish and an occasional rabbit, accommodation could not be produced by electrical stimulation. But when the rudimentary muscle was strengthened by advancement, or the absent one was replaced by a suture which supplied the necessary counter-traction, accommodation could always be produced by electrical stimulation.

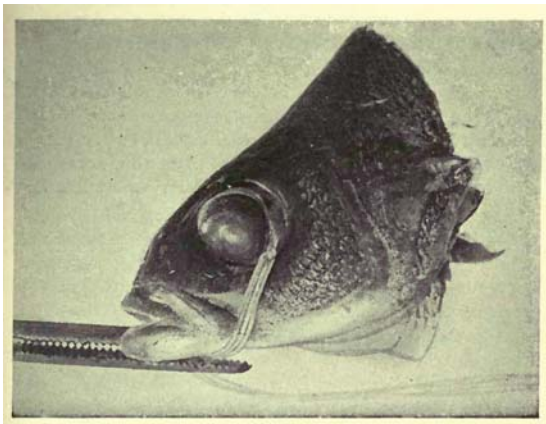

Fig. 16. Demonstration Upon the Eye of a Fish That the Production of Myopic and Hypermetropic Refraction Is Dependent Upon the Action of the Extrinsic Muscles.

Suture tied to the insertion of the superior rectus muscle. By means of strong traction upon the suture the eyeball is turned in its socket, and by tying the thread to a pair of fixation forceps which grasp the lower jaw, it is maintained in this position. A high degree of mixed astigmatism as produced, as demonstrated by simultaneous retinoscopy. When the superior oblique is divided the myopic part of the astigmatism disappears, and when the inferior rectus is cut the hypermetropic part disappears, and the eye becomes normal—adjusted for distant vision—although the same amount of traction is maintained. It is evident that these muscles are essential factors in the production of myopia and hypermetropia.

Fig. 16. Demonstration Upon the Eye of a Fish That the Production of Myopic and Hypermetropic Refraction Is Dependent Upon the Action of the Extrinsic Muscles. Suture tied to the insertion of the superior rectus muscle. By means of strong traction upon the suture the eyeball is turned in its socket, and by tying the thread to a pair of fixation forceps which grasp the lower jaw, it is maintained in this position. A high degree of mixed astigmatism is produced, as demonstrated by simultaneous retinoscopy. When the superior oblique is divided the myopic part of the astigmatism disappears, and when the inferior rectus is cut the hypermetropic part disappears, and the eye becomes normal-adjusted for distant vision-although the same amount of traction is maintained. It is evident that these muscles are essential factors in the production of myopia and hypermetropia.

After one or both of the oblique muscles had been cut, and while two or more of the recti were pr sent and active, 1 electrical stimulation of the eyeball, or of the nerves of accommodation, always produced hypermetropia, while by the manipulation of one of the recti, usually the inferior or the superior, so as to strengthen its pull, the same result could be produced. The paralyzing of the recti by atropine, or the cutting of one or more of them, prevented the production of hypermetropic refraction by electrical stimulation; but after the effects of the atropine had passed away, or after a divided muscle had been sewed together, hypermetropia was produced as usual by electrical stimulation.

It should be emphasized that in order to paralyze either the recti muscles, or the obliques, it was found necessary to inject the atropine far back behind the eyeball with a hypodermic needle. This drug is supposed to paralyze the accommodation when dropped into the eyes of human

1 In many animals, notably in rabbits, the internal and external recti are either absent or rudimentary, so that, practically, in such cases, there are only two recti, just as there are only two obliques. In others, as in many fish, the internal rectus is negligible.

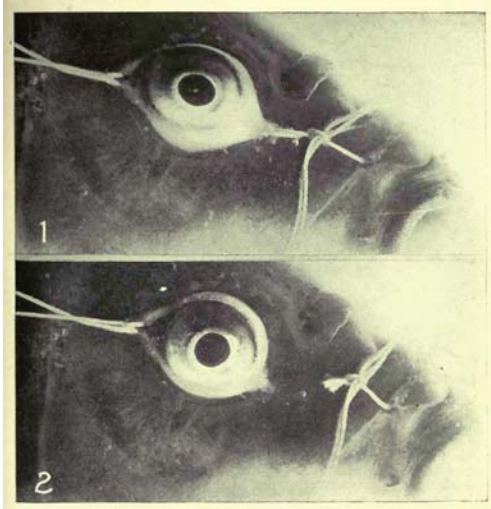

Fig. 17.

No. 1.—Production of mixed astigmatism in the eye of a carp by pulling strings attached to the conjunctiva in opposite directions. Note the oval shape of the front of the eyeball.

No. 2.—With the cutting of the strings the eyeball returns to its normal shape, and the refraction becomes normal.

Production of Astigmatism

beings or animals, but in all of my experiments it was found that when used in this way it had very little effect upon the power of the eye to change its focus.

Astigmatism was usually produced in combination with myopic or hypermetropic refraction. It was also produced by various manipulations of both the oblique and recti muscles. Mixed astigmatism, which is a combination of myopic with hypermetropic refraction, was always produced by traction on the insertion of the superior or inferior rectus in a direction parallel to the plane of the iris, so long as both obliques were present and active : but if either or both of the obliques had been cut,

Fig. 17. No. 1. Production of mixed astigmatism in the eye of a carp by pulling strings attached to the conjunctiva in opposite directions. Note the oval shape of the front of the eyeball. No. 2. With the cutting of the strings the eyeball returns to its normal shape, and the refraction becomes normal.

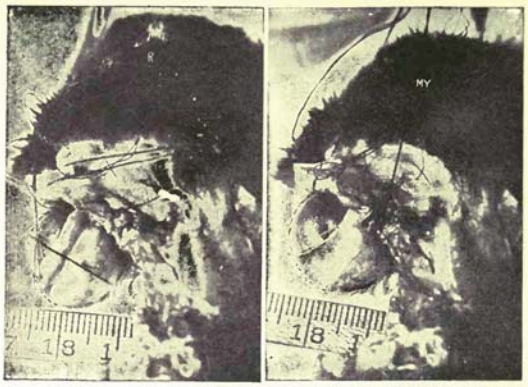

Fig. 18. Demonstration Upon the Eyeball of a Rabbit That the Obliques Lengthen the Visual Axis in Myopia

R, rest. The eyeball is of normal length and emmetropic—that is, perfectly adjusted for distant vision. My, myopia. The pull of the oblique muscles has been strengthened by advancement, and the retinoscope shows that myopia has been produced. It can easily be noted that the eyeball is longer. It was impossible to avoid some movement of the head between the taking of the two pictures as a result of the manipulation of the strings, but the rule shows that the focus of the camera was not appreciably changed by such movements.

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The Recti in Hypermetropia

the myopic part of the astigmatism disappeared. Similarly after the superior or the inferior rectus had been cut the hypermetropic part of the astigmatism disappeared. Advancement of the two obliques, with advancement of the superior and inferior recti, always produced mixed astigmatism.

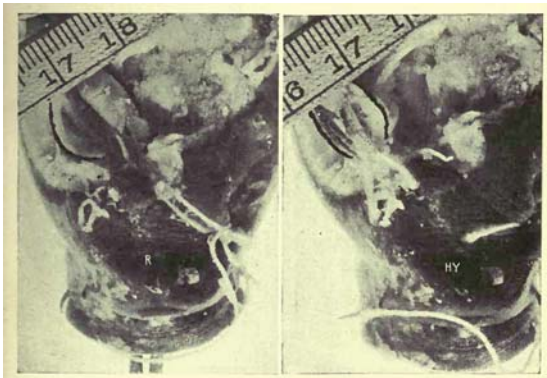


Fig. 19. Demonstration Upon the Eye of a Carp That the Recti Shorten the Visual Axis in Hypermetropia

R, rest. The eyeball is of normal length and emmetropic. Hy, hypermetropia. The pull of the external and internal recti has been strengthened by advancement, and the retinoscope shows that hypermetropia has been produced. It may easily be noted that the eyeball is shorter. The rule shows that the focus of the camera was not appreciably changed between the taking of the two pictures.

Fig. 19. Demonstration Upon the Eye of a Carp That the Recti Shorten the Visual Axis in Hypermetropia. R, rest. The eyeball is of normal length and emmetropic. Hy, hypermetropia. The pull of the external and internal recti has been strengthened by advancement, and the retinoscope shows that hypermetropia has been produced. It may easily be noted that the eyeball is shorter. The rule shows that the focus of the camera was not appreciably changed between the taking of the two pictures.

Eyes from which the lens had been removed, or in which it had been pushed out of the axis of vision, responded to electrical stimulation precisely as did the normal eye, so long as the muscles were active; but when they had been paralyzed by the injection of atropine deep into the orbit, electrical stimulation had no effect on the refraction.

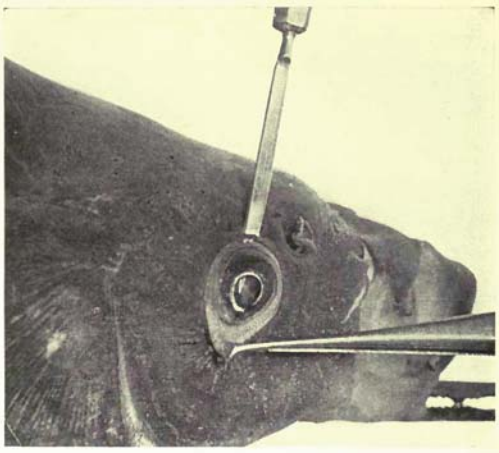


Fig. 20. Lens Pushed Out of the Axis of Vision

In this experiment on the eye of a carp the lens was pushed out of the axis of vision. Accommodation took place after this displacement just as it did before. Note the point of the knife in the pupil in front of the lens.

Fig. 20. Lens Pushed Out of the Axis of Vision. In this experiment on the eye of a carp the lens was pushed out of the axis of vision. Accommodation took place after this displacement just as it did before. Note the point of the knife in the pupil in front of the lens.

In one experiment the lens was removed from the right eye of a rabbit, the refraction of each eye having first been tested by retinoscopy and found to be normal. The wound was then allowed to heal. Thereafter, for a

Accommodation in Aphakia

period extending from one month to two years, electrical stimulation always produced accommodation in the lensless eye precisely to the same extent as in the eye which



Fig. 21. Rabbit With Lens Removed

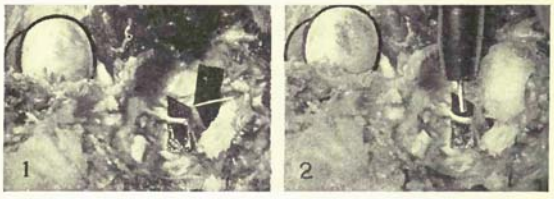
The animal was exhibited at a meeting of the Ophthalmological Section of the American Medical Association, held in Atlantic City, and was examined by a number of ophthalmologists present, all of whom testified that electrical stimulation of the eyeball produced accommodation, or myopic refraction, precisely as in the normal eye.

Fig. 21. Rabbit With Lens Removed. The animal was exhibited at a meeting of the Ophthalmological Section of the American Medical Association, held in Atlantic City, and was examined by a number of ophthalmologists present, all of whom testified that electrical stimulation of the eyeball produced accommodation, or myopic refraction, precisely as in the normal eye.

had a lens. The same experiment with the same result was performed on a number of other rabbits, on dogs and on fish. The obvious conclusion is that the lens is not a factor in accommodation.

In most text-books on physiology it is stated that accommodation is controlled by the third cranial nerve, which supplies all the muscles of the eyeball except the superior oblique and the external rectus; but the fourth cranial nerve, which supplies only the superior oblique, was found in these experiments to be just as much a nerve of accommodation as the third. When either the third or the fourth nerve was stimulated with electricity near its point of origin in the brain accommodation al-

Fig. 22. Experiment Upon the Eye of a Cat Demonstrating That the Fourth Nerve, Which Supplies Only the Superior Oblique Muscle, Is Just as Much a Nerve of Accommodation As the Third, and That the Superior Oblique Muscle Which It Supplies Is a Muscle of Accommodation.



No. 1.—Both nerves have been exposed near their origin in the brain, and a strip of black paper has been inserted beneath each to render it visible. The fourth nerve is the smaller one. The superior oblique muscle has been advanced by a tucking operation, as this muscle is always rudimentary in cats, and unless its pull is strengthened, accommodation cannot be produced in these animals. Stimulation of either or both nerves by the faradic current produced accommodation.

No. 2.—When the fourth nerve was covered with cotton soaked in a normal salt solution, the application of the faradic current to the cotton produced accommodation. When the cotton was soaked in a one per cent solution of atropine sulphate in a normal salt solution, such application produced no accommodation, but stimulation of the third nerve did produce it.

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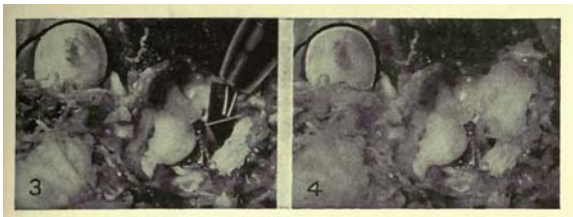
The Role of the Fourth Nerve



No. 3.—When the third nerve was covered with cotton soaked in a normal salt solution, the application of the faradic current to the cotton produced accommodation. When the cotton was soaked with atropine sulphate in a normal salt solution, such application produced no accommodation, but the stimulation of the fourth nerve did produce it.

No. 4.—When both nerves were covered with cotton soaked in atropine sulphate in a normal salt solution, the application of electricity to the cotton produced no accommodation. When the parts had been washed with a warm salt solution electrical stimulation of either nerve always produced accommodation. The nerves were alternately covered with the atropine-soaked cotton and then washed with the warm saline solution for an hour, the electricity being applied in each condition with invariably the same result. Accommodation could never be produced by electrical stimulation when the nerves were paralyzed with the atropine, but always resulted from the stimulation of either or both when they had been washed with the salt solution. The experiment was performed with the same results on many rabbits and dogs.

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ways resulted in the normal eye. When the origin of either nerve was covered with a small wad of cotton soaked in a two per cent solution of atropine sulphate in a normal salt solution, stimulation of that nerve produced no accommodation, while stimulation of the unparalyzed nerve did produce it. When the origin of both nerves was covered with cotton soaked in atropine, accommodation could not be produced by electrical stimulation of either or both. When the cotton was removed and the nerves washed with normal salt solution, electrical stimulation of either or both produced accommodation just as before the atropine had been applied. This experiment, which was performed repeatedly for more

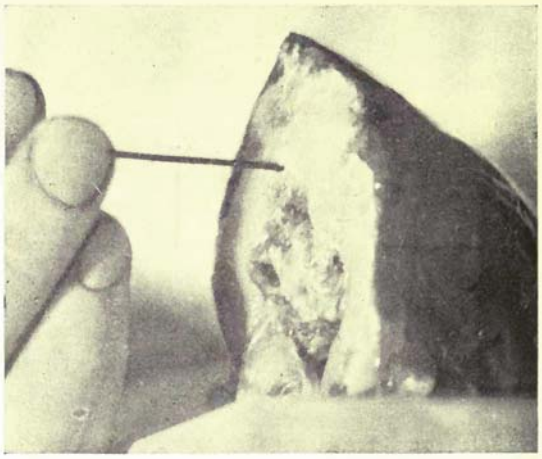

Fig. 23. Pithing a Fish Preparatory to Operating Upon Its Eyes

The object of this operation is to secure greater relaxation of the muscles of the eyes and head, which would work for hours, without external stimulus, if the brain cells were not destroyed by the probe.

Fig. 23. Pithing a Fish Preparatory to Operating Upon Its Eyes. The object of this operation is to secure greater relaxation of the muscles of the eyes and head, which would work for hours, without external stimulus, if the brain cells were not destroyed by the probe.

than an hour by alternately applying and removing the atropine, not only demonstrated clearly what had not been known before, namely, that the fourth nerve is a nerve of accommodation, but also demonstrated that the

No Room for Doubt

superior oblique muscle which is supplied by it is an important factor in accommodation. It was further found that when the action of the oblique muscles was prevented by dividing them, the stimulation of the third nerve produced, not accommodation, but hypermetropia.

In all the experiments all sources of error are believed to have been eliminated. They were all repeated many times and always with the same result. They seemed, therefore, to leave no room for doubt that neither the lens nor any muscle inside the eyeball has anything to do with accommodation, but that the process whereby the eye adjusts itself for vision at different distances is entirely controlled by the action of the muscles on the outside of the globe.

CHAPTER V

THE TRUTH ABOUT ACCOMMODATION AS DEMONSTRATED BY A STUDY OF IMAGES REFLECTED FROM THE LENS, CORNEA, IRIS AND SCLERA

AS the conclusions in which the experiments described in the preceding chapter pointed were diametrically opposed to those reached by Helmholtz in his study of the images reflected from the front of the lens, I determined to repeat the experiments of the German investigator and find out, if possible, why his results were so different from my own. I devoted four years to this work, and was able to demonstrate that Helmholtz had erred through a defective technique, the image obtained by his method being so variable and uncertain that it lends itself to the support of almost any theory.

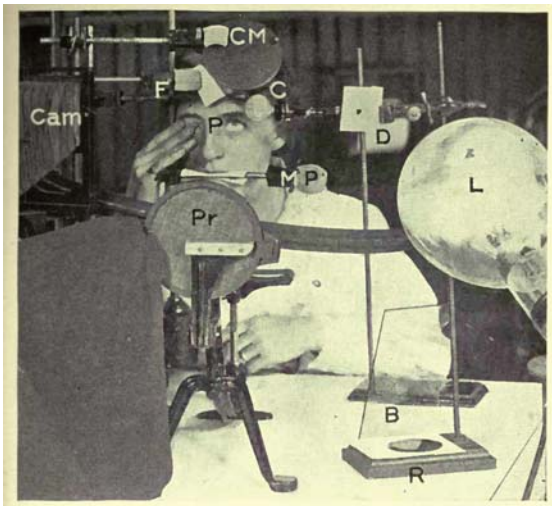

Fig. 24.—Arrangements for Photographing Images Reflected From the Eyeball

CM, concave mirror in which the subject may observe the images reflected from various parts of her eye; C, condenser; D, diaphragm; L, 1000-watt lamp; F, forehead rest; MP, bar which the subject grasps with her teeth for the purpose of holding her head steady; P, plane mirror upon which is pasted a letter of diamond type and in which is reflected a Snellen test card twenty feet behind the subject (the mirror is just above the letter P); CAM, camera; Pr, perimeter used to measure the angle of the light to the eye; R, plane mirror reflecting light from the 1000-watt lamp upon the eye, which otherwise would be in total darkness except for the part from which the highly condensed image of the filament is reflected; B, blue glass screen used to modify the light reflected from the mirror R. When the subject read the bottom line of the Snellen test card reflected in the mirror P, her eye was at rest, and when she saw the letter of diamond type distinctly it was accommodated ten diopters, as demonstrated by the retinoscope.

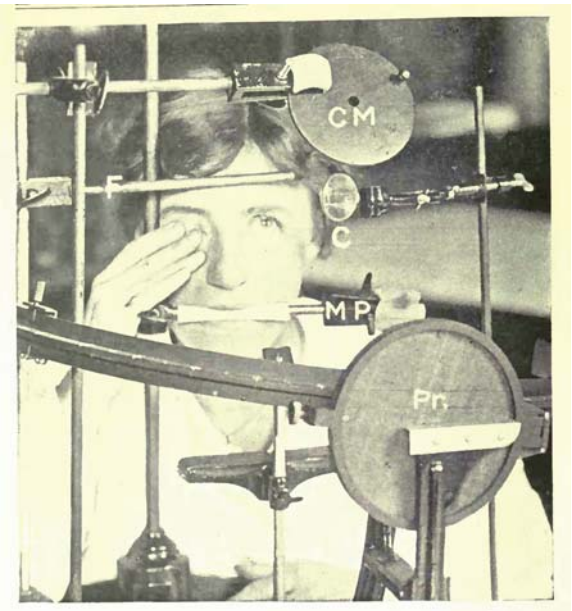

Fig. 25. Arrangements for Holding the Head of the Subject Steady While Images Were Being Photographed

CM, concave mirror; F, forehead rest; C, condenser, MP, mouthpiece; Pr, perimeter.

I worked for a year or more with the technique of Helmholtz, but was unable to obtain an image from the front of the lens which was sufficiently clear or distinct to be measured or photographed. With a naked candle as the source of light a clear and distinct image could be obtained on the cornea; on the back of the lens it was quite clear; but on the front of the lens it was very imperfect. Not only was it blurred, just as Helmholtz stated, but without any ascertainable cause it varied greatly in size and intensity. At times no reflection could be obtained at all, regardless of the angle of the light to the eye of the subject, or of the eye of the observer to that of the subject. With a diaphragm I got

How the Focus Was Changed

Fig. 24. Arrangements for Photographing Images Reflected From the Eyeball. CM, concave mirror in which the subject may observe the images reflected from various parts of her eye; C, condenser; D, diaphragm; L, 1000-watt lamp; F, forehead rest; MP, bar which the subject grasps with her teeth for the purpose of holding her head steady; P, plane mirror upon which is pasted a letter of diamond type and in which is reflected a Snellen test card twenty feet behind the subject (the mirror is just above the letter P); CAM, camera; Pr, perimeter used to measure the angle of the light to the eye; R, plane mirror reflecting light from the 1000- watt lamp upon the eye, which otherwise would be in total darkness except for the part from which the highly condensed image of the filament is reflected; B, blue glass screen used to modify the light reflected from the mirror R. When the subject read the bottom line of the Snellen test card reflected in the mirror P, her eye was at rest, and when she saw the letter of diamond type distinctly it was accommodated ten diopters, as demonstrated by the retinoscope.

Accommodation: Study of Images

Fig. 25. Arrangements for Holding the Head of the Subject Steady While Images Were Being Photographed. CM, concave mirror; F, forehead rest; C, condenser, MP, mouthpiece; Pr, perimeter.

a clearer and more constant image, but it still was not sufficiently reliable to be measured. To Helmholtz the indistinct image of a naked flame seemed to show an appreciable change, while the images obtained by the aid of the diaphragm showed it more clearly; but I was

unable, either with a diaphragm or without it, to obtain images which I considered sufficiently distinct to be reliable.

Men who had been teaching and demonstrating Helmholtz's theory repeated his experiments for my benefit; but the images which they obtained on the front of the lens did not seem to me any better than my own. After

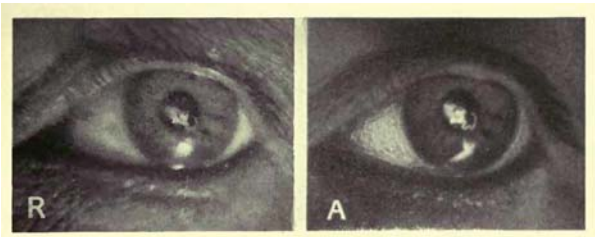

Fig. 26. Image of Electric Filament on the Front of the Lens

R, rest; A, accommodation. Under the magnifying glass no change can be observed in the size of the two images. The image at the right looks larger only because it is more distinct. To support the theory of Helmholz it ought to be the smaller. The comet's tail at the left of the two images is an accidental reflection from the cornea. The spot of light beneath is a reflection from the light used to illuminate the eye while the photo-graphs were being taken. It took two years to get these pictures.

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studying these images almost daily for more than a year I was unable to make any reliable observation regarding the effect of accommodation upon them. In fact, it seemed that an infinite number of appearances might be obtained on the front of the lens when a candle was used as the source of illumination. At times the image became smaller during accommodation and seemed to sustain the theory of Helmholtz; but just as frequently it became larger. At other times it was impossible to tell what it did.

With a thirty-watt lamp, a fifty-watt lamp, a 250-watt lamp and a 1000-watt lamp, there was no improvement. The light of the sun reflected from the front of the lens produced an image just as cloudy and uncertain as the reflections from other sources of illumination, and just as variable in shape, intensity and size. To sum it all up, I was convinced that the anterior surface of the lens

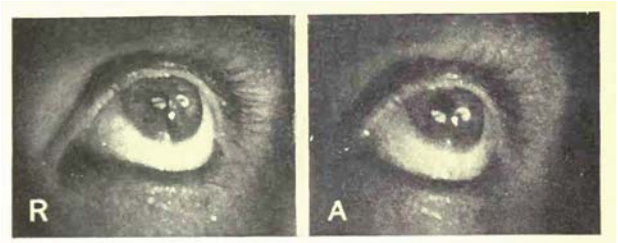


Fig. 27. Images of the Electric Filament Reflected Simultaneously From the Cornea and Lens

R, rest; A, accommodation. The size of the images in both pictures is the same. The corneal image is so small that it has not been noticeably altered by the slight change that takes place in the cornea during accommodation. In A both images have changed their position and the end of the reflection from the lens has been cut off by the iris, but its width remains the same. The white spot between the two images of the filament is a reflection from the lamp used to illuminate the eye. Note that in A more of the sclera is visible, owing to the elongation of the eyeball during accommodation.

Fig. 27. Images of the Electric Filament Reflected Simultaneously From the Cornea and Lens. R, rest; A, accommodation. The size of the images in both pictures is the same. The corneal image is so small that it has not been noticeably altered by the slight change that takes place in the cornea during accommodation. In A both images have changed their position and the end of the reflection from the lens has been cut off by the iris, but its width remains the same. The white spot between the two images of the filament is a reflection from the lamp used to illuminate the eye. Note that in A more of the sclera is visible, owing to the elongation of the eyeball during accommodation.

was a very poor reflector of light, and that no reliable images could be obtained from it by the means described.

After a year or more of failure I began to work at an aquarium on the eyes of fish. It was a long story of failure. Finally I became able, with the aid of a strong light -1000 watts - a diaphragm with a small opening and a condenser, to obtain, after some difficulty, a clear

Image on the Lens Photographed

and distinct image from the cornea of fish. This image was sufficiently distinct to be measured, and after many months a satisfactory photograph was obtained. Then the work was resumed on the eyes of human beings. The strong light, combined with the diaphragm and condenser, the use of which was suggested by their use to improve the illumination of a glass slide under the microscope, proved to be a decided improvement over the method of Helmholtz, and by means of this technique

an image was at last obtained on the front of the lens which was sufficiently clear and distinct to be photographed. This was the first time, so far as published records show, that an image of any kind was ever photographed from the front of the lens. Professional photographers whom I consulted with a view to securing their assistance assured me that the thing could not be done, and declined to attempt it. I was therefore obliged to learn photography, of which I have previously known nothing, myself, and I then found that so far as the image obtained by the method of Helmholtz is concerned the professionals were right.

The experiments were continued until, after almost four years of constant labor, I obtained satisfactory pictures before and after accommodation and during the production of myopia and hypermetropia, not only of images on any surface at will without reflections from the iris, cornea, the front of the sclera (white of the eye) and the side of the sclera. I also became able to obtain images on any surface at will without reflections from the other parts. Before these results were obtained, however, many difficulties had still to be overcome.

Complicating reflections were a perpetual source of trouble. Reflections from surrounding objects were easily prevented ; but those from the sides of the globe of the electric light were difficult to deal with, and it was useless to try to obtain images on the front of the lens until they had been eliminated, or reduced to a minimum, by

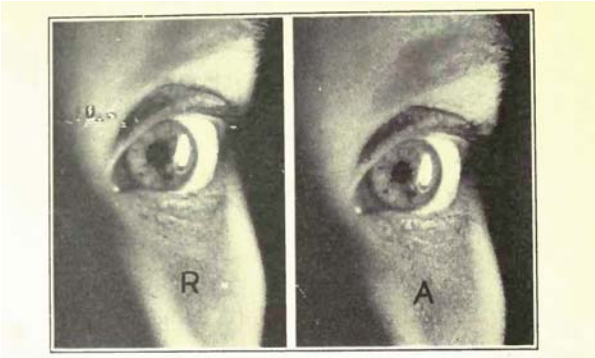


Fig. 28. Image of Electric Filament Upon the Cornea

R, rest; A, accommodation. The image is smaller in A, but the change is so slight as to be scarcely noticeable, showing that the alteration in the shape of the cornea during accommodation is very slight. For this reason the ophthalmometer, with its small image, has been thought to demonstrate that the cornea did not change during accommodation.

Fig. 28. Image of Electric Filament Upon the Cornea. R, rest ; A, accommodation. The image is smaller in A, but the change is so slight as to be scarcely noticeable, showing that the alteration in the shape of the cornea during accommodation is very slight. For this reason the ophthalmometer, with its small image, has been thought to demonstrate that the cornea did not change during accommodation.

a proper adjustment of the light. The same apparent adjustment did not, however, always give similar results. Sometimes there would be no reflections for days; then would come a day when, with the light apparently at the same angle, they would reappear.

With some adjustments of the light multiple images were seen reflected from the front of the lens. Sometimes these images were arranged in a horizontal line, sometimes in a vertical one and sometimes at angles of

Unexplained Difficulties

different degrees, while their distance from each other also varied. Usually there were three of them; sometimes there were more; and sometimes there were only two. Occasionally they were all of the same size, but usually they varied, there being apparently no limit to their possibilities of change in this and other respects. Some of them were photographed, indicating that they were real reflections. Changes in the distance of the diaphragm from the light and from the condenser, and alterations in the size and shape of its opening, appeared to make no difference. Different adjustments of the condenser were equally without effect. Changes in the angle at which the light was adjusted sometimes lessened the number of images and sometimes increased them, until at last an angle was found at which but one image was seen. The images appear, in fact, to have been caused by reflections from the globe of the electric light.

Even after the light had been so adjusted as to eliminate reflections it was often difficult, or impossible, to get a clear and distinct image of the electric filament upon the front of the lens. One could, rearrange the condenser and the diaphragm and change the axis of fixation, and still the image would be clouded or obscured and its outline distorted. The cause of the difficulty appeared to be that the light was not adjusted at the best angle for the purpose and it was not always possible to determine the exact axis at which a clear, distinct image would be produced. As in the case of the reflections from the sides of the globe, it seemed to vary without a known cause. This was true, however: that there were angles of the axis of the globe which gave better images than others, and

that what these angles were could not be determined with exactness. I have labored with the light for two or three hours without finding the right angle. At other times the axis would remain unchanged for days, giving always a clear, distinct image.

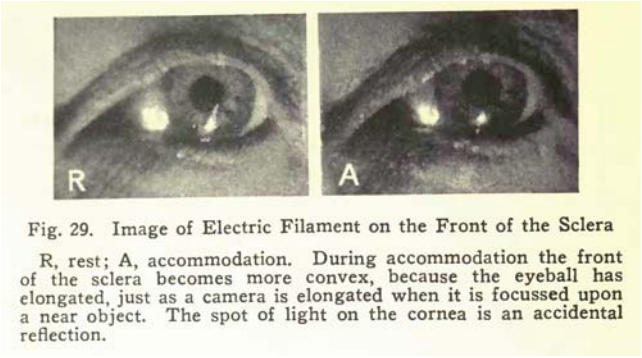


Fig. 29. Image of Electric Filament on the Front of the Sclera

R, rest; A, accommodation. During accommodation the front of the sclera becomes more convex, because the eyeball has elongated, just as a camera is elongated when it is focussed upon a near object. The spot of light on the cornea is an accidental reflection.

Fig. 29. Image of Electric Filament on the Front of the Sclera. R, rest; A, accommodation. During accommodation the front of the sclera becomes more convex, because the eyeball has elongated, just as a camera is elongated when it is focussed upon a near object. The spot of light on the cornea is an accidental reflection.

The results of these experiments confirmed the conclusions drawn from the previous ones, namely, that accommodation is due to a lengthening of the eyeball, and not to a change in the curvature of the lens. They also confirmed, in a striking manner, my earlier conclusions as to the conditions under which myopia and Hypermetropia are produced.1

The images photographed from the front of the lens did not show any change in size or form during accommodation. The image on the back of the lens also remained unchanged, as observed through the telescope of the ophthalmometer; but as there is no dispute about its behavior during accommodation, it was not photographed. Images photographed from the iris before

1 Bates: The Cause of Myopia, N. Y. Med. Jour., March 16, 1912.

No Change in Iris Image

and during accommodation were also the same in size and form, as was to be expected from the character of the lens images. If the lens changed during accommodation, the iris, which rests upon it, would change also.

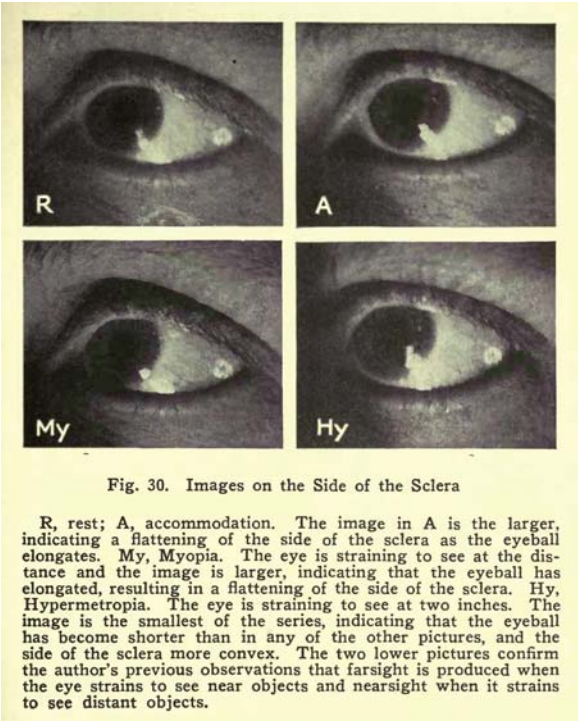


Fig. 30. Images on the Side of the Sclera

R, rest; A, accommodation. The image in A is the larger, indicating a flattening of the side of the sclera as the eyeball elongates. My, Myopia. The eye is straining to see at the distance and the image is larger, indicating that the eyeball has elongated, resulting in a flattening of the side of the sclera. Hy, Hypermetropia. The eye is straining to see at two inches. The image is the smallest of the series, indicating that the eyeball has become shorter than in any of the other pictures, and the side of the sclera more convex. The two lower pictures confirm the author's previous observations that farsight is produced when the eye strains to see near objects and nearsight when it strains to see distant objects.

Fig. 30. Images on the Side of the Sclera. R, rest; A, accommodation. The image in A is the larger, indicating a flattening of the side of the sclera as the eyeball elongates. My, Myopia. The eye is straining to see at the distance and the image is larger, indicating that the eyeball has elongated, resulting in a flattening of the side of the sclera. Hy, Hypermetropia. The eye is straining to see at two inches. The image is the smallest of the series, indicating that the eyeball has become shorter than in any of the other pictures, and the side of the sclera more convex. The two lower pictures confirm the author's previous observations that farsight is produced when the eye strains to see near objects and nearsight when it strains to see distant objects.

A Series of Four Changes

The images photographed from the cornea and from the front and side of the sclera showed, however, a series of four well-marked changes, according to whether the vision was normal or accompanied by a strain. During accommodation the images from the cornea were smaller than when the eye was at rest, indicating elongation of the eyeball and a consequent increase in the convexity of the cornea. But when an unsuccessful effort was made to see at the near-point, the image became larger, indicating that the cornea had become less convex, a condition which one would expect when the optic axis was shortened, as in hypermetropia. When a strain was made to see at a distance the image was smaller than when the eye was at rest, again indicating elongation of the eyeball and increased convexity of the cornea.



Fig. 31. Multiple Images Upon the Front of the Lens

This picture illustrates one of the difficulties that had to be overcome in photographing images reflected from various parts of the eyeball. Unless the light was adjusted at precisely the right angle the filament was multiplied by reflection from the sides of the globe. Usually the image was doubled, sometimes it was tripled, as shown in the picture, and sometimes it was quadrupled. Often days of labor were required to eliminate these reflections, and for reasons that were not definitely determined the same adjustment did not always give the same results. Sometimes all would go well for days, and then, without any apparent reason, the multiple images would return.

Fig. 31. Multiple Images Upon the Front of the Lens. This picture illustrates one of the difficulties that had to be overcome in photographing images reflected from various parts of the eyeball. Unless the light was adjusted at precisely the right angle the filament was multiplied by reflection from the sides of the globe. Usually the image was doubled, sometimes it was tripled, as shown in the picture, and sometimes it was quadrupled. Often days of labor were required to eliminate these reflections, and for reasons that were not definitely determined the same adjustment did not always give the same results. Sometimes all would go well for days, and then, without any apparent reason, the multiple images would return.

The images photographed from the front of the sclera showed the same series of changes as the corneal images, but those obtained from the side of the sclera were found to have changed in exactly the opposite manner, being larger where the former were smaller and vice versa, a

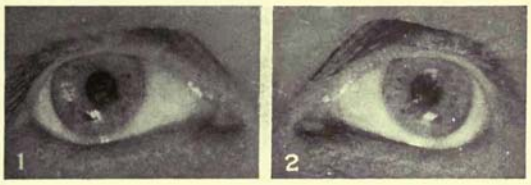


Fig. 32. Reflection of the Electric Filament From the Iris

This picture is shown to illustrate the fact that it is possible to get a reflection from any reflecting surface of the eyeball without reflections from the other parts, although these may be exposed. This is done by changing the angle of the light to the eye. In No. 1 observations of the eye at the time the picture was taken demonstrated that the image was from the iris, not from the cornea, and the fact is also apparent in the picture. (Compare the image with the corneal reflection in Fig. 28.) In No. 2, where the image overlaps the margin of the pupil, the fact that the reflection is from the iris is manifest from the circumstance that only part of the filament is seen. If it were from the cornea, the whole of it would be reflected. Note in this picture that there is no reflection from the lens. The images on the iris did not change their size or shape during accommodation, demonstrating again that the lens, upon which the iris rests, does not change its shape when the eye adjusts itself for near vision.

Fig. 32. Reflection of the Electric Filament From the Iris. This picture is shown to illustrate the fact that it is possible to get a reflection from any reflecting surface of the eyeball without reflections from the other parts, although these may be exposed. This is done by changing the angle of the light to the eye. In No. 1 observations of the eye at the time the picture was taken demonstrated that the image was from the iris, not from the cornea, and the fact is also apparent in the picture. (Compare the image with the corneal reflection in Fig. 28.) In No. 2, where the image overlaps the margin of the pupil, the fact that the reflection is from the iris is manifest from the circumstance that only part of the filament is seen. If it were from the cornea, the whole of it would be reflected. Note in this picture that there is no reflection from the lens. The images on the iris did not change their size or shape during accommodation, demonstrating again that the lens, upon which the iris rests, does not change its shape when the eye adjusts itself for near vision.

difference which one would naturally expect from the fact that when the front of the sclera becomes more convex the sides must become flatter.

When an effort was made to see at a distance the image reflected from the side of the sclera was larger than the image obtained when the eye was at rest, indicating that this part of the sclera had become less convex or flatter, because of elongation of the eyeball. The image obtained during normal accommodation was also larger than when the eye was at rest, indicating again a flattening of the side of the sclera. The image obtained, however, when an effort was made to see near was much smaller than any of the other images, indicating that the sclera had become more convex at the side, a condition which one would expect when the eyeball was shortened, as in hypermetropia.

The most pronounced of the changes were noted in the images reflected from the front of the sclera. Those on the side of the sclera were less marked, and, owing to the difficulty of photographing a white image on a white background, could not always be readily seen on the photographs. They were always plainly apparent, however, to the observer, and still more so to the subject, who regarded them in a concave mirror. The alterations in the size of the corneal image were so slight that they did not show at all in the photographs, except when the image was large, a fact which explains why the ophthalmometer, with its small image, has been thought to show that the cornea did not change during accommodation. They were always apparent, however, to the subject and observer.

The corneal image was one of the easiest of the series to produce and the experiment is one which almost any

No Change in Back of Lens



Fig. 33. Demonstrating That the Back of the Lens Does Not Change During Accommodation

The filament of an electric light (L) is shining into the eye of the subject (S), and the reflection on the back of the lens can be seen by the observer (O) in the telescope (T). The subject holds in her hand, at a distance of four inches, a mirror on which is pasted a small letter, and in which is reflected a Snellen test card hung above and behind her head at a distance of twenty feet. The retinoscope reveals that when she looks at the reflection of the test card and reads the bottom line the eye is at rest, and that when she looks at the letter pasted on the mirror it accommodates. The image on the lens does not change during these changes of focus. The telescope is the telescope of the ophthalmometer, the prisms having been removed. As there is no dispute about the behavior of the back of the lens during accommodation this image was not photographed.

Fig. 33. Demonstrating That the Back of the Lens Does Not Change During Accommodation. The filament of an electric light (L) is shining into the eye of the subject (S), and the reflection on the back of the lens can be seen by the observer (O) in the telescope (T). The subject holds in her hand, at a distance of four inches, a mirror on which is pasted a small letter, and in which is reflected a Snellen test card hung above and behind her head at a distance of twenty feet. The retinoscope reveals that when she looks at the reflection of the test card and reads the bottom line the eye is at rest, and that when she looks at the letter pasted on the mirror it accommodates. The image on the lens does not change during these changes of focus. The telescope is the telescope of the ophthalmometer, the prisms having been removed. As there is no dispute about the behavior of the back of the lens during accommodation this image was not photographed.

one can repeat, the only apparatus required being a fifty candlepower lamp - an ordinary electric globe - and a concave mirror fastened to a rod which moves back and forth in a groove so that the distance of the mirror from the eye can be altered at will. A plane mirror might also be used; but the concave glass is better, because it magnifies the image. The mirror should be so arranged that it reflects the image of the electric filament on the cornea, and so that the eye of the subject can see this reflection by looking straight ahead. The image in the mirror is used as the point of fixation, and the distance at which the eye focuses is altered by altering the distance of the mirror from the eye. The light can be placed within an inch or two of the eye, as the heat is not great enough to interfere with the experiment. The closer it is the larger the image, and according to whether it is adjusted vertically, horizontally, or at an angle, the clearness of the reflection may vary. A blue glass screen can be used, if desired, to lessen the discomfort of the light. If the left eye is used by the subject - and in all the experiments it was found to be the more convenient for the purpose - the source of light should be placed to the left of that eye and as much as possible to the front of it, at an angle of about forty-five degrees. For absolute accuracy the light and the head of the subject should be held immovable, but for demonstration this is not essential. Simply holding the bulb in his hand the subject can demonstrate that the image changes according to whether the eye is at rest, accommodating normally for near vision, or straining to see at a near or a distant point.

In the original report were described possible sources of error and the means taken to eliminate them.

CHAPTER VI

THE TRUTH ABOUT ACCOMMODATION AS DEMONSTRATED BY CLINICAL OBSERVATIONS

THE testimony of the experiments described in the preceding chapters to the effect that the lens is not a factor in accommodation is confirmed by numerous observations on the eyes of adults and children, with normal vision, errors of refraction, or amblyopia, and on the eyes of adults after the removal of the lens for cataract.

It has already been pointed out that the instillation of atropine into the eye is supposed to prevent accommodation by paralyzing the muscle credited with controlling the shape of the lens. That it has this effect is stated in every text-book on the subject, 1 and the drug is daily used in the fitting of glasses for the purpose of eliminating the supposed influence of the lens upon refractive states.

In about nine cases out of ten the conditions resulting from the instillation of atropine into the eye fit the theory upon which its use is based; but in the tenth case they do not, and every ophthalmologist of any experience has noted some of these tenth cases. Many of them are reported in the literature, and many of them have come under my own observation. According to the theory,

1 Certain substances have the power of producing a dilation of the pupil (mydriasis), and hence are termed mydriatics. At the same time they act upon the ciliary body, diminishing and, when applied in sufficient strength, completely paralyzing the power of accommodation, thus rendering the eye for some time unalterably focussed for the farthest point. - Herman Snellen, Jr.: Mydriatics and Myotics, System of Diseases of the Eye, edited by Morris and Oliver, 1897-1900, vpl. ii, p. 30.

Accommodation: Clinical Observations

atropine ought to bring out latent hypermetropia in eyes either apparently normal, or manifestly hypermetropic, provided, of course, the patient is of the age during which the lens is supposed to retain its elasticity. The fact is that it sometimes produces myopia, or changes Hypermetropia into myopia, and that it will produce both myopia and hypermetropia in persons over seventy years of age, when the lens is supposed to be as hard as a stone, as well as in cases in which the lens is hard with incipient cataract. Patients with eyes apparently normal will, after the use of atropine, develop hypermetropic astigmatism, or myopic astigmatism, or compound myopic astigmatism, or mixed astigmatism. 1 In other cases the drug will not interfere with the accommodation, or alter the refraction in any way. Furthermore, when the vision has been lowered by atropine the subjects have often become able, simply by resting their eyes, to read diamond type at six inches. Yet atropine is supposed to rest the eyes by affording relief to an overworked muscle.

In the treatment of squint and amblyopia I have often used atropine in the better eye for more than a year, in order to encourage the use of the amblyopic eye; and at the end of this time, while still under the influence of atropine, such eyes have become able in a few hours, or less, to read diamond type at six inches (see Chapter XXII). The following are examples of many similar cases that might be cited:

A boy of ten had hypermetropia in both eyes, that of

1 In simple hypermetropic astigmatism one principal meridian is normal and the other, at right angles to it, is flatter. In simple myopic astigmatism the contrary is the case ; one principal meridian is normal and the other, at right angles to it, more convex. In mixed astigmatism one principal meridian is too flat, the other too convex. In compound hypermetropic astigmatism both principal meridians are flatter than normal, one more so than the other. In compound myopic astigmatism both are more convex than normal, one more so than the other.

Atropine Fails to Paralyze Accommodation

the left or better eye amounting to three diopters. When atropine was instilled into this eye the Hypermetropia was increased to four and a half diopters, and the vision lowered to 20/200. With a convex glass of four and a half diopters the patient obtained normal vision for the distance, and with the addition of another convex glass of four diopters he was able to read diamond type at ten inches (best). The atropine was used for a year, the pupil being dilated continually to the maximum. Meantime the right eye was being treated by methods to be described later. Usually in such cases the eye

which is not being specifically treated improves to some extent with the others, but in this case it did not. At the end of the year the vision of the right eye had become normal; but that of the left eye remained precisely what it was at the beginning, being still 20/200 without glasses for the distance, while reading without glasses was impossible and the degree of the hypermetropia had not changed. Still under the influence of the atropine and still with the pupil dilated to the maximum, this eye was now treated separately; and in half an hour its vision had become normal both for the distance and the nearpoint, diamond type being read at six inches, all without glasses. According to the accepted theories, the ciliary muscle of this eye must not only have been completely paralyzed at the time, but must have been in a state of complete paralysis for a year. Yet the eye not only overcame four and a half diopters of hypermetropia, but added six diopters of accommodation, making a total of ten and a half. It remains for those who adhere to the accepted theories to say how such facts can be reconciled with them.

Equally, if not more remarkable, was the case of a little girl of six who had two and a half diopters of hypermetropia in her right or better eye, and six in the other, with one diopter of astigmatism. With the better eye under the influence of atropine and the pupil dilated to the maximum, both eyes were treated together for more than a year, and at the end of that time, the right being still under the influence of the atropine, both became able to read diamond type at six inches, the right doing it better, if anything, than the left. Thus, in spite of the atropine, the right eye not only overcame two and a half diopters of hypermetropia, but added six diopters of accommodation, making a total of eight and a half. In order to eliminate all possibility of latent hypermetropia in the left eye - which in the beginning had six diopters - the atropine was now used in this eye and discontinued in the other, the eye education being continued as before. Under the influence of the drug there was a slight return of the hypermetropia; but the vision quickly became normal again, and although the atropine was used daily for more than a year, the pupil being continually dilated to the maximum, it remained so, diamond type being read at six inches without glasses during the whole period. It is difficult for me to conceive how the ciliary muscle could have had anything to do with the ability of this patient to accommodate after atropine had been used in each eye separately for a year or more at a time.

According to the current theory, atropine paralyzes the ciliary muscle and thus, by preventing a change of curvature in the lens, prevents accommodation. When accommodation occurs, therefore, after the prolonged use of atropine, it is evident that it must be due to some factor or factors other than the lens and the ciliary muscle. The evidence of such cases against the accepted

theories is, in fact, overwhelming; and according to these theories the other factors cited in this chapter are equally inexplicable. All of these facts, however, are in entire accord with the results of my experiments on the eye muscles of animals and my observations regarding the behavior of images reflected from various parts of the eyeball. They strikingly confirm, too, the testimony of the experiments with atropine, which showed that the accommodation could not be paralyzed completely and permanently unless the atropine was injected deep into the orbit, so as to reach the oblique muscles, the real muscles of accommodation, while hypermetropia could not be prevented when the eyeball was stimulated with electricity without a similar use of atropine, resulting in the paralysis of the recti muscles.

As has already been noted, the fact that after the removal of the lens for cataract the eye often appears to accommodate just as well as it did before is well known. Many of these cases have come under my own observation. Such patients have not only read diamond type with only their distance glasses on, at thirteen and ten inches and at a less distance, but one man was able to read without any glass at all. In all these cases the retinoscope demonstrated that the apparent act of accommodation was real, being accomplished, not by the "interpretation of circles of diffusion," or by any of the other methods by which this inconvenient phenomenon is commonly explained, but by an accurate adjustment of the focus to the distances concerned.

The cure of presbyopia (see Chapter XX) must also be added to the clinical testimony against the accepted theory of accommodation. On the theory that the lens is a factor in accommodation such cures would be manifestly impossible. The fact that rest of the eyes improves the sight in presbyopia

has been noted by others, and has been attributed to the supposed fact that the rested ciliary muscle is able for a brief period to influence the hardened lens ; but while it is conceivable that this might happen in the early stages of the condition and for a few moments, it is not conceivable that permanent relief should be obtained by this means, or that lenses which are, as the saying goes, as "hard as a stone," should be influenced, even momentarily.

A truth is strengthened by an accumulation of facts. A working hypothesis is proved not to be a truth if a single fact is not in harmony with it. The accepted theories of accommodation and of the cause of errors of refraction require that a multitude of facts shall be explained away. During more than thirty years of clinical experience, I have not observed a single fact that was not in harmony with the belief that the lens and the ciliary muscle have nothing to do with accommodation, and that the changes in the shape of the eyeball upon which errors of refraction depend are not permanent. My clinical observations have of themselves been sufficient to demonstrate this fact. They have also been sufficient to show how errors of refraction can be produced at will, and how they may be cured, temporarily in a few minutes, and permanently by continued treatment.

CHAPTER VII

THE VARIABILITY OF THE REFRACTION OF THE EYE

THE theory that errors of refraction are due to permanent deformations of the eyeball leads naturally to the conclusion, not only that errors of refraction are permanent states, but that normal refraction is also a continuous condition. As this theory is almost universally accepted as a fact, therefore, it is not surprising to find that the normal eye is generally regarded as a perfect machine which is always in good working order. No matter whether the object regarded is strange or familiar, whether the light is good or imperfect, whether the surroundings are pleasant or disagreeable, even under conditions of nerve strain or bodily disease, the normal eye is expected to have normal refraction and normal sight all the time. It is true that the facts do not harmonize with this view, but they are conveniently attributed to the perversity of the ciliary muscle, or if that explanation will not work, ignored altogether.

When we understand, however, how the shape of the eyeball is controlled by the external muscles, and how it responds instantaneously to their action, it is easy to see that no refractive state, whether it is normal or abnormal, can be permanent. This conclusion is confirmed by the retinoscope, and I had observed the facts long before the experiments described in the preceding chapters had offered a satisfactory explanation for it. During thirty years devoted to the study of refraction, I have found few people who could maintain perfect sight for more than a few minutes at a time, even under the most favorable conditions; and often I have seen the refraction change half a dozen times or more in a second, the variations ranging all the way from twenty diopters of myopia to normal.

Similarly I have found no eyes with continuous or unchanging errors of refraction, all persons with errors of refraction having, at frequent intervals during the day and night, moments of normal vision, when their myopia, hypermetropia, or astigmatism, wholly disappears. The form of the error also changes, myopia even changing into hypermetropia, and one form of astigmatism into another.

Of twenty thousand school children examined in one year, more than half had normal eyes, with sight which was perfect at times; but not one of them had perfect sight in each eye at all times of the day. Their sight might be good in the morning and imperfect in the afternoon, or imperfect in the morning and perfect in the afternoon. Many children could read one Snellen test card with perfect sight, while unable to see a different one perfectly. Many could also read some letters of the alphabet perfectly, while unable to distinguish other letters of the same size under similar conditions. The degree of this imperfect sight varied within wide limits, from one-third to one-tenth, or less. Its duration was also variable. Under some conditions it might continue for only a few minutes, or less; under others it might prevent the subject from seeing the blackboard for days, weeks, or even longer. Frequently all the pupils in a classroom were affected to this extent.

Changing Refraction of Infants

Among babies a similar condition was noted. Most investigators have found babies hypermetropic. A few have found them myopic. My own observations indicate that the refraction of infants is continually changing. One child was examined under atropine on four successive days, beginning two hours after birth. A three per cent solution of atropine was instilled into both eyes, the pupil was dilated to the maximum, and other physiological symptoms of the use of atropine were noted. The first examination showed a condition of mixed astigmatism. On the second day there was compound hypermetropic astigmatism, and on the third compound myopic astigmatism. On the fourth one eye was normal and the other showed simple myopia. Similar variations were noted in many other cases.

What is true of children and infants is equally true of adults of all ages. Persons over seventy years of age have suffered losses of vision of variable degree and intensity, and in such cases the retinoscope always indicated an error of refraction. A man eighty years old, with normal eyes and ordinarily normal sight, had periods of imperfect sight which would last from a few minutes to half an hour or longer. Retinoscopy at such times always indicated myopia of four diopters or more.

During sleep the refractive condition of the eye is rarely, if ever, normal. Persons whose refraction is normal when they are awake will produce myopia, hypermetropia and astigmatism when they are asleep, or, if they have errors of refraction when they are awake, they will be increased during sleep. This is why people waken in the morning with eyes more tired than at any other time, or even with severe headaches. When the subject is under ether or chloroform, or unconscious from any other cause, errors of refraction are also produced or increased.

When the eye regards an unfamiliar object an error of refraction is always produced. Hence the proverbial fatigue caused by viewing pictures, or other objects, in a museum. Children with normal eyes who can read perfectly small letters a quarter of an inch high at ten feet always have trouble in reading strange writing on the blackboard, although the letters may be two inches high. A strange map, or any map, has the same effect. I have never seen a child, or a teacher, who could look at a map at the distance without becoming nearsighted. German type has been accused of being responsible for much of the poor sight once supposed to be peculiarly a German malady; but if a German child attempts to read Roman print, it will at once become temporarily hypermetropic. German print, or Greek or Chinese characters, will have the same effect on a child, or other person, accustomed to Roman letters. Cohn repudiated the idea that German lettering was trying to the eyes. 1 On the contrary, he always found it "pleasant, after a long reading of the monotonous Roman print, to return 'to our beloved German.' " Because the German characters were more familiar to him than any others he found them restful to his eyes. "Use," as he truly observed, "has much to do with the matter." Children learning to read, write, draw, or sew, always suffer from defective vision, because of the unfamiliarity of the lines or objects with which they are working.

A sudden exposure to strong light, or rapid or sudden changes of light, are likely to produce imperfect sight in the normal eye, continuing in some cases for weeks and months (see Chapter XVII).

1 Eyes and School Books, Pop. Sci. Monthly, May, 1881, translated from Deutsche Rundschau.

Causes of Defective Vision in Normal Eyes

Noise is also a frequent cause of defective vision in the normal eye. All persons see imperfectly when they hear an unexpected loud noise. Familiar sounds do not lower the vision, but unfamiliar ones always do. Country children from quiet schools may suffer from defective vision for a long time after moving to a noisy city. In school they cannot do well with their work, because their sight is impaired. It is, of course, a gross injustice for teachers and others to scold, punish, or humiliate such children.

Under conditions of mental or physical discomfort, such as pain, cough, fever, discomfort from heat or cold, depression, anger, or anxiety, errors of refraction are always produced in the normal eye, or increased in the eye in which they already exist.

The variability of the refraction of the eye is responsible for many otherwise unaccountable accidents. When people are struck down in the street by automobiles, or trolley cars, it is often due to

the fact that they were suffering from temporary loss of sight. Collisions on railroads or at sea, disasters in military operations, aviation accidents, etc., often occur because some responsible person suffered temporary loss of sight.

To this cause must also be ascribed, in a large degree, the confusion which every student of the subject has noted in the statistics which have been collected regarding the occurrence of errors of refraction. So far as I am aware it has never been taken into account by any investigator of the subject; yet the result in any such investigation must be largely determined by the conditions under which it is made. It is possible to take the best eyes in the world and test them so that the subject will not be able to get into the Army. Again, the test may be so made that eyes which are apparently much below normal at the beginning, may in the few minutes required for the test, acquire normal vision and become able to read the test card perfectly.

CHAPTER VIII

WHAT GLASSES DO TO US

THE Florentines were doubtless mistaken in supposing that their fellow citizen (see page v, Page 6) was the inventor of the lenses now so commonly worn to correct errors of refraction. There has been much discussion as to the origin of these devices, but they are generally believed to have been known at a period much earlier than that of Salvino degli Armati. The Romans at least must have known something of the art of supplementing the powers of the eye, for Pliny tells us that Nero used to watch the games in the Colosseum through a concave gem set in a ring for that purpose. If, however, his contemporaries believed that Salvino of the Armati was the first to produce these aids to vision, they might well pray for the pardon of his sins; for while it is true that eyeglasses have brought to some people improved vision and relief from pain and discomfort, they have been to others simply an added torture, they always do more or less harm, and at their best they never improve the vision to normal.

That glasses cannot improve the sight to normal can be very simply demonstrated by looking at any color through a strong convex or concave glass. It will be noted that the color is always less intense than when seen with the naked eye; and since the perception of form depends upon the perception of color, it follows that both color and form must be less distinctly seen with glasses than without them. Even plane glass lowers the vision both for color and form, as everyone knows who has ever looked out of a window. Women who wear glasses for minor defects of vision often observe that they are made more or less color-blind by them, and in a shop one may note that they remove them when they want to match samples. If the sight is seriously defective, the color may be seen better with glasses than without them.

That glasses must injure the eye is evident from the facts given in the preceding chapter. One cannot see through them unless one produces the degree of refractive error which they are designed to correct. But refractive errors, in the eye which is left to itself, are never constant. If one secures good vision by the aid of concave, or convex, or astigmatic lenses, therefore, it means that one is maintaining constantly a degree of refractive error which otherwise would not be maintained constantly. It is only to be expected that this should make the condition worse, and it is a matter of common experience that it does. After people once begin to wear glasses their strength, in most cases, has to be steadily increased in order to maintain the degree of visual acuity secured by the aid of the first pair. Persons with presbyopia who put on glasses because they cannot read fine print too often find that after they have worn them for a time they cannot, without their aid, read the larger print that was perfectly plain to them before. A person with myopia of 20/70 who puts on glasses giving him a vision of 20/20 may find that in a week's time his unaided vision has declined to 20/200, and we have the testimony of Dr. Sidler-Huguenin, of Zurich,1 that of the thousands of myopes treated by him the majority grew steadily worse, in spite of all the skill he could apply to the fitting of glasses for them. When people break their glasses and go without them for a week or two, they

1 Archiv. f. Augenh., vol. lxxix, 1915, translated in Arch. Ophth., vol. xlv, Nov. 6, 1916.

frequently observe that their sight has improved. As a matter of fact the sight always improves, to a greater or less degree, when glasses are discarded, although the fact may not always be noted.

That the human eye resents glasses is a fact which no one would attempt to deny. Every oculist knows that patients have to "get used" to them, and that sometimes they never succeed in doing so. Patients with high degrees of myopia and hypermetropia have great difficulty in accustoming themselves to the full correction, and often are never able to do so. The strong concave glasses required by myopes of high degree make all objects seem much smaller than they really are, while convex glasses enlarge them. These are unpleasantnesses that cannot be overcome. Patients with high degrees of astigmatism suffer some very disagreeable sensations when they first put on glasses, for which reason they are warned by one of the "Conservation of Vision" leaflets published by the Council on Health and Public Instruction of the American Medical Association to "get used to them at home before venturing where a misstep might cause a serious accident."1 Usually these difficulties are overcome, but often they are not, and it sometimes happens that those who get on fairly well with their glasses in the daytime never succeed in getting used to them at night.

All glasses contract the field of vision to a greater or less degree. Even with very weak glasses patients are unable to see distinctly unless they look through the center of the lenses, with the frames at right angles to the line of vision; and not only is their vision lowered if they fail to do this, but annoying nervous symptoms,

1 Lancaster: Wearing Glasses, p. 15.

such as dizziness and headache, are sometimes produced. Therefore they are unable to turn their eyes freely in different directions. It is true that glasses are now ground in such a way that it is theoretically possible to look through them at any angle, but practically they seldom accomplish the desired result.

The difficulty of keeping the glass clear is one of the minor discomforts of glasses, but nevertheless a most annoying one. On damp and rainy days the atmosphere clouds them. On hot days the perspiration from the body may have a similar effect. On cold days they are often clouded by the moisture of the breath. Every day they are so subject to contamination by dust and moisture and the touch of the fingers incident to unavoidable handling that it is seldom they afford an absolutely unobstructed view of the objects regarded.

Reflections of strong light from eyeglasses are often very annoying, and in the street may be very dangerous.
Soldiers, sailors, athletes, workmen and children have great difficulty with glasses because of the activity of their lives, which not only leads to the breaking of the lenses, but often throws them out of focus, particularly in the case of eyeglasses worn for astigmatism.

The fact that glasses are very disfiguring may seem a matter unworthy of consideration in a medical publication; but mental discomfort does not improve either the general health or the vision, and while we have gone so far toward making a virtue of what we conceive to be necessity that some of us have actually come to consider glasses becoming, huge round lenses in ugly tortoiseshell frames being positively fashionable at the present time, there are still some unperverted minds to which the wearing of glasses is mental torture and the sight of them upon others far from agreeable. Most human

beings are, unfortunately, ugly enough without putting glasses upon them, and to disfigure any of the really beautiful faces that we have with such contrivances is surely as bad as putting an import tax upon art. As for putting glasses upon a child it is enough to make the angels weep.

Up to a generation ago glasses were used only as an aid to defective sight, but they are now prescribed for large numbers of persons who can see as well or better without them. As explained in Chapter I, the hypermetropic eye is believed to be capable of correcting its own difficulties to some extent by altering the curvature of the lens, through the activity of the ciliary muscle. The eye with simple myopia is not credited with this capacity, because an increase in the convexity of the lens, which is supposed to be all that is accomplished by accommodative effort, would only increase the

difficulty; but myopia is usually accompanied by astigmatism, and this, it is believed, can be overcome, in part, by alterations in the curvature of the lens. Thus we are led by the theory to the conclusion that an eye in which any error of refraction exists is practically never free, while open, from abnormal accommodative efforts. In other words, it is assumed that the supposed muscle of accommodation has to bear, not only the normal burden of changing the focus of the eye for vision at different distances, but the additional burden of compensating for refractive errors. Such adjustments, if they actually took place, would naturally impose a severe strain upon the nervous system, and it is to relieve this strain - which is believed to be the cause of a host of functional nervous troubles - quite as much as to improve the sight, that glasses are prescribed.

It has been demonstrated, however, that the lens is not a factor, either in the production of accommodation, or in the correction of errors of refraction. Therefore under no circumstances can there be a strain of the ciliary muscle to be relieved. It has also been demonstrated that when the vision is normal no error of refraction is present, and the extrinsic muscles of the eyeball are at rest. Therefore there can be no strain of the extrinsic muscles to be relieved in these cases. When a strain of these muscles does exist, glasses may correct its effects upon the refraction, jut the strain itself they cannot relieve. On the contrary, as has been shown, they must make it worse. Nevertheless persons with normal vision who wear glasses for the relief of a supposed muscular strain are often benefited by them. This is a striking illustration of the effect of mental suggestion, and plane glass, if it could inspire the same faith, would produce the same result. In fact, many patients have told me that they had been relieved of various discomforts by glasses which I found to be simply plane glass. One of these patients was an optician who had fitted the glasses himself and was under no illusions whatever about them; yet he assured me that when he didn’t wear them he got headaches.

Some patients are so responsive to mental suggestion that you can relieve their discomfort, or improve their sight, with almost any glasses you like to put on them. I have seen people with hypermetropia wearing myopic glasses with a great deal of comfort, and people with no astigmatism getting much satisfaction from glasses designed for the correction of this defect.

Landolt mentions the case of a patient who had for years worn prisms for insufficiency of the internal recti, and who found them absolutely indispensable for work, although the apices were toward the nose. The prescrip

tion, which the patient was able to produce, called for prisms adjusted in the usual manner, with the apices toward the temples ; but the optician had made a mistake which, owing to the patient’s satisfaction with the result, had never been discovered. Landolt explained the case by “the slight effect of weak prisms and the great power of imagination”: 1 and doubtless the benefit derived from the glasses was real, resulting from the patient’s great faith in the specialist - described as “one of the most competent of ophthalmologists” - who prescribed them.

Some patients will even imagine that they see better with glasses that markedly lower the vision. A number of years ago a patient for whom I had prescribed glasses consulted an ophthalmologist whose reputation was much greater than my own, and who gave him another pair of glasses and spoke slightingly of the ones that I had prescribed. The patient returned to me and told me how much better he could see with the second pair of glasses than he did with the first. I tested his vision with the new glasses, and found that while mine had given him a vision of 20/20 those of my colleague enabled him to see only 20/40. The simple fact was that he had been hypnotized by a great reputation into thinking he could see better when he actually saw worse ; and it was hard to convince him that he was wrong, although he had to admit that when he looked at the test card he could see only half as much with the new glasses as with the old ones.

When glasses do not relieve headaches and other nervous symptoms it is assumed to be because they were not properly fitted, and some practitioners and their patients exhibit an astounding degree of patience and

1 Anomalies of the Motor Apparatus of the Eye, System of Diseases of the Eye, voL iv, pp. 154-155.

perseverance in their joint attempts to arrive at the proper prescription. A patient who suffered from severe pains at the base of his brain was fitted sixty times by one specialist alone, and had besides visited many other eye and nerve specialists in this country and in Europe. He was relieved of the pain in five minutes by the methods presented in this book, while his vision, at the same time, became temporarily normal.

It is fortunate that many people for whom glasses have been prescribed refuse to wear them, thus escaping not only much discomfort but much injury to their eyes. Others, having less independence of mind, or a larger share of the martyr's spirit, or having been more badly frightened by the oculists, submit to an amount of unnecessary torture which is scarcely conceivable. One such patient wore glasses for twenty-five years, although they did not prevent her from suffering continual misery and lowered her vision to such an extent that she had to look over the tops when she wanted to see anything at a distance. Her oculist assured her that she might expect the most serious consequences if she did not wear the glasses, and was very severe about her practice of looking over instead of through them.

As refractive abnormalities are continually changing, not only from day to day and from hour to hour, but from minute to minute, even under the influence of atropine, the accurate fitting of glasses is, of course, impossible. In some cases these fluctuations are so extreme, or the patient so unresponsive to mental suggestion, that no relief whatever is obtained from correcting lenses, which necessarily become under such circumstances an added discomfort. At their best it cannot be maintained that glasses are anything more than a very unsatisfactory substitute for normal vision.

CHAPTER IX

THE CAUSE AND CURE OF ERRORS OF REFRACTION

IT has been demonstrated in thousands of cases that all abnormal action of the external muscles of the eyeball is accompanied by a strain or effort to see, and that with the relief of this strain the action of the muscles becomes normal and all errors of refraction disappear. The eye may be blind, it may be suffering from atrophy of the optic nerve, from cataract, or disease of the retina; but so long as it does not try to see, the external muscles act normally and there is no error of refraction. This fact furnishes us with the means by which all these conditions, so long held to be incurable, may be cured.



Fig. 34. Straining to See at the Near-Point Produces Hypermetropia

It has also been demonstrated that for every error of refraction there is a different kind of strain. The study of images reflected from various parts of the eyeball confirmed what had previously been observed, namely, that myopia (or a lessening of hypermetropia) is always associated with a strain to see at the distance, while hypermetropia (or a lessening of myopia) is always associated with a strain to see at the near-point ; and the fact can be verified in a few minutes by anyone who knows how to use a retinoscope, provided only that the instrument is not brought nearer to the subject than six feet.

In an eye with previously normal vision a strain to see near objects always results in the temporary production of hypermetropia in one or all meridians. That is, the eye either becomes entirely hypermetropic, or some form

Fig. 34. Straining to See at the Near-Point Produces Hypermetropia. Patient reading fine print in a good light at thirteen inches, the object of vision being placed above the eye so as to be out of the line of the camera. Simultaneous retinoscopy indicated that the eye was focused at thirteen inches. The glass was used with the retinoscope to determine the amount of the refraction.

When the room was darkened the patient failed to read the fine print at thirteen inches and the retinoscope indicated that the eye was focused at a greater distance. When a conscious strain of considerable degree was made to see, the eye became hypermetropic.

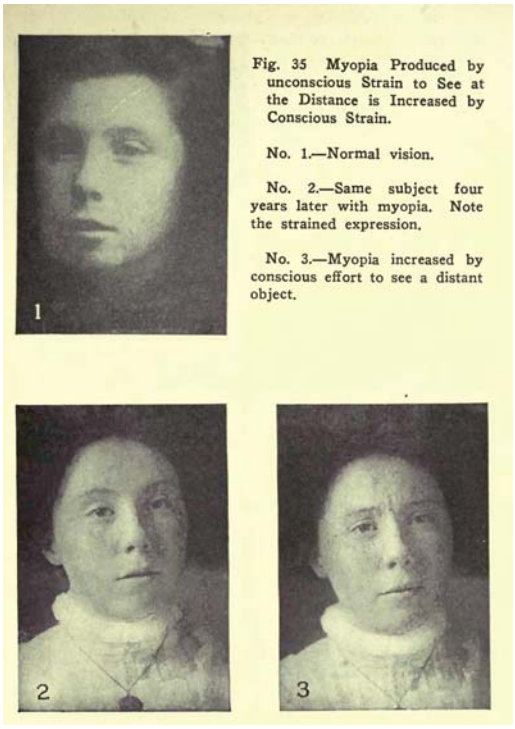


Fig. 35 Myopia Produced by unconscious Strain to See at the Distance is Increased by Conscious Strain.

No. 1.—Normal vision.

No. 2.—Same subject four years later with myopia. Note the strained expression.

No. 3.—Myopia increased by conscious effort to see a distant object.

1

2

3

Voluntary Increase of Refractive Error

Fig. 35 Myopia Produced by unconscious Strain to See at the Distance is Increased by Conscious Strain.

No. 1. Normal vision.

No. 2. Same subject four years later with myopia. Note the strained expression.

No. 3. Myopia increased by conscious effort to see a distant object.

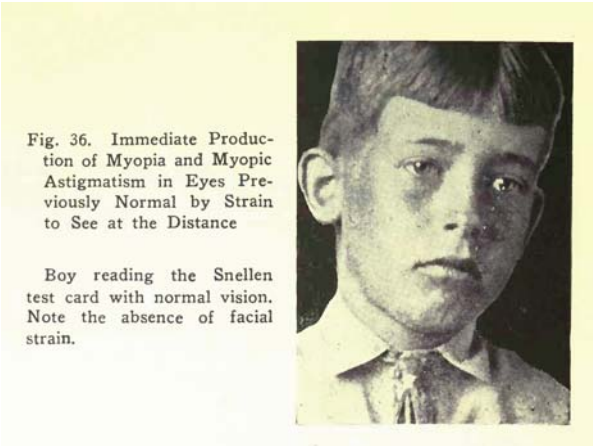
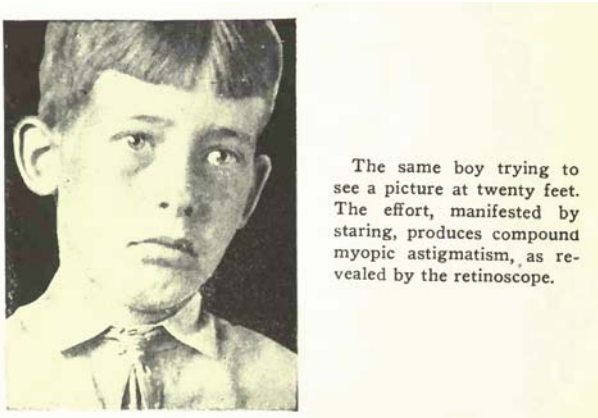


Fig. 36. Immediate Production of Myopia and Myopic Astigmatism in Eyes Previously Normal by Strain to See at the Distance

Boy reading the Snellen test card with normal vision. Note the absence of facial strain.

Fig. 36. Immediate Production of Myopia and Myopic Astigmatism in Eyes Previously Normal by Strain to See at the Distance

Boy reading the Snellen test card with normal vision.
Note the absence of facial strain.



The same boy trying to see a picture at twenty feet. The effort, manifested by staring, produces compound myopic astigmatism, as revealed by the retinoscope.

The same boy trying to see a picture at twenty feet. The effort, manifested by staring, produces compound myopic astigmatism, as revealed by the retinoscope.



The same boy making himself myopic voluntarily by partly closing the eyelids and making a conscious effort to read the test card at ten feet.

The same boy making himself myopic voluntarily by partly closing the eyelids and making a conscious effort to read the test card at ten feet.

Emmetropia at the Near-Point

of astigmatism is produced of which hypermetropia forms a part. In the hypermetropic eye the hypermetropia is increased in one or all meridians. When the myopic eye strains to see a near object the myopia is lessened and emmetropia[1] may be produced, the eye being focussed for parallel rays while still trying to see at the near-point. In some cases the emmetropia may even pass over into hypermetropia in one or all meridians. All these changes are accompanied by evidences of increasing strain, in the form of eccentric fixation (see Chapter XI) and lowered vision ; but, strange to say, pain and fatigue are usually relieved to a marked degree. If, on the contrary, the eye with previously normal vision strains to see at the distance, temporary myopia is always produced in one or all meridians, and if the eye is already myopic, the myopia is increased. If the hypermetropic eye strains to see a distant object, pain and fatigue may be produced or increased; but the hypermetropia and the eccentric fixation are lessened and the vision improves. This interesting result, it will be noted, is the exact contrary of what we get when the myope strains to see at the near-point. In some cases the hypermetropia is completely relieved, and emmetropia is produced, with a complete disappearance of all evidences of strain. This condition may then pass over into myopia, with an increase of strain as the myopia increases.

1 Emmetropia (from the Greek emmetros, in measure, and ops, the eye) is that condition of the eye in which it is focussed for parallel rays. This constitutes normal vision at the distance, but is an error of refraction when it occurs at the near-point.

In other words the eye which strains to see at the nearpoint becomes flatter than it was before, in one or all meridians. If it was elongated to start with, it may pass



Fig. 37. Myopic Astigmatism comes and Goes According as the Subject Looks at Distant Objects With or Without Strain

No. 1.—Patient regarding the Snellen test card at ten feet without effort and reading the bottom line with normal vision.

No. 2.—The same patient making an effort to see a picture at twenty feet. The retinoscope indicated compound myopic astigmatism.

Fig. 37. Myopic Astigmatism comes and Goes According as the Subject Looks at Distant Objects With or Without Strain. No. 1 Patient regarding the Snellen test card at ten feet without effort and reading the bottom line with normal vision. No. 2. The same patient making an effort to see a picture at twenty feet. The retinoscope indicated compound myopic astigmatism.

from this condition through emmetropia, in which it is spherical, to hypermetropia, in which it is flattened; and if these changes take place unsymmetrically, astigmatism will be produced in connection with the other conditions. The eye which strains to see at the distance, on the contrary, becomes longer than it was before in one or all meridians, and may pass from the flattened condition of hypermetropia, through emmetropia, to the elongated condition of myopia. If these changes take place unsymmetrically, astigmatism will again be produced in connection with the other conditions.

What has been said of the normal eye applies equally to eyes from which the lens has been removed. This operation produces usually a condition of hypermetropia; but when there has previously been a condition of high myopia the removal of the lens may not be sufficient to correct it, and the eye may still remain myopic. In the first case a strain to see at the distance lessens the hypermetropia, and a strain to see at the near-point increases it; in the second a strain to see at the distance increases the myopia, and a strain to see at the nearpoint lessens it. For a longer or shorter period after the removal of the lens many aphakic eyes strain to see at the near-point, producing so much hypermetropia that the patient cannot read ordinary print, and the power of accommodation appears to have been completely lost. Later, when the patient becomes accustomed to the situation, this strain is often relieved, and the eye becomes able to focus accurately upon near objects. Some rare cases have also been observed in which a measure of good vision both for distance and the near-point was obtained without glasses, the eyeball elongating sufficiently to compensate, to some degree, for the loss of the lens.



Fig. 38. This Patient Had Had the Lens of the Right Eye Removed for Cataract and Was Wearing an Artificial Eye in the Left Socket. The Removal of the Lens created a Condition of Hypermetropia Which Was Corrected by a Con vex Glass of Ten Diopters.

Should Have Been Impossible

No. 1.—The patient is reading the Snellen test card at twenty feet with normal vision. No. 2.—She is straining to see the test card at the same distance, and her hypermetropia is lessened by two diopters so that her glass now overcorrects it and she cannot see the card perfectly. No. 3.—With a convex reading glass of thirteen diopters the right eye is focussed accurately at thirteen inches. No. 4.—The patient is straining to see at the same distance and her hypermetropia is so increased that in order to read she would require a glass of fifteen diopters. On the basis of the accepted theory that the power of accommodation is wholly destroyed by the removal of the lens these changes in the refraction would have been impossible. The experiment was repeated several times and it was found that the error of refraction produced by straining to see varied, being sometimes more and sometimes less than two diopters.

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The phenomena associated with strain in the human eye have also been observed in the eyes of the lower animals. I have made many dogs myopic by inducing them to strain to see a distant object. One very nervous dog, with normal refraction, as demonstrated by the retinoscope, was allowed to smell a piece of meat. He became very much excited, pricked up his ears, arched his eyebrows and wagged his tail. The meat was then removed to a distance of twenty feet. The dog looked disappointed, but didn't lose interest. While he was watching the meat it was dropped into a box. A worried look came into his eyes. He strained to see what had become of it, and the retinoscope showed that he had become myopic. This experiment, it should be added, would succeed only with an animal possessing two active oblique muscles. Animals in which one of these muscles is absent or rudimentary are unable to elongate the eyeball under any circumstances.

Primarily the strain to see is a strain of the mind, and, as in all cases in which there is a strain of the mind, there is a loss of mental control. Anatomically the results of straining to see at a distance may be the same as those of regarding an object at the near point without strain; but in one case the eye does what the mind desires ; and in the other it does not.

These facts appear sufficiently to explain why visual acuity declines as civilization advances. Under the conditions of civilized life men's minds are under a continual strain. They have more things to worry them than uncivilized man had, and they are not obliged to keep cool and collected in order that they may see and do other things upon which existence depends. If he allowed himself to get nervous, primitive man was promptly

Relation of Civilization to Vision



Fig. 39. A Family Group Strikingly Illustrating the Effect of the Mind Upon the Vision

No. 1.—Girl of four with normal eyes. No. 2.—The child's mother with myopia. No. 3—The same girl at nine with myopia. Note that her expression has completely changed, and is now exactly like her mother's. Nos. 4, 5 and 6.—The girl's brother at two, six and eight. His eyes are normal in all three pictures. The girl has either inherited her mother's disposition to take things hard, or has been injuriously effected by her personality of strain. The boy has escaped both influences. In view of the prevailing theories about the relation of heredity to myopia, this picture is particularly interesting.

eliminated; but civilized man survives and transmits his mental characteristics to posterity. The lower animals when subjected to civilized conditions respond to them in precisely the same way as do human creatures. I have examined many domestic and menagerie animals, and have found them, in many cases, myopic, although they neither read, nor write, nor sew, nor set type.

Fig. 39. A Family Group Strikingly Illustrating the Effect of the Mind Upon the Vision. No. 1. Girl of four with normal eyes. No. 2. The child's mother with myopia. No. 3 The same girl at nine with myopia. Note that her expression has completely changed, and is now exactly like her mother's. Nos. 4, 5 and 6. The girl's brother at two, six and eight. His eyes are normal in all three pictures. The girl has either inherited her mother's disposition to take things hard, or has been injuriously effected by her personality of strain. The boy has escaped both influences. In view of the prevailing theories about the relation of heredity to myopia, this picture is particularly interesting.

A decline in visual acuity at the distance, however, is no more a peculiarity of civilization than is a similar decline at the near-point. Myopes, although they see better at the near-point than they do at the distance, never see as well as does the eye with normal sight; and in hypermetropia, which is more common than myopia, the sight is worse at the near-point than at the distance.



Fig. 40. Myopes Who Never Went to School, or Read in the Subway

No. 1.—Myopic elephant in the Central Park Zoo, New York, thirty-nine years old. Young elephants and other young animals were found to have normal vision.

No. 2.—Cape buffalo with myopia, Central Park Zoo.

No. 3.—Myopic monkey, also in the Central Park Zoo.

No. 4.—Pet dog with myopia which progressed from year to year.

Fig. 40. Myopes Who Never Went to School, or Read in the Subway. No. 1. Myopic elephant in the Central Park Zoo, New York, thirty-nine years old. Young elephants and other young animals were found to have normal vision. No. 2. Cape buffalo with myopia, Central Park Zoo. No. 3. Myopic monkey, also in the Central Park Zoo. No. 4. Pet dog with myopia which progressed from year to year.

Relaxation Cures

The remedy is not to avoid either near work or distant vision, but to get rid of the mental strain which underlies the imperfect functioning of the eye at both points; and it has been demonstrated in thousands of cases that this can always be done.

Fortunately, all persons are able to relax under certain conditions at will. In all uncomplicated errors of refraction the strain to see can be relieved, temporarily, by having the patient look at a blank wall without trying to see. To secure permanent relaxation sometimes requires considerable time and much ingenuity. The same method cannot be used with everyone. The ways in which people strain to see are infinite, and the methods used to relieve the strain must be almost equally varied. Whatever the method that brings most relief, however, the end is always the same, namely relaxation. By constant repetition and frequent demonstration and by all means possible, the fact must be impressed upon the patient that perfect sight can be obtained only by relaxation. Nothing else matters.

Most people, when told that rest, or relaxation, will cure their eye troubles, ask why sleep does not do so. The answer to this question was given in Chapter VII. The eyes are rarely, if ever, completely relaxed in sleep, and if they are under a strain when the subject is awake, that strain will certainly be continued during sleep, to a greater or less degree, just as a strain of other parts of the body is continued.

The idea that it rests the eyes not to use them is also erroneous. The eyes were made to see with, and if when they are open they do not see, it is because they are under such a strain and have such a great error of refraction that they cannot see. Near vision, although accomplished by a muscular act, is no more a strain on them than is distant vision, although accomplished without the intervention of the muscles. The use of the muscles does not necessarily produce fatigue. Some men can run for hours without becoming tired. Many birds support themselves upon one foot during sleep, the toes tightly clasping the swaying bough and the muscles remaining unfatigued by the apparent strain. Fabre tells of an insect which hung back downward for ten months from the roof of its wire cage, and in that position performed all the functions of life, even to mating and laying its eggs. Those who fear the effect of civilization, with its numerous demands for near vision, upon the eye may take courage from the example of this marvelous little animal which, in a state of nature, hangs by its feet only at intervals, but in captivity can do it for ten months on end, the whole of its life's span, apparently without inconvenience or fatigue. 1

The fact is that when the mind is at rest nothing can tire the eyes, and when the mind is under a strain nothing can rest them. Anything that rests the mind will benefit the eyes. Almost everyone has observed that the eyes tire less quickly when reading an interesting book than when perusing something tiresome or difficult to comprehend. A schoolboy can sit up all night reading a novel without even thinking of his eyes, but if he tried to sit up all night studying his lessons he would soon find them getting very tired. A child whose vision was

1 The Wonders of Instinct, English translation by de Mattos and Miall, 1918, pp. 36-38.

Time Required for a Cure

ordinarily so acute that she could see the moons of Jupiter with the naked eye became myopic when asked to do a sum in mental arithmetic, mathematics being a subject which was extremely distasteful to her. Sometimes the conditions which produce mental relaxation are very curious. One patient, for instance, was able to correct her error of refraction when she looked at the test card with her body bent over at an angle of about forty-five degrees, and the relaxation continued after she had assumed the upright position. Although the position was an unfavorable one, she had somehow got the idea that it improved her sight, and therefore it did so.

The time required to effect a permanent cure varies greatly with different individuals. In some cases five, ten, or fifteen minutes is sufficient, and I believe the time is coming when it will be possible to cure everyone quickly. It is only a question of accumulating more facts, and presenting these facts in such a way that the patient can grasp them quickly. At present, however, it is often necessary to continue the treatment for weeks and months, although the error of refraction may be no greater nor of longer duration than in those cases that are cured quickly. In most cases, too, the treatment must be continued for a few minutes every day to prevent relapse. Because a familiar object tends to relax the strain to see, the daily reading of the Snellen test card is usually sufficient for this purpose. It is also useful, particularly when the vision at the near point is imperfect, to read fine print every day as close to the eyes as it can be done. When a cure is complete it is always permanent; but complete cures, which mean the attainment, not of what is ordinarily called normal sight, but of a measure of telescopic and microscopic vision, are very rare. Even in these cases, too, the treatment can be continued with benefit; for it is impossible to place limits to the visual powers of man, and no matter how good the sight, it is always possible to improve it. Daily practice of the art of vision is also necessary to

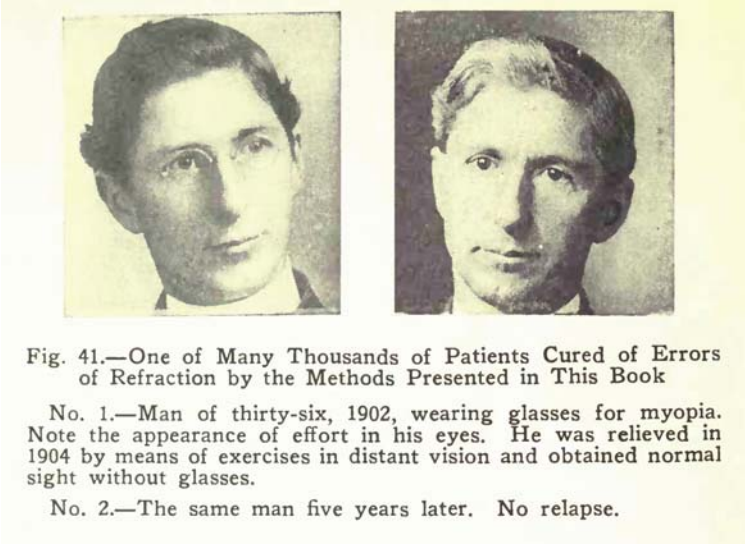


Fig. 41.—One of Many Thousands of Patients Cured of Errors of Refraction by the Methods Presented in This Book

No. 1.—Man of thirty-six, 1902, wearing glasses for myopia. Note the appearance of effort in his eyes. He was relieved in 1904 by means of exercises in distant vision and obtained normal sight without glasses.

No. 2.—The same man five years later. No relapse.

Fig. 41. One of Many Thousands of Patients Cured of Errors of Refraction by the Methods Presented in This Book. No. 1. - Man of thirty-six, 1902, wearing glasses for myopia. Note the appearance of effort in his eyes. He was relieved in 1904 by means of exercises in distant vision and obtained normal sight without glasses.
No. 2. - The same man five years later. No relapse.

prevent those visual lapses to which every eye is liable, no matter how good its sight may ordinarily be. It is true that no system of training will provide an absolute safeguard against such lapses in all circumstances; but the daily reading of small distant, familiar letters will do much to lessen the tendency to strain when disturbing circumstances arise, and all persons upon whose eyesight the safety of others depends should be required to do this.

Cures at All Ages

Generally persons who have never worn glasses are more easily cured than those who have, and glasses should be discarded at the beginning of the treatment. When this cannot be done without too great discomfort, or when the patient has to continue his work during the treatment and cannot do so without glasses, their use must be permitted for a time ; but this always delays the cure. Persons of all ages have been benefited by this treatment of errors of refraction by relaxation; but children usually, though not invariably, respond much more quickly than adults. If they are under twelve years of age, or even under sixteen, and have never worn glasses, they are usually cured in a few days, weeks, or months, and always within a year, simply by reading the Snellen test card every day.

CHAPTER X

STRAIN

TEMPORARY conditions may contribute to the strain to see which results in the production of errors of refraction; but its foundation lies in wrong habits of thought. In attempting to relieve it the physician has continually to struggle against the idea that to do anything well requires effort. This idea is drilled into us from our cradles. The whole educational system is based upon it; and in spite of the wonderful results attained by Montessori through the total elimination of every species of compulsion in the educational process, educators who call themselves modern still cling to the club, under various disguises, as a necessary auxiliary to the process of imparting knowledge.

It is as natural for the eye to see as it is for the mind to acquire knowledge, and any effort in either case is not only useless, but defeats the end in view. You may force a few facts into a child's mind by various kinds of compulsion, but you cannot make it learn anything. The facts remain, if they remain at all, as dead lumber in the brain. They contribute nothing to the vital processes of thought; and because they were not acquired naturally and not assimilated, they destroy the natural impulse of the mind toward the acquisition of knowledge, and by the time the child leaves school or college, as the case may be, it not only knows nothing but is, in the majority of cases, no longer capable of learning.

In the same way you may temporarily improve the sight by effort, but you cannot improve it to normal, and

When the Eye Tries to See

if the effort is allowed to become continuous, the sight will steadily deteriorate and may eventually be destroyed. Very seldom is the impairment or destruction of vision due to any fault in the construction of the eye. Of two equally good pairs of eyes one will retain perfect sight to the end of life, and the other will lose it in the kindergarten, simply because one looks at things without effort and the other does not.

The eye with normal sight never tries to see. If for any reason, such as the dimness of the light, or the distance of the object, it cannot see a particular point, it shifts to another. It never tries to bring out the point by staring at it, as the eye with imperfect sight is constantly doing.

Whenever the eye tries to see, it at once ceases to have normal vision. A person may look at the stars with normal vision; but if he tries to count the stars in any particular constellation, he will probably become myopic, because the attempt to do these things usually results in an effort to see. A patient was able to look at the letter K on the Snellen test card with normal vision, but when asked to count its twenty-seven corners he lost it completely.

It obviously requires a strain to fail to see at the distance, because the eye at rest is adjusted for distant vision. If one does anything when one wants to see at the distance, one must do the wrong thing. The shape of the eyeball cannot be altered during distant vision without strain. It is equally a strain to fail to see at the near-point, because when the muscles respond to the mind's desire they do it without strain. Only by an effort can one prevent the eye from elongating at the near-point.

The eye possesses perfect vision only when it is absolutely at rest. Any movement, either in the organ or the object of vision, produces an error of refraction. With the retinoscope it can be demonstrated that even the necessary movements of the eyeball produce a slight error of refraction, and the moving pictures have given us a practical demonstration of the fact that it is impossible to see a moving object perfectly. When the movement of the object of vision is sufficiently slow, the resulting impairment of vision is so slight as to be inappreciable, just as the errors of refraction produced by slight movements of the eyeball are inappreciable; but when objects move very rapidly they can be seen only as a blur. For this reason it has been found necessary to arrange the machinery for exhibiting moving pictures in such a way that each picture is halted for a twenty-fourth of a second, and screened while it is moving into place. Moving pictures, accordingly, are never seen in motion.

The act of seeing is passive. Things are seen, just as they are felt, or heard, or tasted, without effort or volition on the part of the subject. When sight is perfect the letters on the test card are wait-

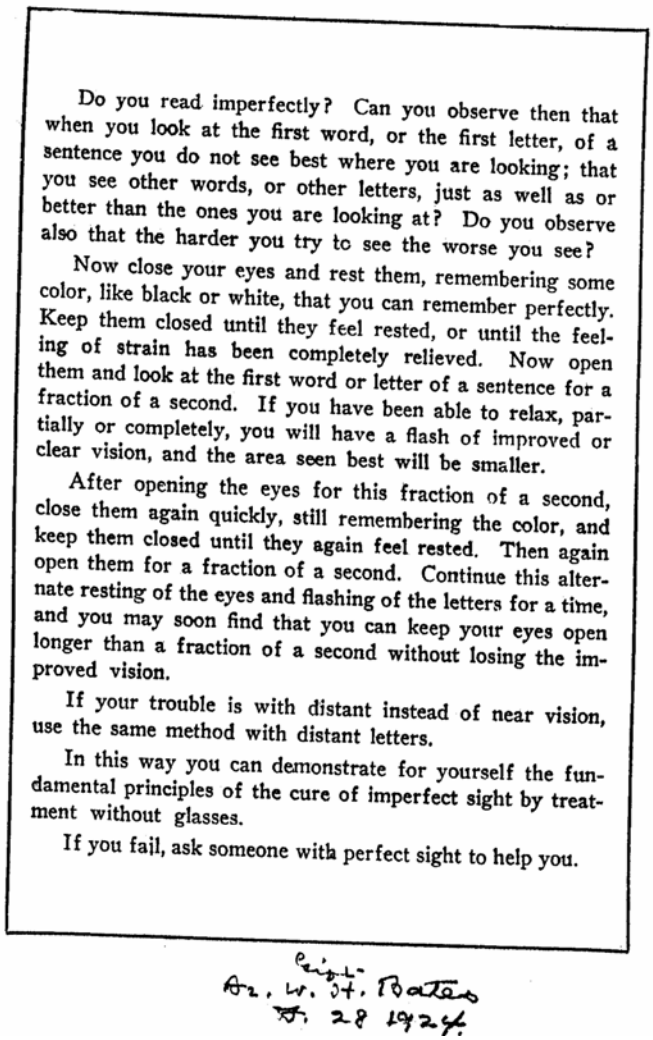
ing, perfectly black and perfectly distinct, to be recognized. They do not have to be sought; they are there. In imperfect sight they are sought and chased. The eye goes after them. An effort is made to see them.

The muscles of the body are supposed never to be at rest. The blood-vessels, with their muscular coats, are never at rest. Even in sleep thought does not cease. But the normal condition of the nerves of sense - of hearing, sight, taste, smell and touch - is one of rest. They can be acted upon; they cannot act. The optic nerve, the

Mental Strain Reflected in the Eye

retina and the visual centers of the brain are as passive as the finger-nail. They have nothing whatever in their structure that makes it possible for them to do anything, and when they are the subject of effort from outside sources their efficiency is always impaired.

The mind is the source of all such efforts from outside sources brought to bear upon the eye ; and every such impulse causes a deviation from the normal in the shape of the eyeball and lessens the sensitiveness of the center of sight. If one wants to have perfect sight, therefore, one must have no thought of effort in the mind. Mental strain of any kind always produces a conscious or unconscious



Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

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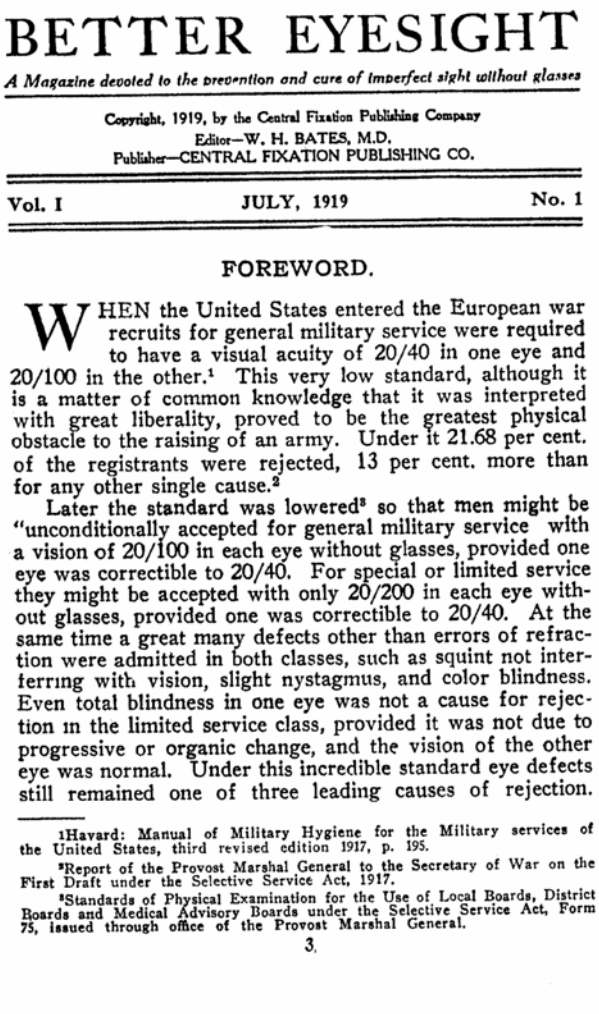

BETTER EYESIGHT

A Magazine devoted to the prevention and cure of imperfect sight without glasses

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Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I JULY, 1919 No. 1

FOREWORD.

WHEN the United States entered the European war recruits for general military service were required to have a visual acuity of 20/40 in one eye and 20/100 in the other.[1] This very low standard, although it is a matter of common knowledge that it was interpreted with great liberality, proved to be the greatest physical obstacle to the raising of an army. Under it 21.68 per cent. of the registrants were rejected, 13 per cent. more than for any other single cause.[2]

Later the standard was lowered[3] so that men might be "unconditionally accepted for general military service with a vision of 20/100 in each eye without glasses, provided one eye was correctible to 20/40. For special or limited service they might be accepted with only 20/200 in each eye without glasses, provided one was correctible to 20/40. At the same time a great many defects other than errors of refraction were admitted in both classes, such as squint not interferring with vision, slight nystagmus, and color blindness. Even total blindness in one eye was not a cause for rejection in the limited service class, provided it was not due to progressive or organic change, and the vision of the other eye was normal. Under this incredible standard eye defects still remained one of three leading causes of rejection.

[1]Havard: Manual of Military Hygiene for the Military services of the United States, third revised edition 1917, p. 195.

[2]Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917.

[3]Standards of Physical Examination for the Use of Local Boards, District Boards and Medical Advisory Boards under the Selective Service Act, Form 75, issued through office of the Provost Marshal General.

eyestrain and if the strain takes the form of an effort to see, an error of refraction is always produced. A schoolboy was able to read the bottom line of the Snellen test card at ten feet, but when the teacher told him to mind what he was about he could not see the big C.[1] Many children can see perfectly so long as their mothers are around ; but if the mother goes out of the room, they may at once become myopic, because of the strain produced by fear. Unfamiliar objects produce eyestrain and a consequent error of refraction, because they first produce mental strain. A person may have good vision when he is telling the truth ; but if he states what is not true, even with no intent to deceive, or if he imagines what is not true, an error of refraction will be produced, because it is impossible to state or imagine what is not true without an effort.

I may claim to have discovered that telling lies is bad

1 In this case and others to be mentioned later, the large letter at the top of the card read by the eye with normal vision at two hundred feet, was a "C."

for the eyes, and whatever bearing this circumstance may have upon the universality of defects of vision, the fact can easily be demonstrated. If a patient can read all the small letters on the bottom line of the test card, and either deliberately or carelessly miscalls any of them, the retinoscope will indicate an error of refraction. In numerous cases patients have been asked to state their ages incorrectly, or to try to imagine that they were a year older or a year younger than they actually were, and in every case when they did this the retinoscope indicated an error of refraction. A patient twenty-five years old had no error of refraction when he looked at a blank wall without trying to see ; but if he said he was twenty-six or if someone else said he was twenty-six, or if he tried to imagine that he was twenty-six, he became myopic. The same thing happened when he stated or tried to imagine that he was twenty-four. When he stated or remembered the truth his vision was normal, but when he stated or imagined an error he had an error of refraction.

Two little girl patients arrived one after the other one day, and the first accused the second of having stopped at Huyler's for an ice cream soda, which she had been instructed not to do, being somewhat too much addicted to sweets. The second denied the charge, and the first, who had used the retinoscope and knew what it did to people who told lies, said :

"Do take the retinoscope and find out."

I followed the suggestion, and having thrown the light into the second child's eyes, I asked:

"Did you go to Huyler's?"

"Yes," was the response, and the retinoscope indicated no error of refraction.

Different Kinds of Strain

"Did you have an ice-cream soda?"

"No," said the child ; but the telltale shadow moved in a direction opposite to that of the mirror, showing that she had become myopic and was not telling the truth.

The child blushed when I told her this and acknowledged that the retinoscope was right; for she had heard of the ways of the uncanny instrument before and did not know what else it might do to her if she said anything more that was not true.

So sensitive is this test that if the subject, whether his vision is ordinarily normal or not, pronounces the initials of his name correctly while looking at a blank surface without trying to see, there will be no error of refraction; but if he miscalls one initial, even without any consciousness of effort, and with full knowledge that he is deceiving no one, myopia will be produced.

Mental strain may produce many different kinds of eyestrain. According to the statement of most authorities there is only one kind of eyestrain,' an indefinite thing resulting from so-called over-use of the eyes, or an effort to overcome a wrong shape of the eyeball. It can be demonstrated, however, that there is not only a different strain for each different error of refraction, but a different strain for most abnormal conditions of the eye. The strain that produces an error of refraction is not the same as the strain that produces a squint, or a cataract, 1 or glaucoma, 2 or amblyopia, 3 or inflammation of the conjunctiva 4 or of the margin of the lids, or disease of the optic nerve or retina. All these conditions may exist

1. An opacity of the lens. 2 A condition in which the eyeball becomes abnormally hard. 3 A condition in which there is a decline of vision without apparent cause. 4 A membrane covering the inner surface of the eyelid and the visible part of the white of the eye.

with only a slight error of refraction, and while the relief of one strain usually means the relief of any others that may coexist with it, it sometimes happens that the strain associated with such conditions as cataract and glaucoma is relieved without the complete relief of the strain that causes the error of refraction. Even the pain that so often accompanies errors of refraction is never caused by the same strain that causes these errors. Some myopes cannot read without pain or discomfort, but most of them suffer no inconvenience. When the hypermetrope regards an object at the distance the hypermetropia is lessened, but pain and discomfort may be increased. While there are many strains, however, there is only one cure for all of them, namely, relaxation.

The health of the eye depends upon the blood, and circulation is very largely influenced by thought. When thought is normal-that is, not attended by any excitement or strain-the circulation in the brain is normal, the supply of blood to the optic nerve and the visual centers is normal, and the vision is perfect. When thought is abnormal the circulation is disturbed, the supply of blood to the optic nerve and visual centers is altered, and the vision lowered. We can consciously think thoughts which disturb the circulation and lower the visual power ; we can also consciously think thoughts that will restore normal circulation, and thereby cure, not only all errors of refraction, but many other abnormal conditions of the eyes. We cannot by any amount of effort make ourselves see, but by learning to control our thoughts we can accomplish that end indirectly.

You can teach people how to produce any error of refraction, how to produce a squint, how to see two images of an object, one above another, or side by side,

As Quick as Thought

or at any desired angle from one another, simply by teaching them how to think in a particular way. When the disturbing thought is replaced by one that relaxes, the squint disappears, the double vision and the errors of refraction are corrected; and this is as true of abnormalties of long standing as of those produced voluntarily. No matter what their degree or their duration their cure is accomplished just as soon as the patient is able to secure mental control. The cause of any error of refraction, of a squint, or of any other functional disturbance of the eye, is simply a thought - a wrong thought - and the cure is as quick as the thought that relaxes. In a fraction of a second the highest degrees of refractive error may be corrected, a squint may disappear, or the blindness of amblyopia may be relieved. If the relaxation is only momentary, the correction is momentary. When it becomes permanent, the correction is permanent.

This relaxation cannot, however, be obtained by any sort of effort. It is fundamental that patients should understand this; for so long as they think, consciously or unconsciously, that relief from strain may be obtained by another strain their cure will be delayed.

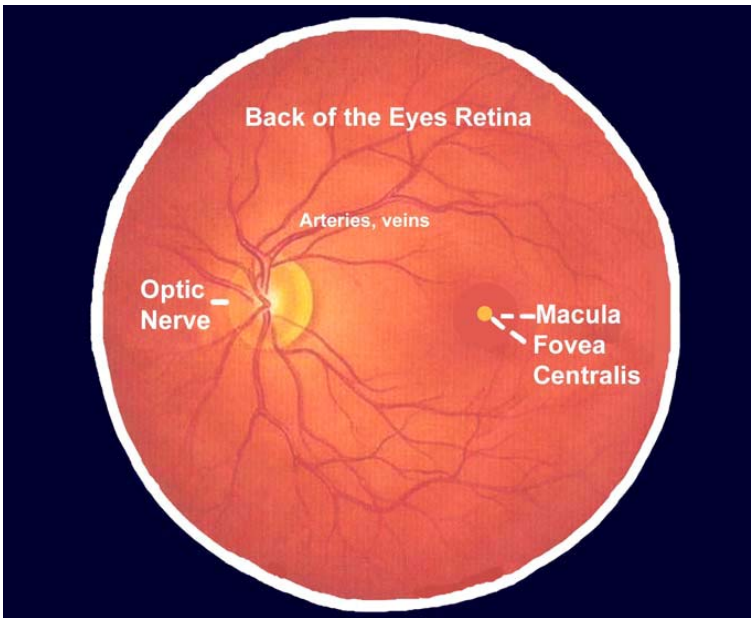
CHAPTER XI

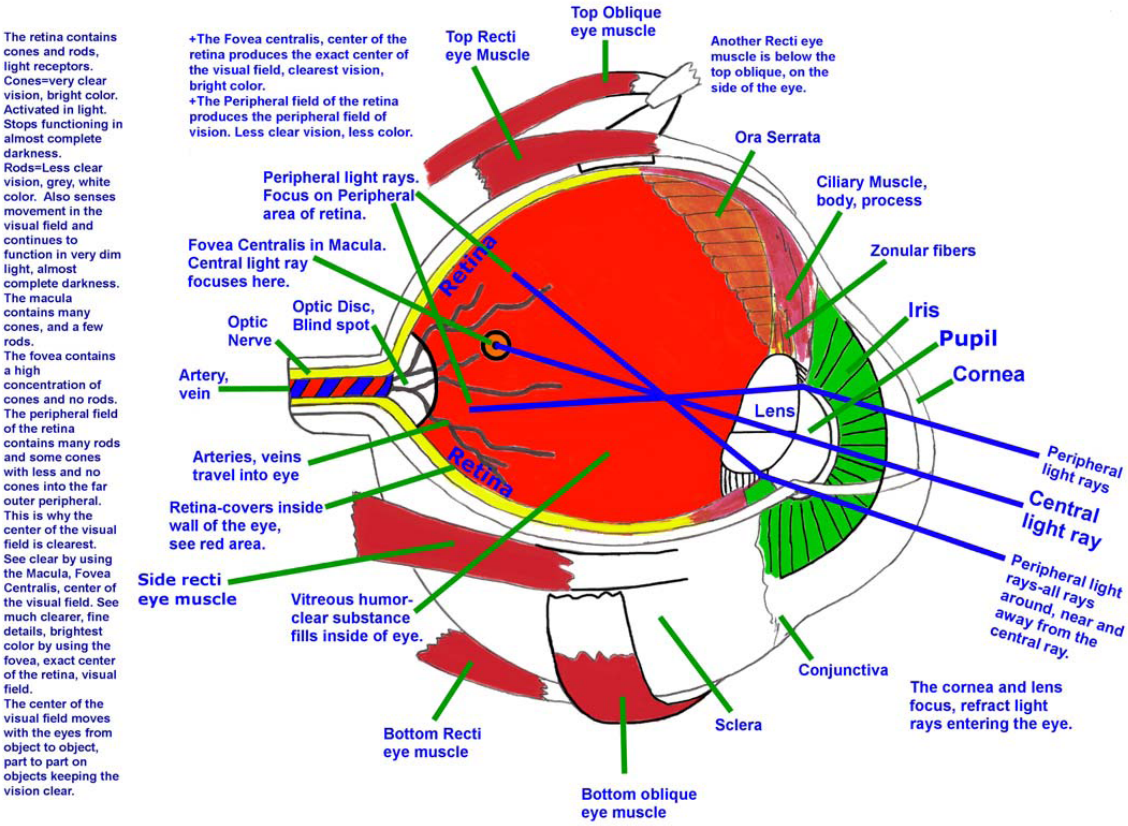
CENTRAL FIXATION

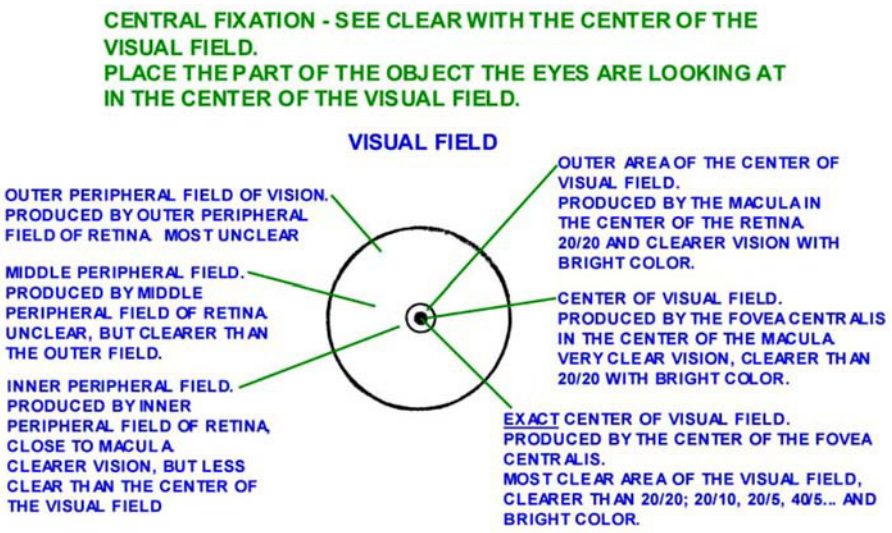
THE eye is a miniature camera, corresponding in many ways very exactly to the inanimate machine used in photography. In one respect, however, there is a great difference between the two instruments. The sensitive plate of the camera is equally sensitive in every part; but the retina has a point of maximum sensitiveness, and every other part is less sensitive in proportion as it is removed from that point. This point of maximum sensitiveness is called the “fovea centralis,” literally the “central pit.”

The retina, although it is an extremely delicate membrane, varying in thickness from one-eightieth of an inch to less than half that amount, is highly complex. It is composed of nine layers, only one of which is supposed to be capable of receiving visual impressions. This layer is composed of minute rodlike and conical bodies which vary in form and are distributed very differently in its different parts. In the center of the retina is a small circular elevation known, from the yellow color which it

assumes in death and sometimes also in life, as the "macula lutea," literally the "yellow spot." In the center of this spot is the fovea, a deep depression of darker color. In the center of this depression there are no rods, and the cones are elongated and pressed very closely together. The other layers, on the contrary, become here extremely thin, or disappear altogether, so that the cones are covered with barely perceptible traces of them. Beyond the center of the fovea the cones become thicker and fewer







An Invariable Symptom of Imperfect Sight

and are interspersed with rods, the number of which increases toward the margin of the retina. The precise function of these rods and cones is not clear; but it is a fact that the center of the fovea, where all elements except the cones and their associated cells practically disappear, is the seat of the most acute vision. As we withdraw from this spot, the acuteness of the visual perceptions rapidly decreases. The eye with normal vision, therefore, sees one part of everything it looks at best, and everything else worse, in proportion as it is removed from the point of maximum vision ; and it is an invariable symptom of all abnormal conditions of the eyes, both functional and organic, that this central fixation is lost.

These conditions are due to the fact that when the sight is normal the sensitiveness of the fovea is normal, but when the sight is imperfect, from whatever cause, the sensitiveness of the fovea is lowered, so that the eye sees equally well, or even better, with other parts of the retina. Contrary to what is generally believed, the part seen best when the sight is normal is extremely small. The text-books say that at twenty feet an area having a diameter of half an inch can be seen with maximum vision, but anyone who tries at this distance to see every part of even the smallest letters of the Snellen test card - the diameter of which may be less than a quarter of an inch - equally well at one time will immediately become myopic. The fact is that the nearer the point of maximum vision approaches a mathematical point, which has no area, the better the sight.

The cause of this loss of function in the center of sight is mental strain; and as all abnormal conditions of the eyes, organic as well as functional, are accompanied by mental strain, all such conditions must necessarily be accompanied by loss of central fixation. When the mind is under a strain the eye usually goes more or less blind. The center of sight goes blind first, partially or completely, according to the degree of the strain, and if the strain is great enough the whole or the greater part of the retina may be involved. When the vision of the center of sight has been suppressed, partially or completely, the patient can no longer see the point which he is looking at best, but sees objects not regarded directly as well, or better, because the sensitiveness of the retina has now become approximately equal in every part, or is even better in the outer part than in the center. Therefore in all cases of defective vision the patient is unable to see best where he is looking.

This condition is sometimes so extreme that the patient may look as far away from an object as it is possible to see it, and yet see it just as well as when looking directly at it. In one case it had gone so far that the patient could see only with the edge of the retina on the nasal side. In other words, she could not see her fingers in front of her face, but could see them if held at the outer side of her eye. She had only a slight error of refraction, showing that while every error of refraction is accompanied by eccentric fixation, the strain which causes the one condition is different from that

which produces the other. The patient had been examined by specialists in this country and Europe, who attributed her blindness to disease of the optic nerve or brain; but the fact that vision was restored by relaxation demonstrated that the condition had been due simply to mental strain.

Eccentric fixation, even in its lesser degrees, is so unnatural that great discomfort, or even pain, can be produced in a few seconds by trying to see every part of an

When the Eye Possesses Central Fixation

area three or four inches in extent at twenty feet, or even less, or an area of an inch or less at the near-point, equally well at one time, while at the same time the retinoscope will demonstrate that an error of refraction has been produced. This strain, when it is habitual, leads to all sorts of abnormal conditions and is, in fact, at the bottom of most eye troubles, both functional and organic. The discomfort and pain may be absent, however, in the chronic condition, and it is an encouraging symptom when the patient begins to experience them.

When the eye possesses central fixation it not only possesses perfect sight, but it is perfectly at rest and can be used indefinitely without fatigue. It is open and quiet; no nervous movements are observable; and when it regards a point at the distance the visual axes are parallel. In other words, there are no muscular insufficiencies. This fact is not generally known. The textbooks state that muscular insufficiencies occur in eyes having normal sight, but I have never seen such a case. The muscles of the face and of the whole body are also at rest, and when the condition is habitual there are no wrinkles or dark circles around the eyes.

In most cases of eccentric fixation, on the contrary, the eye quickly tires, and its appearance, with that of the face, is expressive of effort or strain. The ophthalmoscope 1 reveals that the eyeball moves at irregular intervals, from side to side, vertically or in other directions. These movements are often so extensive as to be manifest by ordinary inspection, and are sometimes sufficiently marked to resemble nystagmus.2 Nervous move-

1 A shorter movement can be noted when the observer watches the optic nerve with the ophthalmoscope than when he views merely the exterior of the eye. 2 A condition in which there is a conspicuous and more or less rhythmic movement of the eyeball from side to side.

ments of the eyelids may also be noted, either by ordinary inspection, or by lightly touching the lid of one eye while the other regards an object either at the near-point or the distance. The visual axes are never parallel, and the deviation from the normal may become so marked as to constitute the condition of squint. Redness of the conjunctiva and of the margins of the lids, wrinkles around the eyes, dark circles beneath them and tearing are other symptoms of eccentric fixation.

Eccentric fixation is a symptom of strain, and is relieved by any method that relieves strain; but in some cases the patient is cured just as soon as he is able to demonstrate the facts of central fixation. When he comes to realize, through actual demonstration of the fact, that he does not see best where he is looking, and that when he looks a sufficient distance away from a point he can see it worse than when he looks directly at it, he becomes able, in some way, to reduce the distance to which he has to look in order to see worse, until he can look directly at the top of a small letter and see the bottom worse, or look at the bottom and see the top worse. The smaller the letter regarded in this way, or the shorter the distance the patient has to look away from a letter in order to see the opposite part indistinctly, the greater the relaxation and the better the sight. When it becomes possible to look at the bottom of a letter and see the top worse, or to look at the top and see the bottom worse, it becomes possible to see the letter perfectly black and distinct. At first such vision may come only in flashes. The letter will come out distinctly for a moment and then disappear. But gradually, if the practice is continued, central fixation will become habitual.

Most patients can readily look at the bottom of the

The Use of Strong Lights

big C and see the top worse; but in some cases it is not only impossible for them to do this, but impossible for them to let go of the large letters at any distance at which they can be seen. In these extreme cases it sometimes requires considerable ingenuity, first to demonstrate to the patient that he does not see best where he is looking, and then to help him to see an object worse when he

looks away from it than when he looks directly at it. The use of a strong light as one of the points of fixation, or of two lights five or ten feet apart, has been found helpful, the patient when he looks away from the light being able to see it less bright more readily than he can see a black letter worse when he looks away from it. It then becomes easier for him to see the letter worse when he looks away from it. This method was successful in the following case :

A patient with vision of 3/200, when she looked at a point a few feet away from the big C, said she saw the letter better than when she looked directly at it. Her attention was called to the fact that her eyes soon became tired and that her vision soon failed when she saw things in this way. Then she was directed to look at a bright object about three feet away from the card, and this attracted her attention to such an extent that she became able to see the large letter on the test card worse, after which she was able to look back at it and see it better. It was demonstrated to her that she could do one of two things: look away and see the letter better than she did before, or look away and see it worse. She then became able to see it worse all the time when she looked three feet away from it. Next she became able to shorten the distance successively to two feet, one foot, and six inches, with a constant improvement in vision; and finally she became able to look at the bottom of the letter and see the top worse, or look at the top and see the bottom worse. With practice she became able to look at the smaller letters in the same way, and finally she became able to read the ten line at twenty feet. By the same method also she became able to read diamond type, first at twelve inches and then at three inches. By these simple measures alone she became able, in short, to see best where she was looking, and her cure was complete.

The highest degrees of eccentric fixation occur in the high degrees of myopia, and in these cases, since the sight is best at the near-point, the patient is benefited by practicing seeing worse at this point. The distance can then be gradually extended until it becomes possible to do the same thing at twenty feet. One patient with a high degree of myopia said that the farther she looked away from an electric light the better she saw it, but by alternately looking at the light at the near-point and looking away from it she became able, in a short time, to see it brighter when she looked directly at it than when she looked away from it. Later she became able to do the same thing at twenty feet, and then she experienced a wonderful feeling of relief. No words, she said, could adequately describe it. Every nerve seemed to be relaxed, and a feeling of comfort and rest permeated her whole body. Afterward her progress was rapid. She soon became able to look at one part of the smallest letters on the card and see the rest worse, and then she became able to read the letters at twenty feet.

On the principle that a burnt child dreads the fire, some patients are benefited by consciously making their sight worse. When they learn, by actual demonstration of the facts, just how their visual defects are produced, they unconsciously avoid the unconscious strain which

Possibilities Cannot Be Limited

causes them. When the degree of eccentric fixation is not too extreme to be increased, therefore, it is a benefit to patients to teach them how to increase it. When a patient has consciously lowered his vision and produced discomfort and even pain by trying to see the big C, or a whole line of letters, equally well at one time, he becomes better able to correct the unconscious effort of the eye to see all parts of a smaller area equally well at one time.
(See the part of the object the eyes are looking at best, clearest in the center of the visual field by using the fovea centralis, center of the eyes retina.)

In learning to see best where he is looking it is usually best for the patient to think of the point not directly regarded as being seen less distinctly than the point he is looking at, instead of thinking of the point fixed as being seen best, as the latter practice has a tendency, in most cases, to intensify the strain under which the eye is already laboring. One part of an object is seen best only when the mind is content to see the greater part of it indistinctly, and as the degree of relaxation increases the area of the part seen worse increases, until that seen best becomes merely a point.

The limits of vision depend upon the degree of central fixation. A person may be able to read a sign half a mile away when he sees the letters all alike, but when taught to see one letter best he will be able to read smaller letters that he didn't know were there. The remarkable vision of savages, who

can see with the naked eye objects for which most civilized persons require a telescope, is a matter of central fixation. Some people can see the rings of Saturn, or the moons of Jupiter, with the naked eye. It is not because of any superiority in the structure of their eyes, but because they have attained a higher degree of central fixation than most civilized persons do.

Not only do all errors of refraction and all functional disturbances of the eye disappear when it sees by central fixation, but many organic conditions are relieved or cured. I am unable to set any limits to its possibilities. I would not have ventured to predict that glaucoma, incipient cataract and syphilitic iritis could be cured by central fixation; but it is a fact that these conditions have disappeared when central fixation was attained. Relief was often obtained in a few minutes, and, in rare cases, this relief was permanent. Usually, however, a permanent cure required more prolonged treatment. Inflammatory conditions of all kinds, including inflammation of the cornea, iris, conjunctiva, the various coats of the eyeball and even the optic nerve itself, have been benefited by central fixation after other methods had failed. Infections, as well as diseases caused by protein poisoning and the poisons of typhoid fever, influenza, syphilis and gonorrhoea, have also been benefited by it. Even with a foreign body in the eye there is no redness and no pain so long as central fixation is retained.

Since central fixation is impossible without mental control, central fixation of the eye means central fixation of the mind. It means, therefore, health in all parts of the body, for all the operations of the physical mechanism depend upon the mind. Not only the sight, but all the other senses - touch, taste, hearing and smell - are benefited by central fixation. All the vital processes - digestion, assimilation, elimination, etc. - are improved by it. The symptoms of functional and organic diseases are relieved. The efficiency of the mind is enormously increased. The benefits of central fixation already observed are, in short, so great that the subject merits further investigation.

CHAPTER XII

PALMING

ALL the methods used in the cure of errors of refraction are simply different ways of obtaining relaxation, and most patients, though by no means all, find it easiest to relax with their eyes shut. This usually lessens the strain to see, and in such cases is followed by a temporary or more lasting improvement in vision.

Most patients are benefited merely by closing the eyes ; and by alternately resting them for a few minutes or longer in this way and then opening them and looking at the Snellen test card for a second or less, flashes of improved vision are, as a rule, very quickly obtained. Some temporarily obtain almost normal vision by this means; and in rare cases a complete cure has been effected, sometimes in less than an hour.

But since some light comes through the closed eyelids, a still greater degree of relaxation can be obtained, in all but a few exceptional cases, by excluding it. This is done by covering the closed eyes with the palms of the hands (the fingers being crossed upon the forehead) in such a way as to avoid pressure on the eyeballs. So efficacious is this practice, which I have called “palming,” as a means of relieving strain, that we all instinctively resort to it at times, and from it most patients are able to get a considerable degree of relaxation.

But even with the eyes closed and covered in such a way as to exclude all the light, the visual centers of the brain may still be disturbed, the eye may still strain to see; and instead of seeing a field so black that it is impossible to remember, imagine, or see anything blacker, as one ought normally to do when the optic nerve is not subject to the stimulation of light, the patients will see illusions of lights and colors ranging all the way from an imperfect black to kaleidoscopic appearances so vivid that they seem to be actually seen with the eyes. The worse the condition of the eyesight, as a rule, the more numerous, vivid and persistent these appearances are. Yet some persons with very imperfect sight are able to palm almost perfectly from the beginning, and are, therefore, very quickly cured. Any disturbance of mind or body, such as fatigue, hunger, anger, worry or depression, also makes it difficult for patients to see black when they palm, persons who

can see it perfectly under ordinary conditions being often unable to do so without assistance when they are ill or in pain.

It is impossible to see a perfect black unless the eyesight is perfect, because only when the eyesight is perfect is the mind at rest; but some patients can without difficulty approximate such a black nearly enough to improve their eyesight, and as the eyesight improves the deepness of the black increases. Patients who fail to see even an approximate black when they palm state that instead of black they see streaks or floating clouds of gray, flashes of light, patches of red, blue, green, yellow, etc. Sometimes instead of an immovable black, clouds of black will be seen moving across the field. In other cases the black will be seen for a few seconds and then some other color will take its place. The different ways in which patients can fail to see black when their eyes are closed and covered are, in fact, very numerous and often very peculiar.

(Modern Teachers state it is not mandatory to imagine and see black. Just relax and think pleasant thoughts, let the mind drift from one happy thought to another.)

Vivid Colors Seen When Palming

Some patients have been so impressed with the vividness of the colors which they imagined they saw that no amount of argument could, or did, convince them that they did not actually see them with their eyes. If

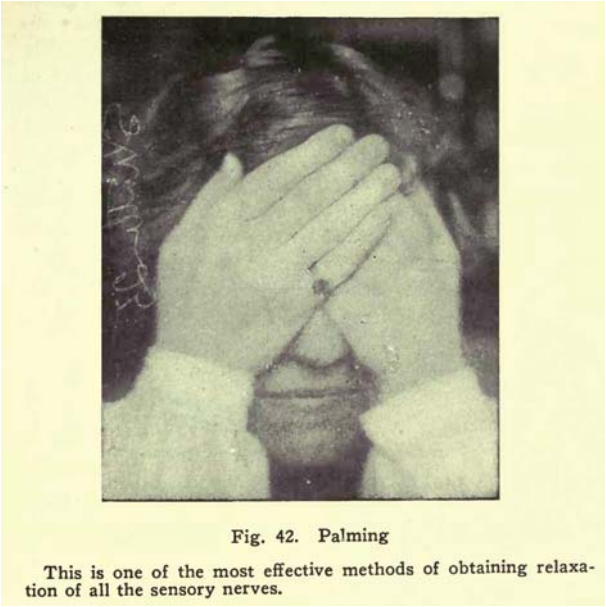


Fig. 42. Palming

This is one of the most effective methods of obtaining relaxation of all the sensory nerves.

Fig. 42. Palming. This is one of the most effective methods of obtaining relaxation of all the sensory nerves.





other people saw bright lights or colors, with their eyes closed and covered, they admitted that these things would be illusions; but what they themselves saw under the same conditions was reality. They would not believe, until they had themselves demonstrated the truth, that their illusions were due to an imagination beyond their control.

Successful palming in these more difficult cases usually involves the practice of all the methods for improving the sight described in succeeding chapters. For reasons which will be explained in the following chapter, the majority of such patients may be greatly helped by the memory of a black object. They are directed to look at such an object at the distance at which the color can be seen best, close the eyes and remember the color, and repeat until the memory appears to be equal to the sight. Then they are instructed, while still holding the memory of the black, to cover the closed eyes with the palms of the hands in the manner just described. If the memory of the black is perfect, the whole

background will be black. If it is not, or if it does not become so in the course of a few seconds, the eyes are opened and the black object regarded again.



Palm and remember, imagine a pleasant object, scenery and shift throughout the scene; from object to object, part to part on objects. See objects in motion, action like a real life movie in the mind, in color, clear.

Many patients become able by this method to see black almost perfectly for a short time ; but most of them, even those whose eyes are not very bad, have great difficulty in seeing it continuously. Being unable to remember black for more than from three to five seconds, they cannot see black for a longer time than this. Such patients are helped by central fixation. When they have become able to see one part of a black object darker than the whole, they are able to remember the smaller area for a longer time than they could the larger one, and thus become able to see black for a longer period when they palm. They are also benefited by mental shifting (see Chapter XV) from one black object to another, or from one part of a black object to another. It is impossible to see, remember, or imagine anything, even for as much as

Mental Shifting

a second, without shifting from one part to another, or to some other object and back again; and the attempt to do so always produces strain. Those who think they are remembering a black object continuously are unconsciously comparing it with something not so black, or

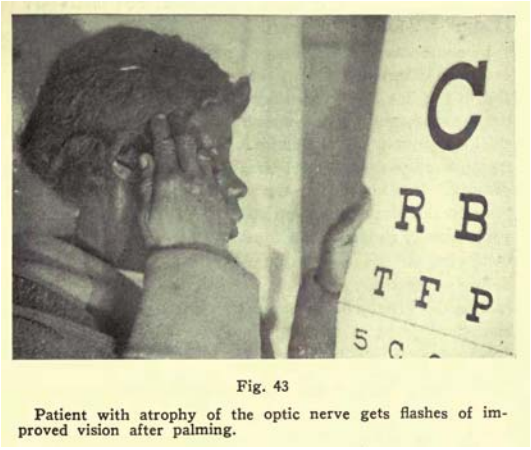


Fig. 43
Patient with atrophy of the optic nerve gets flashes of improved vision after palming.

Fig. 43 Patient with atrophy of the optic nerve gets flashes of improved vision after palming.

else its color and its position are constantly changing. It is impossible to remember even such a simple thing as a period perfectly black and stationary for more than a fraction of a second. When shifting is not done unconsciously patients must be encouraged to do it consciously. They may be directed, for instance, to remember successively a black hat, a black shoe, a black velvet dress, a black plush curtain, or a fold in the black dress or the black curtain, holding each one not more than a fraction of a second. Many persons have been benefited by remembering all the letters of the alphabet in turn perfectly black. Others prefer to shift from one small black object, such as a period or a small letter, to another, or to swing such an object in a manner to be described later (see Chapter XV).

In some cases the following method has proved successful: When the patient sees what he thinks is a perfect black, let him remember a piece of starch on this background, and on the starch the letter F as black as the background. Then let him let go of the starch and remember only the F, one part best, on the black background. In a short time the whole field may become as black as the blacker part of the F. The process can be repeated many times with a constant increase of blackness in the field.

In one case a patient who saw grey so vividly when she palmed that she was positive she saw it with her eyes, instead of merely imagining it, was able to obliterate nearly all of it by first imagining a black C on the grey field, then two black C's, and finally a multitude of overlapping C's.

It is impossible to remember black perfectly when it is not seen perfectly. If one sees it imperfectly, the best one can do is to remember it imperfectly. All persons, without exception, who can see or read diamond type at the near-point, no matter how great their myopia may be, or how much the interior of the eye may be diseased, become able, as a rule, to see black with their eyes closed and covered more readily than patients with hypermetropia or astigmatism; because, while myopes cannot see anything perfectly, even at the near-point, they see

better at that point than persons with hypermetropia or astigmatism do at any distance. Persons with high degrees of myopia, however, often find palming very difficult, since they not only see black very imperfectly, but, because of the effort they are making to see, cannot remember it more than one or two seconds. Any other condition of the eye which prevents the patient from seeing black perfectly also makes palming difficult. In some cases black is never seen as black, appearing to be grey, yellow, brown, or even bright red. In such cases it is usually best for the patient to improve his sight by other methods before trying to palm. Blind persons usually have more trouble in seeing black than those who can see, but may be helped by the memory of a black object familiar to them before they lost their sight. A blind painter who saw grey continually when he first tried to palm became able at last to see black by the aid of the memory of black paint. He had no perception of light whatever and was in terrible pain ; but when he succeeded in seeing black the pain vanished, and when he opened his eyes he saw light.

Even the imperfect memory of black is useful, for by its aid a still blacker black can be both remembered and seen; and this brings still further improvement. For instance, let the patient regard a letter on the Snellen test card at the distance at which the color is seen best, then close his eyes and remember it. If the palming produces relaxation, it will be possible to imagine a deeper shade of black than was seen, and by remembering this black when again regarding the letter it can be seen blacker than it was at first. A still deeper black can then be imagined, and this deeper black can, in turn, be transferred to the letter on the test card. By continuing this process a perfect perception of black, and hence perfect sight, are sometimes very quickly obtained. The deeper the shade of black obtained with the eyes closed, the more easily it can be remembered when regarding the letters on the test card.

The longer some people palm the greater the relaxation they obtain and the darker the shade of black they are able both to remember and see. Others are able to palm successfully for short periods, but begin to strain if they keep it up too long.

It is impossible to succeed by effort, or by attempting to "concentrate" on the black. As popularly understood, concentration means to do or think one thing only; but this is impossible, and an attempt to do the impossible is a strain which defeats its own end. The human mind is not capable of thinking of one thing only. It can think of one thing best, and is only at rest when it does so ; but it cannot think of one thing only. A patient who tried to see black only and to ignore the kaleidoscopic colors which intruded themselves upon her field of vision, becoming worse and worse the more they were ignored, actually went into convulsions from the strain, and was attended every day for a month by her family physician before she was able to resume the treatment. This patient was advised to stop palming, and, with her eyes open, to recall as many colors as possible, remembering each one as perfectly as possible. By thus taking the bull by the horns and consciously making the mind wander more than it did unconsciously, she became able, in some way, to palm for short periods.

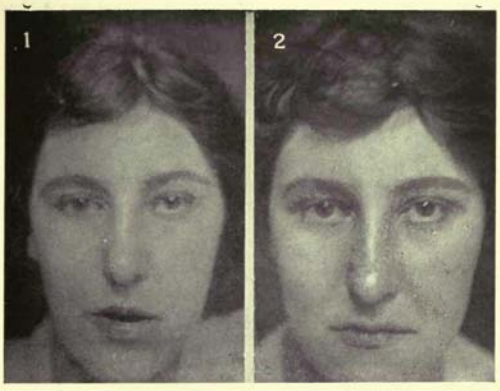


Fig. 44

No. 1.—Owing to paralysis of the seventh nerve on the right side, resulting from a mastoid operation on the right ear, the patient is unable to close her lips.

No. 2.—After palming and remembering a perfectly black period she became able not only to close the lips, but to whistle. The cure was permanent.

Some particular kinds of black objects may be found to be more easily remembered than others. Black plush of a high grade for instance, proved to be an optimum

Optimum Blacks

(see Chapter XVIII) with many persons as compared with black velvet, silk, broadcloth, ink and the letters on the Snellen test card, although no blacker than these other blacks. A familiar black object can often be remembered more easily by the patient than those that

Fig. 44 No. 1. Owing to paralysis of the seventh nerve on the right side, resulting from a mastoid operation on the right ear, the patient is unable to close her lips. No. 2. After palming and remembering a perfectly black period she became able not only to close the lips, but to whistle. The cure was permanent.

are less so. A dressmaker, for instance, was able to remember a thread of black silk when she could not remember any other black object.

When a black letter is regarded before palming the patient will usually remember not only the blackness of the letter, but the white background as well. If the memory of the black is held for a few seconds, however, the background usually fades away and the whole field becomes black.

Patients often say that they remember black perfectly when they do not. One can usually tell whether or not this is the case by noting the effect of palming upon the vision. If there is no improvement in the sight when the eyes are opened, it can be demonstrated, by bringing the black closer to the patient, that it has not been remembered perfectly.

Although black is, as a rule, the easiest color to remember, for reasons explained in the next chapter, the following method sometimes succeeds when the memory of black fails: Remember a variety of colors - bright red, yellow, green, blue, purple, white especially - all in the most intense shade possible. Do not attempt to hold any of them more than a second. Keep this up for five or ten minutes. Then remember a piece of starch about half an inch in diameter as white as possible. Note the color of the background. Usually it will be a shade of black. If it is, note whether it is possible to remember anything blacker, or to see anything blacker with the eyes open. In all cases when the white starch is remembered perfectly the background will be so black that it will be impossible to remember anything blacker with the eyes closed, or to see anything blacker with them open.

When palming is successful it is one of the best methods I know of for securing relaxation of all the sensory nerves, including those of sight. When perfect relaxation is gained in this way, as indicated by the ability to see a perfect black, it is completely retained when the eyes are opened, and the patient is permanently cured.

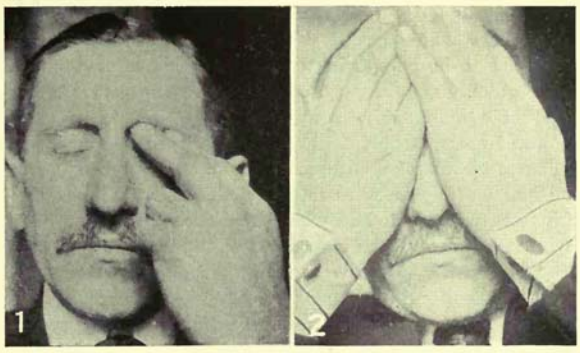


Fig 45

Fig. 1.—Patient with absolute glaucoma of the right eye. He had suffered agonizing pain for six months and had no perception of light. He was photographed when testing the tension of his eyeball, which he found to be perfectly hard.

Fig. 2.—The patient is palming and remembering a perfectly black period. After half an hour the eyeball became soft, the pain ceased, and the patient became able to see the light. After three years there was no return of the glaucoma.

When Palming Is Successful

At the same time pain in the eyes and head, and even in other parts of the body, is permanently relieved. Such cases are very rare, but they do occur. With a lesser degree of relaxation much of it is lost when the eyes are opened, and what is retained is not held permanently. In other words, the greater the degree of the relaxation produced by palming the more of it is retained when the eyes are opened and the longer it lasts. If you palm perfectly, you retain, when you open your eyes, all of the relaxation that you gain, and you do not lose it again. If you palm imperfectly, you retain only part of what you gain and retain it only temporarily - it may be only for a few moments. Even the smallest degree of relaxation is useful, however, for by means of it a still greater degree may be obtained.

Fig 45. Fig. 1. Patient with absolute glaucoma of the right eye. He had suffered agonizing pain for six months and had no perception of light. He was photographed when testing the tension of his eyeball, which he found to be perfectly hard. Fig. 2. The patient is palming and remembering a perfectly black period. After half an hour the eyeball became soft, the pain ceased, and the patient became able to see the light. After three years there was no return of the glaucoma.

Patients who succeed with palming from the beginning are to be congratulated, for they are always cured very quickly. A very remarkable case of this kind was that of a man nearly seventy years of age with compound hypermetropic astigmatism and presbyopia, complicated by incipient cataract. For more than forty years he had worn glasses to improve his distant vision, and for twenty years he had worn them for reading and desk work. Because of the cloudiness of the lens, he had now become unable to see well enough to do his work, even with glasses ; and the other physicians whom he had consulted had given him no hope of relief except by operation when the cataract was ripe. When he found palming helped him, he asked:

"Can I do that too much?"
"No," he was told. "Palming is simply a means of resting your eyes, and you cannot rest them too much."
A few days later he returned and said: "
Doctor, it was tedious, very tedious ; but I did it."
"What was tedious?" I asked.
"Palming," he replied. "I did it continuously for twenty hours."
"But you couldn't have kept it up for twenty hours continuously," I said incredulously. "You must have stopped to eat."

Tedious But Worth While

And then he related that from four o'clock in the morning until twelve at night he had eaten nothing, only drinking large quantities of water, and had devoted practically all of the time to palming. It must have been tedious, as he said, but it was also worth while. When he looked at the test card, without glasses, he read the bottom line at twenty feet. He also read fine print at six inches and at twenty. The cloudiness of the lens had become much less, and in the center had entirely disappeared. Two years later there had been no relapse.

Although the majority of patients are helped by palming, a minority are unable to see black, and only increase their strain by trying to get relaxation in this way. In most cases it is possible, by using some or all of the various methods outlined in this chapter, to enable the patient to palm successfully ; but if much difficulty is experienced, it is usually better and more expeditious to drop the method until the sight has been improved by other means. The patient may then become able to see black when he palms, but some never succeed in doing it until they are cured.

(It is not necessary to imagine and see black. Just relax and let the mind drift from one pleasant thought to another.)

CHAPTER XIII

MEMORY AS AN AID TO VISION

WHEN the mind is able to remember perfectly any phenomenon of the senses, it is always perfectly relaxed. The sight is normal, if the eyes are open; and when they are closed and covered so as to exclude all the light, one sees a perfectly black field - that is nothing at all. If you can remember the ticking of a watch, or an odor or a taste perfectly, your mind is perfectly at rest, and you will see a perfect black when your eyes are closed and covered. If your memory of a sensation of touch could be equal to the reality, you would see nothing but black when the light was excluded from your eyes. If you were to remember a bar of music perfectly when your eyes were closed and covered, you would see nothing but black. But in the case of any of these phenomena it is not easy to test the correctness of the memory, and the same is true of colors other than black. All other colors, including white, are altered by the amount of light to which they are exposed, and are seldom seen as perfectly as it is possible for the normal eye to see them. But when the sight is normal, black is just as black in a dim light as in a bright one. It is also just as black at the distance as at the near-point, while a small area is just as black as a large one, and, in fact, appears blacker. Black is, moreover, more readily

Memory a Measure of Relaxation

available than any other color. There is nothing blacker than printer's ink, and that is practically ubiquitous. By means of the memory of black, therefore, it is possible to measure accurately one's own relaxation. If the color is remembered perfectly, one is perfectly relaxed. If it is remembered almost perfectly, one's relaxation is almost perfect. If it cannot be remembered at all, one has very little or no relaxation.

By means of simultaneous retinoscopy, these facts can be readily demonstrated. An absolutely perfect memory is very rare, so much so that it need hardly be taken into consideration ; but a

practically perfect memory, or what might be called normal, is attainable by every one under certain conditions. With such a memory of black, the retinoscope shows that all errors of refraction are corrected. If the memory is less than normal, the contrary will be the case. If it fluctuates, the shadow of the retinoscope will fluctuate. The testimony of the retinoscope is, in fact, more reliable than the statements of the patient. Patients often believe and state that they remember black perfectly, or normally, when the retinoscope indicates an error of refraction ; but in such cases it can usually be demonstrated by bringing the test card to the point at which the black letters can be seen best, that the memory is not equal to the sight. That the color cannot be remembered perfectly when the eyes and mind are under a strain, the reader can easily demonstrate by trying to remember it when making a conscious effort to see - by staring, partly closing the eyes, frowning, etc. - or while trying to see all the letters of a line equally well at one time. It will be found that it either cannot be remembered at all under these conditions, or that it is remembered very imperfectly.

When the two eyes of a patient are different, it has been found that the difference can be exactly measured by the length of time a black period can be remembered, while looking at the Snellen test card, with both eyes open, and with the better eye closed. A patient with normal vision in the right eye and half-normal vision in the left could, when looking at the test card with both eyes open, remember a period for twenty seconds continuously; but with the better eye closed, it could be remembered only ten seconds. A patient with half-normal vision in the right eye and one-quarter normal in the left could remember a period twelve seconds with both eyes open, and only six seconds with the better eye closed. A third patient, with normal sight in the right eye and vision of one-tenth in the left, could remember a period twenty seconds with both eyes open, and only two seconds when the better eye was closed. In other words, if the right eye is better than the left, the memory is better when the right eye is open than when only the left eye is open, the difference being in exact proportion to the difference in the vision of the two eyes.

In the treatment of functional eye troubles this relationship between relaxation and memory is of great practical importance. The sensations of the eye and of the mind supply very little information as to the strain to which both are being subjected, those who strain most often suffering the least discomfort; but by means of his ability to remember black the patient can always know whether he is straining or not, and is able, therefore, to avoid the conditions that produce strain. Whatever method of improving his sight the patient is using, he is advised to carry with him constantly the memory of a small area of black, such as a period, so that

Not Attainable by Effort

he may recognize and avoid the conditions that produce strain, and in some cases patients have obtained a complete cure in a very short time by this means alone. One advantage of the method is that it does not require a test card, for at any hour of the day or night, whatever the patient may be doing, he can always place himself in the conditions favorable to the perfect memory of a period.

The condition of mind in which a black period can be remembered cannot be attained by any sort of effort. The memory is not the cause of the relaxation, but must be preceded by it. It is obtained only during moments of relaxation, and retained only as long as the causes of strain are avoided; but how this is accomplished cannot be fully explained, just as many other psychological phenomena cannot be explained. We only know that under certain conditions that might be called favorable a degree of relaxation sufficient for the memory of a black period is possible, and that, by persistently seeking these conditions, the patient becomes able to increase the degree of the relaxation and prolong its duration, and finally becomes able to retain it under unfavorable conditions.

For most patients palming provides the most favorable conditions for the memory of black. When the strain to see is lessened by the exclusion of the light, the patient usually becomes able to remember a black object for a few seconds or longer, and this period of relaxation can be prolonged in one of two ways. Either the patient can open his eyes and look at a black object by central fixation at the distance at which it can be seen best, and at which the eyes are, therefore, most relaxed, or he can shift mentally from one black object to another, or from one part of a black object to another. By these means, and perhaps also through other influences that are not clearly

understood, most patients become able, sooner or later, to remember black for an indefinite length of time with their eyes closed and covered.

With the eyes open and looking at a blank surface without trying consciously to see, the unconscious strain is lessened so that the patient becomes able to remember a black period, and all errors of refraction, as demonstrated by the retinoscope, are corrected. This result has been found to be invariable, and so long as the surface remains blank and the patient does not begin to remember or imagine things seen imperfectly, the memory and the vision may be retained. But if, with the improved vision, details upon the surface begin to come out, or if the patient begins to think of the test card, which he has seen imperfectly, the strain to see will return and the period will be lost.

When looking at a surface on which there is nothing particular to see, distance makes no difference to the memory, because the patient can always look at such a surface, no matter where it is, without straining to see it. When looking at letters, or other details, however, the memory is best at the point at which the patient's sight is best, because at that point the eyes and mind are more relaxed than when the same letters or objects are regarded at distances at which the vision is not so good. By practicing central fixation at the most favorable distance, therefore, and using any other means of improving the vision which are found effectual, the memory of the period may be improved, in some cases, very rapidly.

Improved Sight a Disturbing Influence

If the relaxation gained under these favorable conditions is perfect, the patient will be able to retain it when the mind is conscious of the impressions of sight at unfavorable distances. Such cases are, however, very rare. Usually the degree of relaxation gained is markedly imperfect, and is, therefore, lost to a greater or less degree when the conditions are unfavorable, as when letters or objects are being regarded at unfavorable distances. So disturbing are the impressions of sight under these circumstances, that just as soon as details begin to come out at distances at which they have not previously been seen, the patient usually loses his relaxation, and with it the memory of the period. In fact, the strain to see may even return before he has had time to become conscious of the image on his retina, as the following case strikingly illustrates:

A woman of fifty-five who had myopia of fifteen diopters, complicated with other conditions which made it impossible for her to see the big C at more than one foot, or to go about, either in her house or on the street, without an attendant, became able, when she looked at a green wall without trying to see it, to remember a perfectly black period and to see a small area of the wall-paper at the distance as well as she could at the near-point. When she had come close to the wall, she was asked to put her hand on the door-knob, which she did without hesitation. "But I don't see the knob," she hastened to explain. As a matter of fact she had seen it long enough to put her hand on it; but as soon as the idea of seeing it was suggested to her she lost the memory of the period, and with it her improved vision, and when she again tried to find the knob she could not do so.

When a period is remembered perfectly while a letter on the Snellen test card is being regarded, the letter improves, with or without the consciousness of the patient; because it is impossible to strain and relax at the same time, and if one relaxes sufficiently to remember the period, one must also relax sufficiently to see the letter, consciously or unconsciously. Letters on either side of the one regarded, or on the lines above and below it, also improve. When the patient is conscious of seeing the letters, this is very distracting, and usually causes him, at first, to forget the period ; while with some patients, as already noted, the strain may return even before the letters are consciously recognized.

Thus patients find themselves on the horns of a dilemma. The relaxation indicated by the memory of a period improves their sight, and the things they see with this improved vision cause them to lose their relaxation and their memory. It is very remarkable to me how the difficulty is ever overcome, but some patients are able to do it in five minutes or half an hour. With others the process is long and tedious.

There are various ways of helping patients to deal with this situation. One is to direct them to remember the period while looking a little to one side of the test card, say a foot or more; then to look a little nearer to it, and finally to look between the lines. In this way they may become able to

see the letters in the eccentric field without losing the period; and when they can do this they may become able to go a step farther, and look directly at a letter without losing control of their memory. If they cannot do it, they are told to look at only one part of a letter - usually the bottom - or to see or imagine the period as part of the letter, while noting that the rest of the letter is less black and less distinct than the part

Dodging Improved Sight

directly regarded. When they can do this they become able to remember the period better than when the letter is seen all alike. If the letter is seen all alike, the perfect memory of the period is always lost. The next step is to ask the patient to note whether the bottom of the letter is straight, curved, or open, without losing the period on the bottom. When he can do this, he is asked to do the same with the sides and top of the letter, still holding the period on the bottom. Usually when the parts can be observed separately in this way, the whole letter can be seen without losing the memory of the period; but it occasionally happens that this is not the case, and further practice is needed before the patient can become conscious of all sides of the letter at once without losing the period. This may require moments, hours, days, or months. In one case the following method succeeded :

(Imagine the black letter is composed of many small black periods and look at one at a time, shifting from period to period or: shift 'move' one period with the eyes, visual attention to each part of the letter, one part at a time; shifting part to part to see the letter clear.)

The patient, a man with fifteen diopters of myopia, was so much disturbed by what he saw when his vision had been improved by the memory of a period that he was directed to look away from the Snellen test card, or whatever object he was regarding, when he found the letters or other details coming out; and for about a week he went around persistently dodging his improved sight. As his memory improved, it became more and more difficult for him to do this, and at the end of the week it was impossible. When he looked at the bottom line at a distance of twenty feet he remembered the period perfectly, and when asked if he could see the letters, he replied :

"I cannot help but see them."

Some patients retard their recovery by decorating the scenery with periods as they go about during the day, instead of simply remembering a period in their minds. This does them no good, but is, on the contrary, a cause of strain. The period can be imagined perfectly and with benefit as forming part of a black letter on the test card, because this merely means imagining that one sees one part of the black letter best; but it cannot be imagined perfectly on any surface which is not black, and to attempt to imagine it on such surfaces defeats the end in view.

The smaller the area of black which the patient is able to remember, the greater is the degree of relaxation indicated; but some patients find it easier, at first, to remember a somewhat larger area, such as one of the letters on the Snellen test card with one part blacker than the rest. They may begin with the big C, then proceed to the smaller letters, and finally get to a period. It is then found that this small area is remembered more easily than the larger ones, and that its black is more intense. Instead of a period, some patients find it easier to remember a colon, with one period blacker than the other, or a collection of periods, with one blacker than all the others, or the dot over an i or j. Others, again, prefer a comma to a period. In the beginning most patients find it helpful to shift consciously from one of these black areas to another, or from one part of such an area to another, and to realize the swing, or pulsation, produced by such shifting (see Chapter XV) ; but when the memory becomes perfect, one object may be held continuously, without conscious shifting, while the swing is realized only when attention is directed to the matter.

Although black is, as a rule, the best color to remember, some patients are bored or depressed by it, and prefer to remember white or some other color. A

A Help to Other Mental Processes

familiar object, or one with pleasant associations, is often easier to remember than one which has no particular interest. One patient was cured by the memory of a yellow buttercup, and another was able to remember the opal of her ring when she could not remember a period. Whatever the patient

finds easiest to remember is the best to remember, because the memory can never be perfect unless it is easy.

When the memory of the period becomes habitual, it is not only not a burden, but is a great help to other mental processes. Then the mind, when it remembers one thing better than all other things, possesses central fixation, and its efficiency is thereby increased, just as the efficiency of the eye is increased by central fixation. In other words, the mind attains its greatest efficiency when it is at rest, and it is never at rest unless one thing is remembered better than all other things. When the mind is in such a condition that a period is remembered perfectly, the memory for other things is improved.

A high-school girl reports that when she was unable to remember the answer to a question in an examination, she remembered the period, and the answer came to her. When I cannot remember the name of a patient, I remember a period - and, behold, I have it! A musician who had perfect sight and could remember a period perfectly, had a perfect memory for music; but a musician with imperfect sight who could not remember a period could play nothing without his notes, only gaining that power when his sight and visual memory had become normal. In some exceptional cases, the strain to see letters on the Snellen test card has been so terrific that patients have said that they not only could not remember a period while they were looking at them, but could not remember even their own names.

Patients may measure the accuracy of their memory of the period, not only by comparing it with the sight, but by the following tests :

When the memory of the period is perfect it is instantaneous. If a few seconds or longer are necessary to obtain the memory, it is never perfect.

A perfect memory is not only instantaneous, but continuous.

When the period is remembered perfectly perfect sight comes instantaneously. If good vision is obtained only after a second or two, it can always be demonstrated that the memory of the period is imperfect and the sight also.

The memory of a period is a test of relaxation. It is the evidence by which the patient knows that his eyes and mind are at rest. It may be compared to the steamgauge of an engine, which has nothing to do with the machinery, but is of great importance in giving information as to the ability of the mechanism to do its work. When the period is black one knows that the engine of the eye is in good working order. When the period fades, or is lost, one knows that it is out of order, until a cure is effected. Then one does not need a period, or any other aid to vision, just as the engineer does not need a steam-gauge when the engine is going properly. One patient who had gained telescopic and microscopic vision by the methods presented in this book said, in answer to an inquiry from some one interested in investigating the treatment of errors of refraction without glasses, that he had not only done nothing to prevent a relapse, but had even forgotten how he was cured.

The Period no Longer Needed

The reply was unsatisfactory to the inquirer, but is quoted to illustrate the fact that when a patient is cured he does not need to do anything consciously in order to stay cured, although the treatment can always be continued with benefit, since even supernormal vision can be improved.

CHAPTER XIV

IMAGINATION AS AN AID TO VISION

WE see very largely with the mind, and only partly with the eyes. The phenomena of vision depend upon the mind’s interpretation of the impression upon the retina. What we see is not that impression, but our own interpretation of it. Our impressions of size, color, form and location can be demonstrated to depend upon the interpretation by the mind of the retinal picture. The moon looks smaller at the zenith than it does at the horizon, though the optical angle is the same and the impression on the retina may be the same, because at the horizon the mind unconsciously compares

the picture with the pictures of surrounding objects, while at the zenith there is nothing to compare it with. The figure of a man on a high building, or on the topmast of a vessel, looks small to the landsman; but to the sailor it appears to be of ordinary size, because he is accustomed to seeing the human figure in such positions.

Persons with normal vision use their memory, or imagination, as an aid to sight; and when the sight is imperfect it can be demonstrated, not only that the eye itself is at fault, but that the memory and imagination are impaired, so that the mind adds imperfections to the imperfect retinal image. No two persons with normal sight will get the same visual impressions from the same object; for their interpretations of the retinal picture will differ as much as their individualities differ, and

The Mind Out of Focus

when the sight is imperfect the interpretation is far more variable. It reflects, in fact, the loss of mental control which is responsible for the error of refraction. When the eye is out of focus, in short, the mind is also out of focus.

According to the accepted view most of the abnormalities of vision produced when there is an error of refraction in the eye are sufficiently accounted for by the existence of that error. Some are supposed to be due to diseases of the brain or retina. Multiple images are attributed to astigmatism, though only two can be legitimately accounted for in this way, while some patients state that they see half a dozen or more, and many persons with astigmatism do not see any. It can easily be demonstrated, however, that the inaccuracy of the focus accounts for only a small part of these results; and since they can all be corrected in a few seconds through the correction, by relaxation, of the error of refraction, it is evident that they cannot be due to any organic disease.

If we compare the picture on the glass screen of the camera when the camera is out of focus with the visual impressions of the mind when the eye is out of focus, there will be found to be a great difference between them. When the camera is out of focus it turns black into grey, and blurs the outlines of the picture; but it produces these results uniformly and constantly. On the screen of the camera an imperfect picture of a black letter would be equally imperfect in all parts, and the same adjustment of the focus would always produce the same picture. But when the eye is out of focus the imperfect picture which the patient imagines that he sees is always changing, whether the focus changes or not. There will be more grey on one part than on another, and both the shade and the position of the grey may vary within wide limits in a very short space of time. One part of the letter may appear grey and the rest black. Certain outlines may be seen better than others, the vertical lines, perhaps, appearing black and the diagonal grey, and vice versa. Again, the black may be changed into brown, yellow, green, or even red, transmutations impossible to the camera. Or there may be spots of color, or of black, on the grey, or on the white openings. There may also be spots of white, or of color, on the black.

When the camera is out of focus the picture which it produces of any object is always slightly larger than the image produced when the focus is correct; but when the eye is out of focus the picture which the mind sees may be either larger or smaller than it normally would be. To one patient the big C at ten feet appeared smaller than at either twenty feet or four inches. To some it appears larger than it actually is at twenty feet, and to others it seems smaller.

When the human eye is out of focus the form of the objects regarded by the patient frequently appears to be distorted, while their location may also appear to change. The image may be doubled, tripled, or still further multiplied, and while one object, or part of an object may be multiplied other objects or parts of objects in the field of vision may remain single. The location of these multiple images is sometimes constant and at others subject to continual change. Nothing like this could happen when the camera is out of focus.

How Imagination Cures

If two cameras are out of focus to the same degree, they will take two imperfect pictures exactly alike. If two eyes are out of focus to the same degree, similar impressions will be made upon the retina of each; but the impressions made upon the mind may be totally unlike, whether the eyes belong to the same person or to different persons. If the normal eye looks at an object through

glasses that change its refraction, the greyness and blurring produced are uniform and constant; but when the eye has an error of refraction equivalent to that produced by the glasses, these phenomena are non-uniform and variable.

It is fundamental that the patient should understand that these aberrations of vision - which are treated more fully in a later chapter - are illusions, and not due to a fault of the eyes. When he knows that a thing is an illusion he is less likely to see it again. When he becomes convinced that what he sees is imaginary it helps to bring the imagination under control; and since a perfect imagination is impossible without perfect relaxation, a perfect imagination not only corrects the false interpretation of the retinal image, but corrects the error of refraction.

Imagination is closely allied to memory, although distinct from it. Imagination depends upon the memory, because a thing can be imagined only as well as it can be remembered. You cannot imagine a sunset unless you have seen one; and if you attempt to imagine a blue sun, which you have never seen, you will become myopic, as indicated by simultaneous retinoscopy. Neither imagination nor memory can be perfect unless the mind is perfectly relaxed. Therefore when the imagination and memory are perfect, the sight is perfect. Imagination, memory and sight are, in fact, coincident. When one is perfect, all are perfect, and when one is imperfect, all are imperfect. If you imagine a letter perfectly, you will see the letter and other letters in its neighborhood will come out more distinctly, because it is impossible for you to relax and imagine you see a perfect letter and at the same time strain and actually see an imperfect one. If you imagine a perfect period on the bottom of a letter, you will see the letter perfectly, because you cannot take the mental picture of a perfect period and put it on an imperfect letter. It is possible, however, as pointed out in the preceding chapter, for sight to be unconscious. In some cases patients may imagine the period perfectly, as demonstrated by the retinoscope, without being conscious of seeing the letter; and it is often some time before they are able to be conscious of it without losing the period.

When one treats patients who are willing to believe that the letters can be imagined, and who are content to imagine without trying to see, or compare what they see with what they imagine, which always brings back the strain, very remarkable results are sometimes obtained by the aid of the imagination. Some patients at once become able to read all the letters on the bottom line of the test card after they become able to imagine that they see one letter perfectly black and distinct. The majority, however, are so distracted by what they see when their vision has been improved by their imagination that they lose the latter. It is one thing to be able to imagine perfect sight of a letter, and another to be able to see the letter and other letters without losing control of the imagination.

In myopia the following method is often successful : First look at a letter at the point at which it is seen best. Then close the eyes and remember it. Repeat

until the memory is almost as good as the sight at the near-point. With the test card at a distance of twenty feet, look at a blank surface a foot or more to one side of it, and again remember the letter. Do the same at six inches and at three inches. At the last point note the appearance of the letters on the card - that is, in the eccentric field. If the memory is still perfect, they will appear to be a dim black, not grey, and those nearest the point of fixation will appear blacker than those more distant. Gradually reduce the distance between the point of fixation and the letter until able to look straight at it and imagine that it is seen as well as it is remembered. Occasionally it is well during the practice to close and cover the eyes and remember the letter, or a period, perfectly black. The rest and mental control gained in this way are a help in gaining control when one looks at the test card.

Patients who succeed with this method are not conscious while imagining a perfect letter, of seeing, at the same time, an imperfect one, and are not distracted when their vision is improved by their imagination. Many patients can remember perfectly with their eyes closed, or when they are looking at a place where they cannot see the letter; but just as soon as they look at it they begin to strain and lose control of their memory. Therefore, as the imagination depends upon the memory, they cannot imagine that they see the letter. In such cases it has been my custom to proceed somewhat in the manner described in the preceding chapter. I begin by saying to the patient:

"Can you imagine a black period on the bottom of this letter, and at the same time, while imagining the period perfectly, are you able to imagine that you see the letter?

Sometimes they are able to do this, but usually they are not. In that case they are asked to imagine part of the letter, usually the bottom. When they have become able to imagine this part straight, curved, or open, as the case may be, they become able to imagine the sides and top, while still holding the period on the bottom. But even after they have done this, they may still not be able to imagine the whole letter without losing the period. One may have to coax them along by bringing the card up a little closer, then moving it farther away; for when looking at a surface where there is anything to see, the imagination improves in proportion as one approaches the point where the sight is best, because at that point the eyes are most relaxed. When there is nothing particular to see, the distance makes no difference, because no effort is being made to see.

To encourage patients to imagine they see the letter it seems helpful to keep saying to them over and over again:

"Of course you do not see the letter. I am not asking you to see it. I am just asking you to imagine that you see it perfectly black and perfectly distinct."

When patients become able to see a known letter by the aid of their imagination, they become able to apply the same method to an unknown letter ; for just as soon as any part of a letter, such as an area equal to a period, can be imagined to be perfectly black, the whole letter is seen to be black, although the visual perception of this fact may not, at first, last long enough for the patient to become conscious of it.

In trying to distinguish unknown letters, the patient discovers that it is impossible to imagine perfectly unless one imagines the truth; for if a letter, or any part

One Way of Imagining Perfectly

of a letter, is imagined to be other than it is, the mental picture is foggy and inconstant, just like a letter which is seen imperfectly.

The ways in which the imagination can be interfered with are very numerous. There is one way of imagining perfectly and an infinite number of ways of imagining imperfectly. The right way is easy. The mental picture of the thing imagined comes as quick as thought, and can be held more or less continuously. The wrong way is difficult. The picture comes slowly, and is both variable and discontinuous. This can be demonstrated to the patient by asking him first to imagine or remember a black letter as perfectly as possible with the eyes closed, and then to imagine the same letter imperfectly. The first he can usually do easily; but it will be found very difficult to imagine a black letter with clear outlines to be grey, with fuzzy edges and clouded openings, and impossible to form a mental picture of it that will remain constant for an appreciable length of time. The letter will vary in color, shape and location in the visual field, precisely as a letter does when it is seen imperfectly; and just as the strain of imperfect sight produces discomfort and pain, the effort to imagine imperfectly will sometimes produce pain. The more nearly perfect the mental picture of the letter, on the contrary, the more easily and quickly it comes and the more constant it is.

Some very dramatic cures have been effected by means of the imagination. One patient, a physician, who had worn glasses for forty years and who could not without them see the big C at twenty feet, was cured in fifteen minutes simply by imagining that he saw the letters black. When asked to describe the big C with unaided vision he said it looked grey to him, and that the opening was obscured by a grey cloud to such an extent that he had to guess that it had an opening. He was told that the letter was black, perfectly black, and that the opening was perfectly white, with no grey cloud; and the card was brought close to him so that he could see that this was so. When he again regarded the letter at the distance, he remembered its blackness so vividly that he was able to imagine that he saw it just as black as he had seen it at the near-point, with the opening perfectly white; and therefore he saw the letter on the card perfectly black and distinct. In the same way he became able to read the seventy line; and so he went down the card, until in about five minutes he became able to read at twenty feet the line which the normal eye is supposed to read at ten feet. Next diamond type was given to him to read. The letters appeared grey to him, and he could not

read them. His attention was called to the fact that the letters were really black, and immediately he imagined that he saw them black and became able to read them at ten inches.

The explanation of this remarkable occurrence is simply relaxation. All the nerves of the patient's body were relaxed when he imagined that he saw the letters black, and when he became conscious of seeing the letters on the card, he still retained control of his imagination. Therefore he did not begin to strain again, and actually saw the letters as black as he imagined them.

The patient not only had no relapse, but continued to improve. About a year later I visited him in his office and asked him how he was getting on. He replied that his sight was perfect, both for distance and the near-point. He could see the motor cars on the

Too Good To Be True

other side of the Hudson River and the people in them, and he could read the names of boats on the river which other people could make out only with a telescope. At the same time he had no difficulty in reading the newspapers, and to prove the latter part of this statement, he picked up a newspaper and read a few sentences aloud. I was astonished, and asked him how he did it.

"I did what you told me to do," he said.
"What did I tell you to do?" I asked.
"You told me to read the Snellen test card every day, which I have done, and to read fine print every day in a dim light, which I have also done."

Another patient, who had a high degree of myopia complicated with atrophy of the optic nerve, and who had been discouraged by many physicians, was benefited so wonderfully and rapidly by the aid of his imagination that one day while in the office he lost control of himself completely, and raising a test card which he held in his hand, he threw it across the room.

"It is too good to be true," he exclaimed; "I cannot believe it. The possibility of being cured and the fear of disappointment are more than I can stand."

He was calmed down with some difficulty and encouraged to continue. Later he became able to read the small letters on the test card with normal vision. He was then given fine print to read. When he looked at the diamond type, he at once said that it was impossible for him to read it. However, he was told to follow the same procedure that had benefited his distance sight. That is, he was to imagine a period on one part of the small letters while holding the type at six inches. After testing his memory of the period a number of times, he became able to imagine he saw a period perfectly black on one of the small letters. Then he lost control of his nerves again, and on being asked, "What is the trouble?" he said:
"I am beginning to read the fine print, and I am so overwhelmed that I lose my self-control."

In another case, that of a woman with high myopia complicated with incipient cataract, the vision improved in a few days from 3/200 to 20/50. Instead of going gradually down the card, a jump was made from the fifty line to the ten line. The card was brought up close to her, and she was asked to look at the letter O at three inches, the distance at which she saw it best, to imagine that she saw a period on the bottom of it and that the bottom was the blackest part. When she was able to do this at the near-point, the distance was gradually increased until she became able to see the O at three feet.
Then I placed the card at ten feet and she exclaimed:
"Oh, doctor, it is impossible! The letter is too small. It is too great a thing for me to do. Let me try a larger letter first."

Nevertheless she became able in fifteen minutes to read the small O on the ten line at twenty-feet.

(Close Vision Cure; Shift point to point on a period in a fine print letter and remember, imagine it dark black and clear.)

CHAPTER XV

SHIFTING AND SWINGING

WHEN the eye with normal vision regards a letter either at the near-point or at the distance, the letter may appear to pulsate, or to move in various directions, from side to side, up and down, or obliquely. When it looks from one letter to another on the Snellen test card, or from one side of a letter to another, not only the letter, but the whole line of letters and the whole card, may appear to move from side to side. This apparent movement is due to the shifting of the eye, and is always in a direction contrary to its movement. If one looks at the top of a letter, the letter is below the line of vision, and, therefore, appears to move downward. If one looks at the bottom, the letter is above the line of vision and appears to move upward. If one looks to the left of the letter, it is to the right of the line of vision and appears to move to the right. If one looks to the right, it is to the left of the line of vision and appears to move to the left.

Persons with normal vision are rarely conscious of this illusion, and may have difficulty in demonstrating it ; but in every case that has come under my observation they have always become able, in a longer or shorter time, to do so. When the sight is imperfect the letters may remain stationary, or even move in the same direction as the eye.

It is impossible for the eye to fix a point longer than a fraction of a second. If it tries to do so, it begins to strain and the vision is lowered. This can readily be demonstrated by trying to hold one part of a letter for an appreciable length of time. No matter how good the sight, it will begin to blur, or even disappear, very quickly, and sometimes the effort to hold it will produce pain. In the case of a few exceptional people a point may appear to be held for a considerable length of time; the subjects themselves may think that they are holding it ; but this is only because the eye shifts unconsciously, the movements being so rapid that objects seem to be seen all alike simultaneously.

The shifting of the eye with normal vision is usually not conspicuous, but by direct examination with the ophthalmoscope it can always be demonstrated. If one eye is examined with this instrument while the other is regarding a small area straight ahead, the eye being examined, which follows the movements of the other, is seen to move in various directions, from side to side, up and down in an orbit which is usually variable. If the vision is normal these movements are extremely rapid and unaccompanied by any appearance of effort. The shifting of the eye with imperfect sight, on the contrary, is slower, its excursions are wider, and the movements are jerky and made with apparent effort.

It can also be demonstrated that the eye is capable of shifting with a rapidity which the ophthalmoscope cannot measure. The normal eye can read fourteen letters on the bottom line of a Snellen test card, at a distance of ten or fifteen feet, in a dim light, so rapidly that they seem to be seen all at once. Yet it can be demonstrated that in order to recognize the letters under these conditions it is necessary to make about four shifts to each letter. At the near-point, even though one part of the

Rapidity of Eye’s Motion

letter is seen best, the rest may be seen well enough to be recognized; but at the distance it is impossible to recognize the letters unless one shifts from the top to the bottom and from side to side. One must also shift from one letter to another, making about seventy shifts in a fraction of a second.

A line of small letters on the Snellen test card may be less than a foot long by a quarter of an inch in height; and if it requires seventy shifts to a fraction of a second to see it apparently all at once, it must require many thousands to see an area of the size of the screen of a moving picture, with all its detail of people, animals, houses, or trees, while to see sixteen such areas to a second, as is done in viewing moving pictures, must require a rapidity of shifting that can scarcely be realized. Yet it is admitted that the present rate of taking and projecting moving pictures is too slow. The results would be more satisfactory, authorities say, if the rate were raised to twenty, twenty-two, or twenty-four a second.

The human eye and mind are not only capable of this rapidity of action, and that without effort or strain, but it is only when the eye is able to shift thus rapidly that eye and mind are at rest, and the efficiency of both at their maximum. It is true that every motion of the eye produces an error of refraction ; but when the movement is short, this is very slight, and usually the shifts are so rapid that the error does not last long enough to be detected by the retinoscope, its existence being demonstrable only by reducing the rapidity of the movements to less than four or five a second. The period during which the eye is at rest is much longer than that during which an error of refraction is produced. Hence, when the eye shifts normally no error of refraction is manifest. The more rapid the unconscious shifting of the eye, the better the vision; but if one tries to be conscious of a too rapid shift, a strain will be produced.

Perfect sight is impossible without continual shifting, and such shifting is a striking illustration of the mental control necessary for normal vision. It requires perfect mental control to think of thousands of things in a fraction of a second; and each point of fixation has to be thought of separately, because it is impossible to think of two things, or of two parts of one thing, perfectly at the same time. The eye with imperfect sight tries to accomplish the impossible by looking fixedly at one point for an appreciable length of time; that is, by staring. When it looks at a strange letter and does not see it, it keeps on looking at it in an effort to see it better. Such efforts always fail, and are an important factor in the production of imperfect sight.

One of the best methods of improving the sight, therefore, is to imitate consciously the unconscious shifting of normal vision and to realize the apparent motion produced by such shifting. Whether one has imperfect or normal sight, conscious shifting and swinging are a great help and advantage to the eye; for not only may imperfect sight be improved in this way, but normal sight may be improved also. When the sight is imperfect, shifting, if done properly, rests the eye as much as palming, and always lessens or corrects the error of refraction.

The eye with normal sight never attempts to hold a point more than a fraction of a second, and when it shifts, as explained in the chapter on "Central Fixation," it always sees the previous point of fixation worse. When it ceases to shift rapidly and to see the point

The Shift That Rests

shifted from worse, the sight ceases to be normal, the swing being either prevented or lengthened, or (occasionally) reversed. These facts are the keynote of the treatment by shifting.

In order to see the previous point of fixation worse, the eye with imperfect sight has to look farther away from it than does the eye with normal sight. If it shifts only a quarter of an inch, for instance, it may see the previous point of fixation as well as or better than before; and instead of being rested by such a shift, its strain will be increased, there will be no swing, and the vision will be lowered. At a couple of inches it may be able to let go of the first point; and if neither point is held more than a fraction of a second, it will be rested by such a shift and the illusion of swinging may be produced. The shorter the shift the greater the benefit; but even a very long shift - as much as three feet or more - is a help to those who cannot accomplish a shorter one. When the patient is capable of a short shift, on the contrary, the long shift lowers the vision. The swing is an evidence that the shifting is being done properly, and when it occurs the vision is always improved. It is possible to shift without improvement; but it is impossible to produce the illusion of a swing without improvement, and when this can be done with a long shift, the movement can gradually be shortened until the patient can shift from the top to the bottom of the smallest letter, on the Snellen test card or elsewhere, and maintain the swing. Later he may become able to be conscious of the swinging of the letters without conscious shifting. (The Swing: Natural illusion of movement of the object, in the opposite direction the eyes, visual attention move to, upon the object; Oppositional Movement.)

No matter how imperfect the sight, it is always possible to shift and produce a swing, so long as the previous point of fixation is seen worse. Even diplopia and polyopia 1 do not prevent swinging with some improvement of vision. Usually the eye with imperfect vision is able to shift from one side of the card to the other, or from a point above the card to a point below it, and observe that in the first case the card appears to move from side to side, while in the second it appears to move up and down.

When patients are suffering from high degrees of eccentric fixation, it may be necessary, in order to help them to see worse when they shift, to use some of the methods described in the chapter on "Central Fixation." Usually, however, patients who cannot see worse when they shift at the distance can do it readily at the near-point, as the sight is best at that point, not only in myopia, but often in hypermetropia as well. When the swing can be produced at the near point, the distance can be gradually increased until the same thing can be done at twenty feet.

After resting the eyes by closing or palming, shifting and swinging are often more successful. By this method of alternately resting the eyes and then shifting, persons with very imperfect sight have sometimes obtained a temporary or permanent cure in a few weeks.

Shifting may be done slowly or rapidly, according to the state of the vision. At the beginning the patient will be likely to strain if he shifts too rapidly ; and then the point shifted from will not be seen worse, and there will be no swing. As improvement is made, the speed can be increased. It is usually impossible, however, to realize the swing if the shifting is more rapid than two or three times a second.

1 Double and multiple vision.

Imagination Helps

A mental picture of a letter can, as a rule, be made to swing precisely as can a letter on the test card. Occasionally one meets a patient with whom the reverse is true ; but for most patients the mental swing is easier at first than visual swinging; and when they become able to swing in this way, it becomes easier for them to swing the letters on the test card. By alternating mental with visual swinging and shifting, rapid progress is sometimes made. As relaxation becomes more perfect, the mental swing can be shortened, until it becomes possible to conceive and swing a letter the size of a period in a newspaper. This is easier, when it can be done, than swinging a larger letter, and many patients have derived great benefit from it.

All persons, no matter how great their error of refraction, when they shift and swing successfully, correct it partially or completely, as demonstrated by the retinoscope, for at least a fraction of a second. This time may be so short that the patient is not conscious of improved vision; but it is possible for him to imagine it, and then it becomes easier to maintain the relaxation long enough to be conscious of the improved sight. For instance, the patient, after looking away from the card, may look back to the big C, and for a fraction of a second the error of refraction may be lessened or corrected, as demonstrated by the retinoscope. Yet he may not be conscious of improved vision. By imagining that the C is seen better, however, the moment of relaxation may be sufficiently prolonged to be realized.

When swinging, either mental or visual, is successful, the patient may become conscious of a feeling of relaxation which is manifested as a sensation of universal swinging. This sensation communicates itself to any object of which the patient is conscious. The motion may be imagined in any part of the body to which the attention is directed. It may be communicated to the chair in which the patient is sitting, or to any object in the room, or elsewhere, which is remembered. The building, the city, the whole world, in fact, may appear to be swinging. When the patient becomes conscious of this universal swinging, he loses the memory of the object with which it started; but so long as he is able to maintain the movement in a direction contrary to the original movement of the eyes, or the movement imagined by the mind, relaxation is maintained. If the direction is changed, however, strain results. To imagine the universal swing with the eyes closed is easy, and some patients soon become able to do it with the eyes open. Later the feeling of relaxation which accompanies the swing may be realized without consciousness of the latter; but the swing can always be produced when the patient thinks of it.

There is but one cause of failure to produce a swing, and that is strain. Some people try to make the letters swing by effort. Such efforts always fail. The eyes and mind do not swing the letters; they swing of themselves. The eye can shift voluntarily. This is a muscular act resulting from a motor impulse. But the Swing comes of its own accord when the shifting is normal. It does not produce relaxation, but is an evidence of it; and while of no value in itself is, like the period, very valuable as an indication that relaxation is being maintained.

The following methods of shifting have been found useful in various cases :

One Cause of Failure

No. 1
(a) Regard a letter.
(b) Shift to a letter on the same line far enough away so that the first is seen worse.
(c) Look back at No. 1 and see No. 2 worse.
(d) Look at the letters alternately for a few seconds, seeing worse the one not regarded.

When successful, both letters improve and appear to move from side to side in a direction opposite to the movement of the eye.

No. 2
(a) Look at a large letter.
(b) Look at a smaller one a long distance away from it. The large one is then seen worse.
(c) Look back and see it better.
(d) Repeat half a dozen times.

When successful, both letters improve, and the card appears to move up and down.

No. 3
Shifting by the above methods enables the patient to see one letter on a line better than the other letters, and, usually, to distinguish it in flashes. In order to see the letter continuously it is necessary to become able to shift from the top to the bottom, or from the bottom to the top, seeing worse the part not directly regarded, and producing the illusion of a vertical swing.
(a) Look at a point far enough above the top of the letter to see the bottom, or the whole letter worse.
(b) Look at a point far enough below the bottom to see the top, or the whole letter, worse.
(c) Repeat half a dozen times.

If successful, the letter will appear to move up and down, and the vision will improve. The shift can then be shortened until it becomes possible to shift between the top and the bottom of the letter and maintain the swing. The letter is now seen continuously. If the method fails, rest the eyes, palm, and try again.

One may also practice by shifting from one side of the letter to a point beyond the other side, or from one corner to a point beyond the other corner.

No. 4
(a) Regard a letter at the distance at which it is seen best. In myopia this will be at the near-point, a foot or less from the face. Shift from the top to the bottom until able to see each worse alternately, when the letter will appear blacker than before, ‘and an illusion of swinging will be produced.
(b) Now close the eyes, and shift from the top to the bottom of the letter mentally.
(c) Regard a blank wall with the eyes open, and do the same. Compare the ability to shift and swing mentally with the ability to do the same visually at the near-point.
(d) Then regard the letter at the distance, and shift from the top to the bottom. If successful, the letter will improve, and an illusion of swinging will be produced.

No. 5
Some patients, particularly children, are able to see better when one points to the letters. In other cases

Pointing to the Letters

this is a distraction. When the method is found successful one can proceed as follows :
(a) Place the tip of the finger three or four inches below the letter. Let the patient regard the letter, and shift to the tip of the finger, seeing the letter worse.
(b) Reduce the distance between the finger and the letter, first to two or three inches, then to one or two, and finally to half an inch, proceeding each time as in (a).

If successful, the patient will become able to look from the top to the bottom of the letter, seeing each worse alternately, and producing the illusion of swinging. It will then be possible to see the

letter continuously.

No. 6
When the vision is imperfect it often happens that, when the patient looks at a small letter, some of the larger letters on the upper lines, or the big C at the top, look blacker than the letter regarded. This makes it impossible to see the smaller letters perfectly. To correct this eccentric fixation regard the letter which is seen best, and shift to the smaller letter. If successful, the small letter, after a few movements, will appear blacker than the larger one. If not successful after a few trials, rest the eyes by closing and palming, and try again. One may also shift from the large letter to a point some distance below the small letter, gradually approaching the latter as the vision improves.

No. 7
Shifting from a card at three or five feet to one at ten or twenty feet often proves helpful, as the unconscious memory of the letter seen at the near-point helps to bring out the one at the distance.

Different people will find these various methods of shifting more or less satisfactory. If any method does not succeed, it should be abandoned after one or two trials and something else tried. It is a mistake to continue the practice of any method which does not yield prompt results. The cause of the failure is strain, and it does no good to continue the strain.

When it is not possible to practice with the Snellen test card, other objects may be utilized. One can shift, for instance, from one window of a distant building to another, or from one part of a window to another part of the same window, from one auto to another, or from one part of an auto to another part, producing, in each case, the illusion that the objects are moving in a direction contrary to the movement of the eye. When talking to people, one can shift from one person to another, or from one part of the face to another part. When reading a book, or newspaper, one can shift consciously from one word or letter to another, or from one part of a letter to another.

Shifting and swinging, as they give the patient something definite to do, are often more successful than other methods of obtaining relaxation, and in some cases remarkable results have been obtained simply by demonstrating to the patient that staring lowers the vision and shifting improves it. One patient, a girl of sixteen with progressive myopia, obtained very prompt relief by shifting. She came to the office wearing a pair of glasses tinted a pale yellow, with shades at the sides; and in spite of this protection she was so annoyed by the light that her eyes were almost closed, and she had great

Cured by Shifting

difficulty in finding her way about the room. Her vision without glasses was 3/200. All reading had been forbidden, playing the piano from the notes was not allowed, and she had been obliged to give up the idea of going to college. The sensitiveness to light was relieved in a few minutes by focussing the light of the sun upon the upper part of the eyeball when she looked far down, by means of a burning glass (see Chapter XVII). The patient was then seated before a Snellen test card and directed to look away from it, rest her eyes, and then look at the big C. For a fraction of a second her vision was improved, and by frequent demonstrations she was made to realize that any effort to see the letters always lowered the vision. By alternately looking away, and then looking back at the letters for a fraction of a second, her vision improved so rapidly that in the course of half an hour it was almost normal for the distance. Then diamond type was given her to read. The attempt to read it at once brought on a severe pain. She was directed to proceed as she had in reading the Snellen test card; and in a few minutes, by alternately looking away and then looking at the first letter of each word in turn, she became able to read without fatigue, discomfort, or pain. She left the office without her glasses, and was able to see her way without difficulty. Other patients have been benefited as promptly by this simple method.

CHAPTER XVI

THE ILLUSIONS OF IMPERFECT AND OF NORMAL EYESIGHT

PERSONS with imperfect sight always have illusions of vision; so do persons with normal sight. But while the illusions of normal sight are an evidence of relaxation, the illusions of imperfect sight are an evidence of strain. Some persons with errors of refraction have few illusions, others have many; because the strain which causes the error of refraction is not the same strain that is responsible for the illusions.

The illusions of imperfect sight may relate to the color, size, location and form of the objects regarded. They may include appearances of things that have no existence at all, and various other curious and interesting manifestations.

ILLUSIONS OF COLOR

When a patient regards a black letter and believes it to be grey, yellow, brown, blue, or green, he is suffering from an illusion of color. This phenomenon differs from color-blindness. The color-blind person is unable to differentiate between different colors, usually blue and green, and his inability to do so is constant. The person suffering from an illusion of color does not see the false colors constantly or uniformly. When he looks at the Snellen test card the black letters may appear to him at one time to be grey; but at another moment they may appear to be a shade of yellow, blue, or brown. Some

Vagaries of Color and Size

patients always see the black letters red; to others, they appear red only occasionally. Although the letters are all of the same color, some may see the large letters black and the small ones yellow or blue. Usually the large letters are seen darker than the small ones, whatever color they appear to be. Often different colors appear in the same letter, part of it seeming to be black, perhaps, and the rest grey or some other color. Spots of black, or of color, may appear on the white; and spots of white, or of color, on the black.

ILLUSIONS OF SIZE

Large letters may appear small, or small letters large. One letter may appear to be of normal size, while another of the same size and at the same distance may appear larger or smaller than normal. Or a letter may appear to be of normal size at the near-point and at the distance, and only half that size at the middle distance. When a person can judge the size of a letter correctly at all distances up to twenty feet his vision is normal. If the size appears different to him at different distances, he is suffering from an illusion of size. At great distances the judgment of size is always imperfect, because the sight at such distances is imperfect, even though perfect at ordinary distances. The stars appear to be dots, because the eye does not possess perfect vision for objects at such distances. A candle seen half a mile away appears smaller than at the near-point; but seen through a telescope giving perfect vision at that distance it will be the same as at the near-point. With improved vision the ability to judge size improves.

The correction of an error of refraction by glasses seldom enables the patient to judge size as correctly as the normal eye does, and the ability to do this may differ very greatly in persons having the same error of refraction. A person with ten diopters of myopia corrected by glasses may (rarely) be able to judge the sizes of objects correctly. Another person, with the same degree of myopia and the same glasses, may see them only one-half or one-third their normal size. This indicates that errors of refraction have very little to do with incorrect perceptions of size.

ILLUSIONS OF FORM

Round letters may appear square or triangular ; straight letters may appear curved; letters of regular form may appear very irregular ; a round letter may appear to have a checker-board or a cross in the center. In short, an infinite variety of changing forms may be seen. Illumination, distance and environment are all factors in this form of imperfect sight. Many persons can see the

form of a letter correctly when other letters are covered, but when the other letters are visible they cannot see it. The indication of the position of a letter by a pointer helps some people to see it. Others are so disturbed by the pointer that they cannot see the letter so well.

ILLUSIONS OF NUMBER

Multiple images are frequently seen by persons with imperfect sight, either with both eyes together, with each eye separately, or with only one eye. The manner in which these multiple images make their appearance is sometimes very curious. For instance, a patient with presbyopia read the word HAS normally with both eyes. The word PHONES he read correctly with the left eye;

but when he read it with the right eye he saw the letter P double, the imaginary image being a little distance to the left of the real one. The left eye, while it had normal vision for the word PHONES, multiplied the shaft of a pin when this object was in a vertical position (the head remaining single), and multiplied the head when the position was changed to the horizontal (the shaft then remaining single). When the point of the pin was placed below a very small letter, the point was sometimes doubled while the letter remained single. No error of refraction can account for these phenomena. They are tricks of the mind only. The ways in which multiple images are arranged are endless. They are sometimes placed vertically, sometimes horizontally or obliquely, and sometimes in circles, triangles and other geometrical forms. Their number, too, may vary from two to three, four, or more. They may be stationary, or may change their position more or less rapidly. They also show an infinite variety of color, including a white even whiter than that of the background.

ILLUSIONS OF LOCATION

A period following a letter on the same horizontal level as the bottom of the letter may appear to change its position in a great variety of curious ways. Its distance from the letter may vary. It may even appear on the other side of the letter. It may also appear above or below the line. Some persons see letters arranged in irregular order. In the case of the word AND, for instance, the D may occupy the place of the N, or the first letter may change places with the last. All these things are mental illusions. The letters sometimes appear to be farther off than they really are. The small letters, twenty feet distant, may appear to be a mile away. Patients troubled by illusions of distance sometimes ask if the position of the card has not been changed.

ILLUSIONS OF NON-EXISTENT OBJECTS

When the eye has imperfect sight the mind not only distorts what the eye sees, but it imagines that it sees things that do not exist. Among illusions of this sort are the floating specks which so often appear before the eyes when the sight is imperfect, and even when it is ordinarily very good. These specks are known scientifically as “muscae volitantes,” or “flying flies,” and although they are of no real importance, being symptoms of nothing except mental strain, they have attracted so much attention, and usually cause so much alarm to the patient, that they will be discussed at length in another chapter.

ILLUSIONS OF COMPLEMENTARY COLORS

When the sight is imperfect, the subject, on looking away from a black, white, or brightly colored object, and closing the eyes, often imagines for a few seconds that he sees the object in a complementary, or approximately complementary, color. If the object is black upon a white background, a white object upon a black background will be seen. If the object is red, it may be seen as blue ; and if it is blue, it may appear to be red. These illusions, which are known as “after-images,” may also be seen, though less commonly, with the eyes open, upon any background at which the subject happens to look, and are often so vivid that they appear to be real.

The Color of the Sun

ILLUSIONS OF THE COLOR OF THE SUN

Persons with normal sight see the sun white, the whitest white there is; but when the sight is imperfect it may appear to be any color in the spectrum - red, blue, green, purple, yellow, etc. In fact, it has even been described by persons with imperfect vision as totally black. The setting sun commonly appears to be red, because of atmospheric conditions; but in many cases these conditions are not such as to change the color, and while this still appears to be red to persons with imperfect vision, to persons with normal vision it appears to be white. When the redness of a red sun is an illusion, and not due to atmosphere conditions, its image on the ground glass of a camera will be white, not red, and the rays focussed with a burning glass will also be white. The same is true of a red moon.

BLIND SPOTS AFTER LOOKING AT THE SUN

After looking at the sun, most people see black or colored spots which may last from a few minutes to a year or longer, but are never permanent. These spots are also illusions, and are not due, as is commonly supposed, to any organic change in the eye. Even the total blindness which sometimes results, temporarily, from looking at the sun, is only an illusion.

(Modern Natural Eyesight Improvement Teachers state to CLOSE THE EYES when facing the sun (Sunning) and to move the eyes, had side to side, up, down...)

ILLUSIONS OF TWINKLING STARS

The idea that the stars should twinkle has been embodied in song and story, and is generally accepted as part of the natural order of things ; but it can be demonstrated that this appearance is simply an illusion of the mind.

CAUSE OF THE ILLUSIONS OF IMPERFECT SIGHT

All the illusions of imperfect sight are the result of a strain of the mind, and when the mind is disturbed for any reason, illusions of all kinds are very likely to occur. This strain is not only different from the strain that produces the error of refraction, but it can be demonstrated that for each and every one of these illusions there is a different kind of strain. Alterations of color do not necessarily affect the size or form of objects, or produce any other illusion, and it is possible to see the color of a letter, or of a part of a letter, perfectly, without recognizing the letter. To change black letters into blue, or yellow, or another color, requires a subconscious strain to remember or imagine the colors concerned, while to alter the form requires a subconscious strain to see the form in question. With a little practice anyone can learn to produce illusions of form and color by straining consciously in the same way that one strains unconsciously; and whenever illusions are produced in this way it will be found that eccentric fixation and an error of refraction have also been produced.

The strain which produces polyopia is different again from the strain which produces illusions of color, size and form. After a few attempts most patients easily learn to produce polyopia at will. Staring or squinting, if the strain is great enough, will usually make one see double. By looking above a light, or a letter, and then trying to see it as well as when directly regarded, one can produce an illusion of several lights, or letters, arranged vertically. If the strain is great enough, there

may be as many as a dozen of them. By looking to the side of the light or letter, or looking away obliquely at any angle, the images can be made to arrange themselves horizontally, or obliquely at any angle.

To see objects in the wrong location, as when the first letter of a word occupies the place of the last, requires an ingenuity of eccentric fixation and an education of the imagination which is unusual.

The black or colored spots seen after looking at the sun, and the strange colors which the sun sometimes seems to assume, are also the result of the mental strain. When one becomes able to look at the orb of day without strain, these phenomena immediately disappear.

After-images have been attributed to fatigue of the retina, which is supposed to have been so overstimulated by a certain color that it can no longer perceive it, and therefore seeks relief in the hue which is complementary to this color. If it gets tired looking at the black C on the Snellen test card, for instance, it is supposed to seek relief by seeing the C white. This explanation of the phenomenon is very ingenious but scarcely plausible. The eyes cannot see when they are closed; and if they appear to see under these conditions, it is obvious that the subject is suffering from a mental illusion with which the retina has nothing to do. Neither can they see what does not exist; and if they appear to see a white C on a green wall where there is no such object, it is obvious again that the subject is suffering from a mental illusion. The after-image indicates, in fact, simply a loss of mental control, and occurs when there is an error of refraction, because this condition also is due to a loss of mental control. Anyone can produce an after-image at will by trying to see the big C all alike - that is, under a strain ; but one can look at it indefinitely by central fixation without any such result.

While persons with imperfect sight usually see the stars twinkle, they do not necessarily do so. Therefore it is evident that the strain which causes the twinkling is different from that which causes the error of refraction. If one can look at a star without trying to see it, it does not twinkle; and when the illusion of twinkling has been produced, one can usually stop it by "swinging" the star. On the other hand, one can start the planets, or even the moon, to twinkling, if one strains sufficiently to see them.

ILLUSIONS OF NORMAL SIGHT

The illusions of normal sight include all the phenomena of central fixation. When the eye with normal sight looks at a letter on the Snellen test card, it sees the point fixed best, and everything else in the field of vision appears less distinct. As a matter of fact, the whole letter and all the letters may be perfectly black and distinct, and the impression that one letter is blacker than the others, or that one part of a letter is blacker than the rest, is an illusion. The normal eye, however, may shift so rapidly that it appears to see a whole line of small letters all alike simultaneously. As a matter of fact there is, of course, no such picture on the retina. Each letter has not only been seen separately, but it has been demonstrated in the chapter on "Shifting and Swinging" that if the letters are seen at a distance of fifteen or twenty feet, they could not be recognized unless about four shifts were made on each letter. To produce the impression of a simultaneous picture of fourteen letters,

All Vision an Illusion

therefore, some sixty or seventy pictures, each with some one point more distinct than the rest, must have been produced upon the retina. The idea that the letters are seen all alike simultaneously is therefore, an illusion. Here we have two different kinds of illusions. In the first case the impression made upon the brain is in accordance with the picture on the retina, but not in accordance with the fact. In the second the mental impression is in accordance with the fact, but not with the pictures upon the retina.

The normal eye usually sees the background of a letter whiter than it really is. In looking at the letters on the Snellen test card it sees white streaks at the margins of the letters, and in reading fine print it sees between the lines and the letters, and in the openings of the letters, a white more intense than the reality. Persons who cannot read fine print may see this illusion, but less clearly. The more clearly it is seen, the better the vision; and if it can be imagined consciously - it is imagined unconsciously when the sight is normal - the vision improves. If the lines of fine type are covered, the streaks between them disappear. When the letters are regarded through a magnifying glass by the eye with normal sight, the illusion is not destroyed, but the intensity of the white and black are lessened. With imperfect sight it may be increased to some extent by this means, but will remain less intense than the white and black seen by the normal eye. The facts demonstrate that perfect sight cannot be obtained with glasses.

The illusions of movement produced by the shifting of the eye and described in detail in the chapter on "Shifting and Swinging" must also be numbered among the illusions of normal sight, and so must the perception of objects in an upright position. This last is the most curious illusion of all. No matter what the position of the head, and regardless of the fact that the image on the retina is inverted, we always see things right side up.

CHAPTER XVII

VISION UNDER ADVERSE CONDITIONS A BENEFIT TO THE EYES

ACCORDING to accepted ideas of ocular hygiene, it is important to protect the eyes from a great variety of influences which are often very difficult to avoid, and to which most people resign themselves with the uneasy sense that they are thereby "ruining their eyesight." Bright lights, artificial lights, dim lights, sudden fluctuations of light, fine print, reading in moving vehicles, reading lying down, etc., have long been considered "bad for the eyes," and libraries of literature have been produced about their supposedly direful effects. These ideas are diametrically opposed to the truth. When the eyes are properly used, vision under adverse conditions not only does not injure them, but is an actual benefit, because a greater degree of relaxation is required to see under such conditions than under more favorable ones. It is true that the conditions in question may at first cause discomfort, even to persons with normal vision ; but a careful study of the facts has demonstrated that only persons with imperfect sight suffer seriously from them, and that such persons, if they practice central fixation, quickly become accustomed to them and derive great benefit from them.

(Fluorescent lights do impair health, function of the eyes and clarity of vision. It is best to use other light sources for artificial light, full spectrum. Natural sunlight through open windows or outside is best.)

Although the eyes were made to react to the light, a very general fear of the effect of this element upon the organs of vision is entertained both by the medical profession and by the laity. Extraordinary precautions are taken in our homes, offices and schools to temper the light, whether natural or artificial, and to insure that it shall not shine directly into the eyes ; smoked and amber glasses, eye-shades, broad-brimmed hats and parasols are commonly used to protect the organs of vision from what is considered an excess of light; and when actual disease is present, it is no uncommon thing for patients to be kept for weeks, months and years in dark rooms, or with bandages over their eyes.

The evidence on which this universal fear of the light has been based is of the slightest. In the voluminous literature of the subject one finds such a lack of information that in 1910 Dr. J. Herbert Parsons of the Royal Ophthalmic Hospital of London, addressing a meeting of the Ophthalmological Section of the American Medical Association, felt justified in saying that ophthalmologists, if they were honest with themselves, "must confess to a lamentable ignorance of the conditions which render bright light deleterious to the eyes." 1 Since then, Verhoeff and Bell have reported 2 an exhaustive series of experiments carried on at the Pathological Laboratory of the Massachusetts Charitable Eye and Ear Infirmary, which indicate that the danger of injury to the eye from light radiation as such has been "very greatly exaggerated." That brilliant sources of light sometimes produce unpleasant temporary symptoms cannot, of course, be denied; but as regards definite pathological effects, or permanent impairment of vision from exposure to light alone, Drs. Verhoeff and Bell were unable to find, either clinically or experimentally, anything of a positive nature.

1 Jour. Am. Med. Assn., Dec. 10, 1910, p. 2028.
2 Proc. Am. Acad. Arts and Sciences. 1916, Vol. 51, No. 13.

A Danger Greatly Exaggerated

As for danger from the heat effects of light, they consider this to be "ruled out of consideration by the immediate discomfort produced by excessive heat." They conclude, in short, that "the eye in the

process of evolution has acquired the ability to take care of itself under extreme conditions of illumination to a degree hitherto deemed highly improbable." In their experiments, the eyes of rabbits, monkeys and human beings were flooded for an hour or more with light of extreme intensity, without any sign of permanent injury, the resulting scotomata1 disappearing within a few hours. Commercial illuminants were found to be entirely free of danger under any ordinary conditions of their use. It was even found impossible to damage the retina with any artificial illuminant, except by exposures and intensities enormously greater than any likely to occur outside the laboratory. In one case an animal succumbed to heat after an exposure of an hour and a half to a 750-watt nitrogen lamp at twenty centimeters - about eight inches; but in a second experiment, in which it was well protected from the heat, there was no damage to the eye whatever after an exposure of two hours. As for the ultra-violet part of the spectrum, to which exaggerated importance has been attached by many recent writers, the situation was found to be much the same as with respect to the rest of the spectrum ; that is, "while under conceivable or realizable conditions of over-exposure, injury may be done to the external eye, yet under all practicable conditions found in actual use of artificial sources of light for illumination, the ultra-violet part of the spectrum may be left out as a possible source of injury."

1 Blind areas.

The results of these experiments are in complete accord with my own observations as to the effect of strong light upon the eyes. In my experience such light has never been permanently injurious. Persons with normal sight have been able to look at the sun for an indefinite length of time, even an hour or longer, without any discomfort or loss of vision. Immediately afterward they were able to read the Snellen test card with improved vision, their sight having become better than what is ordinarily considered normal. Some persons with normal sight do suffer discomfort and loss of vision when they look at the sun ; but in such cases the retinoscope always indicates an error of refraction, showing that this condition is due, not to the light, but to strain. In exceptional cases, persons with defective sight have been able to look at the sun, or have thought that they have looked at it, without discomfort and without loss of vision; but, as a rule, the strain in such eyes is enormously increased and the vision decidedly lowered by sun-gazing, as manifested by inability to read the Snellen test card. Blind areas (scotomata) may develop in various parts of the field - two or three or more. The sun, instead of appearing perfectly white, may appear to be slate-colored, yellow, red, blue, or even totally black. After looking away from the sun, patches of color of various kinds and sizes may be seen, continuing a variable length of time, from a few seconds to a few minutes, hours, or even months. In fact, one patient was troubled in this way for a year or more after looking at the sun for a few seconds. Even total blindness lasting a few hours has been produced. Organic changes may also be produced. Inflammation, redness of the conjunctiva, cloudiness of the lens and of the aqueous and vitreous humors, congestion and cloudiness of the retina, optic nerve and choroid, have all re

Ill Effects of Sun-Gazing Temporary

sulted from sun-gazing. These effects, however, are always temporary. The scotomata, the strange colors, even the total blindness, as explained in the preceding chapter, are only mental illusions. No matter how much the sight may have been impaired by sun-gazing, or how long the impairment may have lasted, a return to normal



Fig. 46.—Woman With Normal Vision Looking Directly at the Sun. Note That the Eyes are Wide Open and That There Is No Sign of Discomfort.

Fig. 46. Woman With Normal Vision Looking Directly at the Sun. Note That the Eyes are Wide Open and That There Is No Sign of Discomfort.
(MODERN NATURAL VISION IMPROVEMENT TEACHERS STATE: TO FACE THE SUN ONLY WITH THE EYES CLOSED and to MOVE THE EYES, HEAD/FACE SIDE TO SIDE… Looking at the bright sky away from the sun with eyes open is beneficial.) There are people, cultures that continue to Sun-Gaze with eyes open a specific way, but this is not allowed by Modern Bates Teachers.

has always occurred ; while prompt relief of all the symptoms mentioned has always followed the relief of eyestrain, showing that the conditions are the result, not of

the light, but of the strain. Some persons who have believed their eyes to have been permanently injured by the sun have been promptly cured by central fixation, indicating that their blindness had been simply functional.

By persistence in looking at the sun, a person with normal sight soon becomes able to do so without any loss of vision; but persons with imperfect sight usually find it impossible to accustom themselves to such a strong light until their vision has been improved by other means. One has to be very careful in recommending sun-gazing to persons with imperfect sight; because although no permanent harm can result from it, great temporary discomfort may be produced, with no permanent benefit. In some rare cases, however, complete cures have been effected by this means alone.

In one of these cases, the sensitiveness of the patient, even to ordinary daylight, was so great that an eminent specialist had felt justified in putting a black bandage over one eye and covering the other with a smoked glass so dark as to be nearly opaque. She was kept in this condition of almost total blindness for two years without any improvement. Other treatment extending over some months also failed to produce satisfactory results. She was then advised to look directly at the sun. The immediate result was total blindness, which lasted several hours; but next day the vision was not only restored to its former condition, but was improved. The sun-gazing was repeated, and each time the blindness lasted for a shorter period. At the end of a week the patient was able to look directly at the sun without discomfort, and her vision, which had been 20/200 without glasses and 20/70 with them, had improved to 20/10, twice the accepted standard for normal vision.

Patients of this class have also been greatly benefited by focussing the rays of the sun directly upon their eyes, marked relief being often obtained in a few minutes.

Like the sun, a strong electric light may also lower the vision temporarily, but never does any permanent harm.

Artificial Light May Be Beneficial

In those exceptional cases in which the patient can become accustomed to the light, it is beneficial. After looking at a strong electric light some patients have been able to read the Snellen test card better.



Fig. 47. Woman Aged 37, Child Aged 4, Both Looking Directly at Sun Without Discomfort

Fig. 47. Woman Aged 37, Child Aged 4, Both Looking Directly at Sun Without Discomfort

(MODERN TEACHERS STATE; SUNNING, SUN-GAZING IS DONE WITH CLOSED EYES ONLY and to MOVE, SHIFT THE EYES AND HEAD/FACE WITH THE EYES SIDE TO SIDE AND IN VARIOUS DIRECTIONS.) Sun-Gazing, Sunning is still practiced by some cultures with the eyes open & a specific way, with eye movement... but due to the depletion of the ozone layer... I cannot recommend.

It is not light but darkness that is dangerous to the eye. Prolonged exclusion from the light always lowers the vision, and may produce serious inflammatory conditions. Among young children living in tenements this is a somewhat frequent cause of ulcers upon the cornea, which ultimately destroy the sight. The children, finding their eyes sensitive to light, bury them in the pillows and thus shut out the light entirely. The universal fear of reading or doing fine work in a dim light is, however, unfounded. So long as the light is sufficient so that one can see without discomfort, this practice is not only harmless, but may be beneficial.

Sudden contrasts of light are supposed to be particularly harmful to the eye. The theory on which this idea is based is summed up as follows by Fletcher B. Dresslar, specialist in school hygiene and sanitation of the United States Bureau of Education:

"The muscles of the iris are automatic in their movements, but rather slow. Sudden contrasts of strong light and weak illumination are painful and likewise harmful to the retina. For example, if the

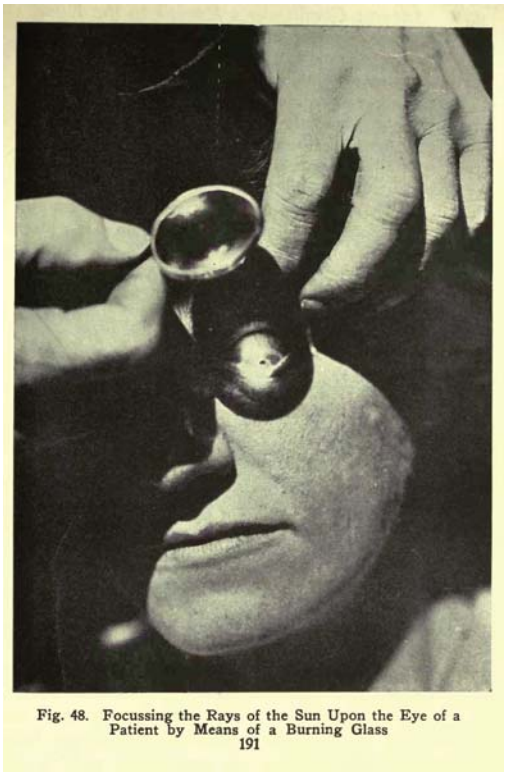


Fig. 48. Focussing the Rays of the Sun Upon the Eye of a Patient by Means of a Burning Glass
191

eye, adjusted to a dim light, is suddenly turned toward a brilliantly lighted object, the retina will receive too much light and will be shocked before the muscles controlling the iris can react to shut out the superabundance of light. If contrasts are not strong, but frequently made, that is, if the eye is called upon to function where frequent adjustments in this way are necessary, the muscles controlling the iris become fatigued, respond more slowly and less perfectly. As a result, eyestrain in the ciliary muscles is produced and the retina is over-stimulated. This is one cause of headaches and tired eyes."[1]

There is no evidence whatever to support these statements. Sudden fluctuations of light undoubtedly cause discomfort to many persons, but, far from being injurious, I have found them, in all cases observed, to be actually beneficial. The pupil of the normal eye, when it has normal sight, does not change appreciably under

Fig. 48. Focussing the Rays of the Sun Upon the Eye of a Patient by Means of a Burning Glass.
(To be done by a Bates Method Ophthalmologist only! And only in extreme cases of vision impairment if necessary. Done wrong: it can burn, injure the eye. Done correct: it activates, brings to life the cells, nerves, cones, rods in the eyes, retina. Plain sunning, daily sunlight without eyeglasses is often all that is needed.)

1 School Hygiene, Brief Course Series in Education, edited by Monroe. 1916, p. 240.

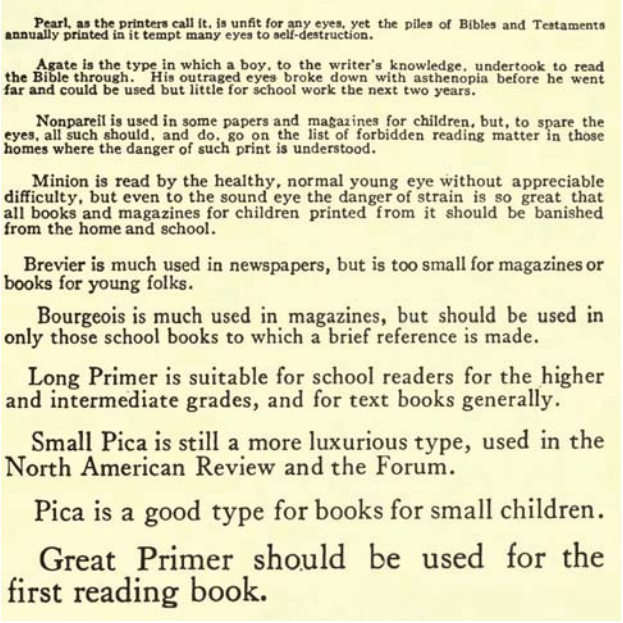
the influence of changes of illumination ; and persons with normal vision are not inconvenienced by such changes. I have seen a patient look directly at the sun after coming from an imperfectly lighted room, and then, returning to the room, immediately pick up a newspaper and read it. When the eye has imperfect sight, the pupil usually contracts in the light and expands in the dark, but it has been observed to contract to the size of a pinhole in the dark. Whether the contraction takes place under the influence of light or of darkness, the cause is the same, namely, strain. Persons with imperfect sight suffer great inconvenience, resulting in lowered vision, from changes in the intensity of the light; but the lowered vision is always temporary, and if the eye is persistently exposed to these conditions, the sight is benefited. Such practices as reading alternately in a bright and a dim light, or going from a dark room to a well-lighted one, and vice versa, are to be recommended. Even such rapid and violent fluctuations of light as those involved in the production of the moving picture are, in the long run, beneficial to all eyes. I always advise patients under treatment for the cure of defective vision to go to the movies frequently and practice central fixation. They soon become accustomed to the flickering light, and afterward other light and reflections cause less annoyance.

(Practice alternating: Palming, Sunning, Palming, Sunning... to improve light tolerance and adjustment of the eyes to light and dark.)

Reading is supposed to be one of the necessary evils of civilization; but it is believed that by avoiding fine print, and taking care to read only under certain favorable conditions, its deleterious influences can be minimized. Extensive investigations as to the effect of various styles of print on the eyesight of school children have been made, and detailed rules have been laid down as to the size of the print, its shading, the distance of

Supposed Dangers of Reading

the letters from each other, the spaces between the lines, the length of the lines, etc. As regards the effects of different sorts of type on the human eye in general and those of children in particular, Dr. A. G. Young, in his much quoted report 1 to the Maine State Board of Health makes the following interesting observations: (These print size examples are not exact.)


Pearl, as the printers call it, is unfit for any eyes, yet the piles of Bibles and Testaments annually printed in it tempt many eyes to self-destruction.

Agate is the type in which a boy, to the writer's knowledge, undertook to read the Bible through. His outraged eyes broke down with asthenopia before he went far and could be used but little for school work the next two years.

Nonpareil is used in some papers and magazines for children, but, to spare the eyes, all such should, and do, go on the list of forbidden reading matter in those homes where the danger of such print is understood.

Minion is read by the healthy, normal young eye without appreciable difficulty, but even to the sound eye the danger of strain is so great that all books and magazines for children printed from it should be banished from the home and school.

Brevier is much used in newspapers, but is too small for magazines or books for young folks.

Bourgeois is much used in magazines, but should be used in only those school books to which a brief reference is made.

Long Primer is suitable for school readers for the higher and intermediate grades, and for text books generally.

Small Pica is still a more luxurious type, used in the North American Review and the Forum.

Pica is a good type for books for small children.

Great Primer should be used for the first reading book.

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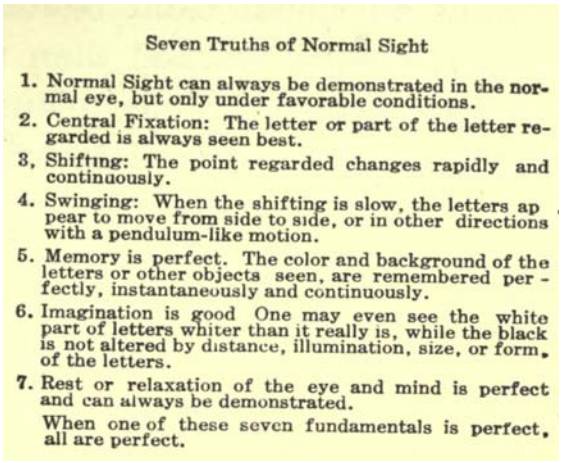
1 Seventh Annual Report to the Maine State Board of Health, by the secretary, Dr. A. G. Young, 1891. p. 193.

All this is directly contrary to my own experience. Children might be bored by books in excessively small print; but I have never seen any reason for supposing that their eyes or any other eyes, would be harmed by such type. On the contrary, the reading of fine print, when it can be done without discomfort, has invariably proved to be beneficial, and the dimmer the light in which it can be read, and the closer to the eyes it can be held, the greater the benefit. By this means severe pain in the eyes has been relieved in a few minutes or even instantly. The reason is that fine print cannot be read in a dim light and close to the eyes unless the eyes are relaxed, whereas large print can be read in a good light and at ordinary reading distance although the eyes may be under a strain. When fine print can be read under adverse conditions, the reading of ordinary print under ordinary conditions is vastly improved. In myopia it may be a benefit to strain to see fine print, because myopia is always lessened when there is a strain to see near objects, and this has sometimes counteracted the tendency to strain in looking at distant objects, which is always associated with the production of myopia. Even straining to see print so fine that it cannot be read is a benefit to some myopes.

Persons who wish to preserve their eyesight are frequently warned not to read in moving vehicles ; but since under modern conditions of life many persons have to spend a large part of their time in moving vehicles, and many of them have no other time to read, it is useless to expect that they will ever discontinue the practice. Fortunately the theory of its injuriousness is not borne out by the facts. When the object regarded is moved more or less rapidly, strain and lowered vision are, at

Benefits of Reading Fine Print



Seven Truths of Normal Sight

1. Normal Sight can always be demonstrated in the normal eye, but only under favorable conditions.
2. Central Fixation: The letter or part of the letter regarded is always seen best.
3. Shifting: The point regarded changes rapidly and continuously.
4. Swinging: When the shifting is slow, the letters appear to move from side to side, or in other directions with a pendulum-like motion.
5. Memory is perfect. The color and background of the letters or other objects seen, are remembered perfectly, instantaneously and continuously.
6. Imagination is good One may even see the white part of letters whiter than it really is, while the black is not altered by distance, illumination, size, or form, of the letters.
7. Rest or relaxation of the eye and mind is perfect and can always be demonstrated.

When one of these seven fundamentals is perfect, all are perfect.

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Fig. 49. Specimen of Diamond Type. Many patients have been greatly benefited by reading type of this size.

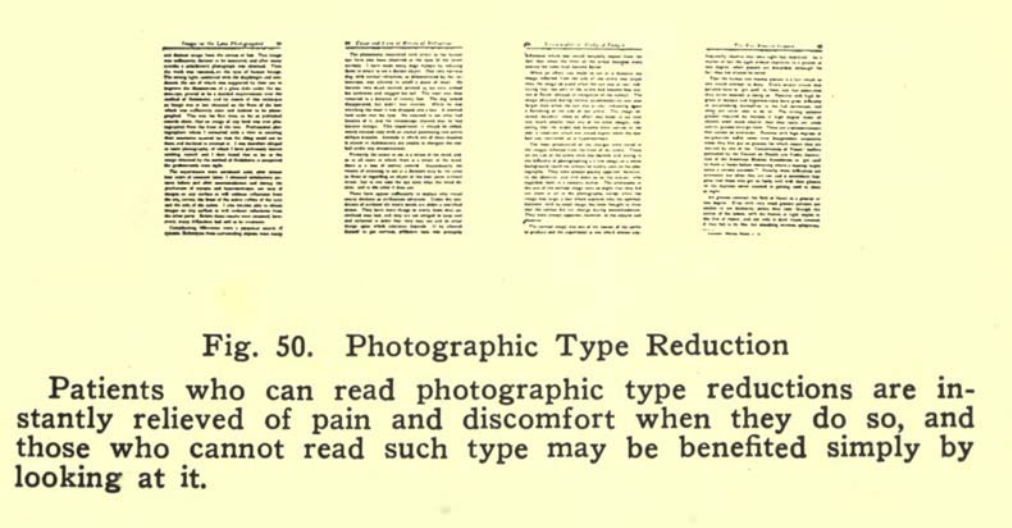

Fig. 50. Photographic Type Reduction

Patients who can read photographic type reductions are instantly relieved of pain and discomfort when they do so, and those who cannot read such type may be benefited simply by looking at it.

Fig. 50. Photographic Type Reduction. Patients who can read photographic type reductions are instantly relieved of pain and discomfort when they do so, and those who cannot read such type may be benefited simply by looking at it.

first, always produced; but this is always temporary, and ultimately the vision is improved by the practice.

There is probably no visual habit against which we have been more persistently warned than that of reading in a recumbent posture. Many plausible reasons have been adduced for its supposed injuriousness ; but so delightful is the practice that few, probably, have ever been deterred from it by fear of the consequences. It is gratifying to be able to state, therefore, that I have found these consequences to be beneficial rather than injurious. As in the case of the use of the eyes under other difficult conditions, it is a good thing to be able to read lying down, and the ability to do it improves with practice. In an upright position, with a good light coming over the left shoulder, one can read with the eyes under a considerable degree of strain; but in a recumbent posture, with the light and the angle of the page to the eye unfavorable, one cannot read unless one relaxes. Anyone who can read lying down without discomfort is not likely to have any difficulty in reading under ordinary conditions.

The fact is that vision under difficult conditions is good mental training. The mind may be disturbed at first by the unfavorable environment; but after it has become accustomed to such environments, the mental control, and, consequently, the eyesight are improved. To advise against using the eyes under unfavorable conditions is like telling a person who has been in bed for a few weeks and finds

it difficult to walk to refrain from such exercise. Of course, discretion must be used in both cases. The convalescent must not at once try to run a Marathon, nor must the person with defective vision attempt, without some preparation, to outstare the

Discretion Must Be Used

sun at noonday. But just as the invalid may gradually increase his strength until the Marathon has no terrors for him, so may the eye with defective sight be educated until all the rules with which we have so long allowed ourselves to be harassed in the name of "eye hygiene" may be disregarded, not only with safety but with benefit.

CHAPTER XVIII

OPTIMUMS AND PESSIMUMS

IN nearly all cases of imperfect sight due to errors of refraction there is some object, or objects, which can be regarded with normal vision. Such objects I have called "optimums." On the other hand, there are some objects which persons with normal eyes and ordinarily normal sight always see imperfectly, an error of refraction being produced when they are regarded, as demonstrated by the retinoscope. Such objects I have called "pessimums." An object becomes an optimum, or a pessimum, according to the effect it produces upon the mind, and in some cases this effect is easily accounted for.

For many children their mother's face is an optimum, and the face of a stranger a pessimum. A dressmaker was always able to thread a No. 10 needle with a fine thread of silk without glasses, although she had to put on glasses to sew on buttons, because she could not see the holes. She was a teacher of dressmaking, and thought the children stupid because they could not tell the difference between two different shades of black. She could match colors without comparing the samples. Yet she could not see a black line in a photographic copy of the Bible which was no finer than a thread of silk, and she could not remember a black period. An employee in a cooperage factory, who had been engaged for years in picking out defective barrels as they went rapidly past him on an inclined plane, was able to continue his work

Idiosyncrasies of the Mind

after his sight for most other objects had become very defective, while persons with much better sight for the Snellen test card were unable to detect the defective barrels. The familiarity of these various objects made it possible for the subjects to look at them without strain - that is, without trying to see them. Therefore the barrels were to the cooper optimums ; while the needle's eye and the colors of silk and fabrics were optimums to the dressmaker. Unfamiliar objects, on the contrary, are always pessimums, as pointed out in the chapter on "The Variability of the Refraction of the Eye."

In other cases there is no accounting for the idiosyncrasy of the mind which makes one object a pessimum and another an optimum. It is also impossible to account for the fact that an object may be an optimum for one eye and not for the other, or an optimum at one time and at one distance and not at others. Among these unaccountable optimums one often finds a particular letter on the Snellen test card. One patient, for instance, was able to see the letter K on the forty, fifteen and ten lines, but could see none of the other letters on these lines, although most patients would see some of them, on account of the simplicity of their outlines, better than they would such a letter as K.

Pessimums may be as curious and unaccountable as optimums. The letter V is so simple in its outlines that many people can see it when they cannot see others on the same line. Yet some people are unable to distinguish it at any distance, although able to read other letters in the same word, or on the same line of the Snellen test card. Some people again will not only be unable to recognize the letter V in a word, but also to read any word that contains it, the pessimum lowering their sight not only for itself but for other objects. Some letters, or objects, become pessimums only in particular situations. A letter, for instance, may be a pessimum when located at the end or at the beginning of a line or sentence, and not in other places. When the attention of the patient is called

to the fact that a letter seen in one location ought logically to be seen equally well in others, the letter often ceases to be a pessimum in any situation.

A pessimum, like an optimum, may be lost and later become manifest. It may vary according to the light and distance. An object which is a pessimum in a moderate light may not be so when the light is increased or diminished. A pessimum at twenty feet may not be one at two feet, or thirty feet, and an object which is a pessimum when directly regarded may be seen with normal vision in the eccentric field.

For most people the Snellen test card is a pessimum. If you can see the Snellen test card with normal vision, you can see almost anything else in the world. Patients who cannot see the letters on the Snellen test card can often see other objects of the same size and at the same distance with normal sight. When letters which are seen imperfectly, or even letters which cannot be seen at all, or which the patient is not conscious of seeing are regarded, the error of refraction is increased. The patient may regard a blank white card without any error of refraction ; but if he regards the lower part of a Snellen test card, which appears to him to be just as blank as the blank card, an error of refraction can always be demonstrated, and if the visible letters of the card are covered, the result is the same. The pessimum may, in short, be letters or objects which the patient is not conscious of seeing. This phenomenon is very common. When the

How Pessimums Become Optimums

card is seen in the eccentric field it may have the effect of lowering the vision for the point directly regarded. For instance, a patient may regard an area of green wallpaper at the distance, and see the color as well as at the near-point; but if a Snellen test card on which the letters are either seen imperfectly, or not seen at all, is placed in the neighborhood of the area being regarded, the retinoscope may indicate an error of refraction. When the vision improves, the number of letters on the card which are pessimums diminishes and the number of optimums increases, until the whole card becomes an optimum.

A pessimum, like an optimum, is a manifestation of the mind. It is something associated with a strain to see, just as an optimum is something which has no such association. It is not caused by the error of refraction, but always produces an error of refraction; and when the strain has been relieved it ceases to be a pessimum and becomes an optimum.

CHAPTER XIX

THE RELIEF OF PAIN AND OTHER SYMPTOMS BY THE AID OF THE MEMORY

MANY years ago patients who had been cured of imperfect sight by treatment without glasses quite often told me that after their vision had become perfect they were always relieved of pain, not only in the eyes and head, but in other parts of the body, even when the pain was apparently caused by some organic disease, or by an injury. The relief in many cases was so striking that I investigated some thousands of cases and found it to be a fact that persons with perfect sight, or the memory of perfect sight - that is, of something perfectly seen - do not suffer pain in any part of the body, while by a strain or effort to see I have produced pain in various parts of the body.

By perfect sight is not meant, necessarily, the perfect visual perception of words, letters, or objects, of a more or less complicated form. To see perfectly the color alone is sufficient, and the easiest color to see perfectly is black. But perfect sight is never continuous, careful scientific tests having shown that it is seldom maintained for more than a few minutes and usually not so long. For practical purposes in the relief of pain, therefore, the memory is more satisfactory than sight.

When black is remembered perfectly a temporary, if not a permanent, relief of pain always results. The skin may be pricked with a sharp instrument without causing discomfort. The lobe of the ear may be pinched be-

tween the nails of the thumb and first finger, and no pain will be felt. At the same time the sense of touch becomes more acute. The senses of taste, smell and hearing are also improved, while the efficiency of the mind is increased. The ability to distinguish different temperatures is increased, but one does not suffer from heat or cold. Organic conditions may not be changed; but all of the functional symptoms, such as fever, weakness, and shock, which these conditions cause, are relieved. Patients who have learned to remember black under all circumstances no longer dread to visit the dentist. When they remember a period the drill causes them no pain, and they are not annoyed even by the extraction of teeth. It is possible to perform surgical operations without anaesthetics when the patient is able to remember black perfectly. The following are only a few of many equally striking cases which might be given of the relief or prevention of pain by this means :

A patient suffered from ulceration of the eyeball, occurring at different times and resulting in the formation of holes through which the fluids in the interior escaped. These openings had to be closed by surgical operations. At first these operations were performed under the influence of cocaine ; but the progressive disease of the eye caused so much congestion that complete anaesthesia was no longer attainable by the use of this drug, and ether and chloroform were employed. As so many operations were needed, it became desirable to get along, if possible, without anaesthetics, and the patient's success in relieving pain by the memory of black suggested that she might also be able to prevent the pain of operations in the same way. Her ability to do this was tested by touching her eyeball lightly with a blunt probe. At first she forgot the black as soon as the probe touched her eye, but later she became able to remember it. The operation was then successfully performed ; the patient not only felt no pain,



Fig. 51. Operating Without Anaesthetics

The patient suffered from ulceration of the eyeball resulting in the formation of holes through which the fluids of the interior escaped. These holes had to be closed by surgical operations, and fourteen of these operations were performed without anaesthetics, because the patient was able to prevent pain by the memory of a black period.

Fig. 51. Operating Without Anaesthetics. The patient suffered from ulceration of the eyeball resulting in the formation of holes through which the fluids of the interior escaped. These holes had to be closed by surgical operations, and fourteen of these operations were performed without anaesthetics, because the patient was able to prevent pain by the memory of a black period.

but her self-control was better than when cocaine had been used. Later fourteen more operations were performed under the same conditions, the patient not only

No Pain in Dentist's Chair

suffering no pain, but, what was more remarkable, feeling no pain or soreness afterward. The patient stated that if she had been operated upon by a stranger she would probably have been so nervous that she would not have been able to remember the black; but later she was treated by a strange dentist, who made two extractions and did some other work, all without causing her any discomfort, because she was able to remember the period perfectly.

A man who had been extremely nervous in the dentist's chair, and had had four extractions made under gas, surprised his dentist, after having learned the effect of the memory of a period in relieving pain, by having a tooth extracted without cocaine, gas, or chloroform. The dentist complimented him on his nerve and looked incredulous when the patient said he had felt no pain at all. In a second case, that of a woman, the dentist removed the nerve from three teeth without causing the patient any pain.

A boy of fourteen came to the eye clinic of the Harlem Hospital, New York, with a foreign body deeply embedded in his cornea. It caused him much pain, and his mother stated that a number of physicians had been unable to remove it, because the child was so nervous that he could not keep

still long enough, although cocaine had been used quite freely. The boy was told to look at a black object, close and cover his eyes, and think of the black object until he saw black. He was soon able to do this, and the pain in his eye was relieved. He was next taught to remember the black with his eyes open. The foreign body was then removed from the cornea. The operation was one of much difficulty and required considerable time, but the boy felt no pain. While it was in progress he was asked if he was still remembering black.
"You bet I am," he replied.

In the same hospital a surgeon from the accident ward visited the eye clinic with a friend suffering from pain in his eyes and head. The patient was benefited very quickly by relaxation methods. The surgeon said it was unusual, and spoke slightingly of my methods. I challenged him to bring me a patient with pain that I could not relieve in five minutes.
"All right," he said. "I want you to understand that I am from Missouri."

He returned soon with a woman who had been suffering from severe pains in her head for several years. She had been operated upon a number of times, and had been under the care of the hospital for many months.
"You cannot help the pain in this patient's head," said the surgeon, "because she has a brain tumor."
I doubted the existence of a brain tumor, but I said:
"Brain tumor or no brain tumor, my assistant will stop the pain in five minutes."

He took out his watch, opened it, looked at the time, and told my assistant to go ahead. The patient was directed to look at a large black letter, note its blackness, then to cover her closed eyes with the palms of her hands, shutting out all the light, and to remember the blackness of the letter until she saw everything black. In less than three minutes she said:

"I now see everything perfectly black. I feel no pain in my head. I am completely relieved, and I thank you very much."

The surgeon looked bewildered, and left the room without a word.



Fig. 52. Neuralgia Relieved by Palming and the Memory of Black
While the visitor was explaining to her sceptical hostess the method of relieving pain by palming and the memory of black, another member of the family, who was suffering from trigeminal neuralgia, came in, and having heard what was being said, immediately put it into practice and was cured. The hostess later developed severe pain in her head and eyes, and did not obtain any relief until she also practiced palming and the memory of black.

Fig. 52. Neuralgia Relieved by Palming and the Memory of Black. While the visitor was explaining to her sceptical hostess the method of relieving pain by palming and the memory of black, another member of the family, who was suffering from trigeminal neuralgia, came in, and having heard what was being said, immediately put it into practice and was cured. The hostess later developed severe pain in her head and eyes, and did not obtain any relief until she also practiced palming and the memory of black.

To prevent a relapse, the patient was advised to palm six times a day or oftener. The pain did not return, and she came to the clinic some weeks later to express her gratitude.

Not only does the memory of perfect sight relieve pain and the symptoms of disease, but in some cases it produces manifest relief of the causes of these symptoms. Coughs, colds, hay fever, rheumatism and glaucoma are among the conditions that have been relieved in this way.

A patient under treatment for imperfect sight from a high degree of mixed astigmatism one day came to the office with a severe cold. She coughed continually, and there was a profuse discharge from both eyes and nose. There was some fever, with a severe pain in the eyes and head, and the patient was unable to breathe through her nose because of the inflammatory swelling. Palming was successful in half an hour, when the pain and discharge ceased, the nose opened, and the breathing and temperature became normal. The benefit was permanent - a very unusual thing after one treatment.

A boy of four with whooping-cough was always relieved by covering his eyes and remembering black. The relapses became less frequent, and in a few weeks he had completely recovered.

A man who suffered every summer from attacks of hay fever, beginning in June and lasting throughout the season was completely relieved by palming for half an hour ; and after three years there had been no relapse.

A man of sixty-five who had been under treatment for rheumatism for six months without improvement obtained temporary relief by palming, and by the time his vision had become normal the relief of the rheumatism was complete.

The Power of Thought

In many cases of glaucoma not only the pain, but the tension which is often associated with the pain, has been completely relieved by palming. In some cases permanent relief of the tension has followed one treatment. In others many treatments have been required.

Why the memory of black should have this effect cannot be fully explained, just as the action of many drugs cannot be explained; but it is evident that the body must be less susceptible to disturbances of all kinds when the mind is under control, and only when the mind is under control can black be remembered perfectly. That pain can be produced in any part of the body by the action of the mind is not a new observation; and if the mind can produce pain, it is not surprising that it should also be able to relieve pain and the conditions which produce it. This, doubtless, is the explanation of some of the remarkable cures reported by Faith Curists and Christian Scientists. Whatever the explanation, however, the facts have been attested by numerous proofs, and are of the greatest practical value.

With a little training, anyone with good sight can be taught to remember black perfectly with the eyes closed and covered, and with a little more training anyone can learn to do it with the eyes open. When one is suffering extreme pain, however, the control of the memory may be difficult, and the assistance of someone who understands the method may be necessary. With such assistance it is seldom or never impossible.

CHAPTER XX

PRESBYOPIA: ITS CAUSE AND CURE

AMONG people living under civilized conditions the accommodative power of the eye gradually declines, in most cases, until at the age of sixty or seventy it appears to have been entirely lost, the subject being absolutely dependent upon his glasses for vision at the near-point. As to whether the same thing happens among primitive people or people living under primitive conditions, very little information is available. Donders1 says that the power of accommodation diminishes little, if at all, more rapidly among people who use their eyes much at the near-point than among agriculturists, sailors and others who use them mainly for distant vision; and Roosa and others2 say the contrary.

This is a fact however, that people who cannot read, no matter what their age, will manifest a failure of near vision if asked to look at printed characters, although their sight for familiar objects at the near-point may be perfect. The fact that such persons, at the age of forty-five or fifty, cannot differentiate between printed characters is no warrant, therefore, for the conclusion that their accommodative powers are declining. A young illiterate would do no better, and a young student who can read Roman characters at the near-point without difficulty always develops symptoms of imperfect sight when he attempts to read, for the first time, old English, Greek, or Chinese characters.

1 On the Anomalies of Accommodation and Refraction of the Eye, p. 223.
2 Roosa: A Clinical Manual of Diseases of the Eye, 1894, p. 537; Oliver: System of Diseases of the Eye, vol. iv, p. 431.

Generally Accepted as Normal

When the accommodative power has declined to the point at which reading and writing become difficult, the patient is said to have "presbyopia," or, more popularly, "old sight" ; and the condition is generally accepted, both by the popular and the scientific mind, as one of the unavoidable inconveniences of old age. "Presbyopia," says Donders, "is the normal quality of the normal, emmetropic eye in advanced age," 1 and similar statements might be multiplied endlessly. De Schweinitz calls the condition "a normal result of growing old" ; 2 according to Fuchs it is "a physiological process which every eye undergoes";3 while Roosa speaks of the change as one which "ultimately affects every eye." 4

The decline of accommodative power with advancing years is commonly attributed to the hardening of the lens, an influence which is believed to be augmented, in later years, by a flattening of this body and a lowering of its refractive index, together with weakness or atrophy of the ciliary muscle; and so regular is the decline, in most cases, that tables have been compiled showing the nearpoint to be expected at various ages. From these it is said one might almost fit glasses without testing the vision of the subject; or, conversely, one might, from a man's glasses, judge his age within a year or two. The following table is quoted from Jackson's chapter on "The Dioptrics of the Eye," in Norris and Oliver's "System of Diseases of the Eye,"5 and does not differ materially from the tables given by Fuchs, Donders and Duane. The first

1 On the Anomalies of Accommodation and Refraction of the Eye, p. 210. 2 Diseases of the Eye, p. 148. 3 Text-book of Ophthalmology, authorized translation from the twelfth German edition by Duane, 1919, p. 862. Ernst Fuchs (1851-). Professor of Ophthalmology at Vienna from 1885 to 1915. His Text-book of Ophthalmology has been translated into many languages. 4 A Clinical Manual of Diseases of the Eye, p. 535. VoL i, p. 504.

column indicates the age ; the second, diopters of accommodative power; the third, the near-point for an emmetropic 1 eye, in inches.

Age	Diopters	Inches
10	14	2.81
15	12	3.28
20	10	3.94
25	8.5	4.63
30	7	5.63
35	5.5	7.16
40	4.5	8.75
45	3.5	11.25
50	2.5	15.75
55	1.5	26.25
60	.75	52.49
65	.25	157.48
70	0	0

According to these depressing figures, one must expect at thirty to have lost no less than half of one's original accommodative power, while at forty two-thirds of it would be gone, and at sixty it would be practically nonexistent.

There are many people, however, who do not fit this schedule. Many persons at forty can read fine print at four inches, although they ought, according to the table, to have lost that power shortly after twenty. Worse still, there are people who refuse to become presbyopic at all. Oliver Wendell Holmes mentions one of these cases in "The Autocrat of the Breakfast Table."

1 An eye which, when it is at rest, focusses parallel rays upon the retina, is said to be emmetropic or normal.

"There is now living in New York State," he says, "an old gentleman who, perceiving his sight to fail, immediately took to exercising it on the finest print, and in this way fairly bullied Nature out of her foolish habit of taking liberties at five-and-forty, or thereabout. And now this old gentleman performs the most extraordinary feats with his pen, showing that his eyes must be a pair of microscopes. I should be afraid to say how much he writes in the compass of a half-dime whether the Psalms or the Gospels, or the Psalms and the Gospels, I won't be positive." 1

There are also people who regain their near vision after having lost it for ten, fifteen, or more years ; and there are people who, while presbyopic for some objects, have perfect sight for others. Many dressmakers, for instance, can thread a needle with the naked eye, and with the retinoscope it can be demonstrated that they accurately focus their eyes upon such objects; and yet they cannot read or write without glasses.

So far as I am aware no one but myself has ever observed the last mentioned class of cases, but the others are known to every ophthalmologist of any experience. One hears of them at the meetings of ophthalmological societies ; they are even reported in the medical journals ; but such is the force of authority that when it comes to writing books they are either ignored or explained away, and every new treatise that comes from the press repeats the old superstition that presbyopia is "a normal result of growing old." We have beaten Germany; but the dead hand of German science still oppresses our intellects and prevents us from crediting the plainest evidence of our senses. Some of us are so filled with repugnance for

1 Everyman's Library, 1908, pp. 166-167.

the Hun that we can no longer endure the music of Bach, or the language of Goethe and Schiller; but German ophthalmology is still sacred, and no facts are allowed to cast discredit upon it.

Fortunately for those who feel called upon to defend the old theories, myopia postpones the advent of presbyopia, and a decrease in the size of the pupil, which often takes place in old age, has some effects in facilitating vision at the near-point. Reported cases of persons reading without glasses when over fifty-or fifty-five years of age, therefore, can be easily disposed of by assuming that the subjects must be myopic, or that their pupils are unusually small. If the case comes under actual observation, the matter may not be so simple, because it may be found that the patient, so far from being myopic, is hypermetropic, or emmetropic, and that the pupil is of normal size. There is nothing to do with these cases but to ignore them. Abnormal changes in the form of the lens have also been held responsible for the retention of near vision beyond the prescribed age, or for its restoration after it has been lost, the swelling of the lens in incipient cataract affording a very convenient and plausible explanation for the latter class of cases. In cases of premature presbyopia "accelerated sclerosis"1 of the lens and weakness of the ciliary muscle have been assumed ; and if such cases as the dressmakers who can thread their needles when they can no longer read the newspapers had been observed, no doubt some explanation consistent with the German viewpoint would have been found for them.

The truth about presbyopia is that it is not "a normal result of growing old," being both preventable and cu-

1 Fuchs: Text-book of Ophthalmology, p. 905.

rable. It is not caused by hardening of the lens, but by a strain to see at the near-point. It has no necessary connection with age, since it occurs, in some cases, as early as ten years, while in others it never occurs at all, although the subject may live far into the so-called presbyopic age. It is true that the lens does harden with advancing years, just as the bones harden and the structure of the skin changes ; but since the lens is not a factor in accommodation, this fact is immaterial, and while in some cases the lens may become flatter, or lose some of its refractive power with advancing years, it has been observed to remain perfectly clear and unchanged in shape up to the age of ninety. Since the ciliary muscle is also not a factor in accommodation, its weakness or atrophy can contribute nothing to the decline of accommodative power. Presbyopia is, in fact, simply a form of

hypermetropia in which the vision for the near-point is chiefly affected, although the vision for the distance, contrary to what is generally believed, is always lowered also. The difference between the two conditions is not always clear. A person with hypermetropia may or may not read fine print, and a person at the presbyopic age may read it without apparent inconvenience and yet have imperfect sight for the distance. In both conditions the sight at both points is lowered, although the patient may not be aware of it.

It has been shown that when the eyes strain to see at the near-point the focus is always pushed farther away than it was before, in one or all meridians ; and by means of simultaneous retinoscopy it can always be demonstrated that when a person with presbyopia tries to read fine print and fails, the focus is always pushed farther away than it was before the attempt was made, indicating that the failure was caused by strain. Even the thought of making such an effort will produce strain, so that the refraction may be changed, and pain, discomfort and fatigue produced, before the fine print is regarded. Furthermore, when a person with presbyopia rests the eyes by closing them, or palming, he always becomes able, for a few moments at least, to read fine print at six inches, again indicating that his previous failure was due, not to any fault of the eyes, but to a strain to see. When the strain is permanently relieved, the presbyopia is permanently cured, and this has happened, not in a few cases, but in many, and at all ages, up to sixty, seventy and eighty.

The first patient that I cured of presbyopia was myself. Having demonstrated by means of experiments on the eyes of animals that the lens is not a factor in accommodation, I knew that presbyopia must be curable, and I realized that I could not look for any very general acceptance of the revolutionary conclusions I had reached so long as I wore glasses myself for a condition supposed to be due to the loss of the accommodative power of the lens. I was then suffering from the maximum degree of presbyopia. I had no accommodative power whatever, and had to have quite an outfit of glasses, because with a glass, for instance, which enabled me to read fine print at thirteen inches, I could not read it either at twelve inches or at fourteen. The retinoscope showed that when I tried to see anything at the near-point without glasses, my eyes were focussed for the distance, and when I tried to see anything at the distance they were focussed for the near-point. My problem, then, was to find some way of reversing this condition and inducing my eyes to focus for the point I wished to see at the moment that I wished

Only One Man Who Could Cure Me

to see it. I consulted various eye specialists but my language was to them like that of St. Paul to the Greeks, namely, foolishness. "Your lens is as hard as a stone," they said. "No one can do anything for you." Then I went to a nerve specialist. He used the retinoscope on me, and confirmed my own observations as to the peculiar contrariness of my accommodation ; but he had no idea what I could do about it. He would consult some of his colleagues, he said, and asked me to come back in a month, which I did. Then he told me he had come to the conclusion that there was only one man who could cure me, and that was Dr. William H. Bates of New York.

"Why do you say that?" I asked.
"Because you are the only man who seems to know anything about it," he answered.

Thus thrown upon my own resources, I was fortunate enough to find a non-medical gentleman who was willing to do what he could to assist me, the Rev. R. B. B. Foote, of Brooklyn. He kindly used the retinoscope through many long and tedious hours while I studied my own case, and tried to find some way of accommodating when I wanted to read, instead of when I wanted to see something at the distance. One day, while looking at a picture of the Rock of Gibralter which hung on the wall, I noted some black spots on its face. I imagined that these spots were the openings of caves, and that there were people in these caves moving about. When I did this my eyes were focussed for the reading distance. Then I looked at the same picture at the reading distance, still imagining that the spots were caves with people in them. The retinoscope showed that I had accommodated, and I was able to read the lettering beside the picture. I had, in fact, been temporarily cured by the use of my imagination. Later I found that when I imagined the letters black I was able to see them black, and when I saw them black I was able to distinguish their form. My progress after this was not what could be called rapid. It was six months before I could read the newspapers with any kind of comfort, and a year before I obtained my present accommodative range of fourteen inches, from

four inches to eighteen; but the experience was extremely valuable, for I had in pronounced form every symptom subsequently observed in other presbyopic patients.

Fortunately for the patients, it has seldom taken me as long to cure other people as it did to cure myself. In some cases a complete and permanent cure was effected in a few minutes. Why, I do not know. I will never be satisfied till I find out. A patient who had worn glasses for presbyopia for about twenty years was cured in less than fifteen minutes by the use of his imagination.

When asked to read diamond type, he said he could not do so, because the letters were grey and looked all alike. I reminded him that the type was printer's ink and that there was nothing blacker than printer's ink. I asked him if he had ever seen printer's ink. He replied that he had. Did he remember how black it was? Yes. Did he believe that these letters were as black as the ink he remembered? He did, and then he read the letters; and because the improvement in his vision was permanent, he said that I had hypnotized him.

In another case a presbyope of ten years' standing was cured just as quickly by the same method. When reminded that the letters which he could not read were black, he replied that he knew they were black, but that they looked grey.

Responsible for Much Defective Eyesight

"If you know they are black, and yet see them grey," I said, "you must imagine them grey. Suppose you imagine that they are black. Can you do that?"
"Yes," he said, "I can imagine that they are black"; and then he proceeded to read them.

These extremely quick cures are rare. In nine cases out of ten progress has been much slower, and it has been necessary to resort to all the methods of obtaining relaxation found useful in the treatment of other errors of refraction. In the more difficult cases of presbyopia the patients often suffer from the same illusions of color, size, form and number, when they try to read fine print, as do patients with hypermetropia, astigmatism, and myopia when they try to read the letters on the Snellen test card at the distance. They are unable to remember or imagine, when trying to see at the near-point, even such a simple thing as a small black spot, but can remember it perfectly when they do not try to see. Their sight for the distance is often very imperfect and always below normal, although they may have thought it perfect; and just as in the case of other errors of refraction, improvement of the distant vision improves the vision at the near-point. Regardless, however, of the difficulty of the case and the age of the patient, some improvement has always been obtained, and if the treatment was continued long enough, the patient has been cured.

The idea that presbyopia is "a normal result of growing old" is responsible for much defective eyesight. When people who have reached the presbyopic age experience difficulty in reading, they are very likely to resort at once to glasses, either with or without professional advice. In some cases such persons may be actually presbyopic ; in others the difficulty may be something temporary, which they would have thought little about if they had been younger, and which would have passed away if Nature had been left to herself. But once the glasses are adopted, in the great majority of cases, they produce the condition they were designed to relieve, or, if it already existed, they make it worse, sometimes very rapidly, as every ophthalmologist knows. In a couple of weeks, sometimes, the patient finds, as noted in the chapter on "What Glasses Do to Us," that the large print which he could read without difficulty before he got his glasses, can no longer be read without their aid. In from five to ten years the accommodative power of the eye is usually gone ; and if from this point the patient does not go on to cataract, glaucoma, or inflammation of the retina, he may consider himself fortunate. Only occasionally do the eyes refuse to submit to the artificial conditions imposed upon them; but in such cases they may keep up an astonishing struggle against them for long periods. A woman of seventy, who had worn glasses for twenty years, was still able to read diamond type and had good vision for the distance without them. She said the glasses tired her eyes and blurred her vision, but that she had persisted in wearing them, in spite of a continual temptation to throw them off, because she had been told that it was necessary for her to do so.

If persons who find themselves getting presbyopic, or who have arrived at the presbyopic age, would, instead of resorting to glasses, follow the example of the gentleman mentioned by Dr.

Holmes, and make a practice of reading the finest print they can find, the idea that the decline of accommodative power is "a normal result of growing old" would soon die a natural death.

CHAPTER XXI

SQUINT AND AMBLYOPIA: THEIR CAUSE
(Wandering, Crossed eyes)

SINCE we have two eyes, it is obvious that in the act of sight two pictures must be formed; and in order that these two pictures shall be fused into one by the mind, it is necessary that there shall be perfect harmony of action between the two organs of vision. In looking at a distant object the two visual axes must be parallel, and in looking at an object at a less distance than infinity, which for practical purposes is less than twenty feet, they must converge to exactly the same degree. The absence of this harmony of action is known as "squint," or "strabismus," and is one of the most distressing of eye defects, not only because of the lowering of vision involved, but because the want of symmetry in the most expressive feature of the face which results from it has a most unpleasant effect upon the personal appearance. The condition is one which has long baffled ophthalmological science. While the theories as to its cause advanced in the text-books seem to fit some cases, they leave others unexplained, and all methods of treatment are admitted to be very uncertain in their results.

The idea that a lack of harmony in the movements of the eye is due to a corresponding lack of harmony in the strength of the muscles that turn them in their sockets seem such a natural one that this theory was almost universally accepted at one time. Operations based upon it once had a great vogue; but to-day they are advised, by most authorities, only as a last resort. It is true that many persons have been benefited by them ; but, at best, the correction of the squint is only approximate, and in many cases the condition has been made worse, while a restoration of binocular vision - the power of fusing the two visual images into one - is scarcely even hoped for.1

The muscle theory fitted the facts so badly that when Donders advanced the idea that squint was a condition growing out of refractive errors - hypermetropia being held responsible for the production of convergent and myopia for divergent squint - it was universally accepted. This theory, too, proved unsatisfactory, and now medical opinion is divided between various theories. Hansen-Grut attributed the condition, in the great majority of cases, to a defect, not of the muscles, but of the nerve supply; and this idea has had many supporters. Worth and his disciples lay stress on the lack of a so-called fusion faculty, and have recommended the use of prisms, or other measures, to develop it. Stevens believes that the anomaly results from a wrong shape of the orbit, and as it is impossible to alter this condition, advocates operations for the purpose of neutralizing its influence.

In order to make any of these theories appear consistent it is necessary to explain away a great many troublesome facts. The uncertain result of operations upon the eye muscles is sufficient to cast suspicion on the theory that the condition is due to any abnormality of the muscles, and many cases of marked paralysis of one or more muscles have been observed in which there was no squint. Relief of paralysis, moreover, may not relieve the squint, nor the relief of the squint the paralysis. Worth found

1 The result obtained by the operation is, as a rule, simply cosmetic. The sight of the squinting eye is not influenced by the operation, and in only a few instances is even binocular vision restored. Fuchs:-Text-book of Ophthalmology, p. 795. The result of even the most successful squint operation, in long-standing strabismus, is merely cosmetic in the vast majority of cases.-Eversbusch: The Diseases of Children, edited by Pfaunder and Schlossman. English translation by Shaw and La Fetra, second edition, 1912-1914, vol. vii, p. 316.

State of Vision Not Important Factor

so many cases which were not benefited by training designed to improve the fusion faculty that he recommended operations on the muscles in such cases; while Donders, noting that the majority of hypermetropes did not squint, was obliged to assume that hypermetropia



Fig. 53
No. 1—Reading the Snellen test card with normal vision; visual axes parallel.
No. 2—The same patient making an effort to see the test card; myopia and convergent squint of the left eye have been produced.

Fig. 53 No. 1 Reading the Snellen test card with normal vision; visual axes parallel. No. 2 The same patient making an effort to see the test card; myopia and convergent squint of the left eye have been produced.

did not cause this condition without the aid of co-operating circumstances.

That the state of the vision is not an important factor in the production of squint is attested by a multitude of facts. It is true, as Donders observed, that squint is usually associated with errors of refraction; but some people squint with a very slight error of refraction. It is also true that many persons with convergent squint have hypermetropia ; but many others have not. Some persons with convergent squint have myopia. A person may also have convergent squint with one eye normal and one hypermetropic or myopic, or with one eye blind. Usually the vision of the eye that turns in is less than that of the eye which is straight; yet there are cases in which the eye with the poorer vision is straight and the eye with the better vision turned in. With two blind eyes, both eyes may be straight, or one may turn in. With one good eye and one blind eye, both eyes may be straight. The blinder the eye, as a rule, the more marked the squint ; but exceptions are frequent, and in rare cases an eye with nearly normal vision may turn in persistently. A squint may disappear and return again, while convergent squint will change into divergent squint and back again. With the same error of refraction, one person will have squint and the other not. A third will squint with a different eye. A fourth will squint first with one eye and then with the other. In a fifth the amount of the squint will vary. One will get well without glasses, or other treatment, and another with these things. These cures may be temporary, or permanent, and the relapses may occur either with or without glasses.

However slight the error of refraction, the vision of many squinting eyes is inferior to that of the straight eye, and for this condition, usually, no apparent or sufficient cause can be found in the constitution of the eye. There is a difference of opinion as to whether this curious defect of vision is the result of the squint, or the squint the result of the defect of vision ; but the predominating opinion that it is, at least, aggravated by the squint has been crystallized in the name given to the condition, namely, "amblyopia ex anopsia," literally "dim-sighted-

Facts Versus Theory

ness from non-use" - for in order to avoid the annoyance of double vision the mind is believed to suppress the image of the deviating eye. There are, however, many squinting eyes without amblyopia, while such a condition has been found in eyes that have never squinted.

The literature of the subject is full of the impossibility of curing amblyopia, and in popular writings persons having the care of children are urged to have cases of squint treated early, so that the vision of the squinting eye may not be lost. According to Worth, not much improvement can ordinarily be obtained in amblyopic eyes after the age of six, while Fuchs says, 1 "The function of the retina never again becomes perfectly normal, even if the cause of the visual disturbance is done away with." Yet it is well known, as the translator of Fuchs points out in an editorial comment upon the above statement,2 that if the sight of the good eye is lost at any period of life, the vision of the amblyopic eye will often become normal. Furthermore, an eye may be amblyopic at one time and not at another. When the good eye is covered, a squinting eye may be so amblyopic that it can scarcely distinguish daylight from darkness; but when both eyes are open, the vision of the squinting eye may be found to be as good as that of the straight eye, if not better. In many cases, too, the amblyopia will change from one eye to the other.

Double vision occurs very seldom in squint, and when it does, it often assumes very curious forms. When the eyes turn in the image seen by the right eye should, according to all the laws of optics, be to the right, and the image seen by the left eye to the left. When the

1 Text-book of Ophthalmology, p. 633. 2 Cases have been reported, some surely authentic, in which an amblyopic squinting eye has acquired good vision, either through correction of the refraction, or because loss of sight in the good eye has compelled the use of the amblyopic eye.-Ibid.

eyes turn out, the opposite should be the case. But often the position of the images is reversed, the image of the right eye in convergent squint being seen to the left and that of the left eye to the right, while in divergent squint the opposite is the case. This condition is known as "paradoxical diplopia." Furthermore, persons with almost normal vision and both eyes perfectly straight may have both kinds of double vision.

All the theories heretofore suggested fail to explain the foregoing facts; but it is a fact that in all cases of squint a strain can be demonstrated, and that the relief of the strain is in all cases followed by the cure of the squint, as well as of the amblyopia and the error of refraction. It is also a fact that all persons with normal eyes can produce squint by a strain to see. It is not a difficult thing to do, and many children derive much amusement from the practice, while it gives their elders unnecessary concern, for fear the temporary squint may become permanent. To produce convergent squint is comparatively easy. Children usually do it by straining to see the end of the nose. The production of divergent squint is more difficult, but with practice persons with normal eyes become able to turn out either eye, or both, at will. They also become able to turn either eye upward and inward, or upward and outward, at any desired angle. Any kind of squint can, in fact, be produced at will by the appropriate kind of strain. Some persons retain the power to produce voluntary squint more or less permanently. Others quickly lose it if they do not keep in practice. There is usually a lowering of the vision when voluntary squint is produced, and accepted methods of measuring the strength of the muscles seem to show deficiencies corresponding to the nature of the squint.

CHAPTER XXII

SQUINT AND AMBLYOPIA: THEIR CURE

THE evidence is conclusive that squint and amblyopia, like errors of refraction, are purely functional troubles; and since they are always relieved by the relief of the strain with which they are associated, it follows that any of the methods which promote relaxation and central fixation may be employed for their cure. As in the case of errors of refraction, the squint disappears and the amblyopia is corrected just as soon as the patient gains sufficient mental control to remember a perfectly black period. In this way both conditions can be temporarily relieved in a few seconds, their permanent cure being a mere matter of making this temporary state permanent.

Strabismus Cure

One of the best ways of gaining mental control in cases of squint is to learn how to increase the squint, or produce other kinds of squint, voluntarily. In the case illustrated, the patient had divergent vertical squint in both eyes. When the left eye was straight the right eye turned out and up, and when the right eye was straight the left eye turned down and out. Both eyes were amblyopic and there was double vision, with the images sometimes on the same side and sometimes on opposite sides. The patient suffered from headaches, and having obtained no relief from glasses, or other methods of treatment, she made up her mind to an operation and consulted Dr. Gudmund J. Gislason, of Grand Forks, N. D., with a view to having one performed. Dr. Gislason, puzzled to find so many muscles apparently at fault, asked my opinion as to which of them should be operated upon. I showed the patient how to make her squint worse, and recommended that Dr. Gislason treat her by eye education without an operation. He did so, and in less than a month the patient had learned to turn both eyes in voluntarily. At first she did this by looking at a pencil held over the bridge of the nose; but later she became able to do it without the pencil, and ultimately she became able to produce every kind of squint at will. The treatment was not pleasant for her,

because the production of new kinds of squint, or the making worse of the existing condition, gave her pain; but it effected a complete and permanent cure both of the squint and of the amblyopia. The same method has proved successful with other patients.

Some patients do not know whether they are looking straight at an object or not. These may be helped by watching the deviating eye and directing them to look more nearly in the proper direction. When the deviating eye looks directly at an object, the strain to see is less, and the vision is consequently improved. Covering the good eye with an opaque screen, or with ground glass, encourages a more proper use of the squinting eye, especially if the vision of that eye is imperfect.

Children of six years, or younger, can usually be cured of squint by the use of atropine, a one per cent solution being instilled into one or both eyes twice a day, for many months, a year, or longer. The atropine makes it more difficult for the child to see, and makes the sunlight disagreeable. In order to overcome this handicap it has to relax, and the relaxation cures the squint.

(Dr. Bates and Modern Teachers use Relaxation Methods... without atropine.)

The improvement resulting from eye education in cases of squint and amblyopia is sometimes so rapid as to be almost incredible. The following are a few of many other examples that might be quoted :

Learning to See Worse

A girl of eleven had convergent vertical squint of the left eye. The vision of this eye at the distance was 3/200, while at the near-point it was so imperfect that she was unable to read. The vision of the right eye was normal both for the near-point and the distance. She was wearing glasses when she came to the office - convex 4.00 D. S. combined with convex 0.50 D. C., axis 90, for the right eye; and convex 5.50 D. S. for the left eye - but had obtained no benefit from them. When she looked three feet away from the big C with the left eye, she saw it better than when she looked directly at it; but when asked to count my fingers held three feet away from the card, they so attracted her attention that she was able to see the large letter worse. The fact was impressed upon her that she could see the card better when she looked away from it, or she could see it worse, at will; and she was also asked to note that when she saw it worse her vision improved, and when she saw it better her vision declined. After shifting from the card to a point three feet away from it, and seeing the former worse a few times, her vision improved to 10/200. The ability to shift and see worse improved by practice so rapidly that in less than ten days her vision was normal in both eyes, and in less than two weeks it had improved to 20/10, while diamond type was read with each eye at from three inches to twenty inches. In less than three weeks her vision for the distance was 20/5, by artificial light, and she read photographic type reductions at two inches, the tests being made with both eyes together and with each eye separately. She also read strange test cards as readily as the familiar ones. She

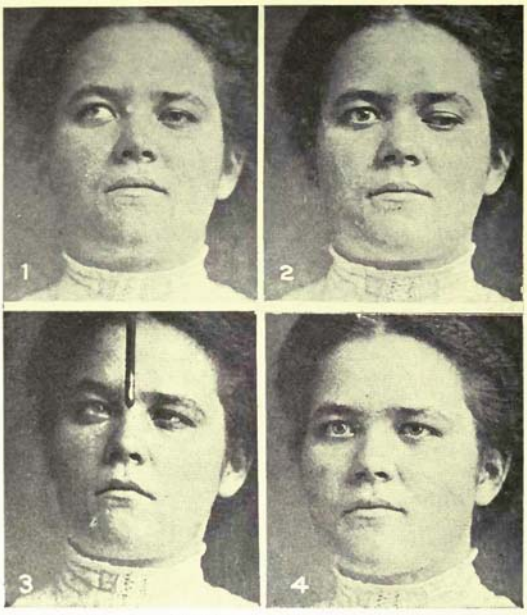

Fig. 54. Case of Divergent Vertical Squint Cured by Eye Education

No. 1.—The right eye turns out and up, the left being straight. No. 2. The patient learns to look down and out with the left eye while the right looks straight. No. 3.—The patient learns to turn both eyes in by looking at a pencil held over the bridge of the nose. No. 4.—The patient is permanently cured. All four pictures were taken within fifteen minutes of each other, the patient having learned to reproduce the conditions represented at will.

Fig. 54. Case of Divergent Vertical Squint Cured by Eye Education. No. 1. The right eye turns out and up, the left being straight. No. 2. The patient learns to look down and out with the left eye while the right looks straight. No. 3. The patient learns to turn both eyes in by looking at a pencil held over the bridge of the nose. No. 4. The patient is permanently cured. All four pictures were taken within fifteen minutes of each other, the patient having learned to reproduce the conditions represented at will.

Cured in Three Weeks

was advised to continue the treatment at home to prevent a relapse, and at the end of three years none had occurred. During the treatment at the office and practice at home the good eye was covered with an

opaque screen, but this was not worn at other times.

(Seeing the letter worse when looking away from it=the letter is then in the peripheral field of vision and it should be worse, less clear. When the letter is placed in the central field, eyes looking directly at it, the letter is seen best, clear due to central fixation, the center of the visual field is clearest.)

A very remarkable case was that of a girl of fourteen who had squinted from childhood. The internal rectus of the right eye had been cut when she was two years old, but still pulled the eye inward. The patient objected to wearing a ground glass over her good eye, because her friends teased her about it and she thought it made her more conspicuous than the squint. One day she lost her glasses in the snow; but her father, who was a man of strong character, immediately provided another pair. Then she announced that she was ill, and couldn't go to school. I told the father that his daughter was hysterical, and simply imagined she was ill to avoid treatment. He insisted that she continue, and as she did not consider herself well enough to come to see me, I called upon her. With the assistance of her father she was made to understand that she would have to continue the treatment until she was cured, and she at once went to work with such energy and intelligence that in half an hour the vision of the squinting and amblyopic eye had improved from 3/200 to 20/30. She also became able to read fine print at twelve inches. She went back to school wearing the ground glass over the good eye; but whenever she wanted to see she looked over the top of it. Her father followed her to school, and insisted that she use the poorer eye instead of the better one. She became convinced that the simplest way out of her troubles would be to follow my instructions, and in less than a week the squint was corrected and she had perfect vision in both eyes. At the beginning of the treatment she could not count her fingers at three feet with the poorer eye, and in three weeks, including all the time that she wasted, she had perfect sight. When told that she was cured her main concern seemed to be to know whether she would have to wear the ground glass any more. She was assured that she would not have to do so unless there was a relapse, but there never was any relapse. 1

1 Bates; L'education de l'oeil dans l'amblyopie ex anopsia, Clin. Opht., Dec.10, 1912.

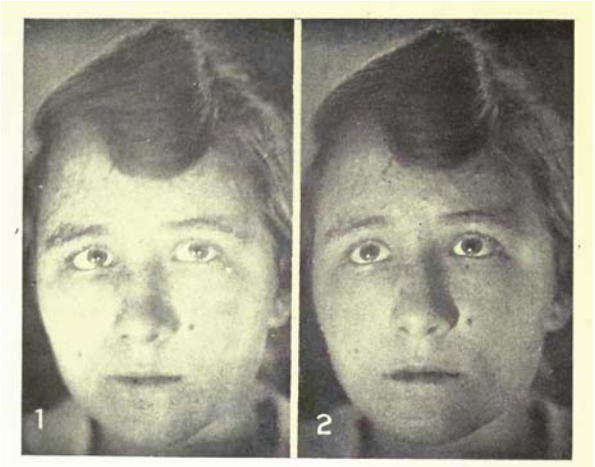

Fig. 55
No. 1.—Convergent squint of the right eye.
No. 2.—The patient is temporarily cured by the memory of a black period.

Fig. 55 No. 1. Convergent squint of the right eye. No. 2. The patient is temporarily cured by the memory of a black period.

Cured in Two Weeks

A girl of eight had had amblyopia and squint since childhood. The vision of the right eye was 10/40, while that of the left was 20/30. Glasses did not improve either eye. The patient was seated twenty feet from a Snellen test card and the right, or poorer eye, was covered with an opaque screen. She was directed to look with her better eye at the large letter on the card and to note its clearness. Next she was told to look at a point three feet to one side of the card, and her attention was called to the fact that she did not then see the large letter so well. The point of fixation was brought closer and closer to the letter, until she appreciated the fact that her vision was lowered when she looked only a few inches to one side of it. When she looked at a small letter she readily recognized that an eccentric fixation of less than an inch lowered the vision.

After she had learned to increase the amblyopia of the better eye, this eye was covered while she was taught how to lower the vision of the other, or poorer eye, by increasing its eccentric fixation. This was accomplished in a few minutes. She was told that the cause of her defective sight was her habit of looking at objects with a part of the retina to one side of the true center of sight. She was advised to see by looking straight at the Snellen card. In less than half an hour the vision of the left

eye became normal, while the right improved from 10/40 to 10/10. The cure was complete in two weeks.

The following case was unusually prolonged, because as soon as one eye had been cured, the defect for which it had been treated appeared in the other eye. The patient, a child of ten, had imperfect sight in both eyes, but worse in the right than in the left. The vision of the right eye was restored after some weeks by eye education, when the left eye turned in and became amblyopic. The right eye was then covered, and after a few weeks of eye education the left became normal. The right eye then turned in and the vision became defective. It was necessary to educate the eyes alternately, for about a year, before both became normal at the same time. This patient had congenital paralysis of the external rectus muscle in both eyes, a condition which was apparently not relieved when the squint and amblyopia were cured.

In the following case the patient had an attack of infantile paralysis after her cure, resulting in a relapse, with new and more serious developments, which were, however quickly cured. The patient, a girl of six, seen first on December 11, 1914, had had divergent squint of the left eye for three years, and had worn glasses for two years without benefit - convex 2.50 D. S. for the right eye, and convex 6.00 D. S. combined with convex 1.00 D. C., axis 90, for the left. The vision of the right eye with glasses was 12/15 and of the left 12/200. Atropine was prescribed for the right eye for the purpose of partially blinding it and thus encouraging a more nearly proper use of the squinting eye, and the usual methods of securing relaxation, such as shifting, palming, the exercise of the memory, etc., were used. On January 13, 1915, the vision without glasses had improved to 10/70 for the right eye, and 10/50 for the left. On February 6, the vision of the right eye was 10/40 and of the left 10/30. The eyes were apparently straight, and scientific tests showed that both were used at the same time (binocular single vision). On April 17, after about four months' treatment, the vision of the left eye was normal, and there was binocular single vision at six inches. On May 1 the vision of the left eye was still normal, and whereas at the beginning the patient had been unable to read with it at all, even with glasses, she now read diamond type without glasses at six inches.

Accommodation Unaffected by Atropine

On August 16, 1916, the patient had an attack of infantile paralysis which was then epidemic. The sight of both eyes failed, the muscles that turned the eyes in and out were paralyzed, the eyelids twitched, and there was double vision. Various muscles of the head, the left leg and the left arm were also paralzyed. When she left the hospital after five weeks the left eye was turned in, and the vision of both eyes was so poor that she was unable to recognize her mother. Later she developed alternate convergent squint. On November 2 the paralysis in the right eye subsided, and four weeks later that of the left eye began to improve. On November 9 she returned for treatment without any conspicuous squint, but still suffering from double vision, with the images sometimes on the same side and sometimes on opposite sides. On November 23 the eyes were straight and the vision normal.

On July 11, 1918, the eyes were still straight and the vision normal, and there was binocular single vision at six inches. Although atropine had been used in the right eye every day for more than a year, and intermittently for a much longer time, and the pupil was dilated to the maximum, it read fine print without difficulty at six inches, central fixation overcoming the paralyzing effect of the drug. According to the current theory the accommodation should have been completely paralyzed, making near vision quite impossible. The patient also read fine print with the left eye as well as, or better than, with the right eye.

CHAPTER XXIII

FLOATING SPECKS: THEIR CAUSE AND CURE

A VERY common phenomenon of imperfect sight is the one known to medical science as "muscae volitantes" or "flying flies." These floating specks are usually dark or black, but sometimes appear like white bubbles, and in rare cases may assume all the colors of the rainbow. They move somewhat rapidly, usually in curving lines, before the eyes, and always appear to be just beyond the

point of fixation. If one tries to look at them directly, they seem to move a little farther away. Hence their name of "flying flies."

The literature of the subject is full of speculations as to the origin of these appearances. Some have attributed them to the presence of floating specks - dead cells or the debris of cells - in the vitreous humor, the transparent substance that fills four-fifths of the eyeball behind the crystalline lens. Similar specks on the surface of the cornea have also been held responsible for them. It has even been surmised that they might be caused by the passage of tears over the cornea. They are so common in myopia that they have been supposed to be one of the symptoms of this condition, although they occur also with other errors of refraction, as well as in eyes otherwise normal. They have been attributed to disturbances of the circulation, the digestion and the kidneys, and because so many insane people have them, have been thought to be an evidence of incipient insanity. The patent-medicine business has thrived upon them, and it would be difficult to estimate the amount of mental torture they have caused, as the following cases illustrate.

A Pitiable Case

A clergyman who was much annoyed by the continual appearance of floating specks before his eyes was told by his eye specialist that they were a symptom of kidney disease, and that in many cases of kidney trouble disease of the retina might be an early symptom. So at regular intervals he went to the specialist to have his eyes examined, and when at length the latter died, he looked around immediately for some one else to make the periodical examination. His family physician directed him to me. I was by no means so well known as his previous ophthalmological adviser, but it happened that I had taught the family physician how to use the ophthalmoscope after others had failed to do so. He thought, therefore, that I must know a lot about the use of the instrument, and what the clergyman particularly wanted was some one capable of making a thorough examination of the interior of his eyes and detecting at once any signs of kidney disease that might make their appearance. So he came to me, and at least four times a year for ten years he continued to come.

Each time I made a very careful examination of his eyes, taking as much time over it as possible, so that he would believe that it was careful ; and each time he went away happy because I could find nothing wrong. Once when I was out of town he got a cinder in his eye, and went to another oculist to get it out. When I came back late at night I found him sitting on my doorstep, on the chance that I might return. His story was a pitiable one. The strange doctor had examined his eyes with the ophthalmoscope, and had suggested the possibility of glaucoma, describing the disease as a very treacherous one which might cause him to go suddenly blind and would be agonizingly painful. He emphasized what the patient had previously been told about the danger of kidney disease, suggested that the liver and heart might also be involved, and advised him to have all of these organs carefully examined. I made another examination of his eyes in general and their tension in particular ; I had him feel his eyeballs and compare them with my own, so that he might see for himself that they were not becoming hard as a stone; and finally I succeeded in reassuring him. I have no doubt, however, that he went at once to his family physician for an examination of his internal organs.

A man returning from Europe was looking at some white clouds one day when floating specks appeared before his eyes. He consulted the ship's doctor, who told him that the symptom was very serious, and might be the forerunner of blindness. It might also indicate incipient insanity, as well as other nervous or organic diseases. He advised him to consult his family physician and an eye specialist as soon as he landed, which he did. This was twenty-five years ago, but I shall never forget the terrible state of nervousness and terror into which the patient had worked himself by the time he came to me. It was even worse than that of the clergyman, who was always ready to admit that his fears were unreasonable. I examined his eyes very carefully, and found them absolutely normal. The vision was perfect both for the near-point and the distance. The color perception, the fields and the tension were normal; and under a strong magnifying glass I could find no opacities in the vitreous. In short, there were absolutely no symptoms of any

disease. I told the patient there was nothing wrong with his eyes, and I also showed him an advertisement of a quack medicine in a newspaper which gave a great deal of space to describing the dreadful things likely to follow the appearance of floating specks before the eyes, unless you began betimes to take the medicine in question at one dollar a bottle. I pointed out that the advertisement, which was appearing in all the big newspapers of the city every day, and probably in other cities, must have cost a lot of money, and must, therefore, be bringing in a lot of money. Evidently there must be a great many people suffering from this symptom, and if it were as serious as was generally believed, there would be a great many more blind and insane people in the community than there were. The patient went away somewhat comforted, but at eleven o'clock - his first visit had been at nine - he was back again. He still saw the floating specks, and was still worried about them. I examined his eyes again as carefully as before, and again was able to assure him that there was nothing wrong with them. In the afternoon I was not in my office, but I was told that he was there at three and at five. At seven he came again, bringing with him his family physician, an old friend of mine. I said to the latter:

"Please make this patient stay at home. I have to charge him for his visits, because he is taking up so much of my time; but it is a shame to take his money when there is nothing wrong with him."

What my friend said to him I don't know, but he did not come back again.

I did not know as much about muscae volitantes then as I know now, or I might have saved both of these patients a great deal of uneasiness. I could tell them that their eyes were normal, but I did not know how to relieve them of the symptom, which is simply an illusion resulting from mental strain. The specks are associated to a considerable extent with markedly imperfect eyesight, because persons whose eyesight is imperfect always strain to see; but persons whose eyesight is ordinarily normal may see them at times, because no eye has normal sight all the time. Most people can see muscae volitantes when they look at the sun, or any uniformly bright surface, like a sheet of white paper upon which the sun is shining. This is because most people strain when they look at surfaces of this kind. The specks are never seen, in short, except when the eyes and mind are under a strain, and they always disappear when the strain is relieved. If one can remember a small letter on the Snellen test card by central fixation, the specks will immediately disappear, or cease to move ; but if one tries to remember two or more letters equally well at one time, they will reappear and move.

Usually the strain that causes muscae volitantes is very easily relieved. A school teacher who had been annoyed by these appearances for years came to me because the condition had grown recently much worse. I was able in half an hour to improve her sight, which had been slightly myopic, to normal, whereupon the specks disappeared. Next day they came back, but another visit to the office brought relief. After that the patient was able to carry out the treatment at home, and had no more trouble.

A physician who suffered constantly from headaches and muscae volitantes was able to read only 20/70 when he looked at the Snellen test card, while the retinoscope showed mixed astigmatism and he saw the specks.

Cured in a Few Days

When he looked at a blank wall, or a blank white card, the retinoscope still showed mixed astigmatism and he still saw the specks. When, however, he remembered a black spot as well as he could see it, when looking at these surfaces, there were no specks, and the retinoscope indicated no error of refraction. In a few days he obtained complete relief from the astigmatism, the muscae volitantes, and the headaches, as well as from chronic conjunctivitis. His eyes, which had been partly closed, opened wide, and the sclera became white and clear. He became able to read in moving trains with no inconvenience, and - what impressed him more than anything else - he also became able to sit up all night with patients without having any trouble with his eyes next day.

CHAPTER XXIV

HOME TREATMENT

IT is not always possible for patients to go to a competent physician for relief. As the method of treating eye defects presented in this book is new, it may be impossible to find a physician in the neighborhood who understands it; and the patient may not be able to afford the expense of a long journey, or to take the time for treatment away from home. To such persons I wish to say that it is possible for a large number of people to be cured of defective eyesight without the aid, either of a physician or of anyone else. They can cure themselves, and for this purpose it is not necessary that they should understand all that has been written in this book, or in any other book. All that is necessary is to follow a few simple directions.

Place a Snellen test card on the wall at a distance of ten, fourteen, or twenty feet, and devote half a minute a day, or longer, to reading the smallest letters you can see, with each eye separately, covering the other with the palm of the hand in such a way as to avoid touching the eyeball. Keep a record of the progress made, with the dates. The simplest way to do this is by the method used by oculists, who record the vision in the form of a fraction, with the distance at which the letter is read as the numerator and the distance at which it ought to be read as the denominator. The figures above, or to one side of, the lines of letters on the test card indicate the distance at which these letters should be read by persons with normal eyesight. Thus a vision of 10/200 would

Children Quickly Cured

mean that the big C, which ought to be read at 200 feet, cannot be seen at a greater distance than ten feet. A vision of 20/10 would mean that the ten line, which the normal eye is not ordinarily expected to read at a greater distance than ten feet, is seen at double that distance. This is a standard commonly attained by persons who have practiced my methods.

Another and even better way to test the sight is to compare the blackness of the letter at the near-point and at the distance, in a dim light and in a good one. With perfect sight, black is not altered by illumination or distance. It appears just as black at the distance as at the near-point, and just as black in a dim light as in a good one. If it does not appear equally black to you under all these conditions, therefore, you may know that your sight is imperfect.

Children under twelve years who have not worn glasses are usually cured of defective eyesight by the above method in three months, six months, or a year. Adults who have never worn glasses are benefited in a very short time - a week or two - and if the trouble is not very bad, may be cured in the course of from three to six months. Children or adults who have worn glasses, however, are more difficult to relieve, and will usually have to practice the method of gaining relaxation described in other chapters; they will also have to devote considerable time to the treatment.

It is absolutely necessary that the glasses be discarded. No half-way measures can be tolerated, if a cure is desired. Do not attempt to wear weaker glasses, and do not wear glasses for emergencies. Persons who are unable to do without glasses for all purposes are not likely to be able to cure themselves. (Later, Dr. Bates changed this statement and allowed eyeglasses as long as the lens strength is continually reduced and worn only if absolutely necessary for work, safety, until vision is clear enough to go without them. Modern Teachers allow reduced, weaker, usually 20/40-20-50 eyeglass lenses if needed, temporarily as the vision is improving.)

Children and adults who have worn glasses will have to devote an hour or longer every day to practice with the test card and the balance of their time to practice on other objects. It will be well for such patients to have two test cards, one to be used at the near-point, where it can be seen best, and the other at ten or twenty feet. The patient will find it a great help to shift from the near card to the distant one, as the unconscious memory of the letters seen at the near-point helps to bring out those seen at the distance.

Make Your Own Eyechart

If you cannot obtain a test card, you can make one for yourself by painting black letters of appropriate size on a white card, or on a piece of white paper. The approximate diameter of these

letters, reading from the top of the card to the bottom, is: 3 1/2 in., 1 3/4 in., 1 1/4 in., 7/8 in., 11/16 in., 1/2 in., 3/8 in., 1/4 in., 3/16 in.

If the patient can secure the aid of some person with normal sight, it will be a great advantage. In fact, persons whose cases are obstinate will find it very difficult, if not impossible, to cure themselves without the aid of a teacher. The teacher, if he is to benefit the patient, must himself be able to derive benefit from the various methods recommended. If his vision is 10/10, he must be able to improve it to 20/10, or more. If he can read fine print at twelve inches, he must become able to read it at six, or at three inches. He must also have sufficient control over his visual memory to relieve and prevent pain. A person who has defective sight, either for the distance or the near-point, and who cannot remember black well enough to relieve and prevent pain, will be unable to be of any material assistance in obstinate cases ; and no one will be able to be of any assistance in the application of any method which he himself has not used successfully.

The Duty of Parents

Parents who wish to preserve and improve the eyesight of their children should encourage them to read the Snellen test card every day. There should, in fact, be a Snellen test card in every family; for when properly used it always prevents myopia and other errors of refraction, always improves the vision, even when this is already normal, and always benefits functional nervous troubles. Parents should improve their own eyesight to normal, so that their children may not imitate wrong methods of using the eyes and will not be subject to the influence of an atmosphere of strain. They should also learn the principles of central fixation sufficiently well to relieve and prevent pain, in order that they may teach their children to do the same. This practice not only makes it possible to avoid suffering, but is a great benefit to the general health.

CHAPTER XXV

CORRESPONDENCE TREATMENT

CORRESPONDENCE treatment is usually regarded as quackery, and it would be manifestly impossible to treat many diseases in this way. Pneumonia and typhoid, for instance, could not possibly be treated by correspondence, even if the physician had a sure cure for these conditions and the mails were not too slow for the purpose. In the case of most diseases, in fact, there are serious objections to correspondence treatment.

But myopia, hypermetropia and astigmatism are functional conditions, not organic, as the text-books teach and as I believed myself until I learned better. Their treatment by correspondence, therefore, has not the drawbacks that exist in the case of most physical derangements. One cannot, it is true, fit glasses by correspondence as well as when the patient is in the office, but even this can be done, as the following case illustrates.

An old colored woman in the wilds of Honduras, far removed from any physician or optician, was unable to read her Bible, and her son, a waiter in New York, asked me if I could not do something for her. The suggestion gave me a distinct shock which I will remember as long as I live. I had never dreamed of the possibility of prescribing glasses for anyone I had not seen, and I had, besides, some very disquieting recollections of colored women whom I had tried to fit with glasses at my clinic.

Glasses Fitted by Mail

If I had so much difficulty in prescribing the proper glasses under favorable conditions, how could I be expected to fit a patient whom I could not even see? The waiter was deferentially persistent, however. He had more faith in my genius than I had, and as his mother was nearing the end of her life, he was very anxious to gratify her last wishes. So, like the unjust judge of the parable, I yielded at last to his importunity, and wrote a prescription for convex 3.00 D. S. The young man ordered the

glasses and mailed them to his mother, and by return mail came a very grateful letter stating that they were perfectly satisfactory.

A little later the patient wrote that she couldn't see objects at the distance that were perfectly plain to other people, and asked if some glasses couldn't be sent that would make her see at the distance as well as she did at the near-point. This seemed a more difficult proposition than the first one; but again the son was persistent, and I myself could not get the old lady out of my mind. So again I decided to do what I could. The waiter had told me that his mother had read her Bible long after the age of forty. Therefore I knew she could not have much hypermetropia, and was probably slightly myopic. I knew also that she could not have much astigmatism, for in that case her sight would always have been noticeably imperfect. Accordingly I told her son to ask her to measure very accurately the distance between her eyes and the point at which she could read her Bible best with her glasses, and to send me the figures. In due time I received, not figures, but a piece of string about a quarter of an inch in diameter and exactly ten inches long. If the patient's vision had been normal for the distance, I knew that she would have been able to read her Bible best with her glasses at thirteen inches. The string showed that at ten inches she had a refraction of four diopters. Subtracting from this the three diopters of her reading glasses, I got one diopter of myopia. I accordingly wrote a prescription for concave 1.00 D. S., and the glasses were ordered and mailed to Honduras. The acknowledgment was even more grateful than in the case of the first pair. The patient said that for the first time in her life she was able to read signs and see other objects at a distance as well as other people did, and that the whole world looked entirely different to her.

Would anyone venture to say that it was unethical for me to try to help this patient? Would it have been better to leave her in her isolation without even the consolation of Bible reading? I do not think so. What I did for her required only an ordinary knowledge of physiological optics, and if I had failed, I could not have done her much harm.

In the case of the treatment of imperfect sight without glasses there can be even less objection to the correspondence method. It is true that in most cases progress is more rapid and the results more certain when the patient can be seen personally; but often this is impossible, and I see no reason why patients who cannot have the benefit of personal treatment should be denied such aid as can be given them by correspondence. I have been treating patients in this way for years, and often with extraordinary success.

Some years ago an English gentleman wrote to me that his glasses were very unsatisfactory. They not only did not give him good sight, but they increased, instead of lessening, his discomfort. He asked if I could help

Was It Unethical?

him, and since relaxation always relieves discomfort and improves the vision, I did not believe that I was doing him an injury in telling him how to rest his eyes. He followed my directions with such good results that in a short time he obtained perfect sight for both the distance and the near-point without glasses, and was completely relieved of his pain. Five years later he wrote me that he had qualified as a sharpshooter in the army. Did I do wrong in treating him by correspondence? I do not think so.

After the United States entered the European war, an officer wrote to me from the deserts of Arizona that the use of his eyes at the near-point caused him great discomfort, which glasses did not relieve, and that the strain had produced granulation of the lids. As it was impossible for him to come to New York, I undertook to treat him by correspondence. He improved very rapidly. The inflammation of the lids was relieved almost immediately, and in about four months he wrote me that he had read one of my own reprints - by no means a short one - in a dim light, with no bad after effects; that the glare of the Arizona sun, with the Government thermometer registering 114, did not annoy him; and that he could read the ten line on the test card at fifteen feet almost perfectly, while even at twenty feet he was able to make out most of the letters.

A third case was that of a forester in the employ of the U. S. Government. He had myopic astigmatism, and suffered extreme discomfort, which was not relieved either by glasses or by long summers in the mountains, where he used his eyes but little for close work. He was unable to come

to New York for treatment, and although I told him that correspondence treatment was somewhat uncertain, he said he was willing to risk it. It took three days for his letters to reach me and another three for my reply to reach him, and as letters were not always written promptly on either side, he often did not hear from me more than once in three weeks. Progress under these conditions was necessarily slow; but his discomfort was relieved very quickly, and in about ten months his sight had improved from 20/50 to 20/20.

In almost every case the treatment of patients coming from a distance is continued by correspondence after they return to their homes; and although they do not get on so well as when they are coming to the office, they usually continue to make progress until they are cured.

At the same time it is often very difficult to make patients understand what they should do when one has to communicate with them entirely by writing, and probably all would get on better if they could have some personal treatment. At the present time the number of doctors in different parts of the United States who understand the treatment of imperfect sight without glasses is altogether too few, and my efforts to interest them in the matter have not been very successful.

CHAPTER XXVI

THE PREVENTION OF MYOPIA IN SCHOOLS : METHODS THAT FAILED

NO phase of ophthalmology, not even the problem of accommodation, has been the subject of so much investigation and discussion as the cause and prevention of myopia. Since hypermetropia was supposed to be due to a congenital deformation of the eyeball, and astigmatism, until recently, was also supposed to be congenital in most cases, these conditions were not thought to call for any explanation, nor to admit of any prevention; but myopia appeared to be acquired. It therefore presented a problem of immense practical importance to which many eminent men devoted years of labor.

Voluminous statistics were collected regarding its occurrence, and are still being collected. The subject has produced libraries of literature. But very little light is to be gained from the perusal of this material, and for the most part it leaves the reader with an impression of hopeless confusion. It is impossible even to arrive at any conclusion as to the prevalence of the complaint; for not only has there been no uniformity of standards and methods, but none of the investigators has taken into account the fact that the refraction of the eye is not a constant condition, but one which continually varies. There is no doubt, however, that most children, when they begin school, are free from this defect, and that both the number of cases and the degree of the myopia steadily increase as the educational process progresses. Professor Hermann Cohn, of Breslau,

Prevention of Myopia

whose report of his study of the eyes of upwards of 10,000 children first called general attention to this subject, found scarcely one per cent of myopia in the village schools, twenty to forty per cent in the "Realschulen," thirty to thirty-five in the gymnasia, and fifty-three to sixty-four in the professional schools. His investigations were repeated in many cities of Europe and America, and his observations, with some difference in percentages, everywhere confirmed.

These conditions were unanimously attributed to the excessive use of the eyes for near work, though, according to the theory that the lens is the agent of accommodation, it was a little difficult to see just why near work should have this effect. On the supposition that accommodation was effected by an elongation of the eyeball, it would have been easy to understand why an excessive amount of accommodation should produce a permanent elongation. But why should an abnormal demand on the accommodative power of the lens produce a change, not in the shape of that body, but in that of the eyeball? Numerous answers to this question have been proposed, but no one has yet succeeded in finding a satisfactory one.1 In the case of children it has been assumed by many authorities that, since the coats of the eye are softer in youth than in later years, they are unable to withstand a supposed intraocular tension produced by near work. When other errors of refraction, such as hypermetropia and astigmatism, believed to be congenital, were present, it has been

supposed that the accommodative struggle for distinct vision produced irritation and strain which encouraged the production of short-

1 A satisfactory explanation of the mechanism by which near work produces myopia has not yet been given.-Tscherning: Physiologic Optics, p. 86. It is not yet determined how near work changes the longitudinal structure of the eye.-Eversbusch : The Diseases of Children, vol. vi, p. 291.

sight. When the condition developed in adults, the explanations had to be modified to fit the case, and the fact that a considerable number of cases were observed among peasants and others who did not use their eyes for near work led some authorities to divide the anomaly into two classes, one caused by near work and one unrelated to it, the latter being conveniently attributed to hereditary tendencies.

As it was impossible to abandon the educational system, attempts were made to minimize the supposed evil effects of the reading, writing and other near work which it demanded. Careful and detailed rules were laid down by various authorities as to the sizes of type to be used in schoolbooks, the length of the lines, their distance apart, the distance at which the book should be held, the amount and arrangement of the light, the construction of the desks, the length of time the eyes might be used without a change of focus, etc. Face-rests were even devised to hold the eyes at the prescribed distance from the desk and to prevent stooping, which was supposed to cause congestion of the eyeball and thus to encourage elongation. The Germans, with characteristic thoroughness, actually used these instruments of torture, Cohn never allowing his own children to write without one, "even when sitting at the best possible desk."1

The results of these preventive measures were disappointing. Some observers reported a slight decrease in the percentage of myopia in schools in which the prescribed reforms had been made, but on the whole, as Risley has observed in his discussion of the subject in Norris and Oliver's "System of Diseases of the Eye," "the injurious results of the educational process were not notably arrested." 1

1 The Hygiene of the Eye in Schools, p. 127.

"It is a significant, though discouraging, fact," he continues, "that the increase, as found by Cohn, both in the percentage and in the degree of myopia, had taken place in those schools where he had especially exerted himself to secure the introduction of hygienic reforms; and the same is true of the observations of Just, who had examined the eyes of twelve hundred and twenty-nine of the pupils of the two high schools of Zittau, in both of which the hygienic conditions were all that could be desired. He found, nevertheless, that the excellent arrangements had not in any degree lessened the percentage of increase in myopia."1



Fig. 56. Face-Rest Designed by Kallmann, a German Optician

Fig. 56. Face-Rest Designed by Kallmann, a German Optician. Cohn never allowed his children to write without it, even when sitting at the best possible desk.

1 School Hygiene, System of Diseases of the Eye, vol. ii, p. 361.

The Theory Breaks Down

Further study of the subject has only added to its difficulty, while at the same time it has tended to relieve the schools of much of the responsibility formerly attributed to them for the production of myopia. As the "American Encyclopedia of Ophthalmology" points out, "the theory that myopia is due to close work aggravated by town life and badly lighted rooms is gradually giving ground before statistics."1

In an investigation in London, for instance, in which the schools were carefully selected to reveal any differences that might arise from the various influences, hygienic, social and racial, to which the children were subjected, the proportion of myopia in the best lighted building of the group was

actually found to be higher than in the one where the lighting conditions were worst, although the higher degrees of myopia were more numerous in the latter than in the former. It has also been found that there is just as much myopia in schools where little near work is done as in those in which the demand upon the accommodative power of the eye is greater. 2 It is only a minority of children, moreover, that become myopic ; yet all are subject to practically the same influences, and even in the same child one eye may become myopic while the other remains normal. On the theory that shortsight results from any external influence to which the eye is exposed, it is impossible to account for the fact that under the same conditions of life the eyes of different individuals and the two eyes of the same individual behave differently.

Owing to the difficulty of reconciling these facts on the basis of the earlier theories, there is now a growing

1 American Encyclopedia and Dictionary of Ophthalmology, edited by Wood, 1913-1919, vol. xi, p. 8271. 2 Lawson: Brit. Med. Jour., June 18, 1898.

disposition to attribute myopia to hereditary tendencies; 1 but no satisfactory evidence on this point has been brought forward, and the fact that primitive peoples who have always had good eyesight become myopic just as quickly as any others when subjected to the conditions of civilized life, like the Indian pupils at Carlisle, 2 seems to be conclusive evidence against it.

In spite of the repeated failure of preventive measures based upon the limitation of near work and the regulation of lighting, desks, types, etc., the use of the eyes at the near-point under unfavorable conditions is still admitted by most exponents of the heredity theory as probably, if not certainly, a secondary cause of myopia. Sidler-Huguenin, however, whose startling conclusions as to the hopelessness of controlling shortsight were quoted earlier, has observed so little benefit from such precautions that he believes a myope may become an engineer just as well as a farmer, or a forester ; and as a result of his experiences with anisometropes, persons with an inequality of refraction between the two organs of vision, he even suggests that the use of myopic eyes may possibly be more favorable to their well-being than their non-use. In 150 cases in which, owing to this inequality and other conditions, the subjects practically used but one eye, the weaker organ, he reports, became gradually more and more myopic, sometimes excessively so, in open defiance of all the accepted theories relating to the matter.

The prevalence of myopia, the unsatisfactoriness of

1 It seems to have been amply demonstrated, by the studies of Motais, Steiger, Miss Barrington, and Karl Pearson, that errors of refraction are inherited. And while the use of the eyes for near work is probably a secondary cause, determining largely the development of the defect, it is not the primary cause. Cyclopedia of Education, edited by Monroe, 1911-1913, vol. iv, p. 361. 2 Fox (quoted by Risley) : System of Diseases of the Eye, vol. ii, p. 357.

all explanations of its origin, and the futility of all methods of prevention, have led some writers of repute to the conclusion that the elongated eyeball is a natural physiological adaptation to the needs of civilization. Against this view two unanswerable arguments can be brought. One is that the myopic eye does not see so well even at the near-point as the normal eye, and the other that the defect tends to progression with very serious results, often ending in blindness. If Nature has attempted to adapt the eye to civilized conditions by an elongation of the globe, she has done it in a very clumsy manner. It is true that many authorities assume the existence of two kinds of myopia, one physiological, or at least harmless, and the other pathological; but since it is impossible to say with certainty whether a given case is going to progress or not, this distinction, even if it were correct, would be more important theoretically than practically.

Into such a slough of despair and contradiction have the misdirected labors of a hundred years led us! But in the light of truth the problem turns out to be a very simple one. In view of the facts given in Chapters V and IX, it is easy to understand why all previous attempts to prevent myopia have failed. All these attempts have aimed at lessening the strain of near work upon the eye, leaving the strain to see distant objects unaffected, and totally ignoring the mental strain which underlies the optical one. There are many differences between the conditions to which the children of primitive man were subjected, and those under which the offspring of civilized races spend their developing years, besides the mere fact that the latter learn things out of books and write things on paper, and

the former did not. In the process of education, civilized children are shut up for hours every day within four walls, in the charge of teachers who are too often nervous and irritable. They are even compelled to remain for long periods in the same position. The things they are required to learn may be presented in such a way as to be excessively uninteresting; and they are under a continual compulsion to think of the gaining of marks and prizes rather than the acquisition of knowledge for its own sake. Some children endure these unnatural conditions better than others. Many cannot stand the strain, and thus the schools become the hotbed, not only of myopia, but of all other errors of refraction.

CHAPTER XXVII

THE PREVENTION AND CURE OF MYOPIA AND OTHER ERRORS OF REFRACTION IN SCHOOLS : A METHOD THAT SUCCEEDED

YOU cannot see anything with perfect sight unless you have seen it before. When the eye looks at an unfamiliar object it always strains more or less to see that object, and an error of refraction is always produced. When children look at unfamiliar writing or figures on the blackboard, distant maps, diagrams, or pictures, the retinoscope always shows that they are myopic, though their vision may be under other circumstances absolutely normal. The same thing happens when adults look at unfamiliar distant objects. When the eye regards a familiar object, however, the effect is quite otherwise. Not only can it be regarded without strain, but the strain of looking later at unfamiliar objects is lessened.

This fact furnishes us with a means of overcoming the mental strain to which children are subjected by the modern educational system. It is impossible to see anything perfectly when the mind is under a strain, and if children become able to relax when looking at familiar objects, they become able, sometimes in an incredibly brief space of time, to maintain their relaxation when looking at unfamiliar objects.

I discovered this fact while examining the eyes of 1,500 school children at Grand Forks, N. D., in 1903.1 In

1 Bates: The Prevention of Myopia in School Children, N. Y. Med. Jour.. July 29, 1911.

many cases, children who could not read all of the letters on the Snellen test card at the first test read them at the second or third test. After a class had been examined the children who had failed would sometimes ask for a second or third test. After a class had been examined, read the whole card with perfect vision. So frequent were these occurrences that there was no escaping the conclusion that in some way the vision was improved by reading the Snellen test card. In one class I found a boy who at first appeared to be very myopic, but who, after a little encouragement, read all the letters on the test card. The teacher asked me about this boy’s vision, because she had found him to be very “nearsighted.” When I said that his vision was normal she was incredulous, and suggested that he might have learned the letters by heart, or been prompted by another pupil. He was unable to read the writing or figures on the blackboard, she said, or to see the maps, charts and diagrams on the walls, and did not recognize people across the street. She asked me to test his sight again, which I did, very carefully, under her supervision, the sources of error which she had suggested being eliminated. Again the boy read all the letters on the card. Then the teacher tested his sight. She wrote some words and figures on the blackboard, and asked him to read them. He did so correctly. Then she wrote additional words and figures, which he read equally well. Finally she asked him to tell the hour by the clock, twenty-five feet distant, which he did correctly. It was a dramatic situation, both the teacher and the children being intensely interested. Three other cases in the class were similar, their vision, which had previously been very defective for distant objects, becoming normal in the few moments devoted

to testing their eyes. It is not surprising that after such a demonstration the teacher asked to have a Snellen test card placed permanently in the room. The children were directed to read the smallest letters they could see from their seats at least once every day, with both eyes together and with

each eye separately, the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. Those whose vision was defective were encouraged to read it more frequently, and, in fact, needed no encouragement to do so after they found that the practice helped them to see the blackboard, and stopped the headaches, or other discomfort, previously resulting from the use of their eyes.

In another class of forty children, between six and eight, thirty of the pupils gained normal vision while their eyes were being tested. The remainder were cured later under the supervision of the teacher by exercises in distant vision with the Snellen card. This teacher had noted every year for fifteen years that at the opening of the school in the fall all the children could see the writing on the blackboard from their seats, but before school closed the following spring all of them without exception complained that they could not see it at a distance of more than ten feet. After learning of the benefits to be derived from the daily practice of distant vision with familiar objects as the points of fixation, this teacher kept a Snellen test card continually in her classroom and directed the children to read it every day. The result was that for eight years no more of the children under her care acquired defective eyesight.

This teacher had attributed the invariable deterioration in the eyesight of her charges during the school year to the fact that her classroom was in the basement and the light poor. But teachers with well-lighted classrooms had the same experience, and after the Snellen test card was introduced into both the well-lighted and the poorly lighted rooms, and the children read it every day, the deterioration of their eyesight not only ceased, but the vision of all improved. Vision which had been below normal improved, in most cases, to normal, while children who already had normal sight, usually reckoned at 20/20, became able to read 20/15, or 20/10. And not only was myopia cured, but the vision for near objects was improved.

At the request of the superintendent of the schools of Grand Forks, Mr. J. Nelson Kelly, the system was introduced into all the schools of the city and was used continuously for eight years, during which time it reduced myopia among the children, which I found at the beginning to be about six per cent, to less than one per cent.

In 1911 and 1912 the same system was introduced into some of the schools of New York City, 1 with an attendance of about ten thousand children. Many of the teachers neglected to use the cards, being unable to believe that such a simple method, and one so entirely at variance with previous teaching on the subject, could accomplish the desired results. Others kept the cards in a closet except when they were needed for the daily eye drill, lest the children should memorize them. Thus they not only put an unnecessary burden upon themselves, but did what they could to defeat the purpose of the system, which is to give the children daily exercise in distant vision with a familiar object as the point of fixation. A considerable number, however, used the system intelligently and persistently, and in less than a year were

1 Bates: Myopia Prevention by Teachers, N. Y. Med. Jour., Aug. 30, 1913.

able to present reports showing that of three thousand children with imperfect sight, over one thousand had obtained normal vision by its means. Some of these children, as in the case of the children of Grand Forks, were cured in a few minutes. Many of the teachers were also cured, some of them very quickly. In some cases the results of the system were so astonishing as to be scarcely credible.

In a class of mental defectives, where the teacher had kept records of the eyesight of the children for several years, it had been invariably found that their vision grew steadily worse as the term advanced. As soon as the Snellen test card had been introduced, however, they began to improve. Then came a doctor from the Board of Health who tested the eyes of the children and put glasses on all of them, even those whose sight was fairly good. The use of the card was then discontinued, as the teacher did not consider it proper to interfere while the children were wearing glasses prescribed by a physician. Very soon, however, the children began to lose, break, or discard their glasses. Some said that the spectacles gave them headaches, or that they felt better without them. In the course of a month or so most of the aids to vision which the Board of Health had supplied had

disappeared. The teacher then felt herself at liberty to resume the use of the Snellen test card. Its benefits were immediate. The eyesight and the mentality of the children improved simultaneously, and soon they were all drafted into the regular classes, because it was found that they were making the same progress in their studies as the other children were.

Another teacher reported an equally interesting experience. She had a class of children who did not fit into the other grades. Many of them were backward in their studies. Some were persistent truants. All of them had defective eyesight. A Snellen test card was hung in the classroom where all the children could see it, and the teacher carried out my instructions literally. At the end of six months all but two had been cured, and these had improved very much, while the worst incorrigible and the worst truant had become good students. The incorrigible, who had previously refused to study, because, he said, it gave him a headache to look at a book, or at the blackboard, found out that the test card, in some way, did him a lot of good ; and although the teacher had asked him to read it but once a day, he read it whenever he felt uncomfortable. The result was that in a few weeks his vision had become normal and his objection to study had disappeared. The truant had been in the habit of remaining away from school two or three days every week, and neither his parents nor the truant officer had been able to do anything about it. To the great surprise of his teacher he never missed a day after having begun to read the Snellen test card. When she asked for an explanation, he told her that what had driven him away from school was the pain that came in his eyes whenever he tried to study, or to read the writing on the blackboard. After reading the Snellen test card, he said, his eyes and head were rested and he was able to read without any discomfort.

To remove any doubts that might arise as to the cause of the improvement noted in the eyesight of the children, comparative tests were made with and without cards. In one case six pupils with defective sight were examined daily for one week without the use of the test card. No improvement took place. The card was then restored to its place, and the group was instructed to read it every

day. At the end of a week all had improved and five were cured. In the case of another group of defectives the results were similar. During the week that the card was not used, no improvement was noted ; but after a week of exercises in distant vision with the card all showed marked improvement, and at the end of a month all were cured. In order that there might be no question as to the reliability of the records of the teachers, some of the principals asked the Board of Health to send an inspector to test the vision of the pupils, and whenever this was done the records were found to be correct.

One day I visited the city of Rochester, and while there I called on the Superintendent of Public Schools and told him about my method of preventing myopia. He was very much interested and invited me to introduce it in one of his schools. I did so, and at the end of three months a report was sent to me showing that the vision of all the children had improved, while quite a number of them had obtained normal vision in both eyes.

The method has been used in a number of other cities and always with the same result. The vision of all the children improved, and many of them obtained normal vision in the course of a few minutes, days, weeks, or months.

It is difficult to prove a negative proposition, but since this system improved the vision of all the children who used it, it follows that none could have grown worse. It is therefore obvious that it must have prevented myopia. This cannot be said of any method of preventing myopia in schools which had previously been tried. All other methods are based on the idea that it is the excessive use of the eyes for near work that causes myopia, and all of them have admittedly failed.

It is also obvious that the method must have prevented other errors of refraction, a problem which previously had not even been seriously considered, because hypermetropia is supposed to be congenital, and astigmatism was until recently supposed also to be congenital in the great majority of cases. Anyone who knows how to use a retinoscope may, however, demonstrate in a few minutes that both of these conditions are acquired; for no matter how astigmatic or hypermetropic an eye may be, its vision always becomes normal when it looks at a blank surface without trying to see. It

may also be demonstrated that when children are learning to read, write, draw, sew, or to do anything else that necessitates their looking at unfamiliar objects at the near-point, hypermetropia, or hypermetropic astigmatism, is always produced. The same is true of adults. These facts have not been reported before, so far as I am aware, and they strongly suggest that children need, first of all, eye education. They must be able to look at strange letters or objects at the near-point without strain before they can make much progress in their studies, and in every case in which the method has been tried it has been proven that this end is attained by daily exercise in distant vision with the Snellen test card. When their distant vision has been improved by this means, children invariably become able to use their eyes without strain at the near-point.

The method succeeded best when the teacher did not wear glasses. In fact, the effect upon the children of a teacher who wears glasses is so detrimental that no such person should be allowed to be a teacher, and since errors of refraction are curable, such a ruling would work no hardship on anyone. Not only do children imitate the visual habits of a teacher who wears glasses, but the

nervous strain of which the defective sight is an expression produces in them a similar condition. In classes of the same grade, with the same lighting, the sight of children whose teachers did not wear glasses has always been found to be better than the sight of children whose teachers did wear them. In one case I tested the sight of children whose teacher wore glasses, and found it very imperfect. The teacher went out of the room on an errand, and after she had gone I tested them again. The results were very much better. When the teacher returned she asked about the sight of a particular boy, a very nervous child, and as I was proceeding to test him she stood before him and said, "Now, when the doctor tells you to read the card, do it." The boy couldn't see anything. Then she went behind him, and the effect was the same as if she had left the room. The boy read the whole card.

Still better results would be obtained if we could reorganize the educational system on a rational basis. Then we might expect a general return of that primitive acuity of vision which we marvel at so greatly when we read about it in the memoirs of travelers. But even under existing conditions it has proven beyond the shadow of a doubt that errors of refraction are no necessary part of the price we must pay for education.

There are at least ten million children in the schools of the United States who have defective sight. This condition prevents them from taking full advantage of the educational opportunities which the State provides. It undermines their health and wastes the taxpayers' money. If allowed to continue, it will be an expense and a handicap to them throughout their lives. In many cases it will be a source of continual misery and suffering. And yet practically all of these cases could be cured and the development of new ones prevented by the daily reading of the Snellen test card.

Why should our children be compelled to suffer and wear glasses for want of this simple measure of relief? It costs practically nothing. In fact, it would not be necessary, in some cases, as in the schools of New York City, even to purchase the Snellen test cards, as they are already being used to test the eyes of the children. Not only does it place practically no additional burden upon the teachers, but, by improving the eyesight, health, disposition and mentality of their pupils, it greatly lightens their labors. No one would venture to suggest, further, that it could possibly do any harm. Why, then, should there be any delay about introducing it into the schools? If there is still thought to be need for further investigation and discussion, we can investigate and discuss just as well after the children get the cards as before, and by adopting that course we shall not run the risk of needlessly condemning another generation to that curse which heretofore has always dogged the footsteps of civilization, namely, defective eyesight. I appeal to all who read these lines to use whatever influence they possess toward the attainment of this end.

DIRECTIONS - FOR USING THE SNELLEN TEST CARD FOR THE PREVENTION AND CURE OF IMPERFECT SIGHT IN SCHOOLS

The Snellen Test Card is placed permanently upon the wall of the classroom, and every day the children silently read the smallest letters they can see from their seats with each eye separately, the other being covered

How to Use the Card

with the palm of the hand in such a way as to avoid pressure on the eyeball. This takes no appreciable amount of time and is sufficient to improve the sight of all children in one week and to cure all errors of refraction after some months, a year, or longer.

Children with markedly defective vision should be encouraged to read the card more frequently. Children wearing glasses should not be interfered with, as they are supposed to be under the care of a physician, and the practice will do them little or no good while the glasses are worn.

While not essential, it is a great advantage to have records made of the vision of each pupil at the time when the method is introduced, and thereafter at convenient intervals annually or more frequently. This may be done by the teacher.

The records should include the name and age of the pupils, the vision of each eye tested at twenty feet, and the date. For example:

John Smith, 10, Sept. 15, 1919
R. V. (vision of the right eye) 20/40
L. V. (vision of the left eye) 20/20
John Smith, 11, January 1, 1920
R. V. 20/30
L. V. 20/15

A certain amount of supervision is absolutely necessary. At least once a year some one who understands the method should visit each classroom for the purpose of answering questions, encouraging the teachers to continue the use of the method, and making some kind of a report to the proper authorities. It is not necessary that either the supervisor, the teachers, or the children should understand anything about the physiology of the eye.

CHAPTER XXVIII

THE STORY OF EMILY

THE efficacy of the method of treating imperfect sight without glasses presented in this book has been demonstrated in thousand of cases, not only in my own practice but in that of many persons of whom I may not even have heard; for almost all patients, when they are cured, proceed to cure others. At a social gathering one evening a lady told me that she had met a number of my patients; but when she mentioned their names I found that I did not remember any of them and said so.

"That is because you cured them by proxy," she said. "You didn't directly cure Mrs. Jones or Mrs. Brown, but you cured Mrs. Smith, and Mrs. Smith cured the other ladies. You didn't treat Mr. and Mrs. Simpkins, or Mr. Simpkins' mother and brother, but you may remember that you cured Mr. Simpkins' boy of a squint, and he cured the rest of the family."

In schools where the Snellen test card was used to prevent and cure imperfect sight, the children, after they were cured themselves, often took to the practice of ophthalmology with the greatest enthusiasm and success, curing their fellow students, their parents and their friends. They made a kind of game of the treatment, and the progress of each school case was watched with the most intense interest by all the children. On a bright day, when the patients saw well, there was great rejoicing, and on a dark day there was corresponding depression. One girl cured twenty-six children in six months; another cured twelve in three months; a third

developed quite a varied ophthalmological practice, and did things of which older and more experienced practitioners might well have been proud. Going to the school which she attended one day, I asked this girl about her sight, which had been very imperfect. She replied that it was now very good and that her headaches were quite gone. I tested her sight and found it normal. Then another child whose sight had also been very poor spoke up.
"I can see all right, too," she said. "Emily" - indicating girl No. 1 - "cured me."
"Indeed!" I replied. "How did she do that?"

The second girl explained that Emily had had her read the card, which she could not see at all from the back of the room, at a distance of a few feet. The next day she had moved it a little farther away, and so on, until the patient was able to read it from the back of the room, just as the other children did. Emily now told her to cover the right eye and read the card with her left, and both girls were considerably upset to find that the uncovered eye was apparently blind. The school doctor was consulted and said that nothing could be done. The eye had been blind from birth and no treatment would do any good.

Nothing daunted, however, Emily undertook the treatment. She told the patient to cover her good eye and go up close to the card, and at a distance of a foot or less it was found that she could read even the small letters. The little practitioner then proceeded confidently as with the other eye, and after many months of practice the patient became the happy possessor of normal vision in both eyes. The case had, in fact, been simply one of high myopia, and the school doctor, not being a specialist, had not detected the difference between this condition and blindness.

In the same classroom there had been a little girl with congenital cataract, but on the occasion of my visit the defect had disappeared. This, too, it appeared, was Emily's doing. The school doctor had said that there was no help for this eye except through operation, and as the sight of the other eye was pretty good, he fortunately did not think it necessary to urge such a course. Emily accordingly took the matter in hand. She had the patient stand close to the card, where, with the good eye covered, she was unable to see even the big C. Emily now held the card between the patient and the light, and moved it back and forth. At a distance of three or four feet this movement could be observed indistinctly by the patient. The card was then moved farther away, until the patient became able to see it move at ten feet and to see some of the larger letters indistinctly at a less distance. Finally, after six months, she became able to read the card with the bad eye as well as with the good one. After testing her sight and finding it normal in both eyes, I said to Emily:
"You are a splendid doctor. You beat them all. Have you done anything else?"
The child blushed, and turning to another of her classmates, said :
"Mamie, come here."
Mamie stepped forward and I looked at her eyes. There appeared to be nothing wrong with them.
"I cured her," said Emily.
"What of?" I inquired.
"Cross eyes," replied Emily.
"How?" I asked, with growing astonishment.
Emily described a procedure very similar to that adopted in the other cases. Finding that the sight of the crossed eye was very poor, so much so, indeed, that poor

Mamie could see practically nothing with it, the obvious course of action seemed to her to be the restoration of its sight; and, never having read any medical literature, she did not know that this was impossible. So she went to it. She had Mamie cover her good eye and practice with the bad one at home and at school, until at last the sight became normal and the eye straight. The school doctor had wanted to have the eye operated upon, I was told, but, fortunately, Mamie was "scared" and would not consent. And here she was with two perfectly good, straight eyes.

"Anything else?" I inquired, when Mamie's case had been disposed of. Emily blushed again, and said: "Here's Rose. Her eyes used to hurt her all the time, and she couldn't see anything on the blackboard. Her headaches used to be so bad that she had to stay away from school every once in a

while. The doctor gave her glasses, but they didn't help her and she wouldn't wear them. When you told us the card would help our eyes I got busy with her. I had her read the card close up, and then I moved it farther away, and now she can see all right and her head doesn't ache any more. She comes to school every day, and we all thank you very much."

This was a case of compound hypermetropic astigmatism.

Such stories might be multiplied indefinitely. Emily's astonishing record might not possibly be duplicated, but lesser cures by cured patients have been very numerous, and serve to show that the benefits of the method of preventing and curing defects of vision in the schools which is presented in the foregoing chapter would be far-reaching. Not only errors of refraction would be cured, but many more serious defects; and not only the children would be helped, but their families and friends also.

CHAPTER XXIX

MIND AND VISION

POOR sight is admitted to be one of the most fruitful causes of retardation in the schools. It is estimated1 that it may reasonably be held responsible for a quarter of the habitually "left-backs," and it is commonly assumed that all this might be prevented by suitable glasses.

There is much more involved in defective vision, however, than mere inability to see the blackboard or to use the eyes without pain or discomfort. Defective vision is the result of an abnormal condition of the mind, and when the mind is in an abnormal condition it is obvious that none of the processes of education can be conducted with advantage. By putting glasses upon a child we may, in some cases, neutralize the effect of this condition upon the eyes, and by making the patient more comfortable may improve his mental faculties to some extent; but we do not alter fundamentally the condition of the mind, and by confirming it in a bad habit we may make it worse.

It can easily be demonstrated that among the faculties of the mind which are impaired when the vision is impaired is the memory; and as a large part of the educational process consists of storing the mind with facts, and all the other mental processes depend upon one's

1 School Health News, published by the Department of Health of New York City, February, 1919.

Memory in Relation to Vision

knowledge of facts, it is easy to see how little is accomplished by merely putting glasses on a child that has "trouble with its eyes." The extraordinary memory of primitive people has been attributed to the fact that owing to the absence of any convenient means of making written records they had to depend upon their memories, which were strengthened accordingly; but in view of the known facts about the relation of memory to eyesight it is more reasonable to suppose that the retentive memory of primitive man was due to the same cause as his keen vision, namely, a mind at rest.

The primitive memory, as well as primitive keenness of vision, has been found among civilized people; and if the necessary tests had been made it would doubtless have been found that they always occur together, as they did in a case which recently came under my observation. The subject was a child of ten with such marvelous eyesight that she could see the moons of Jupiter with the naked eye a fact which was demonstrated by her drawing a diagram of these satellites which exactly corresponded to the diagrams made by persons who had used a telescope. Her memory was equally remarkable. She could recite the whole content of a book after reading it, as Lord Macaulay is said to have done, and she learned more Latin in a few days without a teacher than her sister, who had six diopters of myopia, had been able to do in several years. She remembered five years afterward what she ate at a restaurant, she called the name of the waiter, the number of the building and the street in which it stood. She also remembered what she wore on this occasion and what every one else in the party wore. The same was true of every other event which had awakened her interest in any way, and it was a favorite amusement in her family to ask her what the menu had been and what people had worn on particular occasions.

When the sight of two persons is different it has been found that their memories differ in exactly the same degree. Two sisters, one of whom had only ordinary good vision, indicated by the formula 20/20, while the other had 20/10, found that the time it took them to learn eight verses of a poem varied in almost exactly the same ratio as their sight. The one whose vision was 20/10 learned eight verses of the poem in fifteen minutes, while the one whose vision was only 20/20 required thirty-one minutes to do the same thing. After palming, the one with ordinary vision learned eight more verses in twenty-one minutes, while the one with 20/10 was able to reduce her time by only two minutes, a variation clearly within the limits of error. In other words, the mind of the latter being already in a normal or nearly normal condition, she could not improve it appreciably by palming, while the former, whose mind was under a strain, was able to gain relaxation, and hence improve her memory, by this means.

Even when the difference in sight is between the two eyes of the same person, it can be demonstrated, as was pointed out in the chapter on "Memory as an Aid to Vision," that there is a corresponding difference in the memory, according to whether both eyes are open, or the better eye closed.

Under the present educational system there is a constant effort to compel the children to remember. These efforts always fail. They spoil both the memory and the sight. The memory cannot be forced any more than the vision can be forced. We remember without effort,

Interest Necessary to Good Vision

just as we see without effort, and the harder we try to remember or see the less we are able to do so.

The sort of things we remember are the things that interest us, and the reason children have difficulty in learning their lessons is because they are bored by them. For the same reason, among others, their eyesight becomes impaired, boredom being a condition of mental strain in which it is impossible for the eye to function normally.

Some of the various kinds of compulsion now employed in the educational process may have the effect of awakening interest. Betty Smith's interest in winning a prize, for instance, or in merely getting ahead of Johnny Jones, may have the effect of rousing her interest in lessons that have hitherto bored her, and this interest may develop into a genuine interest in the acquisition of knowledge ; but this cannot be said of the various fear incentives still so largely employed by teachers. These, on the contrary, have the effect, usually, of completely paralyzing minds already benumbed by lack of interest, and the effect upon the vision is equally disastrous.

The fundamental reason, both for poor memory and poor eyesight in school children, in short, is our irrational and unnatural educational system. Montessori has taught us that it is only when children are interested that they can learn. It is equally true that it is only when they are interested that they can see. This fact was strikingly illustrated in the case of one of the two pairs of sisters mentioned above. Phebe, of the keen eyes, who could recite whole books if she happened to be interested in them, disliked mathematics and anatomy extremely, and not only could not learn them but became myopic when they were presented to her mind. She could read letters a quarter of an inch high at twenty feet in a poor light, but when asked to read figures one to two inches high in a good light at ten feet she miscalled half of them. When asked to tell how much 2 and 3 made she said "4," before finally deciding on "5;" and all the time she was occupied with this disagreeable subject the retinoscope showed that she was myopic. When I asked her to look into my eye with the ophthalmoscope, she could see nothing, although a much lower degree of visual acuity is required to note the details of the interior of the eye than to see the moons of Jupiter.

Shortsighted Isabel, on the contrary, had a passion for mathematics and anatomy and excelled in those subjects. She learned to use the ophthalmoscope as easily as Phebe had learned Latin. Almost immediately she saw the optic nerve, and noted that the center was whiter than the periphery. She saw the light-colored lines, the arteries; and the darker ones, the veins; and she saw the light streaks on the blood-vessels. Some specialists never become able to do this, and no one could do it without normal vision. Isabel's vision, therefore, must have been temporarily normal when she did it. Her vision for figures, although not normal, was better than for letters.

In both these cases the ability to learn and the ability to see went hand in hand with interest. Phebe could read a photographic reduction of the Bible and recite what she had read verbatum, she could see the moons of Jupiter and draw a diagram of them afterwards, because she was interested in these things ; but she could not see the interior of the eye, nor see figures even half as well as she saw letters, because these things bored her. When, however, it was suggested to her that it would be a good

Central Fixation of the Mind

joke to surprise her teachers, who were always reproaching her for her backwardness in mathematics, by taking a high mark in a coming examination, her interest in the subject awakened and she contrived to learn enough to get seventy-eight per cent. In Isabel's case letters were antagonistic. She was not interested in most of the subjects with which they dealt, and therefore she was backward in those subjects and had become habitually myopic. But when asked to look at objects which aroused an intense interest her vision became normal.

When one is not interested, in short, one's mind is not under control, and without mental control one can neither learn nor see. Not only the memory but all other mental faculties are improved when the eyesight becomes normal. It is a common experience with patients cured of defective sight to find that their ability to do their work has improved.

The teacher whose letter is quoted in a later chapter testified that after gaining perfect eyesight she "knew better how to get at the minds of the pupils," was "more direct, more definite, less diffused, less vague," possessed, in fact, "central fixation of the mind." In another letter she said: "The better my eyesight becomes, the greater is my ambition. On the days when my sight is best I have the greatest anxiety to do things."

Another teacher reported that one of her pupils used to sit doing nothing all day long and apparently was not interested in anything. After the test card was introduced into the classroom and his sight improved, he became anxious to learn, and speedily developed into one of the best students in the class. In other words, his eyes and his mind became normal together.

A bookkeeper nearly seventy years of age who had worn glasses for forty years found after he had gained perfect sight without glasses that he could work more rapidly and accurately and with less fatigue than ever in his life before. During busy seasons, or when short of help, he has worked for some weeks at a time from 7 a. m. until 11 p. m., and he insisted that he felt less tired at night after he was through than he did in the morning when he started. Previously, although he had done more work than any other man in the office, it always tired him very much. He also noticed an improvement in his temper. Having been so long in the office, and knowing so much more about the business than his fellow employees, he was frequently appealed to for advice. These interruptions, before his sight became normal, were very annoying to him and often caused him to lose his temper. Afterward, however, they caused him no irritation whatever.

In another case, symptoms of insanity were relieved when the vision became normal. The patient was a physician who had been seen by many nerve and eye specialists before he came to me, and who consulted me at last, not because he had any faith in my methods, but because nothing else seemed to be left for him to do. He brought with him quite a collection of glasses prescribed by different men, no two of them being alike. He had worn glasses, he told me, for many months at a time without benefit, and then he had left them off and had been apparently no worse. Outdoor life had also failed to help him. On the advice of some prominent neurologists he had even given up his practice for a couple of years to spend the time upon a ranch, but the vacation had done him no good.

I examined his eyes and found no organic defects and no error of refraction.

Under Terrific Strain

Yet his vision with each eye was only three-fourths of the normal and he suffered from double vision and all sorts of unpleasant symptoms. He used to see people standing on their heads and little devils dancing on the tops of the high buildings. He also had other illusions too numerous to be

mentioned here. At night his sight was so bad that he had difficulty in finding his way about, and when walking along a country road he believed that he saw better when he turned his eyes far to one side and viewed the road with the side of the retina instead of with the center. At variable intervals, without warning and without loss of consciousness, he had attacks of blindness. These caused him great uneasiness, for he was a surgeon with a large and lucrative practice and he feared that he might have an attack while operating.

His memory was very poor. He could not remember the color of the eyes of any member of his family, although he had seen them all daily for years. Neither could he recall the color of his house, the number of rooms on the different floors or other details. The faces and names of patients and friends he recalled with difficulty or not at all.

His treatment proved to be very difficult, chiefly because he had an infinite number of erroneous ideas about physiological optics in general and his own case in particular, and insisted that all these should be discussed; while these discussions were going on he received no benefit. Every day for hours at a time over a long period he talked and argued. His logic was wonderful, apparently unanswerable, and yet utterly wrong.

His eccentric fixation was of such high degree that when he looked at a point forty-five degrees to one side of the big C on the Snellen test card he saw the letter just as black as when he looked directly at it. The strain to do this was terrific and produced much astigmatism; but the patient was unconscious of it and could not be convinced that there was anything abnormal in the symptom. If he saw the letter at all, he argued, he must see it as black at it really was, because he was not colorblind. Finally he became able to look away from one of the smaller letters on the card and see it worse than when he looked directly at it. It took eight or nine months to accomplish this, but when it had been done the patient said that it seemed as if a great burden had been lifted from his mind. He experienced a wonderful feeling of rest and relaxation throughout his whole body.

When asked to remember black with his eyes closed and covered he said he could not do so, and he saw every color but the black which one ought normally to see when the optic nerve is not subject to the stimulus of light. He had, however, been an enthusiastic football player at college, and he found at last that he could remember a black football. I asked him to imagine that this football had been thrown into the sea and that it was being carried outward by the tide, becoming constantly smaller but no less black. This he was able to do, and the strain floated with the football, until, by the time the latter had been reduced to the size of a period in a newspaper, it was entirely gone. The relief continued as long as he remembered the black spot, but as he could not remember it all the time, I suggested another method of gaining permanent relief. This was to make his sight voluntarily worse, a plan against which he protested with considerable emphasis.

"Good heavens!" he said. "Isn't my sight bad enough without making it worse?"

A Problem Not To Be Solved By Glasses

After a week of argument, however, he consented to try the method and the result was extremely satisfactory. After he had learned to see two or more lights where there was only one, by straining to see a point above the light while still trying to see the light as well as when looking directly at it, he became able to avoid the unconscious strain that had produced his double and multiple vision and was not troubled by these superfluous images any more. In a similar manner other illusions were prevented.

One of the last illusions to disappear was his belief that an effort was required to remember black. His logic on this point was overwhelming, but after many demonstrations he was convinced that no effort was required to let go, and when he realized this, both his vision and his mental condition immediately improved.

He finally became able to read 20/10 or more, and although more than fifty-five years of age, he also read diamond type at from six to twenty-four inches. His night blindness was relieved, his attacks of day blindness ceased, and he told me the color of the eyes of his wife and children. One day he said to me :

"Doctor, I thank you for what you have done for my sight, but no words can express the gratiude I feel for what you have done for my mind."

Some years later he called with his heart full of gratitude, because there had been no relapse.

From all these facts it will be seen that the problems of vision are far more intimately associated with the problems of education than we had supposed, and that they can by no means be solved by putting concave, or convex, or astigmatic lenses before the eyes of the children.

CHAPTER XXX

NORMAL SIGHT AND THE RELIEF OF PAIN FOR SOLDIERS AND SAILORS

THE Great War is over and among the millions of brave men who laid down their lives in the cruel conflict there were some who thought that they were doing so that wars might be no more. But the earth is still filled with wars and rumors of war, and in the countries of the victorious Allies the spirit of militarism is rampant. In the United States we are being urged to increase naval and military expenditure, and there is a strong demand for universal military training. Whether it is necessary for us to join in the competition of armaments which resulted in the terrific convulsion through which we have just passed is a question which need not be entered into here ; but if we are going to do so, we may as well have soldiers and sailors with normal sight; and if we attain this end we shall not have borne the burdens of militarism and navalism altogether in vain.

After the United States entered the recent war I had the privilege of making it possible for many young men who had been unable to meet the visual requirements for admission to the army and navy, or to favorite branches of these services, to gain normal vision; and seeing no reason why such benefits should be confined to the few, I supplied the Surgeon General of the Army with a plan whereby, with far less trouble and expense than was involved by the optical service upon which

A Leading Cause of Rejection

we were then depending to make the worst of the enlisted eye-defectives available for service at the front, normal vision without glasses might have been insured to all soldiers and sailors. This plan was not acted upon, and I now present it, with some modifications, to the public, in the hope that enough people will see its military value to secure its adoption.

If we are to have universal military training, we shall find, as the nations of Europe have found, that it will be necessary to take measures to provide suitable material for such training. In Europe this necessity has resulted in extensive systems of child care, but in this book we are concerned only with the question of eyesight. In the first draft for the recent war, defective eyesight was the greatest single cause for rejection, while in later drafts it became one of three leading causes only because of an enormous lowering of an already low standard. Yet there is no impediment to the raising of an army which might be more easily removed. If we want our children to grow big enough to be soldiers, without losing most of their teeth and developing flat feet and crooked spines before they reach the military age, we shall have to make some arrangements, as every one of the advanced countries of Europe has done, for providing material as well as intellectual food in the schools. We shall have to employ school physicians on full time, and pay them enough to compensate men of eminence for the loss of private practice. We shall also have to see that the children are not sacrificed to the ignorance or poverty of their parents before they reach school age. But to preserve their eyesight it is only necessary to place Snellen test cards in every school classroom and see that the children read them every day. With this simple system of eye education beginning in the kindergarten and extending through the whole educational process up to the university and the professional school, it would soon be found that the young men of the country, on arrival at the military age, were practically free from eye defects.

But some years must elapse before this happy result can be achieved; and all eyes, moreover, no matter how good their vision, are benefited by the daily practice of the art of seeing, while by such practice those visual lapses to which every eye is subject, and which are particularly dangerous in military and naval operations, are either prevented or minimized. Therefore a system of eye

education for training camps and the front should also be provided. For this purpose the method used in the schools could be modified.

Under conditions of actual warfare, or on the parade grounds of training camps, a Snellen test card might be impracticable, but there are other letters, or small objects, on the uniforms, on the guns, on the wagons, or elsewhere, which would serve the purpose equally well.

Letters or objects which require a vision of 20/20 should be selected by some one who has been taught what 20/20 means, and the men should be required to regard these letters or objects twice a day. After reading the letters they should be directed to cover their closed eyes with the palms of their hands to shut out all the light, and remember some color, preferably black, as well as they are able to see it, for half a minute. Then they should read the letters again and note any improvement in vision. The whole procedure would not take more than a minute. It should be made part of the regular drill, night and morning, and men with imperfect sight

No Soldier Should Wear Glasses

should be encouraged to repeat it as many times a day as convenient. They will need no urging: for imperfect vision is a bar to advancement and excludes from the favorite branch of the service, namely, aviation.

In each regiment every ten men should be under the supervision of one man who understands the method, and who must possess normal vision without glasses. He should carry a pocket test card, consisting of a few of the smaller letters, and should test the vision of the men at the beginning of the training, and thereafter at intervals of three months, reporting the results to the medical officer in charge.

Since errors of refraction are curable, no soldier should be allowed to wear glasses; but if the use of these aids to vision is permitted, the men wearing them should not be required to take part in the eye drills, as the method will do them no good under these conditions. When they see the benefits of eye education, however, they may wish to share them and will, no doubt, be willing to submit to the inconvenience resulting, temporarily, from going without their glasses.

In military colleges the same method could be used as in the schools; but a daily eye drill should also form part of the maneuvers on the parade ground, so that the students may be prepared to use it later in training camps or at the front.

To aviators, whether engaged in military or civilian operations, or whether they are flying merely for pleasure, eye education is of particular importance. Accidents to aviators, otherwise unaccountable, are easily explained when one understands how dependent the aviator is upon his eyesight, and how easily perfect vision may be lost amid the unaccustomed surroundings, the dangers and hardships of the upper air. It was formerly supposed that aviators maintained their equilibrium in the air by the aid of the internal ear; but it is now becoming evident from the testimony of aviators who have found themselves emerging from a cloud with one wing down, or even with their machines turned completely upside down, that equilibrium is maintained almost entirely, if not altogether, by the sense of sight. 1 If the aviator loses his sight, therefore, he is lost, and we have one of those "unaccountable" accidents which, during the war, were so unhappily common in the air service. All aviators, therefore, should make a daily practice of reading small, familiar letters, or observing other small, familiar objects, at a distance of ten feet or more. In addition, they should have a few small letters, or a single letter, on their machines, at a distance of five, ten, or more feet from their eyes, arrangements being made to illuminate them for night flying and fogs, and should read them frequently while in the air. This would greatly lessen the danger of visual lapses with their accompanying loss of equilibrium and judgment.

As has already been pointed out, eye education not only improves the sight, but affords a means by which pain, fatigue, the symptoms of disease and other discomforts can be relieved. For this latter purpose it is of the greatest value to soldiers and sailors; and if, during the recent war, they had only understood the simple and always available method of relieving pain by the aid of the memory, not only much suffering, but many deaths from the destructive effects of pain upon the body might

have been prevented. A soldier in a flooded trench, if he can remember black perfectly, will know the temperature of

1 Anderson: Lancet, March 16, 1918, p. 398: Hucks: Scientific American, October 6,1917, 0. 263

Palming Instead of Morphine

the water, but will not suffer from cold. Under the same conditions he may succumb from weakness on the march, but will not feel fatigue. He may die of hemorrhage, but he will die painlessly. It will not be necessary to give him morphine to relieve his pain; and thus to the dangers of the battlefields will not be added the danger of returning to civil life under the handicap of a lifelong morphine habit.

This danger, there is reason to believe, assumed enormous proportions during the war. The Germans used a bullet which broke when it struck the bone and caused intense pain. The men often died of this pain before help arrived. Whey they were rescued the surgeons at once gave them morphine. A few hours later the injection was probably repeated. Then the drug was given less frequently, but in many cases it was not discontinued entirely while the man was in the hospital. A Red Cross surgeon at a meeting of the New York County Medical Society stated that he had been responsible for producing the morphine habit in thousands of soldiers, and that every physician at the front had done the same. By such a simple method as palming all this might have been prevented.

If we are going to have universal military and naval training, an essential part of that training should be the instruction of the prospective soldiers and sailors in the art of relieving their own pain; and in the event of war every one who goes to the front, in whatever capacity, from the generals and admirals down to the ambulance drivers, should understand palming. Everyone in the war zone, no matter how far behind the lines, may need this knowledge to relieve his own pain, and everyone may need it to relieve the pain of others.

CHAPTER XXXI

LETTERS FROM PATIENTS

The following letters have been selected almost at random from the author's mail-bag, and are only specimens of many more that are equally interesting. They are published because it was felt that the personal stories of patients, told in their own language, might be more interesting and helpful to many readers than the more formal presentation of the facts in the preceding chapters.

ARMY OFFICER CURES HIMSELF

AS noted in the chapter on "What Glasses Do to Us," the sight always improves when glasses are discarded, though this improvement may be so slight as not to be noticed. In a few unusual cases, the patients when freed from the handicap of a condition which compels them to keep their eyes continually under a strain, find out, in some way, how to avoid strain, and thus regain a greater or less degree of their normal visual power. The writer of the following letter was able, without any help from anyone, to discover and put into practice the main principles presented in this book, and thus became able to read without his glasses. He is an engineer, and at the time the letter was written was fifty-one years of age. He had worn glasses since 1896, first for astigmatism, getting stronger ones every couple of years, and then for astigmatism and presbyopia. At one time he asked his oculist and several opticians if the eyes could not be strengthened by exercises, so as to

Glasses at the Front

make glasses unnecessary, but they said: "No. Once started on glasses you must keep to them." When the war broke out he was very nearly disqualified for service in the Expeditionary Forces by his eyes, but managed to pass the required tests, after which he was ordered abroad as an officer in the Gas Service. While there he saw in the "Literary Digest" of May 2, 1918, a reference to my method of curing defective eyesight without glasses, and on May 11 he wrote to me in part as follows:

"At the front I found glasses a horrible nuisance, and they could not be worn with gas masks. After I had been about six months abroad I asked an officer of the Medical Corps about going without glasses. He said I was right in my ideas and told me to try it. The first week was awful, but I persisted and only wore glasses for reading and writing. I stopped smoking at the same time to make it easier on my nerves.

"I brought to France two pairs of bow spectacles and two extra lenses for repairs. I have just removed the extra piece for near vision from these extra lenses and had them mounted as pince-nez, with shur-on mounts, to use for reading and writing, so that the only glasses I now use are for astigmatism, the age lens being off. Three months ago I could not read ordinary head-line type in newspapers without glasses. To-day, with a good light, I can read ordinary book type, held at a distance of eighteen inches from my eyes. Since the first week in February, when I discarded my glasses, I have had no headaches, stomach trouble, or dizziness, and am in good health generally. My eyes are coming back, and I believe it is due to sticking it out. I ride considerably in automobiles and trams, and somehow the idea has crept into my mind that after every trip my eyes are stronger. This, I think, is due to the rapid changing of focus in viewing scenery going by so fast. Other men have tried this plan on my advice, but gave it up after two or three days. Yet, from what they say, I believe they were not so uncomfortable as I was for a week or ten days. I believe most people wear glasses because they 'coddle* their eyes."

The patient was right in thinking that the motor and tram rides improved his sight. The rapid motion compelled rapid shifting.

A TEACHER'S EXPERIENCES

It has frequently been pointed out in this book that imperfect vision is always associated with an abnormal state of the mind, and that when the vision improves the mental faculties improve also, to a greater or lesser degree. The following letter is a striking illustration of this fact. The writer, a teacher forty years of age, was first treated on March 28, 1919. She was wearing the following glasses: right eye, convex 0.75D.S. with convex 4.00D.C., 105 deg.; left eye, convex 0.75D.S. with convex 3.50D.C., 105 deg. On June 9, 1919, she wrote:

"I will tell you about my eyes, but first let me tell you other things. You were the first to unfold your theories to me, and I found them good immediately - that is, I was favorably impressed from the start. I did not take up the cure because other people recommended it, but because I was convinced : first, that you believed in your discovery yourself ; second, that your theory of the cause of eye trouble was true. I don't know how I knew these two things, but I did. After a little conversation with you, you and your discovery both seemed to me to bear

Enjoys Her Sight

the ear-marks of the genuine article. As to the success of the method with myself I had a little doubt. You might cure others, but you might not be able to cure me. However, I took the plunge, and it has made a great change in me and my life.

"To begin with, I enjoy my sight. I love to look at things, to examine them in a leisurely, thorough way, much as a child examines things. I never realized it at the time, but it was irksome for me to look at things when I was wearing glasses, and I did as little of it as possible. The other day, going down on the Sandy Hook boat, I enjoyed a most wonderful sky without that hateful barrier of misted glasses, and I am positive I distinguished delicate shades of color that I never would have been able to see, even with clear glasses. Things seem to me now to have more form, more reality, than when I wore glasses. Looking into the mirror you see a solid representation on a flat surface, and the flat glass can't show you anything really solid. My eyeglasses, of course, never gave me this impression, but one curiously like it. I can see so clearly without them that it is like looking around corners without changing the position. I feel that I can almost do it.

"I very seldom have occasion to palm. Once in a great while I feel the necessity of it. The same with remembering a period. Nothing else is ever necessary. I seldom think of my eyes, but at times it is borne in upon me how much I do use and enjoy using them.

"My nerves are much better. I am more equable, have more poise, I am less shy. I never used to show that I was shy, or lacked confidence. I used to go ahead and do what was required, if not without hesitation; but it was hard. Now I find it easy. Glasses, or poor sight rather, made me self-conscious. It certainly is a great defect, and one people are sensitive to without realizing it. I mean the poor sight and the necessity for wearing glasses. I put on a pair of glasses the other day just for an experiment, and I found that they magnified things. My skin looked as if under a magnifying glass. Things seemed too near. The articles on my chiffonier looked so close I felt like pushing them away from me. The glasses I especially wanted to push away. They brought irritation at once. I took them off and felt peaceful. Things looked normal.

"From the beginning of the treatment I could use my eyes pretty well, but they used to tire. I remember making a large Liberty Loan poster two weeks after I took off my glasses, and I was amazed to find I could make the whole layout almost perfectly without a ruler, just as well as with my glasses. When I came to true it up with the ruler I found only the last row of letters a bit out of line at the very end. I couldn't have done better with glasses. However, this wasn't fine work. About the same time I sewed a hem at night in a black dress, using a fine needle. I suffered a little for this, but not much. I used to practice my exercises at that time, and palm faithfully. Now I don't have to practice, or palm; I feel no discomfort, and I am absolutely unsparing in my use of my eyes. I do everything I want to with them. I shirk nothing, pass up no opportunity of using them. From the first I did all my school work, read every notice, wrote all that was necessary, neglected nothing.

"Now to sum up the school end of it: I used to get headaches at the end of the month from adding columns of figures necessary to reports, etc. Now I do not get them. I used to get flustered when people came into my room.

Central Fixation of the Mind

Now I do not ; I welcome them. It is a pleasant change to feel this way. And - I suppose this is most important really, though I think of it last - I teach better. I know how to get at the mind and how to make the children see things in perspective. I gave a lesson on the horizontal cylinder recently, which, you know, is not a thrillingly interesting subject, and it was a remarkable lesson in its results and in the grip it got on every girl in the room, stupid or bright. What you have taught me makes me use the memory and imagination more, especially the latter, in teaching.

"To sum up the effect of being cured upon my own mind : I am more direct, more definite, less diffused, less vague. In short, I am conscious of being better centered. It is central fixation of the mind. I saw this in your latest paper, but I realized it long ago and knew what to call it."

A MENTAL TRANSITION

A man of forty-four who had worn glasses since the age of twenty was first seen on October 8, 1917, when he was suffering, not only from very imperfect sight, but from headache and discomfort. He was wearing for the right eye concave 5.00D.S. with concave 0.50D.C., 180 degrees, and for the left concave 2.50D.S. with concave 1.50D.C., 180 degrees. As his visits were not very frequent and he often went back to his glasses, his progress was slow. But his pain and discomfort were relieved very quickly, and almost from the beginning he had flashes of greatly improved and even of normal vision. This encouraged him to continue, and his progress, though slow, was steady. He has now gone without his glasses entirely for some months, and his nervous condition has improved as much as his sight. His wife was particularly impressed with the latter effect, and in December, 1919, she wrote:

"I have become very much interested in the thought of renewing my youth by becoming like a little child. The idea of the mental transition is not unfamiliar, but that this mental, or I should say spiritual, transition should produce a physical effect, which would lead to seeing clearly, is a sort of miracle very possible indeed, I should suppose, to those who have faith.

"In my husband's case, certainly some such miracle was wrought; for not only was he able to lay aside his spectacles after many years' constant use, and to see to read in almost any light, but I particularly noticed his serenity of mind after treatments. In this serenity he seemed able to do a great deal of work efficiently, and not under the high nervous pressure whose after-effect is the devastating scattering of forces.

"It did not occur to me for a long time that perhaps your treatment was quieting his nerves. But I think now that the quiet periods of relaxation, two or three times a day, during which he practiced with the letter card, must have had a very beneficial effect. He is so enthusiastic by nature, and his nerves are so easily stimulated, that for years he used to overdo periodically. Of course, his greatly improved eyesight and the relief from the former strain must have been a large factor in this improvement. But I am inclined to think that the intervals of quiet and peace were wonderfully beneficial, and why shouldn't they be? We are living on stimulants, physical stimulants, mental stimulants of all kinds. The minute these stop we feel we are merely existing, and yet, if we retain any of the normality of our youth, do you not think that we respond very happily to natural simple things?"

Relaxation Versus Glasses

RELIEF AFTER TWENTY-FIVE YEARS

While many persons are benefited by the accepted methods of treating defects of vision, there is a minority of cases, known to every eye specialist, which gets little or no help from them. These patients sometimes give up the search for relief in despair, and sometimes continue it with surprising pertinacity, never being able to abandon the belief, in spite of the testimony of experience, that somewhere in the world there must be some one with sufficient skill to fit them with the right glasses. The rapidity with which these patients respond to treatment by relaxation is often very dramatic, and affords a startling illustration of the superiority of this method to treatment by glasses and muscle-cutting. In the following case relaxation did in twenty-four hours what the old methods, as practiced by a succession of eminent specialists, could not do in twenty-five years.

The patient was a man of forty-nine, and his imperfect sight was accompanied by continual pain and misery, culminating twenty years before I saw him, in a complete nervous breakdown. As he was a writer, dependent upon his pen for a living, his condition was a serious economic handicap, and he consulted many specialists in the vain hope of obtaining relief. Glasses did little either to improve his sight, or to relieve his discomfort, and the eye specialists talked vaguely about disease of the optic nerve and brain as a possible cause of his troubles. The nerve specialists, however, were unable to do anything to relieve him. One specialist diagnosed his case as muscular, and gave him prisms, which helped him a little. Later, the same specialist, finding that all of the apparent muscular trouble was not corrected by glasses, cut the external muscles of both eyes. This also brought some relief, but not much. At the age of twenty-nine the patient suffered the nervous breakdown already mentioned. For this he was treated unsuccessfully by various specialists, and for nine years he was compelled to live out of doors. This life, although it benefited him, failed to restore his health, and when he came to me on September 13, 1919, he was still suffering from neurasthenia. His distant vision was less than 20/40, and could not be improved by glasses. He was able to read with glasses, but could not do so without discomfort. I could find no symptom of disease of the brain or of the interior of the eye. When he tried to palm he saw grey and yellow instead of black ; but he was able to rest his eyes simply by closing them, and by this means alone he became able, in twenty-four hours, to read diamond type and to make out most of the letters on the twenty line of the test card at twenty feet. At the same time his discomfort was materially relieved. He was under treatment for about six weeks, and on October 25 he wrote as follows :

"I saw you last on October 6, and at the end of the week, the 11th, I started off on a ten-day motor trip as one of the officials of the Cavalry Endurance Test for horses. The last touch of eyestrain which affected me nervously at all I experienced on the 8th and 9th. On the trip, though I averaged but five hours' sleep, rode all day in an open motor without goggles and wrote reports at night by bad lights, I had no trouble. After the third day the universal slow swing seemed to establish itself, and I have never had a moment's discomfort since. I stood fatigue and excitement better than I have ever

Out of the Woods

done, and went with less sleep. My practicing on the trip was necessarily somewhat curtailed, yet there was noticeable improvement in my vision. Since returning I have spent a couple of hours a day in practice, and have at the same time done a lot of writing.

"Yesterday, the 24th, I made a test with diamond type, and found that after twenty minutes' practice I could get the lines distinct, and make out the capital letters and bits of the text at a scant three inches. At seven I could read it readily, though I could not see it perfectly. This was by an average daylight - no sun. In a good daylight I can read the newspaper almost perfectly at a normal reading distance, say fifteen inches.

"I feel now that I am really out of the woods. I have done night work without suffering for it, a thing I have not done in twenty-five years, and I have worked steadily for more hours than I have been able to work at a time since my breakdown in 1899, all without sense of strain or nervous fatigue. You can imagine my gratitude to you. Not only for my own sake, but for yours, I shall leave no stone unturned to make the cure complete and get back the child eyes which seem perfectly possible in the light of the progress I have made in eight weeks."

SEEKING A MYOPIA CURE

In spite of the emphasis with which the medical profession denies the possibility of curing errors of refraction, there are many lay persons who refuse to believe that they are incurable. The author of the following statement represents a considerable class, and was remarkable only in the persistency with which he searched for relief. He was first seen on June 27, 1919, at which time he was thirty-two years of age. He was wearing concave 2.50D.S. for each eye, and his vision in each eye was 20/100. After he had obtained almost normal vision he wrote the following account of his experiences for "Better Eyesight" :

"When the 'Lusitania' was sunk I knew that the United States was going to get into trouble, and I wanted to be in a position to join the Army. But I was suffering from a high degree of myopia, and I knew they wouldn't take me with glasses. Later on they took almost anyone who wasn't blind, but at that time I couldn't possibly have measured up to the standard. So I began to look about for a cure. I tried osteopathy, but didn't go very far with it. I asked the optician who had been fitting me with glasses for advice, but he said that myopia was incurable. I dismissed the matter for a time, but I didn't stop thinking about it. I am a farmer, and I knew from the experience of outdoor life that health is the normal condition of living beings. I knew that when health is lost it can often be regained. I knew that when I first tried to lift a barrel of apples onto a wagon I could not do so, but that after a little practice I became able to do it easily, and I did not see why, if one part of the body could be strengthened by exercise, others could not be strengthened also. I could remember a time when I was not myopic, and it seemed to me that if a normal eye could become myopic, it ought to be possible for a myopic eye to regain normality. After a while I went back to the optician and told him that I was convinced that there must be some cure for my condition. He replied that this was quite impossible, as everyone knew that myopia was incurable. The assurance with which he made this statement had an effect upon me quite the opposite of what he intended, for when he said that the cure of

It Ought To Be Possible

myopia was impossible I knew that it was not, and I resolved never to give up the search for a cure until I found it. Shortly after I had the good fortune to hear of Dr. Bates, and lost no time in going to see him. At the first visit I was able, just by closing and resting my eyes, to improve my sight considerably for the Snellen test card, and after a few months of intermittent treatment I became able to read 20/10 - in flashes. I am still improving, and when I can see a little better I mean to go back to that optician and tell him what I think of his ophthalmological learning."

FACTS VERSUS THEORIES

Reading fine print is commonly supposed to be an extremely dangerous practice, and reading print of any kind upon a moving vehicle is thought to be even worse. Looking away to the distance, however, and not seeing anything in particular is believed to be very beneficial to the eyes. In the light of these superstitions, the facts contained in the following letter are particularly interesting :

"On reaching home Monday morning I was surprised and pleased at the comments of my family regarding the appearance of my eyes. They all thought they looked so much brighter and rested, and that after two days of railroading. I didn't spare my eyes in the least on the way home. I read magazines and newspapers, looked at the scenery; in fact, used my eyes all the time. My sight for the near-point is splendid. Can read for hours without tiring my eyes. ... I went downtown today and my eyes were very tired when I got home. The fine print on the card [diamond type] helps me so... I would like to have your little Bible [a photographic reduction of the Bible with type much smaller than diamond]. I'm sure the very fine print has a soothing effect on one's eyes, regardless of what my previous ideas on the subject were."

It will be observed that the eyes of this patient were not tired by her two days' railroad journey, during which she read constantly; they were not tired by hours of reading after her return ; they were rested by reading extremely fine print; but they were very much tired by a trip downtown during which they were not called upon to focus upon small objects. Later a leaf from the Bible was sent to her, and she wrote:

"The effect even of the first effort to read it was wonderful. If you will believe it, I haven't been troubled having my eyes feel 'crossed' since, and while my actual vision does not seem to be any better, my eyes feel a great deal better."

CURED WITHOUT PERSONAL ASSISTANCE

I am constantly hearing of patients who have been able to improve their sight by the aid of information contained in my publications, without personal assistance. The writer of the following letter, a physician, is a remarkable example of these cases, as he was able not only to cure himself, but to relieve some very serious cases of defective vision among his patients.

"I first tried central fixation on myself and had marvelous results. I threw away my glasses and can now see better than I have ever done. I read very fine type (smaller than newspaper type) at a distance of six inches from the eyes, and can run it out at full arm's length and still read it without blurring the type.

Cataract Relieved

"I have instructed some of my patients in your methods, and all are getting results. One case who has a partial cataract of the left eye could not see anything on the Snellen test card at twenty feet, and could see the letters only faintly at ten feet. Now she can read 20/10 with both eyes together, and also with each eye separately; but the left eye seems, as she says, to be looking through a little fog. I could cite many other cases that have been benefited by central fixation, but this one is the most interesting to me."

CHAPTER XXXII
REASON AND AUTHORITY

SOME one - perhaps it was Bacon - has said: "You cannot by reasoning correct a man of ill opinion which by reasoning he never acquired." He might have gone a step further and stated that neither by reasoning, nor by actual demonstration of the facts, can you convince some people that an opinion which they have accepted on authority is wrong.

A man whose name I do not care to mention, a professor of ophthalmology, and a writer of books well known in this country and in Europe, saw me perform the experiment illustrated on Page 40, (Accommodation: Experiments on Animals) an experiment which, according to others who witnessed

it, demonstrates beyond any possibility of error that the lens is not a factor in accommodation. At each step of the operation he testified to the facts; yet at the conclusion he preferred to discredit the evidence of his senses rather than accept the only conclusion that these facts admitted.

First he examined the eye of the animal to be experimented upon, with the retinoscope, and found it normal, and the fact was written down. Then the eye was stimulated with electricity, and he testified that it accommodated. This was also written down. I now divided the superior oblique muscle, and the eye was again stimulated with electricity. The doctor observed the eye with the retinoscope when this was being done and said: "You failed to produce accommodation." This fact, too, was written down. The doctor now used the electrode himself, but again failed to observe accommodation, and

Discredited His Own Observations

these facts were written down. I now sewed the cut ends of the muscle together, and once more stimulated the eye with electricity. The doctor said, "Now you have succeeded in producing accommodation," and this was written down. I now asked:

"Do you think that superior oblique had anything to do with producing accommodation?"
"Certainly not," he replied.
"Why?" I asked.
"Well," he said, "I have only the testimony of the retinoscope; I am getting on in years, and I don't feel that confidence in my ability to use the retinoscope that I once had. I would rather you wouldn't quote me on this."

While the operation was in progress, however, he gave no indication whatever of doubting his ability to use the retinoscope. He was very positive, in fact, that I had failed to produce accommodation after the cutting of the oblique muscle, and his tone suggested that he considered the failure ignominious. It was only after he found himself in a logical trap, with no way out except by discrediting his own observations, that he appeared to have any doubts as to their value.

Patients whom I have cured of various errors of refraction have frequently returned to specialists who had prescribed glasses for them, and, by reading fine print and the Snellen test card with normal vision, have demonstrated the fact that they were cured, without in any way shaking the faith of these practitioners in the doctrine that such cures are impossible.

The patient with progressive myopia whose case was mentioned in Chapter XV returned after her cure to the specialist who had prescribed her glasses, and who had said not only that there was no hope of improvement, but that the condition would probably progress until it ended in blindness, to tell him the good news which, as an old friend of her family, she felt he had a right to hear. But while he was unable to deny that her vision was, in fact, normal without glasses, he said it was impossible that she should have been cured of myopia, because myopia was incurable. How he reconciled this statement with his former patient's condition he was unable to make clear to her.

A lady with compound myopic astigmatism suffered from almost constant headaches which were very much worse when she took her glasses off. The theatre and the movies caused her so much discomfort that she feared to indulge in these recreations. She was told to take off her glasses and advised, among other things, to go to the movies ; to look first at the corner of the screen, then off to the dark, then back to the screen a little nearer to the center, and so forth. She did so, and soon became able to look directly at the pictures without discomfort. After that nothing troubled her. One day she called on her former ophthalmological adviser, in the company of a friend who wanted to have her glasses changed, and told him of her cure. The facts seemed to make no impression on him whatever. He only laughed and said, "I guess Dr. Bates is more popular with you than I am."

Sometimes patients themselves, after they are cured, allow themselves to be convinced that it was impossible that such a thing could have happened, and go back to their glasses. This happened in the case of a patient already mentioned in the chapter on "Presbyopia," who was cured in fifteen minutes by the aid of his imagination. He was very grateful for a time, and then he began to talk to eye specialists whom he knew and straightway grew skeptical as to the value of what I had done for him.

Discredited His Own Experience

One day I met him at the home of a mutual friend, and in the presence of a number of other people he accused me of having hypnotized him, adding that to hypnotize a patient without his knowledge or consent was to do him a grievous wrong. Some of the listeners protested that whether I had hypnotized him or not, I had not only done him no harm but had greatly benefited him, and he ought to forgive me. He was unable, however, to take this view of the matter. Later he called on a prominent eye specialist who told him that the presbyopia and astigmatism from which he had suffered were incurable, and that if he persisted in going without his glasses he might do himself great harm. The fact that his sight was perfect for the distance and the near-point without glasses had no effect upon the specialist, and the patient allowed himself to be frightened into disregarding it also. He went back to his glasses, and so far as I know has been wearing them ever since. The story obtained wide publicity, for the man had a large circle of friends and acquaintances; and if I had destroyed his sight I could scarcely have suffered more than I did for curing him.

Fifteen or twenty years ago the specialist mentioned in the foregoing story read a paper on cataract at a meeting of the ophthalmological section of the American Medical Association in Atlantic City, and asserted that anyone who said that cataract could be cured without the knife was a quack. At that time I was assistant surgeon at the New York Eye and Ear Infirmary, and it happened that I had been collecting statistics of the spontaneous cure of cataract at the request of the executive surgeon of this institution, Dr. Henry G. Noyes, Professor of Ophthalmology at the Bellevue Hospital Medical School. As a result of my inquiry, I had secured records of a large numher of cases which had recovered, not only without the knife, but without any treatment at all. I also had records of cases which I had sent to Dr. James E. Kelly of New York and which he had cured, largely by hygienic methods. Dr. Kelly is not a quack, and at that time was Professor of Anatomy in the New York Post Graduate Medical School and Hospital and attending surgeon to a large city hospital. In the five minutes allotted to those who wished to discuss the paper, I was able to tell the audience enough about these cases to make them want to hear more. My time was, therefore, extended, first to half an hour and then to an hour. Later both Dr. Kelly and myself received many letters from men in different parts of the country who had tried his treatment with success. The man who wrote the paper had blundered, but he did not lose any prestige because of my attack, with facts upon his theories. He is still a prominent and honored ophthalmologist, and in his latest book he gives no hint of having ever heard of any successful method of treating cataract other than by operation. He was not convinced by my record of spontaneous cures, nor by Dr. Kelly’s record of cures by treatment; and while a few men were sufficiently impressed to try the treatment recommended, and while they obtained satisfactory results, the facts made no impression upon the profession as a whole, and did not modify the teaching of the schools. That spontaneous cures of cataract do sometimes occur cannot be denied; but they are supposed to be very rare, and any one who suggests that the condition can be cured by treatment still exposes himself to the suspicion of being a quack.

Between 1886 and 1891 I was a lecturer at the Post- Graduate Hospital and Medical School. The head of the institution was Dr. D. B. St. John Roosa. He was the

Man Not a Reasoning Being

author of many books, and was honored and respected by the whole medical profession. At the school they had got the habit of putting glasses on the nearsighted doctors, and I had got the habit of curing them without glasses. It was naturally annoying to a man who had put glasses on a student to have him appear at a lecture without them and say that Dr. Bates had cured him. Dr. Roosa found it particularly annoying, and the trouble reached a climax one evening at the annual banquet of the faculty when, in the presence of one hundred and fifty doctors, he suddenly poured out the vials of his wrath upon my head. He said that I was injuring the reputation of the Post Graduate by claiming to cure myopia. Every one knew that Donders said it was incurable, and I had no right to claim that I knew more than Donders. I reminded him that some of the men I had cured had been fitted with glasses by himself. He replied that if he had said they had myopia he had made a mistake. I suggested further investigation. “Fit some more doctors with glasses for myopia,” I said, “and I will cure them. It is easy for you to examine them afterwards and see if the cure is genuine.” This method did not appeal to him, however. He repeated that it was impossible to cure

myopia, and to prove that it was impossible he expelled me from the Post Graduate, even the privilege of resignation being denied to me.

The fact is that, except in rare cases, man is not a reasoning being. He is dominated by authority, and when the facts are not in accord with the view imposed by authority, so much the worse for the facts. They may, and indeed must, win in the long run; but in the meantime the world gropes needlessly in darkness and endures much suffering that might have been avoided.

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Medical Articles

By

Ophthalmologist William H. Bates M.D.



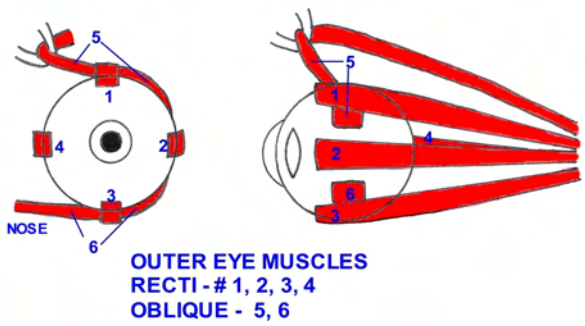
Ophthalmologist
William H. Bates

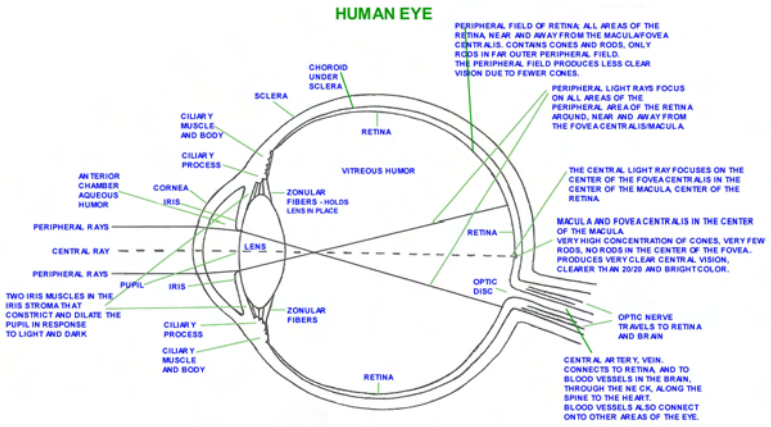
Dr. William H. Bates discovered Natural Eyesight Improvement 'The Bates Method'.
His Experiments prove that tension in the outer eye muscles (oblique and Recti) disrupt/change the shape of the eye, focus of light rays in the eye resulting in: unclear close and distant vision, astigmatism, crossed, wandering eyes, cataract and other abnormal eye conditions.

He proved that the outer eye muscles (oblique) can change the shape of the eye to produce clear close and distant vision. Mental, emotional, visual strain, tension is a main cause of outer eye muscle tension and blur.

Dr. Bates proved that relaxation of the outer eye muscles, mind results in a return of the eye to normal shape with correct focus of light rays in the eyes, on the retina, clear vision at all distances, removal of astigmatism and other eye problems, keeps the eyes healthy, normal circulation and eye pressure, correct function of the optic and other nerves, eye muscles: outer (oblique, recti and muscles for blinking, tears...) and inner (ciliary, iris muscles near and attached to the lens), perfect: convergence, accommodation for clear close vision, divergence, un-accommodation for clear distant vision, shifting eye movement, central fixation, function of the retina, lens, brain, entire visual system.

Dr. Bates older articles were based on the beliefs of most Ophthalmologists. As Dr. Bates treated patients, performed experiments on the eyes, eye muscles, he changed his view on accommodation and other eye functions resulting in natural eye/vision treatment without eyeglasses, surgery, drugs.





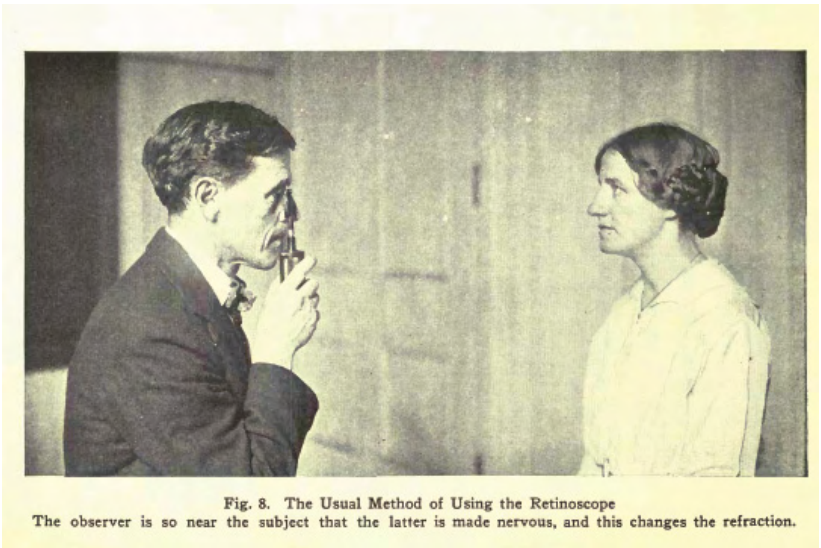


Fig. 8. The Usual Method of Using the Retinoscope
The observer is so near the subject that the latter is made nervous, and this changes the refraction.

Glasses are often prescribed unnecessarily or 'too strong' (over-corrected) due to temporary nervousness, pressure to hurry, limited eye, head, neck, body movement during an eye exam. Eye doctors also prefer to prescribe an 'extra strength' to the eyeglass lenses. All eyeglasses, especially strong eyeglass lenses cause fast, increased vision impairment and prescriptions for stronger lenses.

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Do It Yourself – Natural Eyesight Improvement

Clearsight Publishing and www.cleareyesight.info preserves Ophthalmologist Bates work, free and low cost to the public.

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Fig. 43

Patient with atrophy of the optic nerve gets flashes of improved vision after palming.



Fig. 39. A Family Group Strikingly Illustrating the Effect of the Mind Upon the Vision

No. 1.—Girl of four with normal eyes. No. 2.—The child's mother with myopia. No. 3—The same girl at nine with myopia. Note that her expression has completely changed, and is now exactly like her mother's. Nos. 4, 5 and 6.—The girl's brother at two, six and eight. His eyes are normal in all three pictures. The girl has either inherited her mother's disposition to take things hard, or has been injuriously effected by her personality of strain. The boy has escaped both influences. In view of the prevailing theories about the relation of heredity to myopia, this picture is particularly interesting.

Pictures are from Dr. Bates original book; 'The Cure Of Imperfect Sight By Treatment Without Glasses.'

A NEW OPERATION FOR THE ALLEVIATION OF PERSISTENT DEAFNESS

BY W. H. BATES, M.D
NEW YORK

Medical Journal, January 23, 1886

Many cases of deafness are not benefited by thorough catarrhal treatment, inflation of the middle ear, the use of Siegle's otoscope, an artificial opening in the drum-membrane, division of the tensor tympani, etc. I desire to call the attention of the profession to an operation which has benefited a number of these obstinate cases.

The operation consisted in puncturing or incising the drum-membrane in from five to ten different places. Simple punctures were made, or the drum-membrane was slit in various directions. The operation was repeated as soon as the openings in the drum-membrane had healed. The size and freedom of the incisions must be determined after the first operation for each case.

For the operation I employed a Graefe cataract-knife with a long shank. It is important that the knife be *sharp*, and to make this certain I often used a freshly sharpened knife for each puncture. Pain was avoided by this precaution. A dull knife, or the paracentesis instruments sold in the shops, caused more pain than the patients could bear.

Cocaine was not necessary when the knife-blade was in proper condition, and this remedy would not prevent pain when the knife was dull.

The result of this operation is to leave a number of cicatrices in the drum-membrane; the subsequent contraction of these producing a tension by which the membrane is drawn out. The membrane frees itself from adhesions in this manner, and in many cases loosens the anchylosed ossicles. The various benefits of paracentesis, as formerly employed, are not only obtained but much increased. It is not an improvement the result of a perforation of the drummembrane alone, which, as is well known, is often doubtful and transitory, but the subsequent healing, of the openings is part of an improving process. The operation, suggested by that of paracentesis, differs from it in the simultaneous number and extent of the incisions, as well as in the purpose for which it is resorted to, and in the immediate and subsequent results.

CASE I.—J. M—, aged fourteen, resident of Boston, presented himself at my office, July 8, 1885. Deaf in right ear since childhood. Has had measles, scarlet fever, and cerebro-spinal meningitis. Has been seen and treated by specialists in Boston. Examination: Drum-membrane depressed, thickened, congested, adherent to the promontory from chronic catarrh of the middle ear, Eustachian tubes congested. Hearing distance for snapping of finger-nails, two inches. Hears no conversation, whisper, or watch. Inflated readily. Hearing distance not improved by inflation.

July 18th.—Thorough treatment of the catarrh with inflation of the middle ear had improved the hearing distance at the outset, but this limited improvement was again lost. In view of the etiology of the ear trouble, and still further from the unsatisfactory result of the routine treatment, and the apparent hopelessness of these cases, even in hands more skilled than mine, I was much discouraged. I then determined to make a paracentesis, but one more general than usual.

July 19th.—I made three incisions in the drum-membrane.

July 20th.—My patient heard better; and on examining the drum-membrane I found my punctures healed, and, while the membrane seemed less congested, it also appeared a little less depressed. With nothing to lose, and perhaps something to gain, I now made bold to make six free incisions into the membrane, hoping for a possible continuation of the improvement. These incisions healed over as rapidly as before; and, on the succeeding days, each day found the hearing improved, with an apparent diminishing depression in the membrane. It now occurred to me that the wounds in healing seemed to draw upon the membrane, and that the cicatrices were acting as elevators.

On July 25th, the membrane having healed, I made a single, but very large incision into the drum, and then proposed to await developments. Daily the hearing improved, until, on August 10th, I found the drum-membrane was healed. Examination revealed that the hearing distance for the watch in the right ear had risen to 18 inches (the same for the left ear), which under favorable surroundings was ten feet.

The patient was seen and kindly examined by Dr. Pomeroy, who recognized the hearing distance for watch at 18 inches. The patient remained under observation until August 16th; improvement had remained and increased. He now returned to his home out of town.

January 13, 1886.—A written communication of this date informed me that the improvement has persisted.

CASE II.—N. L. J—, male, aged thirty, merchant, native of United States, came under observation at the time that I had met my first encouragement in Case I.

July 21st.—Began treatment. Complained of noises in both ears, and of constant vertigo. Examination revealed no hearing in left ear. In right ear heard snapping of finger-nails at 2 inches. Drum-membranes depressed, thickened, congested, and adherent to the promontory. Made four free incisions in both drums.

Treatment repeated six times, and on August 9th he passed from observation. On this date the tinnitus was much improved, the vertigo had disappeared. Hearing distance in both ears for snapping of finger nails, 6 inches.

Two months later the improvement was reported as continuing.

CASE III.—C. H—, German, aged thirty-four; very nervous man. Complained of noises in both ears. Examined and found to be suffering from chronic catarrh of the middle ear.

October 15th.—Heard watch in right ear, two and one-half inches; nine inches in left ear.

October 16th.—One incision in right drum-membrane.

October 17th.—One incision in right drum-membrane.

October 21st.—No better. Incisions were made in both drum-membranes.

October 29th.—Noise in left ear had stopped entirely. Incision in right drum-membrane.

December 4th.—Noises in right ear a little better. Five incisions were made in the right drum-membrane.

January 11th, 1886.—Incision made in the right drum-membrane.

January 14th.—Three incisions were made in the right drum-membrane.

January 15th.—The noises in the left ear have not returned. The noises in the right ear are very much better, and have stopped occasionally. The hearing is better for conversation. Patient appears less nervous.

The succeeding case presents some features of unusual interest. It was in the person of a *deaf-mute*, who seemed intelligent.

CASE IV.—B. R—, female, aged seventeen; had scarlatina and measles in early infancy, was never able to speak, but appeared observing and intelligent. Is a fairly developed girl. Has been treated three months at one of our public institutions by a most competent specialist without result. Examination revealed chronic catarrh of the middle ear. The drum-membrane was depressed, thickened, congested, adherent to the promontory.

October 3, 1885.—Began treatment. Hearing distance for the snapping of finger-nails four inches for the right ear, one inch for the left ear. Conversation not heard.

October 4th.—Five incisions were made in both drums.

October 6th.—Both drum-membranes healed. Hearing distance improved.

October 7th.—Four incisions in the right drum-membrane, two incisions in the left.

October 8th.—Hears better.

October 9th.—Three incisions in the right drum-membrane.

October 12th.—One incision in the right drum-membrane. Left drum-membrane not healed.

October 14th.—One incision in the right drum-membrane.

October 15th.—Left drum-membrane healed; incised.

October 17th.—Two incisions in the right drum-membrane.

October 19th.—One incision in the right drum-membrane.

October 20th.—Left drum-membrane incised. Hearing lowered immediately after the operation.

October 22d.—Hears snapping of finger-nails two inches with both ears.

October 29th.—Hears snapping of finger-nails six inches with both ears. Five incisions were made in the left drum-membrane; hearing reduced to two inches.

November 1st.—Right drum-membrane healed. Left drum-membrane open. Hears nails with right ear twenty inches; five inches with left ear. Inflation did not improve.

November 26th.—Hears watch half an inch with both ears.

December 7th.—Three incisions were made in the left drum-membrane.

January 6, 1886.—Three incisions made in the right drum-membrane.

January 11th.—Five incisions were made in the left drum-membrane.

January 13th.—Hears watch at least six inches with both ears. Hears conversation and whisper. Since hearing was restored it became necessary to teach patient language, and she is now, under careful tutelage of her guardian, learning the rudiments of speech, her own name, the names of common objects, etc., etc.

With as yet a limited experience and the comparative brief time which has elapsed since I have first performed this operation, its full scope and range has not yet been determined.

That I have benefited some apparently incurable cases, I can, with becoming modesty, honestly contend. In the light of the classical treatment of chronic cases and its frequent failure, this innovation, which has given results as unexpected and satisfactory to me as to the patients, may be fairly presented for future endorsement. To Dr. O. D. Pomeroy I extend most sincere thanks for kind corroboration as to the hearing of some of the above cases. In conclusion, I beg to state that all of the cases have been seen and examined by observers besides myself.

The ears, hearing, balance, coordination function with the eyes, brain, visual system.
Improved ear function, hearing, balance improves the clarity of vision, eye movement.
Improving eye function, clarity of vision often improves hearing.
The sinuses, throat also affects the ears, eyes, hearing, clarity of vision.

MULTIPLE PARACENTESIS OF THE MEMBRANE TYMPANI
BY W. H. BATES, M.D.
LETTERS TO THE EDITOR – 49 WEST FIFTY SEVENTH STREET, MARCH, 1887

IMPROVEMENT IN THE VISION OF MYOPIA BY TREATMENT WITHOUT GLASSES
BY W. H. BATES, M.D.
N. Y. MEDICAL JOURNAL APRI 18, 1891

Letters to the Editor.

MULTIPLE PARACENTESIS OF THE MEMBRANA TYMPANI.

49 WEST FIFTY-SEVENTH STREET, *February 26, 1887.*

To the Editor of the New York Medical Journal:

SIR: Dr. Pomeroy, in his article on "Cases Exhibiting the Results of Multiple Paracentesis of the Drum Membrane on the Hearing in Chronic Aural Catarrh," makes some statements about me which are not justifiable. By giving a history of the operation performed by me I can best explain the assertions made by Dr. Pomeroy.

In July, 1885, I was treating a patient suffering from chronic catarrhal inflammation of the middle ear. At the end of two weeks he was not improving. I had employed the usual methods of treatment, except paracentesis for drainage and ventilation. Knowing that paracentesis was not injurious in itself, even if not beneficial, I tried it, with the faint hope that some benefit might follow. One puncture seemed to do good, and, on my own responsibility, I made [illegible] ones, with the hope of getting more improvement. The patient was markedly improved. I told Dr. Pomeroy, [illegible] previously. I took the patient to his office, and Dr. P[illegible] partly convinced that what I professed to have [illegible]. I asked for a test case from the hospital. [illegible] conditions, a deaf-mute was given me to tr[illegible] at that time that he did not believe I could [illegible] a month's treatment, the deaf-mute w[illegible] then examined the patient, and adm[illegible] was a good one. This was early in Nov[illegible] he became very enthusiastic over the operation, and advocated suitable cases. In my article on the subject, to which Dr. Pomeroy alludes, I thanked him for the personal kindness he had extended to me.

In conclusion, I would add that for a brief time I was the subject of some ridicule for so-called preposterous pretensions, until the proof showed to the contrary.

W. H. BATES, M. D.

IMPROVEMENT IN THE VISION OF MYOPIA BY TREATMENT WITHOUT GLASSES.

By W. H. BATES, M. D.

CASE I.—Frank G., aged eighteen, began treatment March 1, 1888. He had been using a solution of atropine, two grains to an ounce, in both eyes for a week. Pupils dilated *ad maximum*, throat dry, and cheeks flushed. The best vision obtained with both eyes without glasses was $\frac{1}{15}$ the normal. With -4 D. S., vision $\frac{2}{3}$ the normal. Cloudy vitreous.

***Treatment.*—Iron, cod-liver oil, laxatives, counter-irritation over the spine, and the removal of hypertrophies in the nose.**

***March 20, 1888.*—The vision of both eyes without glasses $\frac{1}{2}$ the normal.**

CASE II.—Sam. J., aged eighteen, began treatment March 5, 1888. Vision with both eyes $\frac{1}{15}$ the normal. With -6 D. S., vision normal.

Treatment consisted of atropine in the eyes, iron internally, seton in temples, and nasal treatment.

***March 24, 1888.*—Vision had improved to almost normal without glasses. $\frac{20}{20}$ —.**

CASE III.—Miss A., aged thirty, began treatment December

31, 1887. Vision with both eyes without glasses $\frac{1}{15}$. With — 10 D. S., vision $\frac{2}{3}$ the normal.

Treatment which seemed to improve the vision was the removal of hypertrophies in the nose, tonics, and counter-irritation.

April 10, 1888.—Vision of both eyes $\frac{1}{2}$ the normal without glasses.

Case IV.—Mr. M., aged twenty, began treatment July 2, 1888. Vision with both eyes $\frac{1}{12}$ the normal. Extensive chorioidal changes, and floating bodies in the vitreous. Ordered atropine and iodide of potassium.

July 7, 1888.—Vision without glasses not improved. With — 11 D. S., vision $\frac{1}{2}$.

At different periods the nose was operated upon with only temporary improvement.

Three leeches, applied first to the left temple, and at a later date to the right temple, did not improve the vision.

August 4th.—Vision the same as at the commencement of treatment. Atropine is still used.

The iodide of potassium was stopped and the vision improved. Various methods of counter-irritation over the epigastrium were employed with benefit.

January 2, 1889.—Vision without glasses $\frac{1}{3}$ the normal.

Case V.—Hattie K., aged twenty-four, began treatment June 21, 1888. Vision with both eyes without glasses $\frac{1}{15}$ the normal. With — 5 D. S., vision $\frac{2}{3}$ the normal.

Ordered atropine and iodide of potassium.

July 7, 1888.—Vision without glasses slightly improved.

Treatment of the naso-pharyngeal catarrh was now begun and continued.

August 25th.—Vision of both eyes without glasses $\frac{1}{3}$ the normal.

Case VI.—Louisa H., aged eight, began treatment November 1, 1889. Vision without glasses $\frac{1}{15}$ the normal. Ordered atropine and blue glasses, to stop her studies.

December 7, 1890.—With — 4·5 D. S. ⌒ — 5·5 D. C., vision $\frac{2}{3}$ the normal.

January 17, 1891.—Pupils dilated *ad maximum* by the atropine. Vision of both eyes without glasses $\frac{2}{3}$ the normal.

Case VII.—Nellie K., aged thirteen, began treatment October 31, 1890. Vision of both eyes without glasses $\frac{1}{15}$ the normal. With — 10 D. S. ⌒ — 5·5 D. C., vision $\frac{2}{3}$ the normal. Patient was under atropine until November 16, 1890, when the vision was found to be unimproved with and without the above glasses. Atropine stopped.

Vision was improved by using a solution of bichloride of mercury as an eye wash.

Wearing a pressure bandage at night was beneficial for a time.

Treatment of the nose improved the vision.

A tenotomy of the tendon of the external rectus muscle of the left eye also improved the vision.

Eserine, by contracting the pupil, improved the vision early in the treatment, but made the vision worse when tried February 2, 1891, with the vision without glasses improved to $\frac{2}{3}$ the normal.

March 6, 1891.—Vision without glasses $\frac{2}{3}$ the normal.

Contracting the palpebral fissure (squinting) makes the vision worse.

Conclusions.

1. The vision in many cases of myopia can be improved very much by treatment without glasses, and frequently this improvement is so marked as to render glasses unnecessary.

2. An astigmatism of even 5 D. did not interfere with the good results.

3. The greater the myopia and the older the patient, the longer is the time necessary to obtain the best results.

4. The use of glasses during the treatment must be prohibited.

131 West Fifty-sixth Street.

THE VISION OF A CASE OF MYOPIA IMPROVED BY TREATMENT WITHOUT GLASSES

By W. H. BATES, M.D.

Virginia Medical Monthly Vol. 18. 941-943 - 1892

ART. V.—The Vision of a Case of Myopia Improved by Treatment Without Glasses.

By W. H. BATES, M. D., of New York.

The cure of myopia has long been considered impossible. Helmholtz, von Graefe, Donders, and many other authorities in ophthalmology, make the positive statement that the visual axis of the myopic eye-ball cannot be shortened by treatment. Glasses are usually prescribed to improve the vision of myopia, and the patients are told that nothing else can be done. I wish to call the attention of the profession to the fact that the vision of myopia can be improved very much by treatment without glasses, and that this improvement is often so marked as to render glasses unnecessary.

The indications for treatment vary in different individuals. As a general rule it may be stated that when cocaine applied to the mucous membrane of the nose, produces temporary improvement in the vision, the removal of any abnormality, however slight at that point, will produce permanent improvement in the vision. The converse of this proposition is also true.

Again, when a pressure eye bandage produces temporary improvement in the vision, permanent and greater benefit

may be expected after its use for a variable length of time. Sometimes the pressure bandage is injurious. Atropine is beneficial in some cases, and injurious in others. In general, all methods of treament should be tentative, and the progress of each case carefully watched.

The following case of progressive myopia is an example of what can be done by treatment.

Miss F., aged 21, has complained of near-sightedness, growing worse for ten days. At first she wore a minus sixteen inch glass, which was gradually increased to a minus ten inch glass. She ascribes the cause of her myopia to reading by a dim light.

October 2nd, 1891, began treatment. Vision without glasses one-fortieth the normal in each eye. With a normal ten inch glass, vision normal. Media clear; posterior staphyloma in each eye. There is a slight conjunctivitis. Patient has attacks of phlyctenular conjunctivitis from time to time. General health is good. Treatment consisted of local applications of nitrate of silver, gr. x to ℥i, to lids three times a week, the use of a wash of hydrarg. bichlor. 1:5000 three times a day, calomel powder dusted into the eyes once daily, the wearing of a pressure eye bandage at night, treatment of the nose and throat, counter-irritation over the epigastrium, a tonic and tablets of calomel, gr. ¼, *ter in die.*

October 9th. Vision no better.

October 12th. Removed a cartilaginous spur from the left septum, which was pressing on the posterior portion of the inferior turbinated bone. The effect of the operation was to permanently improve the vision of both eyes to one-twentieth the normal.

October 23rd. Vision of the left eye improved to one-tenth the normal. The slight conjunctivitis had improved from the use of the local remedies, and the vision seemed to improve at the same time. With the ophthalmoscope, the fundus can be seen clearly without a minus glass, but only occasionally.

October 25th. Under ether; the retrotarsal folds were everted, scarified, and mercuric bichloride 1:500 rubbed in with a tooth brush.

October 30th. Vision of the right eye one-twentieth the normal; vision of the left eye one-tenth + the normal. Mucus discharge from both eyes. With the ophthalmoscope the fundus could not be seen except with a minus ten-inch glass.

November 23rd. Vision of the right eye one-tenth + the normal; vision of the left eye reduced to one-twentieth the normal. The left eye was put under atropine for two days without improvement in the vision. The pressure bandage had been stopped November 5th, because it seemed to cause too much irritation of the lids.

December 8th. Pressure bandage resumed. Vision not improved since November 23rd.

December 18th. Vision improved rapidly to more than one-half the normal. There is still considerable mucus discharge.

December 21st. Removed some adenoid tissue from the vault of the pharnyx, without any effect on the vision.

Patient was compelled to leave the city.

In a letter written *December 26th*, the patient reports her vision improved since she was last seen. She feels very grateful for what has already been done for her. For most purposes her vision is sufficient, and she feels more comfortable now *without* glasses than she formerly did when compelled to wear them.

131 *West Fifty-sixth street.*

NOTES ON SPASM OF THE ACCOMMODATION
By W. H. BATES, M.D.
N.Y. MEDICAL JOURNAL June 4, 1892

NOTES ON SPASM OF THE ACCOMMODATION.

By W. H. BATES, M. D.

Case I.—A business man, aged thirty-six, several years ago complained that his vision for distant objects had failed. He could not recognize his friends across the street. Large signs could not be read until he was very near. He felt that he had become near-sighted. The cause of his poor vision he ascribed to continued writing by a poor light. After stopping the work which strained his eyes, he recovered without other treatment. Now his vision is perfect without glasses.

Case II.—A lady, aged thirty-three, has had poor vision for a number of years. To obtain normal vision she requires — 1 D. S. After treatment of the eyelids for one week vision improved from $\frac{20}{40}$ to almost normal, $\frac{20}{20}$ —, without glasses.

Case III.—An oculist, aged thirty, reports that ten years ago he was wearing — 1·5 D. S. to obtain good vision. Under atropine at this time he was still myopic. Several years ago, after an attack of measles, vision normal, $\frac{20}{20}$, without glasses. With the return of his general health the spasm came back and he was compelled to use — 1·5 D. S. to obtain vision of $\frac{20}{40}$. Atropine was used for several weeks until constitutional symptoms of atropine poisoning were produced. Vision under atropine $\frac{20}{200}$, with — 1·5 D. S. vision normal, $\frac{20}{20}$.



Fig 45

Fig. 1.—Patient with absolute glaucoma of the right eye. He had suffered agonizing pain for six months and had no perception of light. He was photographed when testing the tension of his eyeball, which he found to be perfectly hard.

Fig. 2.—The patient is palming and remembering a perfectly black period. After half an hour the eyeball became soft, the pain ceased, and the patient became able to see the light. After three years there was no return of the glaucoma.

Later, without the use of atropine, he finds that there are times when his vision is normal, $\frac{20}{20}$, without glasses.

It is a curious fact that the spasm relaxed during ill health. The impression is prevalent among many authorities that ill health at least aggravates if it does not act as a factor in the cause of myopia. The following case also shows that the spasm may relax during ill health:

Case IV.—A medical student, aged twenty-one, has been wearing four years a minus fourteen-inch glass with no discomfort, most of the time at a German gymnasium. The glasses were prescribed by a prominent oculist who used atropine for one week and made several tests. Lately, he being run down, his eyes have not been entirely comfortable. An examination without atropine showed a myopia of one half the degree of the glass he is wearing. Under atropine two days, patient is not myopic. I am indebted to Dr. H. Seabrook for the notes of this case.

Case V.—An artist, aged eighteen, gave the history of myopia after an attack of measles when seven years old. Under atropine five days, vision $\frac{20}{100}$. w. — 1·5 D. S. = $\frac{20}{20}$. These glasses were prescribed for constant use. Several months later vision the same with and without the glasses as when under atropine. After remaining five minutes in a dark room with the eyes closed, rubbing the skin of the forehead a few times with the hand, and then testing the vision, it was found that the patient had temporary vision of $\frac{20}{15}$ without glasses. The cause of the spasm in this case seemed to be due to the effect of light.

In the following case also there seemed to be spasm from the effect of light:

Case VI.—A physician, aged thirty-five, has a vision of $\frac{20}{100}$ in the right eye; the left eye has normal vision. After remaining in a dark room for a few moments, the vision of the right eye is normal, $\frac{20}{20}$, for a short time only. Under atropine one week, vision of the right eye $\frac{20}{200}$, with a minus twenty-inch glass, vision normal, $\frac{20}{20}$. After remaining in a dark room for a few moments and then testing the vision of the right eye in the light, vision is normal, $\frac{20}{20}$, for a short time only.

When treatment can relieve this sensitiveness of the eyes to the light, the spasm is sometimes relieved also, as in the following case:

Case VII.—Mrs. H., aged twenty-three, is wearing — $\frac{1}{15}$. She has chronic conjunctivitis slight, with considerable pain in the eyes from the effect of light, especially gas-light. Treatment of the lids relieved the intolerance of light, and the vision became normal at the same time without glasses.

Case VIII.—A stenographer, aged thirty, wore glasses to see at a distance.

April 29, 1888.—Vision of the right eye $\frac{20}{70}$, with — $\frac{1}{15}$ vision normal. Vision of the left eye $\frac{20}{70}$+, and requires same glass to obtain normal vision. Cocaine applied to the mucous membrane of the left nostril improved the vision of the left eye. Cocaine in the right nostril did not improve the vision of the right eye to an appreciable degree. A number of operations were performed for the removal of nasal hypertrophies, etc.

May 15, 1888.—Vision of the right eye not improved. Vision of the left eye normal, $\frac{20}{20}$, without glasses.

June 1, 1891.—Three years later the left eye was still normal, the right eye still myopic.

Case IX.—Mr. M., aged twenty, complains of being near-sighted. He has been tested three times under atropine.

April 5, 1888.—After using atropine for a week, pupils widely dilated, throat dry, cheeks flushed. Vision of both eyes $\frac{20}{70}$, with — 2 D. S. vision normal. Ophthalmoscopic examination showed myopia. Cocaine was applied to the right inferior turbinated and septum of the nose, when the vision at once became nearly normal. At the end of fifteen minutes the vision returned to $\frac{20}{70}$, what it was before the application of the cocaine in the right nostril. The vision of the left eye was not materially changed by the application of the cocaine in the right nostril. A sharp projecting point on the right septum was removed with the saw after cocaine was applied. Vision of the right eye became normal, $\frac{20}{20}$, and remained normal.

July 15, 1888.—Three months later the vision of the right eye is still normal, $\frac{20}{20}$. The vision of the left eye is unchanged, $\frac{20}{70}$. Cocaine in the left nostril improves the vision of the left eye to the normal for a few minutes only.

Case X.—A sailor, aged thirty-five, complained of recent failure of his vision. He required a minus twenty-inch glass to give him normal sight. Treatment for several weeks of the eyelids and nose with nitrate of silver and yellow oxide-of-mercury ointment improved the vision from $\frac{70}{100}$ to the normal, $\frac{20}{20}$, without glasses.

Case XI.—A colored girl, aged twelve, an epileptic, had always been near-sighted (?). Atropine was used in both eyes for a week. At this time, vision of both eyes $\frac{200}{200}$ —; with a minus ten-inch glass the vision was normal. With the ophthalmoscope the fundus could be seen best with this glass, but there were moments when the light streak on the vessels could be seen with a far-sighted glass, convex twenty inches, but seen only dimly. The atropine was continued and the patient seen twice a week for five months, when the vision and refraction were found to be still unchanged. At the end of another month, altogether making six months' use of the atropine, patient had normal sight with a convex twenty-inch glass.

Case XII.—A boy aged ten years applied for treatment.

July 12, 1888.—Until two years ago vision all right. He attends school in the winter months. Does not study at home. Under atropine two days, with the general symptoms of atropine poisoning, fever, dry throat, etc., vision in both eyes $\frac{20}{200}$ +; with minus sixteen-inch glass, vision normal. He was kept under atropine ten weeks, with the result that the vision in both eyes became slowly normal without glasses. Atropine stopped. One month later vision still normal without glasses. Patient went back to school and resumed his studies. After a time the spasm returned; the use of atropine was followed by relief, only to have another relapse soon after returning to school. Patient was lost sight of for several years.

March 19, 1891.—Under atropine has a myopia of 3·5 D. S. Accommodation paralyzed completely by atropine. The atropine was stopped and a mild trachoma treated. The vision improved to $\frac{20}{15}$ without glasses after a month's treatment of the lids, when the patient again disappeared.

It seems reasonable to infer that this patient might have been permanently benefited after receiving temporary relief if he could have been kept under observation and received proper care.

Conclusions.—1. Spasm of the accommodation can not always be relieved by atropine.

2. The vision of symptomatic myopia can often be improved so that glasses are unnecessary.

131 West Fifty-sixth Street.

Dr. Broadbent, of London, is announced to have been appointed physician in ordinary to the Prince of Wales, to succeed the late Sir William Gull.

TREATMENT OF MYOPIA WITHOUT GLASSES

By W. H. BATES, M.D.

Medical record - Vol.14 Jan. 27, 1894

ASSISTANT SURGEON NEW YORK INFIRMARY

TREATMENT OF MYOPIA WITHOUT GLASSES.

By W. H. BATES, M.D.,

NEW YORK.

ASSISTANT SURGEON NEW YORK INFIRMARY.

Acquired myopia is very prevalent. More than twenty-five per cent. of all students twenty-one years of age are myopic. Among older students the proportion of acquired myopia is more than sixty per cent. (H. Cohn, Erismann, Conrad, Reuss, Pflüger, Agnew, E. G. Loring, H. Derby, R. H. Derby, Norsa, Belt, Randall, and others).

Object of Treatment.—1. To cure functional myopia caused by spasm of the accommodation. 2. To improve the vision of axial myopia so that glasses will not be necessary.

Results of Treatment.—1. Functional myopia caused by spasm of the accommodation has been cured by treatment, and normal vision obtained without glasses. 2. The vision of a number of cases of axial myopia has been improved by treatment so that glasses were no longer necessary. 3. The eyeball has never been shortened by treatment in a single case of myopia.

The first stage of acquired myopia is usually spasm of the accommodation; tension of the ciliary muscle. The eyes are constantly focussed or accommodated for near objects, and do not relax in order to see distant objects. Concave glasses are necessary for distant vision and such eyes are practically myopic. It is only in this stage that myopia can be cured. Spasm of the accommodation may last for years, or it may, early or late, cause elongation of the eyeball, incurable axial myopia.

Glasses are often prescribed in the first stage of acquired myopia, when treatment of the spasm of accommodation by appropriate hygienic, local, or constitutional measures would have cured the near-sightedness without glasses. It is the rule that acute diseases of the lungs, stomach, and other parts of the body tend to complete recovery, and the same fact is true of the eye. Acute myopia is usually a functional disease, and glasses should never be prescribed until treatment to relieve spasm of the accommodation has failed.

Acquired myopia is often caused by the injurious effects of light on eyes which are weak from various causes. A temporary myopia from spasm of the accommodation may be produced in normal eyes by sudden exposure to strong light. Individuals whose eyes have been strained by near work suffer more from spasm of the accommodation by sudden exposure to strong light, and the poor vision lasts longer. Individuals whose eyes are weakened by constitutional debility; school children especially, who obtain little fresh air and exercise; and individuals who suffer from inflammations of the eye (conjunctivitis, keratitis, iritis, etc.), are particularly liable to develop spasm of the accommodation from the effects of strong objective symptoms of conjunctivitis are not always in direct proportion to each other. A mild conjunctivitis may cause considerable functional myopia; the converse is also true. In some cases there was very little redness of the conjunctiva and no discharge of mucus; yet the application of astringents to the conjunctiva was followed by great improvement in the vision. In other cases where there was greater redness and swelling of the conjunctiva, with more discharge of mucus, very little improvement in the vision followed the application of astringents to the conjunctiva.

Treatment of the conjunctiva has cured functional myopia after atropine had failed to relieve. The vision of axial myopia has been decidedly improved by local applications to the conjunctiva.

Nasal Treatment—The removal of spurs on the septum and hypertrophies of the turbinated bodies cured some cases of functional myopia by relieving the spasm of the ciliary muscle. The vision of some cases of axial myopia improved after nasal treatment, and the improvement in the vision seemed to be coincident with the lessened nasal congestion. The indication for nasal treatment was determined by the use of cocaine. When no improvement in the vision followed after the application of cocaine to the mucous membrane of the nose, the vision of a number of cases of myopia was not improved by the removal of projections of the septum, or by the removal of hypertrophies of the turbinated bodies.

When cocaine applied to a spur on the septum was followed by immediate temporary improvement in the vision, this improvement was permanent after the removal of the spur. In some cases a number of projections of the septum in contact with the turbinated bodies were removed with benefit. The naso-pharyngeal catarrh was not relieved in some cases of myopia in which the vision was improved by nasal treatment. The ages of the patients benefited varied from eighteen to thirty. All degrees of myopia were benefited.

The Pressure Bandage.—Many cases of myopia are improved by the use of the pressure bandage. The improvement in the vision is sometimes very decided. The bandage may be worn for an hour every day, or it may be worn all night. Patients have kept one eye constantly bandaged day and night for three months with benefit. Von Graefe many years ago called attention to the fact that the pressure bandage lessened intra-ocular tension, and the pressure bandage certainly lessens the tension of the eyeball in many cases of myopia. This may suggest the reason why the bandage is beneficial, etc. The bandage does not shorten the length of the eyeball.

Objections to the Pressure Bandage.—1. Some appear to be made worse immediately. The bandage produces too much irritation, the spasm is increased, the whole eye becomes congested, and the vision is decidedly lowered. 2. Conjunctivitis, usually mild, is caused in the majority of cases. 3. Photophobia, as a rule, is increased. 4. Opacity of the cornea occurs in some of the cases. The opacity is in the form of light lines crossing the cornea in all directions; it requires a strong glass on the ophthalmoscope to be seen, and is made out with difficulty by oblique illumination. The opacity disappears in a few days after leaving off the use of the bandage.

Some cases are improved by atropine up to a certain point, when the improvement in the vision stops. Nasal treatment may bring about further benefit. Treatment of the conjunctivitis and the use of the pressure bandage may produce still further improvement in the vision.

In conclusion, it may be stated positively that myopia tends to increase after it has once begun, unless efforts are made to prevent it. It is the rule that acquired myopia in its earlier stages is curable by treatment. No treatment has ever shortened the length of the eyeball.

64 East Fifty-eighth Street.

SUTURE OF THE CORNEA AFTER REMOVAL OF THE LENS - AN EXPERIMENTAL STUDY

BY WILLIAM H. Bates

Late 1800-early1900?

In a series of experiments made upon seventy-eight eyes in the rabbit, with a view of testing the safety and efficiency of the suture of the wound in cataract operation, it was found that by a modification of the methods hitherto practiced, loss of the vitreous and intraocular hemorrhage could be prevented, the wound could be firmly and readily closed, and the prolapsed iris could be returned to the anterior chamber, and this without aseptic (preventing infection) treatment. Primary healing occurred in 80 per cent of the cases with a clear circular and nearly central pupil.

Inasmuch as the operation for the removal of the lens, although similar in the rabbit, is more difficult than the same operation in the human subject, the conclusion appears to be justified that the use of sutures to close the wound in the operation for the removal of the lens in man is a valuable improvement in the technique of cataract extraction.

This article is hard to find and may not be complete.

A SUGGESTION OF AN OPERATION TO CORRECT ASTIGMATISM

By W. H. BATES, M.D.

ASSISTANT SURGEON, NEW YORK EYE INFIRMARY

Archives of Ophthalmology, 1894, Vol. 23, pp. 9-13.

IT has long been known that the contraction of corneal scars produces permanent corneal astigmatism. The following cases furnished facts which suggested the operation.

CASE 1.—Mr. H., aged twenty-four, came to the New York Eye Infirmary, service of Dr. Noyes, in June, 1890, with a small piece of iron imbedded in the upper pupillary margin of the iris. Atropine was prescribed. Several weeks later, vision 20/40, not improved by any glass. The nerve looked round with the ophthalmoscope. Under ether a corneal section was made with a Grafe knife over the foreign body at an axis of 45°.

The foreign body was removed and a piece of iris with it. One month later, eye quiet, vision 10/200; with a convex cylinder of 9. D. axis parallel to the corneal section (45°), combined with − 5. D. S., vision is 20/30. The effect of the incision was to produce 9. D. of (regular) astigmatism. With the ophthalmoscope, the optic disc is decidedly oval at 45°. The iris is caught in the wound.

CASE 2.—Mrs. D. (a patient of Dr. R. H. Derby), aged fifty, has been operated upon for glaucoma of the left eye. There is beginning glaucoma of the right eye.

February 8, 1891.—Vision of the right eye is normal and no glass is accepted. The ophthalmometer showed no corneal astigmatism. She has been tested a number of times with the same result.

February 10*th*.—Iridectomy upwards with a corneal section.

March 5*th*.—Right vision 20/70; with a convex cylinder of 2.75 D. axis 15°, combined with − 1.75 D. S., vision 20/20.

Iris is caught in the wound.

The ophthalmometer showed the astigmatism to be all corneal, the meridian of least curvature being at right angles to the corneal wound.

March 26*th*.—The astigmatism is less. Vision 20/90, with a convex cylinder of 2. D. axis 15° combined with − 1. D. S. The astigmatism is the same with the ophthalmometer.

May 30*th*.—Two months later, the astigmatism had not changed, and the glasses were prescribed. Subsequently the patient came back and received glasses for reading, at which time the astigmatism had not changed.

CASE 3.—Mrs. U., aged forty-nine, has glaucoma of the left eye. Treated by Dr. Weeks.

April 7*th*.—Vision of the right eye normal, no glass accepted. Vision of the left eye 20/40, not improved by glasses.

May 15*th*.—Iridectomy upwards with a corneal section. Two weeks later, a sclerotomy below.

June 30*th*.—Vision of the left eye 20/300 +; with a convex cylinder of 2.25 D. at 180° combined with − 1.25 D. S., vision is normal, 20/20. The ophthalmometer showed that the astigmatism was all corneal. Iris is caught in the wound.

Tension of the eyeball +.

August 4*th*.—One month later, the corneal astigmatism, as shown by the ophthalmometer had not changed. Left vision 20/200; with a convex cylinder of 2.25 D., combined with − 2. D. S., vision is 20/20 −. Tension still +.

CASE 4.—Mr. H., aged thirty-eight, was injured June 27, 1891, in the right eye by a champagne bottle bursting. There is a linear corneal scar axis 120°. The iris is caught in the wound.

July 7*th*.—Vision of the right eye, which the patient says was good before the injury, is now 20/50 −, with a convex cylinder of 1. D. axis parallel to the corneal section, 120°, combined with − 1. D. S., vision is 20/30. Eye is still inflamed.

The ophthalmometer showed the astigmatism to be all corneal, the meridian of least curvature being at right angles to the corneal wound. The left eye is normal.

CASE 5.—Mrs. A., aged fifty-five, was seen February 19, 1892. Right vision with + 2.75 D. S. = 20/20. Left vision with + 2.75 D. S. ⊖ + 1.5 D. C. 15° = 20/20 −. The eye which has the astigmatism has a linear scar on the cornea at an axis of 15°. The ophthalmometer showed the astigmatism to be all corneal. This case suggests the fact that the incision at 15° produced a regular astigmatism by shortening the radius of curvature of the meridian at 105° without lengthening that of the meridian at 15°.

CASE 6.—Mr. B., aged sixty-four, was seen October 10, 1893. Right vision with + 4.5 D. S. = 20/15 −. Left vision with + 4 D. S. ⊖ + 4.5 D. C. 105° = 20/40 −. The patient complained that the vision of the left eye had failed in recent years. He has a pterygium of the left eye at an axis of 15°. The radius of curvature of the meridian of 15° was lengthened without appreciably shortening that of the meridian at 105°.

PROPOSITIONS

1. A corneal incision lengthens the radius of curvature of that corneal meridian which is at right angles to the line of the incision, and does not flatten any other meridian. The astigmatism produced is a regular astigmatism, and is corrected by a convex cylinder at an axis parallel to the line of the incision.
2. The immediate result is greater than the ultimate result.
3. The astigmatism produced is permanent after a length of time—at least a month after the cornea has healed. There may be at first 3. D. of astigmatism produced. At the end of a month, there may be 2. D. At the end of three months, the astigmatism may still be 2. D., and this amount of astigmatism will be permanent.
4. The amount of astigmatism produced is greater the nearer the incision is to the center of the cornea. As much as 9. D. can be produced.
5. Mixed astigmatism occurs: (*a*) temporarily; (*b*) with incarceration of the iris.

A study of Case 3 would show that Proposition 1 still holds true, and that the myopia is due to other causes than the cornea. The myopia is due to swelling of the lens or to lengthening of the eyeball.

The operation suggested.—Incisions of the cornea are made at right angles to the most convex meridian. The amount of correction can be regulated by the number, depth, and location of the incisions.

The operation promises a permanent effect. The risk to the eye is not great. It is not as dangerous an operation as the operation for iridectomy, which is usually performed without accident. Incarceration of the iris must be avoided to prevent the development of myopia.

The operation was performed tentatively on the two following cases.

CASE A.—Miss K, aged fourteen, had compound myopic astigmation. October 30, 1891, the left eye was found by the ophthalmometer to have 2.5 D. of astigmatism with the meridian of greater curvature at 75°.

November 2n*d*.—The first corneal incision was made. A strip of ordinary adhesive plaster was prepared 3" × ¼". This was applied below the eye to act as a guide to the incision to be made. The plaster was applied at an axis of 165°. Cocaine, 2 %, was dropped into the eye for fifteen minutes. No speculum or fixation forceps was used. The incision was made with a Graefe cataract knife held parallel to the plaster at an axis of 165°, the edge of the knife cutting the cornea from without inwards. No pain was produced.

There was no escape of aqueous. Bandage was applied.

November 3r*d*.—There was some photophobia after the removal of the bandage. No reaction.

November 8*th*.—For the first time the vision of the left eye was equal to that of the right eye. The ophthalmometer showed no change in the corneal astigmatism.

November 10*th*.—Operated as before, but the incision was made deeper and nearer the center of the cornea. There was no escape of aqueous. Bandage.

November 11*th*.—After the removal of the bandage there was more photophobia than after the first operation. The eyelids were slightly swollen. The eye felt sore. The ocular conjunctiva was not red. Recovered in a few hours. The bandage was not reapplied.

November 30*th*.—Incision repeated. No bandage was applied, and there was no reaction and no pain.

January 8, 1892.—Incision repeated.

January 25*th*.—Incision repeated. No bandage was applied after the two last incisions, and there was no reaction.
No effect on the corneal astigmatism could be discovered with the ophthalmometer.

April 24, 1893.—The vision of the operated eye is still certainly improved. No scar can be observed by ordinary inspection.

CASE B.—Dr. S., aged twenty-three, has been wearing − 1.25 D. S. ⌯ − 0.75 D. C. 100° for both eyes. The astigmatism cannot be determined with the ophthalmometer.

April 7, 1893.—A slight corneal incision was made on the right eye at an axis of 100°. The incision was made on the temporal side of the cornea. No bandage. No reaction after the operation.

April 8*th*.—The left eye was operated upon in the same manner. There was no reaction.

October 19*th*.—The vision of the patient without glasses is better. No trace of the incisions can be made out by ordinary inspection.

THE USE OF EXTRACT OF SUPRARENAL CAPSULE IN THE EYE

A PRELIMINARY REPORT

BY W. H. BATES, M. D.

New York Medical Journal, May 16, 1896, pp. 647-650.
Read before the Section in Ophthalmology of the New York Academy of Medicine, April 20, 1896.

The aqueous extract of the powder of the desiccated suprarenal capsule of the sheep is a powerful astringent and hæmostatic. When it is instilled into the eye the conjunctiva of the globe and lids is whitened in a few minutes. The effect is very decided. None of the usual astringents, including cocaine, can produce such an astringent effect. In normal eyes the extract whitens the conjunctiva and sclera when used in very weak solutions—less than one per cent. The effect is increased by repeated instillations or by the use of stronger solutions. In eyes very much congested from inflammation, the extract produces its astringent effect. No case has been found in which the extract did not act.

The following is a partial list of diseases of the eye in which the extract has whitened the conjunctiva and sclera: Trachoma, acute conjunctivitis (catarrhal), chronic conjunctivitis, phlyctænular conjunctivitis and keratitis, interstitial keratitis, rheumatic and syphilitic iritis, episcleritis, irido-cyclitis, sympathetic ophthalmia, atrophy of the globe, secondary glaucoma, traumatic conjunctivitis, traumatic keratitis, traumatic iritis, traumatic kerato iritis, lacrymal inflammations, and rheumatic ophthalmia.

Visible blood-vessels on the cornea from specific keratitis or from trachoma disappeared from view completely after the extract was used. An eye with a foreign body on the cornea was whitened. During operations on the ocular muscles, tenotomy and advancement, the extract whitened the eyeball.

The extract is not irritating. It generally produces a cooling sensation when dropped into the eye. It does not dilate or contract the pupil, and it has no effect on the accommodation. A tolerance was not established in two cases in which the extract was instilled into the eye several times daily for more than three months. A third patient used the extract daily for more than twelve months, and the extract whitened the eyeball and palpebral conjunctiva as well at the end of the twelve months as at the beginning.

The astringent effect of the extract on the conjunctival vessels is temporary—usually in an hour the eye looks as it did before the extract was used. There was no congestion after the astringent effect had passed off.

The extract when swallowed increases the frequency of the pulse. Considerable doses may be taken without harm. A lady, aged eighty-seven years, had a pulse of forty, which was intermittent and irregular; after the extract had been used in the eye for a few days the pulse became regular, increased to eighty, and remained so during a period of six months that the extract was used. A woman, aged thirty years, swallowed sixty grains at one dose. She vomited immediately, but felt no other ill effects. A man, aged sixty years, after taking two grains three times a day for a week, was suddenly attacked with a peculiar eruption on his hands, which disappeared in ten days without treatment after stopping the extract. The hypodermic use of the extract requires care. In one case ten grains produced alarming symptoms. The face was livid; there was great pain in the head and chest, with a feeling of throbbing. Consciousness was not lost. The pulse was weak. In ten minutes the patient felt all right and walked home from the dispensary, a distance of more than a mile.

Preparation.—The powder of the desiccated suprarenal gland of the sheep is placed in cold water and allowed to stand a few minutes. The fluid is filtered through filter paper and evaporated to dryness at a temperature below 105° F. The residue is the aqueous extract. It requires sixteen ounces of the fresh glands or eight ounces of the powdered desiccated glands to make an ounce of the aqueous extract.

Chemical Properties.—The active principle of the suprarenal gland is very soluble in water, one part of the extract dissolving in somewhat less than three parts of water. It is insoluble in strong alcohol, but soluble in dilute alcohol on account of the presence of water. It is also insoluble in ether or chloroform. The dried extract has remained immersed in strong alcohol, in ether, and in chloroform for several months without apparent injury. The dried aqueous extract has a brown color. The color depends partly on the temperature at which it is dried; the higher the temperature, the darker the color. It does not crystallize. When moist, it is slightly sticky; when dry, it is brittle. It has a slight odor resembling that of extract of beef. The most characteristic chemical property is its reaction with tincture of iron. A drop of tincture of iron added to a neutral solution of the aqueous extract produces a green color. The green color gradually disappears. A precipitate is formed. The addition of more of the iron solution may produce the green color again, with the formation of more of the precipitate. The supernatant fluid loses its color at the same time that the precipitate is formed. Finally, it is possible to add sufficient tincture of iron to make the solution of the extract clear, and the addition of more iron does not produce the green color. The precipitate contains the extract and the iron, because the filtered fluid evaporated to dryness leaves no residue except the excess of iron. The precipitate is black and is composed in part of metallic iron, probably. Dilute hydrochloric acid dissolves the precipitate and the solution becomes reddish.

My explanation of the preceding phenomena is that the extract is a strong reducing agent. The green color is due to the fact that the red perchloride is reduced to the green sesquichloride by the extract. The green color changes to the black of metallic iron by further reduction by the extract. What becomes of the extract will require further experiments to determine. The reducing action of the extract is certainly remarkable. The reaction of tincture of iron with the extract is very delicate, and is valuable in many circumstances. A solution of less than one per cent. of the extract will produce the green color on the addition of less than a minim of tincture of iron. A solution of extract of the color of water may contain enough extract to produce the green color. After the extract solution has became infected and has lost its color, the green color, may be produced. The sterilized solution also produces the green color. If the extract is in a very strong solution, it may reduce the chloride of iron to the metallic state so quickly that the green color may not be observed. This reaction does not occur in solutions of thyroid, thymus, testicle, or pineal gland.

When solutions of the extract are filtered through animal charcoal, the solution which has passed through first does not contain the extract. Later the filtered solution contains the extract.

As the extract is easily infected and does not keep unless sterilized, experiments were made to determine if it could be combined with bichloride of mercury in solution without altering the properties of the extract. The extract forms a precipitate with the bichloride, and if enough bichloride is added all the extract can be precipitated. It requires a large amount of bichloride of mercury to precipitate less than a grain of the extract. It cannot be used with bichloride. When a solution of nitrate of silver is added to a solution of the extract a precipitate is formed which contains the silver. The precipitate contains part of the extract. The solution of the extract becomes weaker as the nitrate of silver is added. The color disappears. The extract precipitates a very considerable quantity of silver. When a sufficient quantity of nitrate of silver has been added no further precipitation takes place. The clear fluid evaporated to dryness has very little residue, the little residue being mostly excess of nitrate of silver, from which we may conclude that the extract and nitrate of silver compose the precipitate. If the nitrate of silver is not in excess, the clear fluid filtered contains the extract with all its properties unimpaired. The only effect of the silver is to precipitate part of the extract. The precipitate is not soluble in dilute acids.

Before leaving this subject it may be well to emphasize the fact that nitrate of silver precipitates the extract itself as well as any chlorides or phosphates which may be present. It also precipitates all of the extract if sufficient nitrate of silver is added, and a great deal is necessary. And, finally, the nitrate of silver precipitates everything composing the aqueous extract which may be in solution with the active principle. Of course, with these facts established, it is evident that the extract cannot be used in solutions with nitrate of silver.

There are many other substances with which the extract, because it is a strong reducing agent, or for other reasons, cannot be used in solution. With solutions of sulphate of copper and other astringents, precipitates are formed containing the extract, or reactions occur which alter the chemical properties of the extract or interfere with its action in the eye.

When the extract was used in solution with cocaine, the eye was irritated and not anaesthetized. In my judgment, the extract cannot be used in the same solution with cocaine without impairing both the properties of the cocaine and its own.

The chemical properties of the extract are impaired by dilute hydrochloric, sulphuric, nitric, acetic, tartaric, tannic, and oxalic acids; also by dilute solutions of ammonia and sodic hydrate. In short, the extract does not act well when combined with other substances. I have tried a great many compounds, and I am not sure that there was one which, if added in sufficient quantity, did not interfere with the chemical properties of the extract.

Boiling the aqueous solution produces a precipitate. The filtered fluid can be boiled a number of times and still retain the properties of the extract. It has been boiled fifteen minutes daily for several weeks and the properties of the extract were retained. However, the extract loses its strength by prolonged boiling, and it is possible to destroy it altogether. The color of the extract is much darker after it has been boiled. When the filtered solution is evaporated to dryness, the color of the extract is almost black. The sterilized solution has all the properties of the fresh aqueous extract. It has kept more than a year without change. When infected, it soon spoils like the fresh solution.

My observations on the use of the extract in the eye were made during the past two years. As this use of it is entirely new, it was necessary to be very cautious. I have had no disagreeable effects from it, and my confidence in it increases constantly. It is the only remedy of which I know that is purely an astringent. It is the ideal hæmostatic. It acts by contracting the muscle of the small arteries until the lumen is occluded and a coagulum is formed inside the artery. The following cases of ocular disease were treated with the extract:

CASE I.—A patient was treated for acute catarrhal conjunctivitis. The extract had a marked effect in lessening the ocular and palpebral congestion. The eye was well in a week.

It cannot be stated positively that the extract is curative in any form of conjunctivitis. As it is only an astringent and not an antiseptic, theoretically it should not be curative in the infectious diseases of the eyelids. But, after one has seen the unusual and immediate benefit that follows the instillation of only a few drops of the solution, one must believe that it is a valuable remedy. The patients like the cooling effect of the drops.

CASE II.—A severe phlyctænular conjunctivitis was treated at the dispensary. The eyeball was red, and showed no white sclerotic at all. At the end of five days there was no change. A few drops of the extract whitened the eyeball at once. Two days later the eye was entirely well. In this case the extract seemed to produce a prompt and decided benefit. The patient had other treatment besides.

In a number of other phlyctænular cases the extract was beneficial. It certainly is not curative in phlyctænular inflammations.

CASE III. *Interstitial Keratitis*.—There was so much congestion on the lower part of the cornea that it seemed as though there was blood in the anterior chamber. Atropine and hot water, with constitutional treatment, did not relieve the condition after a week. A few drops of the extract caused all the corneal vessels to disappear from view. A month later they had not become visible again.

In other cases the extract was also beneficial in reducing congestion. Other treatment was always necessary to bring about a cure.

CASE IV. *Secondary Glaucoma following Cataract Extraction*.—The eye was congested and very painful. The extract whitened the eye, and the patient was relieved of the pain for a short time. The extract was used many times during the day. An operation finally stopped the pain. In this case the astringent property of the extract was beneficial by relieving the congestion. The tension was not materially reduced.

CASE V. *Obstinate Iritis following a "Needling."*—After three months' treatment with atropine and hot water the eye was still red and painful. A few drops of the extract applied at intervals of a few minutes whitened the eye and relieved, the pain. There was no relapse a year later. The astringent property of the extract was undoubtedly of benefit in this case. Cases of iritis in general are undoubtedly benefited by the extract. But as the extract is only an astringent, it cannot take the place of atropine and constitutional remedies.

CASE VI. *Acute Dacryocystitis benefited by the Extract*.—The lower lid was so swollen in the neighborhood of the punctum that the punctum could not be seen. A few drops of cocaine did not relieve the swelling. The extract relieved the congestion so much that a small probe was passed through the punctum into the sac and the sac syringed.

When the patient was seen two days later the swelling of the lower lid had not returned.

A great many cases of lacrymal disease have been treated with the extract. It is only beneficial by lessening the congestion. The nasal duct has opened by reason of the astringent action of the extract.

The extract has been of material assistance in curing a number of obstinate cases of lacrymal disease without operation.

The extract was valuable in operations on the eye in following cases:

1. *Nervous People*.—An operation on some nervous people is unsatisfactory, because cocaine does not produce anæsthesia. Such cases are quite common.

A woman was operated upon recently for tenotomy of the inferior rectus. The cocaine did not whiten the ocular conjunctiva, dilate the pupil, or produce anæsthesia after being instilled frequently for an hour. A few drops of the extract whitened the ocular conjunctiva, and the cocaine in five minutes dilated the pupil and produced anæsthesia. The operation caused no pain. Traction on the tendon of the muscle with the hook was not painful. There was very little hemorrhage. A previous operation on the same muscle, using cocaine alone, was painful, and there was an unusual amount of hemorrhage. The eye was bleeding six hours later. The eye was sore for two days. The extract in this case had a very happy effect by securing a painless operation without hemorrhage and without soreness afterward.

In a number of other and similar cases the extract has been of material assistance. It is well to repeat that the extract is not an anæsthetic.

2. *Inflamed Eyes*.—It is difficult to produce cocaine anæsthesia in eyes which are congested, the reason being that either the cocaine is not absorbed or because the irritation of the nerves resists the cocaine. The suprarenal extract by astringing the vessels relieves the congestion, and complete anæsthesia with cocaine can then be obtained.

An eye with inflammatory glaucoma was operated upon painlessly by the use of the extract and the cocaine together. Previous to the operation the use of cocaine alone instilled every ten minutes for an hour had no effect on the congestion, pain, or the tension. It seemed magical to observe the eye whiten after the extract was instilled, and the patient was relieved of the pain as well. The tension was slightly reduced. The operation did no good, the pain returned, and the patient's condition was rendered bearable by the use of the extract until relieved by another operation.

3. *Eyes Congested after Recent Operations*.—After a tenotomy there may be so much congestion that cocaine does not produce anæsthesia. The use of the extract in the eye secures cocaine anæsthesia. After cataract extraction there may be so much congestion

that cocaine does not act well. It may be desirable to do an iridectomy for prolapse of the iris. In such cases the extract is indicated to reduce the congestion sufficiently so that cocaine will act.

4. Prolonged Operations.—An operation which requires more than a few minutes becomes painful in some cases, although cocaine may be instilled frequently. Advancement of an ocular muscle is generally so painful that many operators are compelled to use ether anæsthesia. The operation may begin painlessly. Later the anæsthesia wears off, particularly if there is hemorrhage. The extract, when frequently instilled, prevents hemorrhage, and the cocaine anæsthesia is prolonged indefinitely for this reason. As soon as bleeding occurs, one notices very soon the sensitiveness of the eye returning. A number of advancements have been done painlessly and almost bloodlessly by the use of the extract and cocaine together. It is a great comfort to be able to work over some of these cases carefully, without hurry; to operate and test immediately, and operate again and test many times when necessary. Cocaine is not always sufficient.

5. *Bloody Operations*.—The extract prevents hemorrhage because of its property of contracting the small arteries. After hemorrhage begins the extract is not very efficient. It is possible to perform an almost bloodless operation on the ocular muscles or lacrymal sac by instilling the extract frequently. The following case illustrates the value of the extract as a hæmostatic:

A man was operated upon four times during the last three months for stricture of the nasal duct. After each operation the patient lost enough blood to saturate two and sometimes more towels. The hemorrhage was unusually copious. The operations were very painful. A fifth operation was done in which the extract was used with the cocaine. There was no pain and very little hemorrhage. The towel used had one spot a quarter of an inch in diameter.

A number of other and similar cases have been operated upon with success. The extract is not an objectionable hæmostatic. It does not form clots like iron or irritate as does peroxide of hydrogen. It is better to use the sterilized solution, as infection has occurred from the freshly prepared aqueous extract of the gland and of the desiccated powder. The extract has failed to control hemorrhage in some cases and the cause of failure was not apparent. In one case of failure, four previous operations had been done almost bloodlessly on the ocular muscles by the use of the extract.

Finally, the fact that the suprarenal extract is not a substance foreign to the human economy may explain why in the two years during which I have used it no disagreeable effects have been produced by instilling it into the eye. In conclusion, I wish to repeat that within the limits of its sphere of activity there is absolutely no other substance which can take its place.

64 EAST FIFTY-EIGHTH STREET.

SECONDARY CATARACT - AN EXPERIMENTAL STUDY

By WILLIAM H. BATES M.D.

N. Y. Medical Journal, July 7, 1900

After a series of experiments upon rabbits' eyes, for the purpose of studying the nature and origin of secondary cataract, the writer has come to the following conclusions:

1. Secondary cataract in the rabbit is composed of new connective tissue, usually, together with the folded posterior capsule of the lens. But the opacity of the structure occupying the pupillary area is due to the new connective tissue and not to the capsule.
2. The *formation* of secondary cataract in the rabbit begins with the accumulation in the anterior chamber of a coagulable fluid at the time of operation. Fibrin appears in the pupillary area from the coagulation of this fluid. Later, new connective tissue replaces the fibrin.
3. The *prevention* of secondary cataract in the rabbit may be secured by performing a quick operation, closing the scleral or corneal wound with sutures, and, restoring the anterior chamber with normal salt solution.

The studies recorded in this paper have been limited to the rabbit, and, while they afford a strong presumption that secondary cataract in man also is due to a formation of new connective tissue in the pupillary area, this can be definitely determined only by the study of human material. This study is now under way.

EYE, EAR, NOSE AND THROAT

Secondary Cataract

W. H. Bates, New York, reports the results of an experimental study in the formation of secondary cataract in the rabbit. In a long series of operations on the eyes of rabbits, with a careful morphologic study of the changes which follow section of the cornea and removal of the lens, he has been able to trace, step by step, the formation of a connective-tissue membrane veiling the pupil. The posterior capsule was usually wrinkled or thrown into folds, and did not alone form the secondary cataract, nor was it thickened. He did not find on a careful microscopic examination that secondary cataract was ever due to the opacity or thickening or wrinkling of the lens capsule. His conclusions are as follows:

(1) Secondary cataract in the rabbit is composed of new connective tissue, usually, together with the folded posterior capsule of the lens. But the opacity of the structure occupying the pupillary area is due to the new connective tissue and not to the capsule.
(2) The formation of secondary cataract in the rabbit begins with the accumulation in the anterior chamber of a coagulable fluid at the time of operation. Fibrin appears in the pupillary area from the coagulation of this fluid. Later, new connective tissue replaces the fibrin.
(3) The prevention of secondary cataract in the rabbit may be secured by performing a quick operation, closing the scierai or corneal wound with sutures, and restoring the anterior chamber with normal salt solution.

While these studies afford a strong presumption that secondary cataract in man also is due to a new formation of new connective tissue in the pupillary area, this can be determined definitely only by the study of human material. This study the writer now has under way.

*N. Y. Med. Jour., July 7, 1900.
Jour A. M. A., June 30, 1900.

Secondary cataract has been studied experimentally by W. H. Bates. He concludes that in the rabbit the opacity is due not to the posterior capsule, but to new connective tissue formed in the pupil: that the formation of secondary cataract begins with the accumulation in the anterior chamber of coagulable fluid at the time of operation.

From the coagulation, fibrin appears, which later is replaced by connective tissue. He prevented secondary cataract in rabbits by quick operation, with closure of the wound with sutures and restoring the anterior chamber with physiological salt solution.

SECONDARY CATARACT

Dr. W. H. Bates (New York Med. Journal), has been making some experimental study in the aetiology (cause and origin) of secondary cataract. The work has been carried on at the Pathological Laboratory of the College of Physicians and Surgeons, Columbia University, N. Y., using rabbits as material. He describes his technique, and gives drawings of the gross and minute sections. His conclusions are:

1. Secondary cataract in the rabbit is composed of new connective tissue, together with the folded posterior capsule of the lens. But the opacity of the structure occupying the pupillary area is due to the new connective tissue, and not to the capsule.
2. The formation of secondary cataract in the rabbit begins with the accumulation in the anterior chamber of a coagulable fluid at the time of operation. Fibrin appears in the pupillary area from the coagulation of this fluid. Later, new connective tissue replaces the fibrin.
3. The prevention of secondary cataract in the rabbit may be secured by performing a quick operation, closing the scleral or corneal wound with sutures, and restoring the anterior chamber with normal salt solution.

The studies recorded in this paper have been limited to the rabbit, and while they afford a strong presumption that secondary cataract in man also is due to formation of new connective tissue in the pupillary area, this can be definitely determined only by the study of human material. This study is now under way.

If the author's observations are correct, it may lead to a revival of the use of suture to close the corneal wound after cataract extraction. Such closure is desirable on theoretical grounds if it can be accomplished without adding to the risk of poor results from the operation.

These articles are hard to find and may not be complete.

THE PREVENTION OF MYOPIA IN SCHOOL CHILDREN

By W. H. BATES, M.D.

New York Medical Journal, July 29, 1911, vol. 24, no 5, pp. 237-238.

In 1903 I examined the eyes of 1,500 school children at Grand Forks, N.D., a city of 12,000 inhabitants, and found six per cent. myopic. The superintendent, Mr. J. Nelson Kelly, was interested in the facts and desired prevention. At my suggestion Snellen test cards were placed in all the class rooms with directions for their use. The results were so encouraging that the method was employed continuously for eight years and is still in use. In 1910, among 2,000 children, less than one percent were myopic.

The children were examined during a study period while sitting in their seats.

After testing the sight of all the children in one class room the teacher asked me the character of the vision of one of the boys. I said his sight was normal—that he was slow in reading the letters of the test card; but, after some encouragement he read the smallest letters the normal eye should see at his distance from the card. The teacher was incredulous and told me very emphatically that she was positive the boy was "near-sighted." She declared his vision for all distant objects was poor: he was unable to read the writing or figures on the blackboard, he did not recognize people at a distance, or see the maps, charts, or diagrams on the walls. The teacher told me that my conclusion was erroneous. She suggested that the boy might have learned the letters or had been prompted by another pupil. She asked me to test him again. The second examination was made carefully under her supervision, the sources of error she suggested were met, and I found the boy's sight was normal. Immediately afterward the teacher tested his sight with the writing on the blackboard and the boy read what she had written. Then she wrote additional words and figures which the boy read equally well. She asked him to tell the hour by a clock twenty-five feet distant which he read correctly. It was a dramatic situation. The children were intensely interested. I was impressed by her surprise when she was convinced that the boy's vision was normal.

Three other cases in this class were similar and on examination yielded identical results. The teacher asked for an explanation. I told her that when the children looked at the blackboard or other distant objects and strained or made an effort to see better, they focused their eyes for a near point and consequently could not see distant objects clearly; and, while testing the vision with the Snellen test card, I educated them to use their eyes properly for distant vision. It was interesting also to me to find that the few moments devoted to testing them were sufficient to relieve these children so that their vision for distant objects became normal. This teacher at once realized that the Snellen test card was valuable in relieving and preventing defective vision. At her request a Snellen card was given her which was placed permanently on the wall of the class room where all the children could see it from their seats.

NORMAL EYES WITH DEFECTIVE VISION FOR DISTANCE

This fact was demonstrated as follows: The child regarded objects ten feet, twenty feet or more distant. When the distant object was a Snellen card at ten feet and while the child was reading the line marked 10, or had normal vision, the retinoscope, used simultaneously, showed no myopia. But when the child regarded at ten feet or further, a picture, a map, the writing on the blackboard, a person, a book, or some other object with which he was not familiar, the retinoscope used simultaneously indicated near focus of one or all meridians, functional myopia, or myopic astigmatism. A positive result, near focus of the eye, was always observed when the child made an effort to see distant objects.

No special drill was requisite to make this demonstration. During the past year 100 persons, not physicians, demonstrated with the aid of the retinoscope that all school children did not adjust their eyes accurately for distant vision. Children, ten years old, handled the retinoscope successfully and told me promptly when near focus of the eye occurred. The matter is so important that I strongly

recommend all physicians, teachers, and others, interested in the welfare of the eyes of school children and in the preservation of their own vision, to obtain a retinoscope and learn by a practical demonstration that all school children and many adults do not usually adjust their eyes accurately for distant vision. By doing this one obtains a grasp of the subject which will be of material benefit. A retinoscope with instructions will be sent free to any one on request.

Why was the Snellen test card better than other distant objects to improve the sight? It enabled the pupil to know when an improper strain or effort to see was made. It was only when the eyes were property adjusted for distant vision that the small letters were read. With other distant objects children had greater difficulty in knowing when the focus was adjusted accurately. Many persons with normal eyes believed erroneously that they saw better at the distance by partly closing the eyelids or by otherwise straining the eyes; but, when they looked at the Snellen card, they at once discovered that the effort made the letters indistinct.

Why did children strain their eyes when looking at distant objects? They strained because their experience had taught them that to accomplish most things an effort was required. They had learned that they saw near objects more distinctly by making a voluntary effort. Naturally, most of them strained when looking at distant objects, to improve their sight.

How did straining to see distant objects lessen the vision? We know that distant objects were seen most distinctly by the normal eye when the muscle which controlled the focus was at rest. Any contraction of this muscle which was produced by straining always focused the eye for a near point and produced functional myopia. When the eye was focused for a near point, objects at a distance were indistinct.

THE PRINCIPAL FACTOR IN THE CAUSE OF MYOPIA IN SCHOOL CHILDREN

The normal eye could focus for near and distant objects.

The myopic eye could focus only for near objects. Obviously, the principal difference between the two was in the ability of the normal eye to see at a distance.

When the normal eye acquired myopia it lost the ability to adjust its accommodation for distant vision, therefore: *All individuals with normal eyes who do not adjust their accommodation accurately for distant vision become myopic.*

Nothing else was possible. It was self evident. The demonstration of temporary functional myopia is simple: Look at the letters of a distant sign and note their clearness. If one has normal eyes any effort or strain made by staring, partly closing the eyelids, (squinting) or focusing a nearer point, is followed by a blurring of the distant letters, In 1910 I demonstrated this fact with the aid of the Snellen card to 2,000 school children whose ages ranged from six to twenty years.

CONCLUSIONS

1. All school children did not focus accurately writing on the blackboard, or pictures, maps, persons, or other new or strange distant objects.
2. They became myopic when they did not learn to adjust their eyes properly for distant vision.
3. Myopia was prevented by teaching school children to focus their eyes accurately for distant objects.
4. The Snellen test card was found to be the best object to use for exercises in distant vision. It was placed permanently in each class room where all the pupils could see it from their seats. They were encouraged to read daily the smallest letters they could see, with each eye separately, covering the other eye with the palm of the hand in such a way as to avoid pressure on the eyeball.

117 WEST EIGHTY-THIRD STREET.

THE CAUSE OF MYOPIA

By W. H. BATES, M. D.,

New York, March 16, 1912

New York Medical Journal, March 16, 1912, pp. 529-532.
Read before the New York Country, Medical Association, January 23, 1912

In the normal eye parallel rays of light are focused on the retina; in myopia they are focused in front of the retina. Myopia, with elongation of the optic axis from bulging of the posterior pole, posterior staphyloma, is incurable. Rarely congenital, myopia is usually acquired. (Later years, Bates proved Myopia is curable without glasses)

Functional myopia is an early stage of myopia with elongation of the eyeball. It is produced by muscular action, which alters the curvature of the crystalline lens, modifies the convexity of the cornea, or produces an elongation of the eyeball. Voluntary functional myopia may be produced by efforts to see distant objects, in children, elderly people, cases in which the accommodation is apparently paralyzed by atropine, and in aphakia after cataract extraction. That muscular action can produce functional myopia is shown by the fact that many cases of voluntary functional myopia manifest a convergent, divergent, or vertical squint. Also, operations on the eye muscles have benefited functional myopia. Von Graefe, Donders, and others have reported good results in functional myopia after tenotomy of the external rectus. Stevens published (*Anomalies of the Eye Muscles*) some cases of functional myopia relieved after operations on the eye muscles. In a personal communication he said that in his experience the refraction of the eye was usually changed after such operations.

The diagnosis of myopia may be made with the ophthalmoscope or retinoscope. In myopia with elongation of the eyeball, with the ophthalmoscope by the direct method, the details of the fundus cannot be seen clearly without the aid of a concave glass; whereas, in functional myopia, the retinal vessels and chorioidal pigment can be seen clearly, occasionally without such a glass. With the retinoscope, in myopia with elongation of the eyeball the shadow seen with the plane mirror held at four feet or further always moves in the opposite direction to the movements of the mirror; but, in functional myopia the shadow moves in the same direction at times, and especially when the eye is regarding distant objects without especially trying to see.

It has been generally accepted, that after the prolonged use of atropine, if the myopia continues, it is due to permanent elongation of the eyeball. After twenty-five, years' study of these cases, my experience leads me to the conclusion that atropine does not always relax the near focus or relieve functional myopia.

A study of the eyes of a large number of individuals in whom functional myopia was produced by an effort, unconsciously or voluntarily, may be briefly summarized as follows:

An unsuccessful effort of the normal eye to see accurately new, strange, or unfamiliar distant objects was always followed either by myopic astigmatism, usually—compound myopic astigmatism, occasionally, or simple myopia infrequently. Mixed astigmatism was not observed. For example:

Case I. A woman, aged twenty-five years, had difficulty in reading the ten line of the Snellen card at ten feet. When she was unable to see the letters, retinoscopy always indicated a myopic refraction; but, when she read the letters, simultaneous retinoscopy always indicated no myopia. So accurate was retinoscopy in measuring the refraction that one was invariably correct when telling her when she could see and when not.

Case II. A boy, aged nine years, while reading at ten feet the line marked ten on the Snellen card was not myopic. When he regarded the large letter, vision 10/200, he had myopic astigmatism. When he regarded a picture at twenty feet, he appeared to make a greater effort to see, and by simultaneous retinoscopy, he had compound myopic astigmatism.

Case III. A boy, aged five years, when regarding his mother at ten feet, by retinoscopy was not myopic; but, when he regarded a stranger at ten feet, or the unknown letters on the Snellen card at the same distance, he had myopic astigmatism. When he made a manifestly increased effort to see a dog at 100 feet, the objective test used simultaneously indicated compound myopic astigmatism. The increased effort to see distant objects produced more myopic refraction.

Case IV. A woman, aged thirty-six years, with vision, 10/200, 10/50, 10/10, was not myopic. Neither was she myopic when she regarded at ten feet or 100 feet a picture, a book, and many other objects; but, when she was asked to look directly at a point three feet to one side of the Snellen card and read the letters, which was impossible, the retinoscope indicated compound myopic astigmatism, and the left eye converged. (Fig 53 # 1 and 2)

Case V. A girl aged eighteen years, emmetropic, was similar to the previous patient; she did not make an effort to see distant objects until asked to regard the Snellen card by eccentric fixation. Compound myopic astigmatism was produced and the right eye diverged.

Case VI. A man, aged twenty years, had used atropine sulphate, one per cent., three times a day, in the left eye for two months. When he regarded a green curtain at ten feet he was not myopic; but, when regarding the large letters on the Snellen card he had compound myopic astigmatism.

Cass VII. A woman, aged forty-seven years, right eye, keratoiritis, received atropine sulphate, one per cent., three times a day for fifty days. When she regarded a green curtain at ten feet, she was not myopic; but, when she read some of the large letters on the Snellen card at ten feet, retinoscopy indicated compound myopic astigmatism.

Case VIII. A man aged seventy years, by retinoscopy was not myopic when reading the ten line at ten feet; but, when he regarded an indistinct object, a thermometer, at 100 feet, retinoscopy indicated myopic astigmatism. An increased effort produced compound myopic astigmatism.

In normal eyes the axis of myopic astigmatism, which was found by retinoscopy after an effort to see distant objects, was usually corrected by a concave cylinder at 180°. It was observed frequently at 90°, and less often in an oblique meridian. As a rule the vertical or horizontal axis was the same in each eye—exceptions were found infrequently. When the axis was oblique in one eye it was generally parallel, or else at right angles, in the other eye. In most individuals the axis was always the same when tested frequently, daily, weekly, or after some months. Occasionally the axis would change in one person from 90° to 180°, or the reverse, or became more or less oblique when making apparently the same effort to see distant objects. The maximum amount of myopic astigmatism produced was 4 D., and was observed in a man aged fifty-nine years, with normal eyes when he regarded an astigmatic chart at ten feet.

In most eyes with errors of refraction, and in normal eyes with eccentric fixation, the axes of astigmatism produced by efforts to see distant objects were not usually constant, and greater variations occurred in the same eye from day to day than was observed in normal eyes. In compound hypermetropic astigmatism the effort to see at a distance always lessened the refraction of sometimes one, sometimes the other principal meridian, or of both. In compound myopic astigmatism, one or both of the principal meridians were always increased. In mixed astigmatism, sometimes the hypermetropic meridian was lessened; in other cases the myopic meridian was increased, and in still others the hypermetropic meridian was lessened, while the myopic meridian was increased.

Symptoms of effort when trying to see distant objects: School children and others usually showed by facial expression that an effort was made—the eyelids were partly closed, or the reverse, more open, staring; wrinkling of the skin of the forehead and eyelids, contortions of the facial muscles, inclinations of the head in various directions; tremor of the head, and movements of the eyeballs resembling nystagmus were observed. Many school children and adults with normal eyes produced temporary eccentric fixation, either with convergent, divergent, or vertical squint when trying unsuccessfully to read the Snellen card. The eyes of more than 10,000 school children were examined during the past ten years. The efforts of many to see were so manifest that one could usually tell before the sight was tested that their vision was defective (Fig. 35, #2, 3).

Recently a public school in New York was visited. In one class room of thirty young pupils, the attention of the principal was directed to five children whose facial expression suggested defective vision. She tested their sight and found it poor in all. She proposed glasses. In a few minutes the children were shown how to read the small letters on the Snellen card. They obtained normal vision and required no glasses. The facial wrinkles and evidences of strain disappeared.

About twenty-five teachers listened to a talk on myopia. Most of them showed by their facial expression, wrinkles of the forehead, and strained look of their eyes that their vision was probably defective. They were recommended to read the small letters on the Snellen card. The majority obtained normal vision almost immediately; the wrinkles were lost, and their eyes and faces no longer had the appearance of strain.

H. Cohn (*The Hygiene of the Eye in Schools*, p. 53) wrote: "All oculists agree that protracted near work with a bad light is one of the circumstances most favorable to the origin and development of short sight." My observations did not support this statement.

The near focus of the normal eye was measured objectively with the aid of the retinoscope. When a normal eye reads fine print, diamond type, Jaeger No. 1, readily, without effort, at twelve inches, a concave twelve inch glass held outside the visual axis corrected the focus. When the eye read at ten inches it was too weak to correct the focus; and when the print was read at a greater distance than twelve inches, the glass was too strong, over-corrected the focus. Retinoscopy always measured the focus accurately and simultaneously while the normal eye read at 6", 10", 20", 40", or at any distance the fine print.

When the illumination of the print was lessened sufficiently to make it difficult to read Jaeger 1 at twelve inches, retinoscopy indicated that the near focus of the eye was not increased, but lessened in one or all meridians. No exceptions were found. It occurred in all school children, adults, and elderly people with normal eyes. Usually only one meridian was lessened, the horizontal. The maximum amount was 3 D. The vertical meridian was lessened, exceptionally.

Patients with emmetropia or normal refraction under atropine were examined. When large print was read, easily at twelve inches, the eye was focused as in distant vision; but when, because of less light, or the request to read smaller print, an effort was made, one or all of the principal meridians became hypermetropic. It was interesting to note that these same individuals always produced myopic refraction, usually greater in the horizontal meridian, while making an effort to see distant objects; when an effort to see near always produced the opposite refraction, hypermetropia, and greater in the same meridian, the horizontal.

In hypermetropia, with or without astigmatism, one or more of the meridians of the eye were increased by efforts to read by a dim light. In myopia, with or without astigmatism, one or more of the meridians became less, myopic. In mixed astigmatism the refraction of the horizontal meridian became either less myopic or more hypermetropic when an effort was made to read fine print. In presbyopia no exceptions were found; an effort to read always produced hypermetropia in one meridian in normal eyes, increased it in hypermetropia, or diminished it in myopia. In diseased conditions, inflammations of the eyelids, cornea, iris, retina, chorioid, and in cataract, an effort to read always lessened the focus.

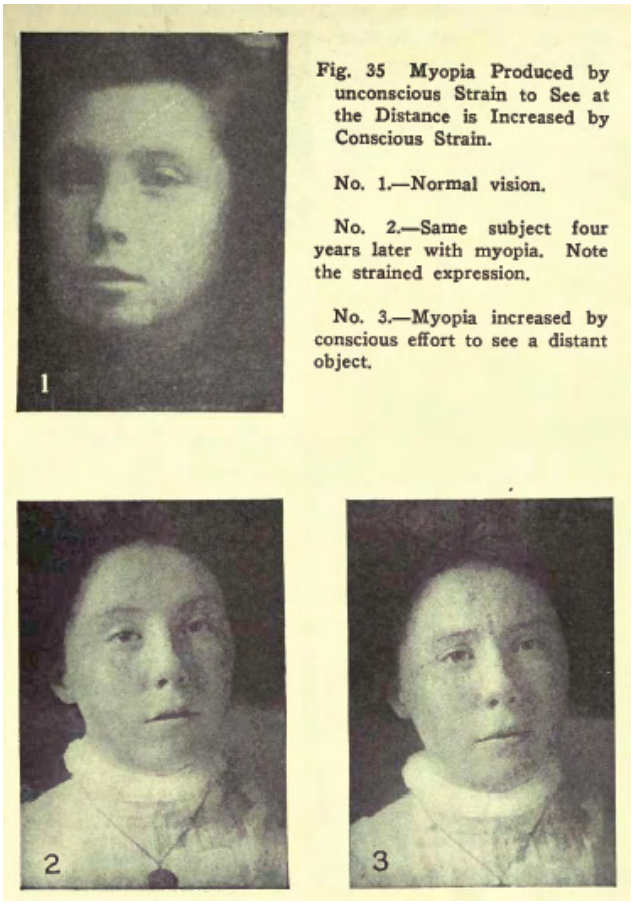

Fig. 35 Myopia Produced by unconscious Strain to See at the Distance is Increased by Conscious Strain.

No. 1.—Normal vision.

No. 2.—Same subject four years later with myopia. Note the strained expression.

No. 3.—Myopia increased by conscious effort to see a distant object.

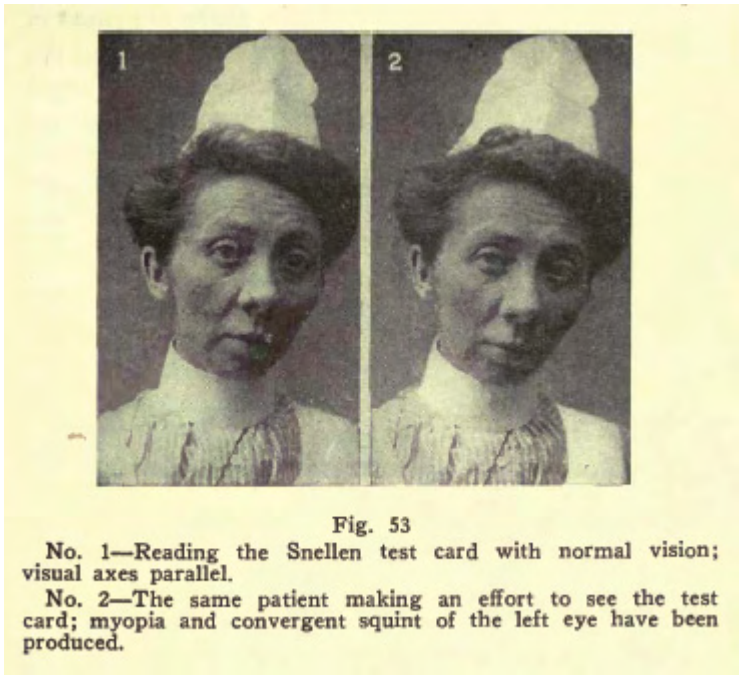

Fig. 53

No. 1—Reading the Snellen test card with normal vision; visual axes parallel.

No. 2—The same patient making an effort to see the test card; myopia and convergent squint of the left eye have been produced.

Fig. 35
1—Girl with normal vision in 1904.
Note the absence of facial effort.
2—The same girl as shown in #1, four years later with myopia of 3.00 D.
Note the elevation of the eyebrows and other manifestations of effort.
3 —The same, with myopia increased by voluntary effort to see better the Snellen card at twenty feet. The manifestation of effort is increased.

Fig. 53
1—Reading the Snellen test card with normal vision; optic axes parallel.
2—The same patient making an effort to see the Snellen test card at ten feet by eccentric fixation. The patient produced a functional myopia and the left eye turned in.

So decided was the relaxation of the near focus that efforts to read by a dim light were successfully employed in some cases of functional myopia to obtain adjustment of the eye for distant vision after other methods had failed.

The following cases illustrate the effects of effort when reading with difficulty at a near point:

Case IX. A boy with normal eyes, aged nine years, read Jaeger No. 1 easily at twenty inches. A concave twenty inch glass held outside the visual axis corrected the focus in all meridians. When the light was lessened, the print was read with difficulty. Now retinoscopy indicated that the vertical meridian was accommodated as before, but the horizontal was lessened and had become hypermetropic. With the aid of the retinoscope one always knew when the boy read easily or with difficulty, He was also examined after he had been reading two hours by a poor light, leaning over, the book held in his lap. The result was the same.

Case X. A girl, aged twelve years, compound hypermetropic astigmatism, left vision, 10/10 nearly. Retinoscopy, vertical meridian was corrected by convex 3.00 D. and the horizontal by convex 1.50 D. when she regarded the 200 Snellen card letter at ten feet. When she read the twenty line Snellen at ten inches the vertical meridian was corrected by a concave ten inch glass and the horizontal by concave 1.00 D. She read Jaeger No. 1 at ten inches with difficulty; the vertical meridian remained the same, while the horizontal was corrected by convex 1.00 D. The illumination of the page was reduced by a screen. She had greater difficulty in reading Jaeger

No. 1 at ten inches when the retinoscope used simultaneously indicated that the vertical meridian was corrected by concave 4. D., or ten inch, while the horizontal was corrected by convex 2.30 D. Retinoscopy indicated that this patient read with difficulty even very large print. An increased effort did not increase the myopic refraction of the vertical meridian, but made the horizontal more hypermetropic than when regarding the Snellen card at ten feet.

Case XI. A girl, aged seven years, left eye under atropine sulphate, one per cent., three times a day for two months, vision normal with convex 3,00 D. S. combined with convex 0.50 D. C, at 90°, the same refraction with retinoscopy. With her correction she read with difficulty large print, Jaeger No. 14, at six inches when the vertical meridian was corrected by convex 4.00 D. and the horizontal by convex 5.00 D., an increase of 2. D. of hypermetropia in the horizontal meridian after an effort to read with the accommodation apparently paralyzed by atropine.

Case XII. A woman, aged seventy-six years, right eye, 20/30, no glass improved, incipient cataract. By retinoscopy all meridians were corrected by convex 0.50 D. Regarding the tip of her finger at six inches, the vertical meridian by retinoscopy was measured by convex 2.00 D., and the horizontal by convex 4.00 D. An effort to see distant objects always produced myopic refraction, while an effort to see near objects always produced the opposite, hypermetropic refraction.

Sufficient evidence has been obtained to convince me that near use of the eyes is not the cause of myopia. The cause of myopia is the same in birds, the lower animals, uncivilized man, and school children.

Wild birds have unusually good distant vision; but in captivity they acquire myopia (Casey A. Wood, *Ophthalmology*, Chicago, April, 1907). Uncivilized people have good sight; but after they live in civilized communities they acquire myopia (Risley, *System of Diseases of the Eye*, Norris & Oliver, 1897, Vol. II). Children in the first year of school have normal vision; later, myopia is acquired. The following explanation of these facts is offered:

The uncivilized man is compelled to adjust his eyes for accurate distant vision, for protection against enemies, and in obtaining food. But, when living in civilized communities he is protected from enemies, his food is supplied, accurate distant vision is no longer necessary, he neglects to practice it, naturally loses it, and becomes myopic. Wild birds are compelled to adjust their eyes accurately for distant vision; but, in captivity the necessity ceases, and, because accurate distant vision is no longer required, they neglect it and become myopic. School children do not need accurate adjustment of their eyes for distant vision. When they neglect to practice it they become myopic. To make the matter clearer: When the eyes are not accurately adjusted for distant vision they must obviously be adjusted for a near point and be functionally myopic

CONCLUSIONS.

1. Myopia is not caused by efforts to read by a bad light.
2. The cause of myopia is an effort, usually unconscious, to see distant objects.

938 ST NICHOLAS AVENUE.

Eye Training for the Cure of Functional Myopia
May, 18, 1912

EYE TRAINING FOR THE CURE OF FUNCTIONAL MYOPIA.*

By W. H. Bates, M. D.,
New York.

In functional myopia the eye is adjusted for near vision without permanent elongation of the optic axis, as is found in true myopia. The defective vision is usually improved by concave glasses. The diagnosis has been made with the aid of the ophthalmoscope. By the direct method the details of the fundus were seen momentarily with clearness by the normal eye. Many cases have been recognized by retinoscopy. The local and prolonged use of sulphate of atropine has not always relieved functional myopia.

Occurrence. **Functional myopia occurs universally. Newborn children are afflicted. It was found in varying degrees in more than ten thousand school children, and was responsible for nearly all the eye pain, asthenopia, headaches, defective vision, irritability, not only of the children, but of the teachers as well. It was found frequently among**

*Read before the Medical Association of the Greater City of New York, January 15, 1912.

farmers, day laborers, sailors, mechanics, and professional men and women. The oldest treated was aged seventy-six.

Most persons with normal eyes when they regard large objects at a distance are unconsciously functionally myopic. The eye is habitually focused for a near point, and the continuous muscular effort is often injurious. But when regarding small or large distant objects clearly or when reading the XX line of the Snellen test card at twenty feet, the normal eye was adjusted accurately for distant vision and was at rest. Simultaneous retinoscopy demonstrated the facts.

Children, when entering school, usually have normal vision. In a short time, a few weeks, they acquire functional myopia. The discomforts which school children suffer from functional myopia can be appreciated only by teachers and others who have had practical experience with these unfortunates. teacher afterward used the card continuously for eight years, and stated that as a result no more children in her room acquired defective vision. Her success in relieving or preventing functional myopia was also achieved by more than fifty other teachers. Numerous other benefits were observed, less headache, fatigue, and irritability. The teachers themselves found relief from eyestrain by the use of the card. The exercises in distant vision required less than half a minute daily and were not objectionable in any way, to my knowledge. A Snellen test card was placed permanently in each class room where all the children could see it from their seats, with the directions: Read daily the smallest letters you can see with each eye at more than ten feet.

Most persons with functional myopia were unconscious of the effort made to see distant objects. (See Figs. 1, 2, 4, 5.) They were benefited after



Does your boy squint?

This boy is reading the Snellen test card with normal vision. Note the absence of facial strain.

The same boy straining to see at a distance is producing myopic astigmatism in eyes previously normal.

In this picture the boy is making himself myopic by partly closing his eyes and making conscious effort to read the test card at ten feet.

Fig. 1–A boy with normal eyes reading the X line of the Snellen test card at ten feet. Note the expression of the eyes with the focus completely relaxed.

Fig. 2 – The same as figure one regarding a picture at twenty feet. Simultaneous retinoscopy indicated compound myopic astigmatism. He was *unconscious* of the fact that his eyes were focused for a near point. Note the manifestation of effort by staring.

Fig. 3 – Functional myopia produced voluntarily by partly closing the eyelids (squinting) and making an effort to read the Snellen test card at ten feet.

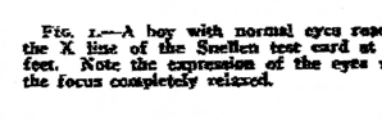

FIG. 1.—A boy with normal eyes reading the X line of the Snellen test card at ten feet. Note the expression of the eyes with the focus completely relaxed.

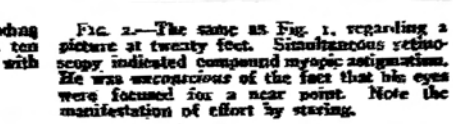

FIG. 2.—The same as Fig. 1, regarding a picture at twenty feet. Simultaneous retinoscopy indicated compound myopic astigmatism. He was unconscious of the fact that his eyes were focused for a near point. Note the manifestation of effort by staring.

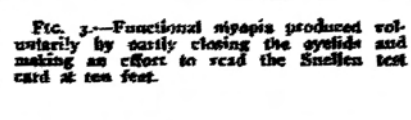

FIG. 3.—Functional myopia produced voluntarily by partly closing the eyelids and making an effort to read the Snellen test card at ten feet.

In one class room of forty pupils, first year children, six to eight years old, the teacher noted that at the opening of school in the Fall, all the children could see the writing or letters on the blackboard; but, before school closed in the following Spring, all, without exception, complained that they could not see the writing or letters on the blackboard from their seats, when distant more than ten feet. This had been her experience each year for fifteen years. The eyes of her pupils were first examined in the Spring of 1903; result, all had difficulty in reading the Snellen test card. Thirty were relieved almost immediately, in less than five minutes, when their eyes were tested, by showing them with the aid of the same test card how to regard distant objects without an accommodative effort. Relapses were prevented, and the remaining ten defectives cured by the teacher by exercises in distant vision with the aid of the Snellen card. This they became conscious that an effort lowered the vision. (See Figs. 3, 6, 7.) One method: They were directed to regard the smallest letters they could see on the Snellen card at more than ten feet and to note their clearness. By partly closing their eyelids, by staring or otherwise making a voluntary strain, they observed that the letters became blurred. It was then suggested that they regard the card without effort. The alternate strain and relaxation were repeated until the patient was convinced that an effort to see distant objects lowered the acuity of vision; while, regarding the card without effort made the vision better. The exaggeration of the unconscious effort was usually followed by a greater relaxation of the effort to see distant objects. The simultaneous use of the retinoscope indicated improvement, less functional myopia, and the vision improved. A large amount of compound myopic astigmatism, 4.D., has been observed with the retin-

oscope in a normal eye during the time the patient made an effort to read the Snellen card with the eyelids partly closed. With each succeeding effort the myopia became less until it disappeared, and the patient no longer produced myopia by partly closing the eyelids and making an effort to see the distant card.



Fig. 37. Myopic Astigmatism comes and Goes According as the Subject Looks at Distant Objects With or Without Strain

No. 1.—Patient regarding the Snellen test card at ten feet without effort and reading the bottom line with normal vision.

No. 2.—The same patient making an effort to see a picture at twenty feet. The retinoscope indicated compound myopic astigmatism.

FIG. 4.—Regarding the Snellen test card at ten feet with normal vision. This patient had incipient cataract. When she made an effort, unsuccessful, to read at six inches, simultaneous retinoscopy indicated +2.00 D. S., combined with +2.00 D. C. 180°.

FIG. 5.—Regarding a picture at twenty feet and making an effort to see it more clearly, simultaneous retinoscopy, compound myopic astigmatism.

Patients with functional myopia were instructed in excentric fixation: When the normal eye read one letter of the line marked XX on the card at twenty feet, the eye was directed straight to the letter. When the eye was directed to a point less than six inches to one side of the letter it became indistinct. In fact, the area of maximum vision at twenty feet is less than one inch in diameter. Looking straight at a small letter, central fixation is necessary for the best vision. Regarding an object with the eye directed to one side of it, excentric fixation, always lowers the vision. In functional myopia, excentric fixation was frequently found, either in one eye or both. Such cases were not benefited until after it was corrected. In order to teach the patient how to regard objects by central fixation he was first shown how to exaggerate it. For example, he regarded the large letter of the card with one eye, the other being covered. He was then directed to look at a point three feet to one side of the card and to note that the large letter now became less distinct. The fixation point was gradually brought nearer to the letter until he could recognize that an excentric fixation of only a few inches lowered the vision. The patient then tested the effect of excentric fixation on the clearness of the smallest letters he could see. This simple demonstration proved to the patient the necessity of central fixation in securing the best vision and was successful in relieving many cases promptly. The functional myopia was benefited.

CASE. A girl, aged fourteen years, right vision, fingers counted at four feet, excentric fixation of 45°, amblyopia ex anopsia, convergent squint, and functional myopia. The left eye was normal. She was treated in February, 1903. The excentric fixation was corrected in the right eye after she learned with the aid of the other and normal eye that perfect vision was only possible by central fixation. Eye training, with the aid of the Snellen card, was followed by daily improvement in the functional myopia until the vision became normal. She obtained binocular single vision and was cured in two weeks. The good result was permanent after eight years.

Twitching of the muscles of the eyelids occurred frequently in functional myopia. It was so pronounced in some cases that it was readily seen. In other cases it was felt by light pressure on the closed eyelids with the tip of the finger. After the patient was told of its presence and encouraged to rest the closed eyes until it had ceased, the vision improved. When the twitching returned the vision became less. After some days the twitching usually ceased and the vision remained good.

Near use of the eyes. By retinoscopy it was discovered that an effort to read by a dim light at thirteen inches or less benefited functional myopia. While the eye was reading without difficulty diamond type at thirteen inches the refraction by retinoscopy was corrected by a concave thirteen inch or 3.00 D. glass; but, when an effort was made, or the effort was unsuccessful in reading the type, simultaneous retinoscopy indicated that the focus was less and was corrected by concave 2.50 D., 2.00 D., 1.00 D., or by a weak convex glass (usually at 180° only)—in some cases of functional myopia one or more meridians became normal. When tested with the distant Snellen card immediately afterward, the vision was improved. Repeated efforts to read by a dim light, at thirteen inches or less, fine print, Jaeger No. 1, was a great benefit.

Mrs. X. visited the eye clinic of the Amity Dispensary one day last summer. Her object was to investigate the cause of myopia in school children. She was first shown the use of the retinoscope. A boy, aged ten years, was sent by a school inspector to obtain glasses. He had a vision of one fourth the normal. With a concave 2.00 D. S., his vision was normal. Mrs. X. used the retinoscope while the patient was trying to read the Snellen card at ten feet, and found him myopic. The patient was urged to try to see better at the distance, to read the smaller letters of the test card, and he did make



Fig. 41.—One of Many Thousands of Patients Cured of Errors of Refraction by the Methods Presented in This Book

No. 1.—Man of thirty-six, 1902, wearing glasses for myopia. Note the appearance of effort in his eyes. He was relieved in 1904 by means of exercises in distant vision and obtained normal sight without glasses.

No. 2.—The same man five years later. No relapse.

FIG. 6.—A man, aged thirty-six years, 1902, wearing glasses for the correction of functional myopia. Homatropine did not relax the focus. Note the appearance of effort in his eyes. He was relieved in 1904 by exercises in distant vision and obtained normal sight without glasses.

FIG. 7.—The same in 1909. No relapse.

very evident efforts to see better by wrinkling the skin of the forehead, by partly closing the eyelids, by staring, and by looking sidewise at the card, excentric fixation. He became convinced that with all his efforts he not only did not improve his sight but he made it much worse. He was then told that he would see better if he looked at the card without making an effort. After a little encouragement he obtained normal vision. While he was reading the card with normal vision, Mrs. X. used the retinoscope, which now indicated no myopia. The time required to relieve this boy of functional myopia was less than fifteen minutes. To prevent a relapse the patient was given a Snellen card with directions to read the small letters at more than ten feet with each eye daily. Mrs. X. observed other and similar cases relieved.

We had a talk, the substance of which was that I should cure functional myopia in school children after some well known and competent physicians had made the diagnosis. She emphasized the importance of this plan to test the facts I claimed.

Mrs. X. was wearing glasses, concave 1.co D. nearly, with astigmatism, prescribed by a competent ophthalmologist who had used a cycloplegic to relax the accommodation. Her vision with the glasses was nearly normal. Without glasses her vision was about one third. She had myopia apparently with the retinoscope, but spasm of the accommodation or functional myopia by the direct method with the ophthalmoscope. She was told that a cure without concave or other glasses was possible.

How long will it take?" she asked.

"About five minutes," was my reply. She was asked to read the Snellen card at ten feet and to note her ability to see. Then she was directed to read it by making an effort and shown how to make an effort by partly closing the eyelids, by staring, etc., in short, to imitate the efforts of the children she saw treated. She was convinced that the effort materially lowered the vision. It was explained to her that her poor vision was caused by a continuous effort which was unconscious. The suggestion was then made that she read the letters on the distant card without trying so hard. The vision improved immediately and became normal in a short time. Her sight was now better without glasses than it had been before with glasses. She was quite excited over the prompt relief.

A number of physicians have visited the same clinic, diagnosticated functional myopia with the aid of the retinoscope, and observed its prompt relief by eye training with the aid of the Snellen card.

The maximum amount of functional myopia under atropine cured by eye training without glasses was 2.50 D.

CONCLUSIONS.

1. Functional myopia occurs frequently.
2. All normal eyes acquire functional myopia by improper efforts to see distant objects.
3. School teachers, physicians, and others have relieved functional myopia by eye training or education.
4. The Snellen test card is found to be the best distant object for training the eye for the cure of functional myopia.

938 ST. NICHOLAS AVENUE.

A CASE OF MYOPIC REFRACTION RELIEVED BY EYE EDUCATION

By W. H. BATES, M.D.,
New York

Medical Record, November 9, 1912, pp. 851-852.

For more than ten years the method of eye education in relieving functional disorders of vision has impressed me with its value. The following case is a type of many hundreds benefited and is described in some detail in order to illustrate the method of treatment.

An intelligent man, aged 25, was seen August 30, 1912. Right vision 1/5 normal. Has been wearing constantly for this eye—1.00 D. S.—0.50 D. C. at 180 deg., vision normal. Left vision, 2/3 normal. Wearing a plane glass for this eye.

After an ophthalmoscopical examination the patient was told that he was not near-sighted and did not need glasses to improve his vision but that his eye defect was due to improper use and was curable by a little instruction in the art of seeing. To this method of treatment he agreed, followed instructions and obtained normal vision without glasses in forty minutes, which pleased him more than a prescription of glasses.

First, the right or defective eye was covered by a screen. Then the better eye, the left, was instructed in the proper methods of obtaining normal vision with the aid of a Snellen test card at 20 feet. He was told that perfect sight was only possible by regarding one letter of the distant card at a time or by regarding a small part of each letter in turn. (Central Fixation) It was important to regard one letter on a line in such a manner that the one following it appeared less distinct. This was in the beginning difficult for him to do because he said he could see all the letters of the same size on one line equally well and at the same time or simultaneously. He was convinced that he did not see with the same distinctness all the letters on one line after he tried to read them when regarding a point several feet to one side of the card. He was urged to make an effort to see clearly one letter while its neighbor appeared less distinct. In a few minutes this was accomplished. The next step required more concentration, namely, to acquire the ability to see the top of a small letter better than the bottom or to see the left side of a small letter better than the right side of the same letter. It was difficult for him to accomplish this because he had a strong tendency or inclination to attempt to see a number of letters simultaneously or to regard all parts of one letter at the same moment. He was anxious to do the proper thing and tried to understand and carry out my suggestions. He was liable to forget the directions and try something else which might occur to him. But by insisting that he try my methods instead of experimenting with his own inclinations he was soon able to say that when he regarded closely one part of a small letter the other parts of the same letter were less distinct. He was learning the proper methods of obtaining normal vision and became conscious of the methods practiced by the normal eye, usually unconscious, to see properly and perfectly.

Having now learned the necessity of directing the eye accurately to distant objects in order to obtain good vision, his attention was next called to the importance of a proper focus. He was requested to hold his fore-finger at ten inches from his left eye with the tip of the finger placed close to a line from the eye to the large letter on the Snellen card. When he regarded the tip of his finger closely he was unable to distinguish the distant letter at the same time. He was told that this phenomenon was one of great importance as the cause of the defective vision of the other eye, the right, was the fact that the eye was focused for near vision when regarding distant objects. He learned that he could not see even large letters on the Snellen card at 20 feet when the better eye, the left, was focused for the near or reading distance. Although self evident to many people he had not realized this fact before. I believe that the few minutes devoted to demonstration that the normal eye could not see distant objects clearly when focused for near vision was an important factor in the subsequent rapid relief of the defective vision of the poorer eye, the right, by education. The demonstration was made quickly and in less time than one might expect, about five minutes. At this time it was found that the vision of the left eye had improved from vision of 2/3 to vision normal.

The left or normal eye was then covered by a screen during the time that the right was exercised. He was shown how the vision of the right eye was further lowered when the gaze was directed to one side of the distant card. When he regarded a point three feet or further to one side of the card he was unable to distinguish the large letter. The point of eccentric fixation was brought closer and closer to the card until he was convinced that he saw the letter worse when he looked only a few inches to one side instead of directly at the letter. Central fixation or the ability to direct the eye directly at one point and to hold the eye steady (this sentence is partially correct – the true state of central fixation when looking a small part, point is to keep the eye moving, shifting on the point. The eye must also be allowed to shift to other parts, objects, then back to the original point.) was difficult and was not accomplished immediately. He was surprised when told that he did not practice central fixation. When the effort was made to see a small letter

unsuccessfully the eye was seen to move in various directions. I come now to a description of an original procedure which gave him complete relief in some few minutes. It has proved of such great value in so many of my cases of real and functional myopia that I feel that it should be emphasized. It has never done harm. It has always been beneficial. All oculists may disagree or oppose my facts with theories while they are unable to stop the increase of many cases of myopia even with glasses. The procedure is as follows:

He was directed to make an effort to see a small object held so close to his eye that it was impossible for him to see it clearly.

For convenience a fine point on the end of my finger nail was the visual object employed. It was held about three inches in front of his eye while he made strenuous efforts to see it, but was not successful. In a short time his vision for distance was tested and found improved. By alternately regarding the finger nail at three inches (and shifting on it, relaxed to avoid strain) and the Snellen card at 20 feet the vision rapidly improved from vision 1/5 to the normal. The good result was obtained in less than twenty minutes. He was told that the relief was not due to suggestion, hypnotism, or to some unknown agency, but that he became able to see as he should, normally, because he had learned how to use the eye properly by education.

To prevent a relapse he was recommended to practice daily regarding small letters or small objects at a distance in such a way that he would see one part better than another part of a small letter or other small object. Shift on the objects part to part - combine shifting with central fixation. He was to do this with each eye separately, covering or closing the other eye. He was given a Snellen test card for exercises in distant vision.

Shift, central fixation, switch on objects at close, middle, far distances with both eyes together, then one eye at a time, then both together again = fast vision improvement. If vision is less clear in one eye, practice extra time with that eye. Test each eye at close and far distances.

938 St. Nicholas Avenue.

MYOPIA PREVENTION BY TEACHERS

By W. H. BATES, M.D.,

New York Medical Journal, August 30, 1913 ,Vol. 98 pp. 410-413.

Myopia with elongation of the eyeball is incurable. (The belief that myopia with elongation of the eyeball is incurable is an old theory Dr. Bates was taught in Ophthalmology College. In later years/articles Dr. Bates proves myopia with elongation of the eyeball is curable.)

It is usually acquired during school life. Acute myopia, spasm of the accommodation, or functional myopia is an early stage of incurable myopia. The cause of myopia is an effort to see distant objects.

Dr. Bates proves myopia is curable

Corroboration:

1. Myopic refraction has always been produced in man and the lower animal when regarding unfamiliar distant objects which required an effort.
2. Myopia was prevented in the public schools of Grand Forks, N. D., for eight years by methods which prevented an effort to see distant objects.
3. Myopia was always benefited by treatment suggested by the cause.
4. The cause suggested a method for the experimental production of myopia in rabbits, dogs, and cats.
5. Physicians, teachers, and others interested have investigated and confirmed these facts.
6. It should be emphasized that there is but *one* cause of myopia, an effort to see distant objects. There is no other cause.

Near use of the eyes is not a cause of myopia. By the aid of simultaneous retinoscopy, it was always demonstrated that an effort to see near objects lessened myopic refraction or produced hypermetropic refraction.

Prevention of diseases is usually suggested by the cause. When the cause is known, prevention may be successful, but when the cause is not known prevention is uncertain. For example: Yellow fever, twenty five years ago, was not prevented by quarantine, disinfection, or other methods until the cause was discovered, the infected mosquito. By removing the cause, yellow fever has been eliminated form Havana and Panama.

Likewise, previous efforts to prevent myopia have failed because the cause was not known. It was erroneously believed that when school children regarded, or made an effort to see, distant objects, that the eyes were at rest or that accommodation or myopic refraction did not occur. Simultaneous retinoscopy disproved this assumption. It has been repeatedly demonstrated with the aid of the retinoscope that all school children with normal eyes when regarding unfamiliar writing or figures on the blackboard, distant maps, diagrams, or pictures had myopic refraction. It was quite otherwise when they regarded a familiar distant object. The retinoscope used at the same time indicated no myopic refraction.

The Snellen test card, while being of use for testing the acuity of vision, was found also during the past ten years to be the best distant object for exercises in distant vision. It should be memorized and thus made a familiar distant object. After its daily use for half a minute or longer myopia was prevented; and, in addition the vision of many pupils with defective sight was improved for an unfamiliar Snellen card, for writing and figures on the blackboard, and for other distant objects. Furthermore, near vision was benefited by the use of the Snellen card. Many pupils stated that they could study their lessons with less or no discomfort.

Myopia prevention was introduced in Public Schools Nos. 6, 183, and 186 of New York city January, 1912; later, Public Schools Nos. 46 and 43 tested the method.

THE METHOD

A Snellen test card was placed permanently where all the pupils could see it from their seats. Daily the teachers recommended all the children to silently read the card with each eye separately, covering the other eye with the palm of the hand in such a way as to avoid pressure on the eyeball.

Records were made with the same card or with an unfamiliar card for testing the vision. This matter is discussed below. Each line of the Snellen card is designated by a number which indicates the feet that the line should be read by the normal eye. Records of the vision are written in the form of a fraction: **The numerator of the fraction represents the distance in feet of the pupil from the**

card while the denominator denotes the number which designates the lowest line read.
Records were usually submitted as follows:

Public School No. 46, W. A. Boylan, principal.
E. 6A., J. Hiesel. T., 27
D., 27
I., 27
N., 25
W., 0

	February, 1913.		April, 1913.		June, 1913.	
	R.	L.	R.	L.	R.	L.
John D.	20/100	20/50	20/50	20/40	20/20	20/20
Sanford G.	20/50	27/70	20/30	20/40	20/15	20/20

Public School No. 6.

The first school authorized to try the method was Public School No. 6. Miss K. D. Blake, principal. In November, 1911, she permitted me to test and record the vision of 115 pupils. Later, she informed me that a medical inspector examined the same children and found my record correct.

In one class room she observed me relieve the defective vision of five pupils in fifteen minutes with the aid of the Snellen card. She was told that the teachers were able to improve the vision of all pupils in the same simple way and thus, logically, prevent myopia.

The memorized Snellen test card aroused much skepticism. Its value for testing the vision was questioned by most teachers. To settle the matter, Miss Blake had the vision of 1,500 pupils tested, January, 1912, with a memorized Snellen card by the teachers. Soon afterward, the vision of the same 1,500 pupils was tested with an unfamiliar Snellen card. The tabulated records of both tests were sent at his request to Gustave Straubenmuller, associate superintendent, with the following conclusion: "The figures submitted are interesting and it would seem as though Doctor Bates had, to a certain extent, proved his point." The test was repeated in June, 1913, and the memorized Snellen card was again found satisfactory for testing the vision. Objective tests were conclusive, and demonstrated the interesting fact that school children did not deceive themselves or others, when their vision was tested with a memorized Snellen card. When a pupil said he was reading the memorized Snellen card with normal vision, the retinoscope used at the same time, indicated no manifest error of refraction; the eye was adjusted for normal vision.

The reliability of the teachers' records of the vision was investigated by Miss Blake. At her request the health department sent a medical inspector who also tested the vision of the pupils and told Miss Blake that the records of the teachers were reliable and correct.

One teacher taught her pupils to test and record the vision of their own eyes daily. They convinced me that they did both correctly.

The pupils learned the value of the Snellen card for improving the sight; and many obtained by their own efforts normal vision without glasses. This fact was observed also in other schools. One teacher asked me to investigate a boy who said his vision had improved from 20/200 to 20/30. I found the boy had normal vision, but I had trouble to convince a skeptical teacher that the pupil was able to see perfectly.

It is suggested that a monitor be appointed in each class to improve the vision of all pupils with defective sight.

Miss Blake deserves much credit for her intelligent methods of investigation of myopia prevention by teachers. When Dr. C. Ward Crampton, the director of physical training, investigated the method and visited her school early in 1913, he told her to remove the Snellen cards and discontinue her efforts to prevent myopia. This command was so manifestly unfair to the method at the time that she refused to comply without an order from her superiors. I cannot express in words my gratitude to her for her championship of the method. The records she submitted in June, 1913, of pupils also tested in October, 1912, were the best of all. She desires to continue the method and is now willing for me to use the ophthalmoscope to obtain more scientific facts for the benefit of school children.

Finally, when the question was asked her, "Do you believe that the Snellen card was a benefit?" she replied: "Yes, I do; but I do not understand it."

Public School No. 183.

In the Fall of 1911, Miss A. J. Farley, principal Public School No. 183, became interested in myopia prevention and consented to try the methods in her school. In the beginning most of the teachers neglected to use the method. This was true of other schools.

Miss C. V. Dillon, ungraded class, was the first New York City teacher to submit accurate records of the vision of school children before and after the use of the method of myopia prevention. She recorded the vision of all her pupils, October, 1911, and again, December, 1911. During this time the Snellen card was not used and the vision of no child improved. After the Snellen card was placed permanently in the class room, January, 1912, she gave her pupils daily exercises in distant vision with its aid. She noted a prompt improvement in the sight. The vision of the same children was recorded, March, 1912, and June, 1912, using an unfamiliar Snellen card for testing the sight. The records indicated that the vision of all was improved. She continued the use of the Snellen card, daily, during the school years, 1912-1913.

June 27, 1913, Miss Dillon was asked her opinion of the method. She answered that her results continued good, and offered her recent records as additional evidence in favor of the method. At one time during the year the health department prescribed glasses for all her pupils. As long as a child wore glasses she refrained from giving it exercises in distant vision with the memorized Snellen card, by order from the principal; but, after a child appeared in school without glasses she believed she was privileged to benefit it with the Snellen card. She described in detail the results obtained. Some pupils, even with glasses, were unable to see the writing on the blackboard from their seats. In a short time their vision improved without glasses, so that they had no further difficulty with their sight. Others complained of eye pain or had trouble in seeing to read. They held their books close, about six inches from the face. The use of the distant Snellen card gave them relief and they later read without effort or discomfort at a comfortable distance, about twelve inches. She discarded glasses and relieved her own eyes by the use of the Snellen card. I believe that if all teachers were as enthusiastic or as conscientious as Miss Dillon, no child would acquire myopia while attending school.

The success of Miss Dillon with the method encouraged Miss Farley, the principal, to persuade other teachers to try it.

October, 1912, Miss Knauff, 2A, reported the vision of six pupils with defective sight did not improve after one week when the Snellen card was not used. After the method was employed daily for one week, all had improved, and five of the six defectives obtained normal vision without glasses. Similar results were obtained by four other teachers. Miss Farley asked the health department for an investigation to determine the reliability of the teacher's records. The medical inspector sent tested the vision of the same pupils and told Miss Farley that the teachers tested and recorded the vision correctly. Relapses occurred after the use of the Snellen card was stopped.

In January, 1913, Miss Farley had the vision of all the pupils recorded on the school card which each child receives on entering school, a method of keeping records which I recommend. All the teachers began the use of the method and their records were tabulated in June 1913.

Miss Farley is to be commended for her thorough investigation of the method. She told me that she was convinced of its value and was willing to continue. She will permit the use of the ophthalmoscope.

Public School No. 186.

J. T. Nicholson, principal, Public School No. 186, had defective vision without his glasses. With the aid of a memorized Snellen card his vision became normal in a few minutes. In this way he learned something of the value of the Snellen card. After his personal experience with its benefits he more readily believed in the probability that the teachers by improving the vision of school children would prevent myopia. His teachers did not all record the vision until October, 1912.

On April 14, 1913, all the Snellen cards were removed and not replaced until June 16, 1913. The records of his teachers indicated a less number benefited than in Public Schools Nos. 6 and 183, where the Snellen card were in use for a longer time.

Miss Marry E. Sinnott, assistant principal, called my attention to the fact that the more experienced or better teachers benefited the vision of a larger number of children than did the teachers of less ability. Mr. Nicholson believed that the vision of the pupils in his school was benefited by the Snellen card. He is now willing that I use the ophthalmoscope for more accurate investigation.

C. B. Jameson, principal, Public School No. 43, in March, 1913, introduced the method in his school on the recommendation of J. T. Nicholson, principal, Public School No. 186. Four teachers tested the vision, made the records, and used the Snellen card for myopia prevention without my supervision. It was only through the courtesy of J. T. Nicholson that I learned the facts. In June, 1913, Dr, John P. Conroy, district superintendent, kindly loaned me the records of the vision of the pupils tested, in March and again in June, 1913, by the teachers of Public School No. 43. The results were good. It seems probable that the method could be introduced successfully in other schools without my supervision.

W. A. Boylan, principal, Public School No. 46, introduced the Snellen cards in 1912. He has incurable myopia acquired in school. With the aid of the Snellen card, I improved his vision, without his glasses, fivefold in ten minutes. He has cooperated with me as much as he could, but only two teachers submitted records, June, 1913.

Miss J. Hiesel, E6A, submitted the best records which I have seen in ten years. Of twenty-seven defectives all were improved and twenty-five obtained normal vision in both eyes. She described how one incorrigible, and one truant, became good students after their eyes were relieved of pain and discomfort by the use of the Snellen card. I attended one of her daily exercises in distant vision with the aid of the Snellen card, witnessed the enthusiasm of all the pupils in the game, and learned much of the possibilities of the method for improving defective vision and preventing myopia.

RECORDS

Public School No. 186.

J. T. Nicholson, principal, Public School No. 186, had defective vision without his glasses. With the aid of a memorized Snellen card his vision became normal in a few minutes. In this way he learned something of the value of the Snellen card. After his personal experience with its benefits he more readily believed in the probability that the teachers by improving the vision of school children would prevent myopia. His teachers did not all record the vision until October, 1912.

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RECORDS.

Table 1.— Summary of the records of the vision of the pupils made by the teachers of five New York city schools.

Note that in Public School No. 186 the Snellen cards were removed from all the class rooms April 14, 1913, and replaced June 16, 1913.

	Number.	Per cent.
T., Pupils tested twice	5700	
D., Pupils with defective sight at the first examination	3299	58
I., Defectives improved in one or both eyes	2026	61
N., Both eyes of defectives found normal at the second test	1023	31
W., One or both eyes of T. found worse at the second test	359	6
R., Dates when the two tests of the vision were recorded.		

TABLE No. 1.

P. S.	T. Number.	D. Number.	Per cent.	I. Number.	Per cent.	N. Number.	Per cent.	W. Number.	Per cent.	R. Dates of tests.	Teachers. Number.
6	925	474	51	390	82	303	54	83	9	October, 1912, June, 1913	37
183	635	333	52	250	75	168	50	38	6	January, 1913, June, 1913	21
186	1,939	1,223	63	669	55	220	18	69	4	October, 1912, January, 1913	49
186	2,007	1,139	57	620	54	276	24	164	8	February, 1913, June, 1913	57
43	131	85	65	61	72	30	30	5	4	March, 1913, June, 1913	4
46	63	45	71	36	80	26	58	0	0	March, 1913, June, 1913	2
Totals	5,700	3,209	Av. 58	2,026	Av. 61	1,023	Av. 37	359	Av. 6		121

Table 2.—Summary of the records of the vision of the pupils made by those teachers of five New York City schools who recorded that the vision of no pupil became worse.

In Public School No. 186.

28 teachers recorded no pupils worse in January, 1913; 13 teachers recorded none worse in June, 1913; and 10 teachers recorded no pupils with vision worse both in January and June, 1913.

	Number.	Per cent.
T., Pupils tested twice	1351	
D., Pupils with defective sight at the first examination	845	62
I., Defectives improved in one or both eyes	605	71
N., Both eyes of defectives found normal at the second test	334	40
W., One or both eyes of T. found worse at the second test	0	

R., Dates when the two tests of the vision were recorded.

TABLE No. 2.

P. S.	T. Number.	D. Number.	D. Per cent.	I. Number.	I. Per cent.	N. Number.	N. Per cent.	W.	R. Dates of tests.	Teachers Number.
6	244	135	55	129	95	121	82	0	October, 1912, June, 1913	11
183	198	85	43	81	95	62	73	0	January, 1913, June, 1913	7
186	414	328	77	170	53	52	16	0	October, 1912; January, 1913	10
186	365	213	58	152	71	64	30	0	February, 1913, June, 1913	10
43	67	49	73	37	75	19	39	0	March, 1913, June, 1913	2
46	63	45	71	36	80	26	58	0	March, 1913, June, 1913	2
Totals	1,351	845	Av. 62	605	Av. 71	334	Av. 40	0		32

All the principals and all the teachers, in the beginning, were skeptical. After they used the method and investigated the results in the class rooms, they became convinced that the use of the memorized Snellen card improved the vision of the school children. They do not understand it.

CONCLUSIONS

1. All investigators, I believe, have published that previous efforts to lessen defective vision or prevent myopia in schools have failed.
2. One hundred and twenty one teachers in the schools of New York city have lessened appreciably the number of pupils with defective vision. Note in the accompanying records that over 1000 pupils with defective sight obtained normal vision in both eyes.
3. Thirty-two teachers prevented the vision of all their pupils from becoming worse.
4. Myopia was prevented by teachers.

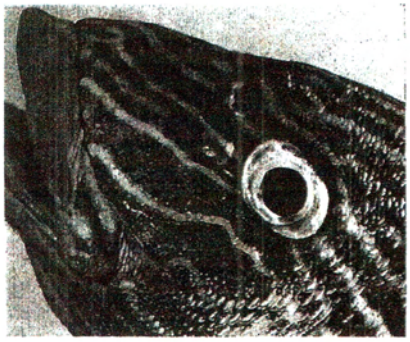
938 ST NICHOLAS AVENUE.

FISHES' EYES

***By* W. H. BATES, M.D.**

(Photographs by Elwin R. Sanborn.)

Bulletin of the New York Zoological Society, November, 1914, pp. 1170-1173



YELLOW GRUNT
The pupil is nearly round.



YELLOW GRUNT
Enucleated eyeball held by forceps. The skin covering the front of the eyeball has not been removed.

FISHES' EYES.

By W. H. Bates, M.D.
(Photographs by Elwin R. Sanborn.)

THE Aquarium is one of the show places of New York. Here are gathered sev-

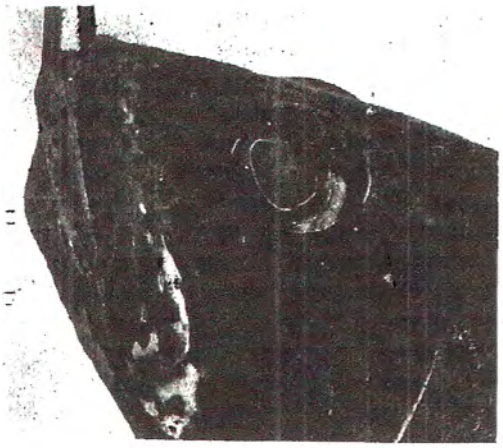
THE Aquarium is one of the show places of New York. Here are gathered several thousand fishes so arranged that they can be readily inspected while swimming in the tanks. The crowds of people that visit the place daily, testify to the fact that here is something worth seeing.

Some children were taken to the Aquarium and were asked to tell what they saw of the eyes of the fish. One boy eleven years old, said, "the pike has an eyeball shaped like an egg and their eyes seemed to be staring at you when you looked at them." "The muskallunge has eyes which go in and out; they are bright with a yellow ring around them." The rainbow trout appeared to him to have an eyeball shaped something like a square, the eyes of the yellow perch bulged at the top. He noted the turquoise blue of the eye of the red hind. Both he and his sister, aged seven, after two hours did not want to leave.

The eyes of the fish are in constant use except when they are asleep. They move up, down, to the right or left and rotate. In some fish these movements are quite marked. Fish have large eyes relatively to man. The width of the eyeball from side to side, is usually much greater than its depth. A fish ten inches long usually has eyeballs about one-half of an inch long, while a man seventy inches tall has spherical eyeballs about one inch long. One may say that the eye of a fish is one-twentieth of its length, while that of a man is occasionally only one-sixtieth or one seventieth of his height. However, the black grouper has very large eyes. In one specimen three feet long, the eyes were nearly two inches wide. A nurse shark of about the same length had eyes less than one-quarter of an inch wide. Eels four feet long had eyes as small as those of the shark.

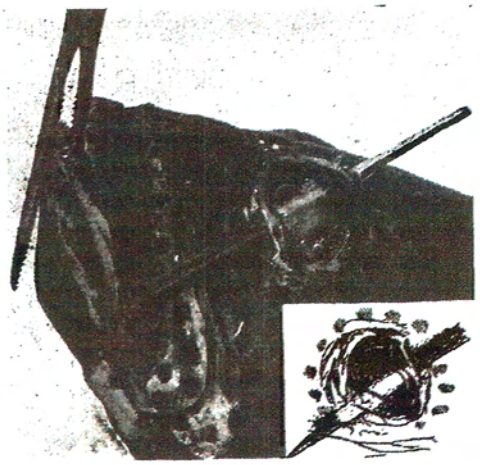
My first impression of the fish seen in the tanks of the New York Aquarium was that their eyes seemed very open. Why? After investigation it was found that most of them had no eyelids. As their eyes need protection, was there anything else to save them from injury? Most fish have their eyes protected by a slimy material. The eyes of the red hind, yellow grunt and others have a transparent skin over the front part of their eyes, which is as thick as the skin of the fish or as the eyelids of some animals which live on the land. In the herring, this transparent skin covers only a part of the eye. Exposure to the air was soon followed by a cloudiness of the transparent coat of the eye so that in a few minutes, or less, the interior of the eye could not be seen with an instrument called the opthalmoscope. The puffer, or swell fish, living in salt water, has eyelids which cover the eyeball when closed. The lower eyelid is much larger than the upper, being the reverse of the condition found in man, whose upper lid is larger than the lower.

Mr. L. L. Mowbray, of the Aquarium staff, suggested that the puffer needed eyelids for the protection of its eyes because of its habit of burrowing in the sand at the bottom of the water.



RED HIND

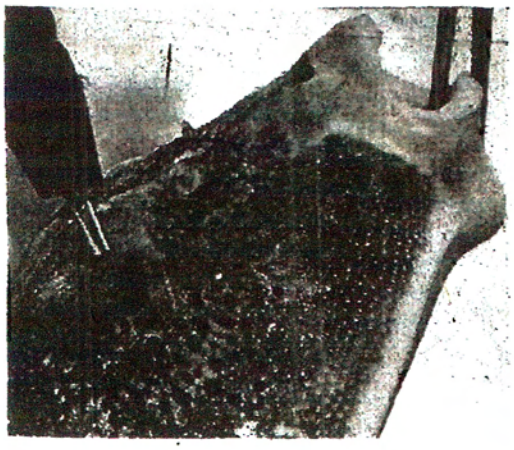
Note the pear shaped pupil. The outer skin of the eyeball is pigmented above, transparent where it passes over the cornea and pupil and becomes opaque and less pigmented below.



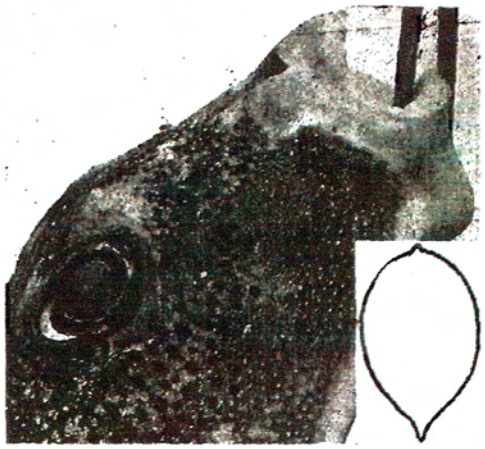
RED HIND

A probe has been inserted between the outer skin of the eyeball and the globe, A part of the pupil can be seen.

Diagram—Red hind showing the transparent membrane covering the front of the eye with a probe beneath it. Note the pear shaped pupil.



PUFFER
The eyelids are closed by electrical stimulation.



PUFFER
The eye is open. Note the oval pupil.
Diagram—The shape of the pupil of the eye of the Puffer.

fish were normal, as were the eyes of fish that were asleep from the effects of ether. When examined out of the water or in the air, the eyes were the same as when the fish were immersed; but, in a short time, less than a minute, one could not see the interior of their eyes. Good photographs of the eyes could only be obtained while the fish were immersed. The fact that fish are not near-sighted should be emphasized because some writers have stated that fish have their eyes focussed for near objects most of the time. Fish, while able to see, or to focus their eyes correctly for distant objects, are also able to change their focus and see near objects. Some fish were observed with the aid of the retinoscope that had their eyes properly focussed on objects as close as four inches or even less.

How do Fishes Change the Focus of Their Eyes.

Fishes' eyes are adjusted to see near objects by the squeeze or contraction of the two oblique muscles on the outside of their eyeballs. The squeeze of the oblique muscles makes the eyeballs longer, the condition found in near-sight. To see distant objects accurately, these muscles relaxed, which permitted the eyes to resume their normal shape. The following experiment demonstrates that the accommodation or the near focus of fishes' eyes is produced by the action of the oblique muscles and not by the action of the ciliary or any other eye muscle:

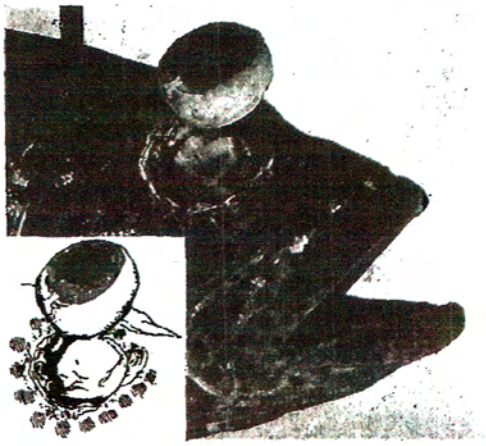
1. In the beginning the eye of a normal fish was examined.

2. By means of electrical stimulation applied to the eyeball or its neighborhood, in most fish their focus was changed from distant to near objects.

3. One of the muscles of the eye called the superior oblique, was cut, which produced no change in the focus of the eye.

4. Electrical stimulation now did not produce any change in the focus. It did not accommodate.

5. The muscle which had been cut was now re-united with a thread, sewed together, with-



RED HIND
The outer skin of the eyeball has been peeled off and the eye muscles removed. The eyeball is held only by the optic nerve which appears as a white cord.
Diagram—Red hind, right eye with muscles removed and skin over the front of the eye peeled off. Note the shape of the eyeball, wider from side to side than at the optic axis.

The colored portion of the eye, the iris, is usually yellow in color. However, one found fish with the iris of different colors. In the center appears the black part called the pupil, usually round, as in man; but, fish were found whose pupils were pear-shaped, triangular, oval and pointed at each end. The size of the pupil does not appear to change very much on exposure to a bright light or as rapidly as does the pupil of most air-breathing animals. When the light comes from behind the observer, the interior of the eyes of the fish show beautiful colors; shades of red, yellow, blue and green. Many visitors at the Aquarium were entertained for a long time by the wonderful variety and kaleidoscopic changes of colors in the eyes of the fish. Dr. C. H. Townsend has published in one of the reports of the Zoological Society a valuable and interesting paper on the changes in the color of fish.

Have Fish Good Eyesight?

The men connected with the Aquarium have told me some interesting stories of their wonderful power of vision; and, one can believe that fish do see well when they avoid obstruction in their paths while darting rapidly through the water.

The object of the study of fishes' eyes was to find out the cause of near-sight and the need of glasses acquired by school children. The facts learned were of great practical value. One theory of the cause of myopia or near-sight was that muscle inside the eye, called the ciliary muscle, produced near-sightedness. This theory was not the truth in the case of fish, because they have no ciliary muscle. Another theory was that the near use of the eyes caused myopia or near-sight. This theory did not apply to fish because myopia or near-sight was not found in fish like eels that habitually use their eye for near objects. Near-sight or myopia was produced in fish by the action of two muscles outside of the eyeball, called the **superior and inferior oblique.** They are so arranged about the eyeball that they form a nearly complete belt. **When these muscles contract, the belt is tightened and consequently the eyeball is squeezed out of its normal shape, just as one would change the shape of a hollow rubber ball by squeezing it when held in the hand. The line or axis of vision becomes elongated. The elongated eyeball like the photographic camera with the bellows elongated is focused for near objects.**

With the aid of an instrument called the retinoscope, which reflects the beam of an electric light into the pupils of the eyes of the fish, it was determined positively that all the fish examined while they were swimming in the tanks, several hundred individuals of many species, were neither near-sighted nor did they have astigmatism. Their eyes were nearly normal and were usually focused accurately to see distant objects. The eyes of decapitated or dead fish were normal, as were the eyes of fish that were asleep from the effects of ether. When examined out of the water or in the air, the eyes were the same as when the fish were immersed; but, in a short time, less than a minute, one could not see the interior of their eyes. Good photographs of the eyes could only be obtained while the fish were immersed. The fact that fish are not near-sighted should be emphasized because some writers have stated that fish have their eyes focused for near objects most of the time. Fish, while able to see, or to focus their eyes correctly for distant objects, are also able to change their focus and see near objects. Some fish were observed with the aid of the retinoscope that had their eyes properly focused on objects as close as four inches or even less.

How Do Fishes Change the Focus of Their Eyes.

Experiment proving the oblique outer eye muscles can change the focus of light rays in the eye

Fishes' eyes are adjusted to see near objects by the squeeze or contraction of the two oblique muscles on the outside of their eyeballs. The squeeze of the oblique muscles makes the eyeballs longer, the condition found in near-sight. To see distant objects accurately, these muscles relaxed, which permitted the eyes to resume their normal shape. The following experiment demonstrates that the accommodation or the near focus of fishes' eyes is produced by the action of the oblique muscles and not by the action of the ciliary or any other eye muscle:

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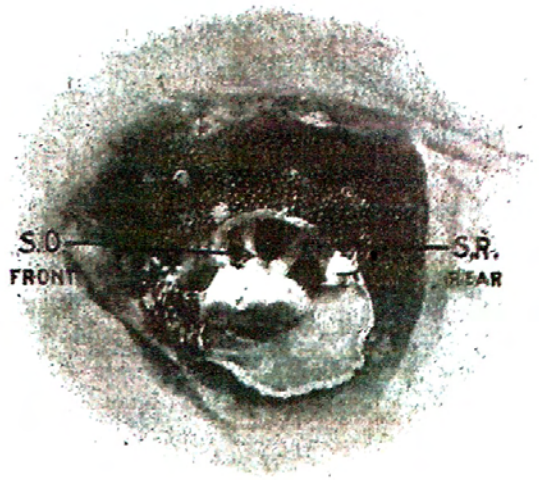
2. By means of electrical stimulation applied to the eyeball or its neighborhood, in most fish their focus was changed from distant to near objects.
3. One of the muscles of the eye called the superior oblique, was cut, which produced no change in the focus of the eye.
4. Electrical stimulation now did not produce any change in the focus. It did not accommodate.
5. The muscle which had been cut was now re-united with a thread, sewed together, without producing any change in the focus of the eyes of the fish.
6. Electrical stimulation now changed the focus from distant to near objects, as it did in the beginning.



PUFFER

i. o. Inferior Oblique, one of the two muscles of accommodation.

i. r. Inferior Rectus, the muscle which turns the eyeball downwards.



PUFFER

s. o. Superior Oblique, one of the two muscles of accommodation.

s. r. Superior Rectus, the muscle which turns the eyeball upwards.



DIAGRAM OF HUMAN EYE

One inch long from a person, 60 inches tall. Note the nearly spherical shape. The optic nerve entrance is at the inner side.

It was interesting to observe that in those fish which did not have two oblique muscles, electrical stimulation failed to change the focus of their eyes from the distance to a near point. In one, the dog fish, with one oblique muscle, accommodation or near focus was not produced by electrical stimulation; but, after the place of the absent muscle was supplied by a thread of silk, then the focus of dog fish's eyes was changed to a near point when they were stimulated with electricity. After the oblique muscles were removed from the eye of a fish and when the eye had healed, some weeks later, near focus or accommodation could not be produced by electrical stimulation.

In another series of experiments, the lens of a fish's eye was removed. A pearl roach six inches long was examined. The eyes were not near-sighted. Electrical stimulation produced considerable change and the eyes were focused for a near point. The lens of the eye was pushed to one side of the axis of vision, when the eye became very far-sighted. Electrical stimulation of the eye now produced marked accommodation. This experiment confirmed others that the lens was not necessary to change the focus from distant objects to those which were near. While I was otherwise engaged, Dr. C. Barnert performed the same experiment successfully on the eye of a carp. He pushed the lens to one side, applied the electric current, and produced near-sight or accommodation in a few minutes, all without assistance. Electrical stimulation produced as much accommodation after the removal of the lens as before. The fact that accommodation in the eyes of fish is not produced by the action of the lens inside of the eyes, but is accomplished by the two oblique muscles outside of the eyes, is one of great practical value. **The investigations further showed that fish could be made nearsighted, far-sighted or astigmatic by various operations upon the oblique muscles.**

Of what value was the study of fishes' eyes to people with poor sight wearing glasses? In brief, the cause of the need of glasses was learned and it suggested treatment successful in relieving near-sight, far-sight, astigmatism and presbyopia or old age sight without glasses.

New York Medical Journal

INCORPORATING THE

Philadelphia Medical Journal and The Medical News

A Weekly Review of Medicine, Established 1843

VOL. CI, No. 19. NEW YORK, MAY 8, 1915. WHOLE No. 1901.

Original Communications.

THE RADICAL CURE OF ERRORS OF REFRACTION.

By Means of Central Fixation.

BY W. H. BATES, M. D.,
New York.

INTRODUCTION.

In most textbooks on ophthalmology it is clearly stated that errors of refraction are incurable, and

c. Traction inward of the insertion of either the superior or the inferior obliques;

d. Advancement or a tucking operation of one or both obliques.

4. After myopic refraction is produced, it becomes increased after a tenotomy of one or more of the recti.

5. Myopic refraction is never produced by electrical stimulation:

a. After a tenotomy of one or both obliques;

b. After the subconjunctival injection of a two per cent. solution of atropine sulphate deep into the orbit. Instillation of atropine in the conjunctival

THE RADICAL CURE OF ERRORS OF REFRACTION

By Means of Central Fixation.

BY W. H. BATES, M. D.

New York Medical Journal, May 8, 1915, vol. 101, no 19, pp. 925-933.
Also called: "The Cure of Defective Eyesight by Treatment Without Glasses".

INTRODUCTION

In most textbooks on ophthalmology it is clearly stated that errors of refraction are incurable, and that relief of the symptoms can be obtained only with the aid of glasses. My investigations during the past twenty-five years have convinced me and others that errors of refraction can be cured by treatment without glasses.

I have been engaged during the past three years in the physiological laboratory of the College of Physicians and Surgeons of Columbia University New York, in a series of experiments on the eyes of animals, which show, I believe, that the prevalent ideas concerning the causes of errors of refraction are not correct. Those ideas ascribe such errors to permanent, innate, or acquired deformations of the eyeball. My experiments seem to demonstrate that we can go farther back and find such deformations in abnormal strain of the extrinsic muscles of the eye. **In animals, myopic refraction is produced by excessive contraction or strain of the oblique muscles; hypermetropic refraction by an excessive contraction or strain of the recti muscles; and astigmatism by a modification of the action of the extrinsic muscles.**

I. EXPERIMENTS ON THE EYES OF ANIMALS

CONCLUSIONS

1. A strain of two or more of the extrinsic eye muscles produced by electrical stimulation or advancement is always followed by an error of refraction. Relaxation of these muscles by one or more tenotomies always prevents the production of errors of refraction by a strain.

2. Neither the crystalline lens nor the ciliary muscle is a factor in the production of either myopic refraction or accommodation. (*See Bulletin of the New York Zoological Society* for November, 1914)
(Modern scientists state that the shape of the lens and eyeball can change to produce accommodation.)

3. When the two oblique muscles are present and active, myopic refraction or accommodation is always produced by:
a. Electrical stimulation of the eyeball;
b. Electrical stimulation of either the third or fourth nerves near their origins in the brain;
c. Traction inward of the insertion of either the superior or the inferior obliques;
d. Advancement or a tucking operation of one or both obliques.

4. After myopic refraction is produced, it becomes increased after a tenotomy of one or more of the recti.

5. Myopic refraction is never produced by electrical stimulation:
a. After a tenotomy of one or both obliques;
b. After the subconjunctival injection of a two per cent. solution of atropine sulphate deep into the orbit. Instillation of atropine in the conjunctival sac may lessen but not prevent the experimental production of myopic refraction.

6. After a tenotomy of one or both obliques, and when two or more of the recti muscles are present and active or capable of moving the eyeball in two or more directions, hypermetropic refraction is always produced by:
a. Electrical stimulation of the eyeball;
b. Electrical stimulation of the third nerve near its origin in the brain;
c. Traction forward of the insertion of one rectus muscle;
d. An advancement or tucking operation of one or more of the recti.

7. Hypermetropic refraction is never produced by electric stimulation:
a. After a tenotomy of all the recti;
b. After the subconjunctival injection of a two per cent. solution of atropine deep in the orbit; or by instillation into the conjunctival sac.

8. Astigmatism is usually produced and combined with myopic or hypermetropic refraction produced experimentally.

9. Mixed astigmatism is produced by a traction of the insertion of the superior rectus directly upward, and in other ways. In these cases myopic refraction in one meridian is never produced after a tenotomy of the inferior oblique, while hypermetropic refraction in one meridian is never produced after a tenotomy of the inferior rectus.

10. Advancement of both obliques with advancement of the superior and inferior recti always produces mixed astigmatism.

11. When considerable myopic refraction is produced experimentally, the optic axis is evidently lengthened (See diagrams below); in a high degree of hypermetropic refraction it is shortened; after the production of a large amount of mixed astigmatism the cornea becomes markedly elliptical.

12. In eyes after the removal of the lens, myopic, hypermetropic, and astigmatic refraction is produced as mentioned above in normal eyes. Atropine, as in normal eyes, prevents the production of myopic, hypermetropic, and astigmatic refraction, in lensless eyes by electrical stimulation.

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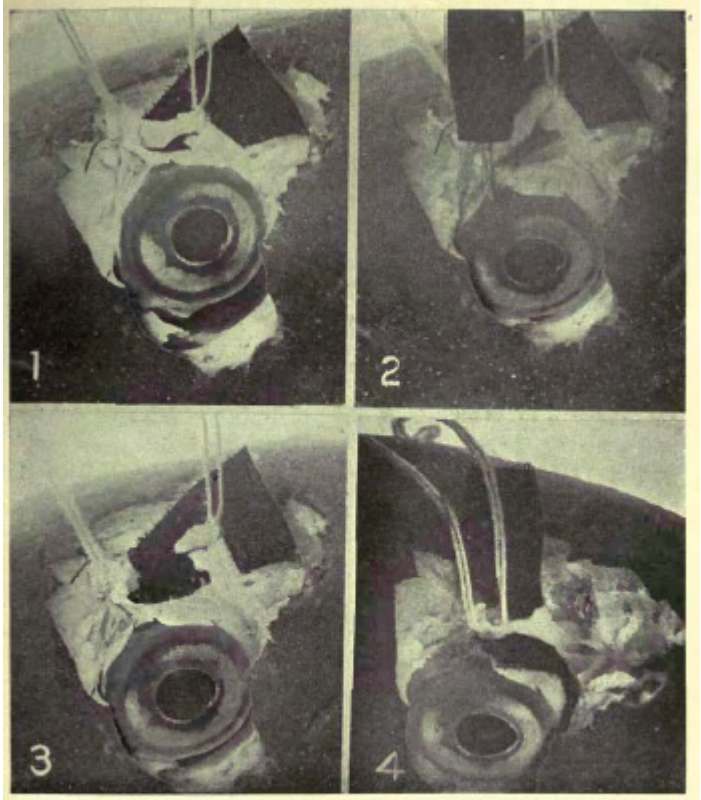


Fig. 14. Demonstration Upon the Eye of a Carp That the Superior Oblique Muscle Is Essential to Accommodation.

No. 1.—The superior oblique is lifted from the eyeball by two sutures, and the retinoscope shows no error of refraction. No. 2.—Electrical stimulation produces accommodation, as determined by the retinoscope. No. 3.—The muscle has been cut. Stimulation of the eyeball with electricity fails to produce accommodation. No. 4.—The divided muscle has been reunited by tying the sutures. Accommodation follows electrical stimulation as before.

Subjective: By central fixation maximum vision is obtained. While the ability of the normal eye to read the twenty line at twenty feet in a good light

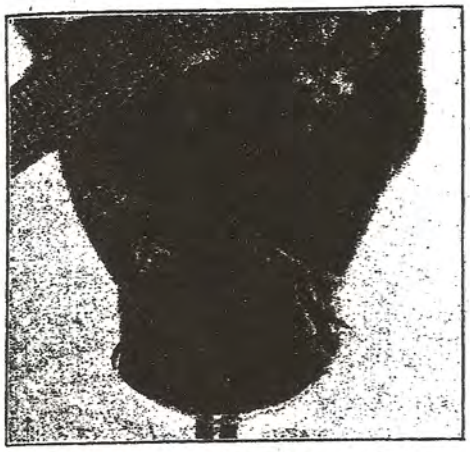


FIG. 1.—Carp with eyeball of normal length and emmetropic.



FIG. 2.—Same as Fig. 1, but with hypermetropia produced by advancement of the external and internal recti. Note that the eyeball is shortened.

white background. Polyopia is frequent; sometimes

Before central fixation and normal vision can be obtained, it is necessary to stop the twitching of the eyelids and the movements of the eyeball that result from the strain of eccentric fixation. One method which succeeds in a small proportion of cases is to

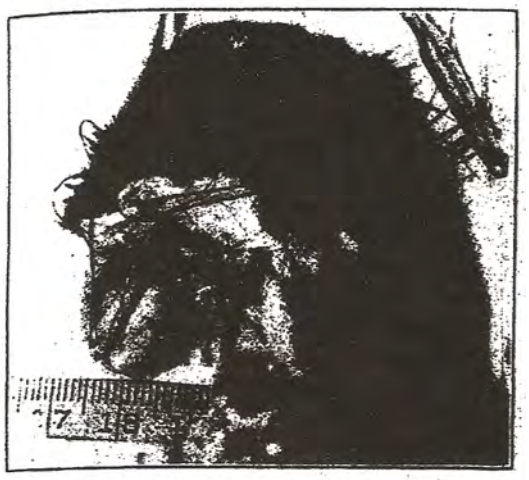


FIG. 3.—Rabbit with eyeball of normal length.

vision is obtained. It is easier to obtain central fixation by regarding small rather than large letters and



FIG. 4.—Same as Fig. 3, but with myopia produced by advancement of both obliques. Note that the eyeball is lengthened.

For more photos of fish, rabbits, human... eye experiments - see the book; The Cure of imperfect Sight By Treatment Without Glasses by William H. Bates.

The following are details of experiments on the eyes of animals:

EXPERIMENTS ON ACCOMMODATION

I. A perch was placed in a square glass jar 12" by 6" by 6" nearly filled with water, about two drams of ether was added and the top was covered with a board. In half an hour the perch became less active and was removed from the jar. It was difficult or impossible to measure the refraction satisfactorily by the aid of the retinoscope in the air. The fish was returned to the glass jar, head near the surface, and was supported by fixation forceps fastened to the lower jaw. With the eye immersed the refraction by retinoscopy was nearly normal. At three feet distant with a plane mirror, self illuminated by electric light, the battery being in the handle of the retinoscope, the shadow in the pupil moved with the movement of the mirror with, a convex spherical glass plus 1 D. held close to the eye of the perch, and with plus 2 D. the shadow moved in the opposite direction.

When the eye was examined in the air, the illumination of the retina or the light reflex obtained was fainter, but sufficient to enable the observer to note that the refraction was nearly the same as when the eye, was immersed in the water. On continued exposure to the air, even in less than five minutes, no light reflex from the pupil was obtained with the retinoscope. However, immediately after the reimmersion into water a bright reflex was visible in the pupil when the light was reflected into the pupil by the retinoscope.

The head of the perch was lifted above the surface of the water and the eye was stimulated with the faradic current. Muscular movements of the head and body of the fish were manifest. The eye was then immersed. Retinoscopy now indicated myopic refraction in all meridians; or in other words, accommodation. The myopia remained for some minutes and then gradually subsided until it disappeared altogether, the eye becoming nearly normal as before. The same phenomena occurred with the other eye. The perch was removed from the water and placed on a table, and the superior oblique of the right eye was cut transversely. Electrical stimulation of the right eye did not then produce accommodation as in the left eye. Conclusion: The ciliary muscle does not produce accommodation in the perch.

II. In another experiment on a rock bass, both eyes were found to be emmetropic when examined in water. Electrical stimulation of the right eye produced myopic refraction or accommodation. The superior oblique was then divided, after which electrical stimulation produced no accommodation. The divided superior oblique was next united by a suture. Electrical stimulation then produced accommodation as at first.

Both the superior and inferior obliques were then removed from the right eye. Twenty-four hours later, ten days later, and even six weeks later, electrical stimulation of the right eye produced no accommodation at any time, but always resulted in hypermetropia, which was usually corrected by plus 5 D. sphere. Electrical stimulation of the left or non-operated eye on the same dates always produced accommodation or myopic refraction. These experiments were witnessed and confirmed by a number of physicians.

III. Decapitated dog; emmetropic. Electrical stimulation of the eyeball produced myopic astigmatism which was corrected by minus 2 D. cylinder, 90°. After tenotomy of the superior oblique, electrical stimulation produced compound hypermetropic astigmatism, which was corrected by convex 2 D.S. and convex 3 D.C., 180°. After tenotomy of the superior rectus, the refraction became normal and was not changed to myopic or hypermetropic refraction by electrical stimulation. This experiment is offered as additional evidence that the lens is not a factor in the production of myopic refraction or accommodation. It also indicates that the obliques produce myopic refraction and that the recti produce hypermetropic refraction.

***Congenital absence of one oblique*.** Strong evidence that the obliques are the muscles that produce myopic refraction or accommodation is found in the fact that while electrical stimulation of the oblique eye muscles always produces accommodation when: the two obliques are present and active; it is never produced in animals with a congenital absence of one oblique. Moreover, when the counter-traction is supplied by a suture inserted near the usual location of the absent oblique in these cases, accommodation is always produced by electrical stimulation. The following experiment illustrates this:

IV. Dogfish, decapitated, emmetropic; electric stimulation on the eye produced no accommodation. The inferior oblique was absent and a suture was inserted in its usual location. Accommodation was then produced by electrical stimulation of either the eyeball or the fourth nerve near its origin in the brain. A two per cent. solution of atropine sulphate was applied to the fourth nerve and thereafter electrical stimulation of the fourth nerve produced no accommodation. It should be mentioned that soon after the removal of the lower lid the cornea became cloudy and the refraction could not be measured by retinoscopy. Whenever electrical stimulation or advancement of one oblique did not produce myopic refraction or accommodation, investigation always revealed the absence of one oblique; or, as in all cats observed, an inactive or insufficient oblique.

V. *Production of myopia*. A rabbit had hypermetropia 4 D.S. The superior oblique was advanced by a tucking operation and the refraction was then corrected by convex 2 D.S. and convex 2 D.C., 180°. The eye was examined frequently during fourteen days, and remained unchanged. Seventeen days after the operation the refraction had returned to convex 4 D.S., the amount existing before the advancement of the muscle. Examination of the site of the operation showed that the suture inserted in the muscle had cut its way through and the oblique was no longer shortened.

A large number of rabbits were operated upon by advancement of either the superior or inferior oblique or of both at the same or at different times, without obtaining a permanent production of myopia. In all cases the stature cut through the delicate ribbon-like muscle very soon; generally in a few days, when the refraction became the same as before the operation. To increase the effect of the advancement, a tenotomy of one or more of the recti was frequently done without much if any permanent effect.

VI. *Production of hypermetropia*. Carp, decapitated, emmetropic. Had hypermetropic astigmatism after advancement of the superior rectus which was corrected by convex 5 D.C., 180°. After electrical stimulation of the eyeball, the error of refraction was corrected by concave 2 D.S. and convex 11 D.C., 180°; after tenotomy of the superior oblique the error of refraction was corrected by convex 16 D.C., 180°. Thus, after the production of hypermetropic astigmatism, electrical stimulation produced myopic refraction in one meridian and increased the amount in the hypermetropic meridian. After tenotomy of the superior oblique, the hypermetropic meridian was increased, while the normal meridian remained unchanged. In eyes which have not been operated upon, a tenotomy of

one or both obliques does not produce hypermetropia nor increase it when it is present. Neither does a tenotomy of one or all of the recti produce myopia.

VII. Decapitated cat, emmetropic. Electrical stimulation of the eyeball produced hypermetropia of 1 D.S. After tenotomy of the superior oblique, there was no change in the refraction and electrical stimulation of the eye produced more hypermetropia which was corrected by convex 9 D.S. Tenotomy of the superior rectus did not change the refraction from the normal, but thereafter electrical stimulation produced no hypermetropia. The same results were obtained in many other cats and no exceptions were observed. Conclusion: Hypermetropia is produced in the eyes of cats by electrical stimulation before and after tenotomy of the superior oblique and is prevented by a tenotomy of one or more of the recti.

EXPERIMENTS ON LENSLESS EYES

VIII. Carp; by retinoscopy both eyes were emmetropic. Electrical stimulation of each eyeball produced accommodation or myopic refraction. Simple extraction of the lens with the aid of a spoon was done; after a peripheral corneal section. Eleven days later, the eye was healed and the pupil was sufficiently clear to measure the refraction objectively with the aid of the retinoscope. With the eye immersed in water the refraction was corrected by convex 23 D.S. Electrical stimulation produced less hypermetropia; or in other words, accommodation.

IX. Cat; twenty-four hours after decapitation the right eye was emmetropic by retinoscopy. A narrow bladed cataract knife was made to enter the interior of the eyeball from above and just behind the equator. The point of the knife was pushed downward and forward and passed through the periphery of the lens into the area of the pupil. The point with the flat surface of the blade looking forward was then pressed backward, forcing the lens downward below the axis of vision. The refraction was then corrected by convex 17 D.S. With the aid of a pair of fixation forceps, the insertion of the superior oblique was rotated inward and backward. For some minutes the refraction was corrected by convex 15 D.S.: i.e., myopic refraction of 2 D. was produced. Traction upward and forward of the insertion of the superior oblique was made. The refraction was then corrected by convex 20 D.S.: i. e., hypermetropic refraction of 3 D. was produced. Traction of the insertion of the superior oblique upward and nearly parallel to the plane of the iris was made. The refraction was then corrected by convex 15 D. S. and convex 3 D.C. at 180°: i.e., mixed astigmatism, corrected by concave 2 D.C. 180° and convex 1 D.C. 90° was produced.

X. Carp, decapitated, emmetropic. The left lens was pushed outside the axis of vision by Dr. C. Barnert. The refraction was corrected by convex 16 D.S. After electrical stimulation the refraction was corrected by convex 13 D.S., i. e., accommodation of 3 D.S. was produced.

XI. Pearl roach, emmetropic. The lens of the left eye was dislocated outside the axis of vision and the refraction was corrected by convex 16 D.S. After electrical stimulation the refraction was corrected by convex 14 D.S., i. e., accommodation of 2 D.S. was produced. These last two experiments were witnessed by three other physicians.

XII. Rabbit; simple extraction of the lens of the right eye. Two months later, by retinoscopy, hypermetropia of 17 D.S. Electrical stimulation lessened the hypermetropia or produced accommodation, the error of refraction being corrected by convex 14 D.S. and convex 2 D.C. 180°. In other experiments on rabbits, after the removal of the lens, the hypermetropia was always lessened or accommodation was produced by electrical stimulation.

EXPERIMENTS WITH ATROPINE

XIII. Cat, decapitated. Both eyes were emmetropic. Electrical stimulation did not produce myopic refraction or accommodation. The superior oblique of both eyes was advanced without altering the refraction, and electrical stimulation then produced accommodation. The third and fourth nerves were exposed near their origins in the brain. Electrical stimulation of either nerve produced accommodation. A small piece of cotton wet with a two per cent. solution of atropine sulphate in 0.8 per cent. chloride of sodium solution was placed in contact with the third nerve near its origin. In less than one minute an electrical stimulation of the third nerve did not, while stimulation by electricity of the fourth nerve, did produce accommodation. After the atropine solution was applied to the fourth nerve, electrical stimulation of the fourth nerve did not produce accommodation. The origins of the third and fourth nerves were washed with an 0.8 per cent. salt solution, clean of atropine. After this, electrical stimulation of either nerve produced accommodation. Cotton wet with atropine solution was next applied to the fourth nerve and electrical stimulation did not produce accommodation, although accommodation was possible through stimulation of the third nerve. The atropine was again applied to both nerves, and electrical stimulation of either or both failed to produce accommodation. The atropine was then washed off the nerves and the experiment repeated with the same results as before. Always after atropine was applied to both nerves and electrical stimulation of one or both failed to produce accommodation, the application of the electrical current to the eyeball resulted in accommodation or myopic refraction. Accommodation was produced two hours after the cat was decapitated in a room at a temperature below 70° F.

XIV. Dog, emmetropic. Electrical stimulation produced myopic refraction or accommodation. After tenotomy of the superior oblique, electrical stimulation produced hypermetropia of 4 D.S. After the subconjunctival injection deep in the orbit of five minims of a two per cent. solution of atropine sulphate in 0.8 per cent. chloride of sodium, there was no change in the refraction upon electrical stimulation; in other words, atropine injected deep into the orbit prevented the production of hypermetropic refraction by electrical stimulation.

XV. Rabbit with hypermetropia of 4 D.S. atropine sulphate two per cent. solution instilled to the conjunctival sac daily for two weeks, did not change the refraction. Electrical stimulation produced myopic refraction or accommodation to the same degree apparently as before the atropine was instilled.

From this and other experiments the impression was obtained that the instillation of atropine in the conjunctival sac had little or no effect in preventing accommodation by electrical stimulation. In other experiments on normal eyes and eyes with hypermetropia the injection of atropine deep into the orbit usually prevented accommodation or myopic refraction by electrical stimulation.

TRACTION EXPERIMENTS

XVI. Decapitated carp, emmetropic. A thread was fastened to the insertion of the superior oblique. Traction of the thread inward and forward, or downward and forward, produced simple hypermetropia which was corrected by convex 5 D.S.; traction backward and inward caused simple myopia; while traction in the plane of the iris produced mixed astigmatism: Myopia, myopic astigmatism, compound myopic astigmatism, hypermetropia, hypermetropic astigmatism, compound hypermetropic astigmatism, or mixed astigmatism were all produced by traction on the thread in various directions.

XVII. Decapitated carp, emmetropic. Rotation downward and inward or in other directions with the aid of a suture fastened to the external rectus produced no change in the refraction of the right eye. Pulling strongly on the suture forward produced hypermetropia, which was corrected by convex 5 D.S. Traction downward and forward and inward produced hypermetropic refraction which was corrected by convex 3 D.S., and convex 7 D.C. at 90°. Electrical stimulation produced an error of refraction which was corrected by convex 14 D.S. and concave 16 D.C. at 180°. After a tenotomy of the superior oblique, the error of refraction was corrected by convex 3 D.S. and 7 D.C. at 90°. Electrical stimulation then increased the hypermetropia in all meridians, which was corrected by convex 10 D.S. and convex 6 D.C. at 90°. After tenotomy of the superior rectus the hypermetropia disappeared and the eye became emmetropic. Electrical stimulation then produced no effect.

The point has been raised that while in rabbits, dogs, fishes, and other animals, traction of the two obliques may squeeze the eyeball transversely in such a way as always to lengthen it, accommodation in the human eye cannot be produced in the same way. To determine the matter the following observation was made: A woman with myopia of 20 D.S., who consented to the experiment, had the inferior oblique exposed near its origin at the lower and inner part of the orbit by an incision through the lower lid. The tendon was grasped by fixation forceps and traction was made downward, inward, and backward. By simultaneous retinoscopy the myopia was found increased, indicating the production of myopic refraction or accommodation. This observation proved that accommodation can be produced in the human eye by traction of the inferior oblique.

Lucien Howe (*Muscles of the Eye*, 1, p. 68) has described the reflections from the cornea and posterior surfaces of the lens when the lens was tipped in various directions during accommodation. I have found that traction on the obliques or recti of the eyes of dogs, cats, rabbits, and fishes produces the same phenomenon, of tipping of the lens out, in, forward, or backward, which indicate that the symptoms of tipping of the lens that are assumed to be due to the action of the ciliary muscle can be produced by the action of the extrinsic muscles. I believe that the ciliary muscle has nothing whatever to do with tipping of the lens, because after tenotomy of one oblique and one of the recti, the phenomena of tipping were not observed after electrical stimulation as they were before.

Curvature of cornea. In rabbits the ophthalmometer indicated that accommodation was usually produced without changing the curvature of the cornea. The results were so constant as to warrant the belief that in the rabbit, as has been demonstrated in the human eye by Javal and others, accommodation is not produced by a change in the corneal curvature.

Ciliary muscle. Much has been written on the connection of the ciliary muscle with the production of accommodation. The theories of Helmholtz, Müller, Hess, Tscherning, and others are well known. They are based largely on the changes which occur in the images of a source of light reflected from the anterior and posterior surfaces of the lens during accommodation. These images of Purkinje were studied in the eyes of rabbits, dogs, cats, and fishes before and after the production of accommodation by electrical stimulation. The same changes were observed at times as have been described by observers who studied the human eye. It was possible also by traction experiments, by varying the resultant of pulls on the eyeball, to obtain images which indicated various changes in the position and curvature of the lens. Fishes' eyes, when examined after immersion in water, were favorable for the experiments because the reflections from the cornea were eliminated and it was easier to see the reflections from the anterior and posterior surfaces of the lens. After tenotomy of one or both obliques the images of Purkinje did not change their location on electrical stimulation of the eyeball, indicating that the curvature or location of the lens was not altered. The experiments offered strong evidence that the ciliary muscle is not a factor in changing the curvature of the lens during accommodation. They also reconciled the conflicting observations and theories of the many observers.

Bier's experiment. Theodore Bier (Die Accommodation des Auges in der Thierreihe, *Wiener klinische Wochenschrift*, 42, 1898) has stated that fishes' eyes when at rest are myopic and that in order to see distant objects clearly, the myopia is corrected by drawing back the lens closer to the retina with the aid of a muscle inside the eyeball connected with the lower margin of the lens. My experiments and observations disprove his theory. Fish can accommodate or adjust the focus to see distinctly at four inches, and this power of accommodation is always lost after a tenotomy of one oblique muscle. Electrical stimulation always produces myopic refraction when both of the obliques are present and active, and this is never produced in fishes which have but one oblique, but after a suture is inserted in the usual location of the absent oblique to furnish counter-traction, electrical stimulation which contracts the oblique which is present has always produced accommodation. (See dogfish observation in Experiment IV.) The removal of the lens does not prevent accommodation by electrical stimulation.

II. OBSERVATIONS ON THE EYES OF HUMAN BEINGS

A large number of original observations on the eyes of adults and children with normal vision, on those with defective sight from errors of refraction, and on the eyes of adults after removal of the lens for cataract, and a study of the phenomena of sight in amblyopia ex anopsia, have tended to support the foregoing results from animal experimentation and have led to the following conclusions with reference to the human eye:

The sole cause of all uncomplicated or functional errors of refraction is a conscious or an unconscious effort or strain to see. The only remedy for this strain is relaxation. Relaxation or rest of the eyes is accomplished only by central fixation. These facts were obtained both objectively, with the aid of the retinoscope, ophthalmoscope, and ophthalmometer: and subjectively, from the testimony of the persons under examination.

The optic or visual axes are always parallel when a point at an infinite distance is regarded by each eye at the same time by central fixation. Muscular insufficiency or heterophoria is then always absent.

The lensless eye. After the lens was removed for cataract and the refraction for infinity was corrected by glasses the following observations were made: In all cases when the eye regarded a small letter of the Snellen test card at twenty feet by central fixation, simultaneous retinoscopy indicated that the glasses corrected the refraction. When a small letter was read by central fixation at twenty inches, simultaneous retinoscopy indicated that the eye was accommodated and that the myopic refraction or accommodation was corrected by a concave twenty inch spherical lens or minus 2 D.S. When the lensless eye with the distance glasses read a small letter by central fixation at thirteen inches, at ten inches, or a less distance, simultaneous retinoscopy always indicated that the eye was accurately focused. When the lensless eye read a small letter of the Snellen test card at twenty feet by eccentric fixation, simultaneous retinoscopy indicated either myopic refraction in one or all meridians or that the distance glasses were too strong. When a letter was regarded at twenty inches or less by eccentric fixation, simultaneous retinoscopy always indicated that the eye was focused for a greater distance in one or all meridians. In the lensless eye an effort to see near always produced hypermetropic refraction.

***Central fixation*.** By central fixation is meant the ability of the eye to look directly at a point, and while doing so to see best with the center of the fovea or the center of the sight of the retina. (center of the visual field) When a person with a normal eye which is capable usually of reading the Snellen test card at twenty feet with normal vision, 20/20, regards one small letter of the Snellen test card at twenty feet or regards one letter of diamond type, Jaeger No. 1, at a near point, say ten inches, by central fixation the following phenomena become manifest.

Subjective: By central fixation maximum vision is obtained. While the ability of the normal eye to read the twenty line at twenty feet in a good light is considered to be normal vision, a much greater acuity of vision is observed when the part of each letter that is regarded and seen better than the rest of the letter is smaller or more nearly approaches a point. Letters or parts of letters outside the point of fixation are always less distinct than those at the fixation point. When the top of a small letter at twenty feet is regarded by central fixation the bottom of the same letter appears less black, but the whole letter is clearer, the black appears a darker shade of black, and the white part of the letter appears whiter than when all parts of the letter are seen equally well: The eyes feel no strain when regarding a small letter for a short time or continuously at twenty feet, or when regarding one letter of diamond type at twelve inches, six inches, or a less distance, from the eye. Squinting, or partly closing the eyelids, or regarding a letter through a small opening, always lowers the vision of central fixation.

Objective: Simultaneous retinoscopy, or the examination of the eye with the retinoscope at the same time that the eye is regarding a distant or near letter, indicates always that the eye is accurately adjusted or accommodated for the point regarded by central fixation. In other words, when the point fixed is at infinity, no error of refraction is manifest and the eye is emmetropic. When the point is at four inches, the refraction of the eye is corrected by a concave four inch spherical lens—minus 10 D.S. The ophthalmometer indicates no corneal astigmatism of the normal eye when regarding a distant or near letter by central fixation. **The appearance of the normal eye when regarding a distant or near letter by central fixation, is usually expressive of rest or relaxation. The eye is open, quiet, with no nervous movements, and the pupil is moderately dilated. The muscles of the face are generally in repose, while other muscles of the body appear also relaxed and at rest. The optic or visual axes are always parallel when a point at an infinite distance is regarded by each eye at the same time by central fixation. Muscular insufficiencies or heterophoria are always absent.**

Eccentric fixation. By eccentric fixation is meant the ability of the eye partially or completely to suppress the vision of the center of the fovea and to see best with other parts of the retina (the peripheral field). When a person with normal vision regards one small letter of the Snellen card at twenty feet, or regards one letter of diamond type at six, ten, twenty inches, etc., by eccentric fixation; the following phenomena become manifest.

Subjective: The person notes that the vision for letters or words is always less distinct than with central fixation, not only for the letters or words regarded, but also for those seen better in other parts of the field. One part of a letter fixed or regarded is less distinct than other parts of the same letter not fixed or regarded. Black letters appear less black than by central fixation; white letters on a black background appear less white; letters of different colors have a lighter shade of color. The edges of the letters are not clean cut and have a fuzzy or shadowy margin. The size of letters is altered; they appear larger or smaller than with normal vision. Their shape is distorted; a square letter may seem to be round. The curved lines may appear more like straight lines or straight lines as if somewhat curved. Illusions of sight occur; in some cases dark spots or irregular shapes are seen on a white background. Polyopia is frequent; sometimes it is binocular, but usually it is monocular. With both eyes or with one eye covered a person with normal eyes when regarding one letter at twenty feet or six inches or at any distance by eccentric fixation; may describe the location of two, three, or four images, all of which are less distinct than the one image of the same letter seen by central fixation.

Pain, fatigue, tension, or discomfort of some kind is usually felt in the eyes during: eccentric fixation. The discomfort may become manifest only after the eyes are closed. Headaches are frequently produced by eccentric fixation when regarding a distant letter or a letter at the reading distance.

An important symptom is twitching of the muscles of the eyelids or of the eyeballs. It is always present when a letter is regarded by eccentric fixation either at twenty feet, six inches, or any distance from the eyes. Usually it is an unconscious manifestation of eccentric fixation. The twitching becomes evident when one lightly touches the closed eyelids of one eye while the other eye is regarding a letter by eccentric fixation; a fluttering or intermittent movement of the eyelids or of the eyeball is then felt. Squinting or partly closing the eyelids or regarding a distant or near letter through a pinhole opening to a card, always improves the vision of eccentric fixation. (Squinting leads to eye muscle tension, eyestrain and blur).

Objective: When a small letter of the Snellen test card at twenty feet is regarded by eccentric fixation, simultaneous retinoscopy always indicates myopic refraction in one or all meridians. When a small letter of diamond type is regarded at twenty inches or less by eccentric fixation, simultaneous retinoscopy always indicates hypermetropic refraction in one or all meridians. The ophthalmometer usually indicates corneal astigmatism during the time the normal eye regards a distant or near letter by eccentric fixation. **The ophthalmoscope reveals an important symptom of eccentric fixation: the eyeball always moves at irregular intervals from side to side, vertically or in other directions.** The appearance of the normal eye when regarding a distant or near letter by eccentric fixation is usually expressive of effort or strain. Twitching of the muscles of the eyelids can usually be observed and may be more evident immediately after the eyelids are closed. Often the movements of the eyeball become so extensive as to be manifest by ordinary inspection; in some cases they are sufficiently marked to resemble nystagmus.

The optic axes in eccentric fixation are never parallel; convergent, divergent, or vertical squint is noted. Lesser degrees of lack of balance of the eye muscles, muscular insufficiencies, are always present.

Eccentric fixation produces redness of the ocular conjunctiva and margins of the lids. Wrinkles of the forehead and dark circles under the eyes appear. The eyes may water.

The optimum. When a person with myopia, hypermetropia, or astigmatism, regards a certain letter or object under favorable conditions, simultaneous retinoscopy reveals little or no error of refraction. The letter or object so regarded may be called the optimum. The favorable conditions include proper or sufficient illumination and quiet. The optimum may be a telegraph wire, a distant light, a crack in the floor, a small area of blue, green, or dark blank wall paper, a large or small white card, a hole about one half inch in diameter in a Snellen or other large card, the vertical or horizontal edge of the face or back of the Snellen card, a blank spot about one half inch in diameter on a blank white card, a certain number, which is most frequently the number 7, one letter of the alphabet, or the face of a well known relative or friend. Usually, but not always, a small letter of the Snellen card, as the first or last letter of the tenth line regarded at five, ten, or twenty feet, is an optimum. An optimum for one eye may not be an optimum for the other eye or for both when regarding it at the same time. Furthermore, an optimum is seldom continuous—while regarding it on one day may lessen or correct the error of refraction this fact may not be true on succeeding days. It may be lost and later regained. The number of optimums discovered in each person is variable. It is well to know that the distance of the optimum from the patient is important, since an object which is an optimum at twenty feet may not be one at ten or thirty feet. Looking at an optimum is usually restful, but the patient may not be conscious of any relief. The vision may become normal for the object regarded, but generally, although no error of refraction is manifest by simultaneous retinoscopy, the vision is not normal. The following three cases illustrate these facts:

A man with myopia of 2 D.S. who had vision of 20/70 was able to see clearly the letter K on the fifteen line and the letter K only on the forty line. When he regarded the letter K on the fifteen line, by simultaneous retinoscopy he was not myopic, but when he regarded other letters on the same card he was myopic.

A woman, aged sixty years, with myopia of 18 D.S., was not myopic when she regarded a letter O on the ten line at ten feet.

A child, aged four years, when he regarded the face of a stranger at ten feet, was myopic by simultaneous retinoscopy, but when he regarded the face of his mother, simultaneous retinoscopy indicated no myopia.

TREATMENT

As a general rule it is best for the patient to discard glasses. In some cases of extreme myopia, where going without glasses entails too great a hardship, good results have been obtained by **gradually reducing the strength of the glasses worn as the vision improves, but the treatment is then prolonged.** The patient is told that all cases of uncomplicated myopia, hypermetropia, and astigmatism are caused by eccentric fixation and that central fixation is necessary for a cure. He is told the meaning of the terms used; and the symptoms of eccentric fixation manifest in his own case are demonstrated. Not only at the beginning of treatment, but also at frequent intervals, by constant repetition, by frequent demonstration, and by all means possible, the fact is impressed upon him again and again that perfect sight or a cure can be obtained only by relaxation or no strain whatever, which in turn can be obtained only by central fixation. Nothing else matters. The idea that the treatment demands effort is eliminated as much as possible. The fact is repeatedly emphasized that the exercises of the eyes are not work or effort, but rather that everything recommended is to secure physiological rest of the eyes, a condition which is found only with central fixation and perfect vision. Young children respond more promptly to the benefits of eye training than adults; not because their trouble may be more recent, which is not always true, but rather because they usually do as they are told and do not lose time by useless experiments suggested by their own inclinations or by other persons.

Before central fixation and normal vision can be obtained, it is necessary to stop the twitching of the eyelids and the movements of the eyeball that result from the strain of eccentric fixation. One method which succeeds in a small proportion of cases is to make the patient conscious of the movements. After regarding the Snellen test card with one or both eyes for a part of a minute, the eyes are closed, and when the closed eyelids are lightly touched by the patient with his fingers, he may frequently feel the movements. In some cases the strain, tension, or twitching is evident to the patient without touching the closed eyelids, or it may become apparent to him while the eyes are open when trying to read the Snellen card. Another method to stop the twitching and one which usually succeeds is to have the patient **close the eyes and then press on the sides of the base of the nose as high as the inner canthus and also a little above it, with the forefingers of each hand, avoiding pressure on the eyeballs.** The pressure may need to be applied continuously for some minutes or for a longer period. The value of the method should be emphasized. After it was repeatedly employed some well marked cases of nystagmus were observed to disappear for a longer or shorter time. **Twitching of the eyelids and movements of the eyeball are always corrected by central fixation when regarding a distant letter at twenty feet or a small letter at twenty inches or nearer.** It is well to bear in mind constantly that twitching of the muscles of the eyelids and movements of the eyeball always prevent central fixation for both near and far distances. In the beginning the use of the Snellen test card should be discontinued at frequent intervals in order that time may be given to stop the twitching.

The following procedures are recommended for obtaining central fixation: The patient is told to look at a light at twenty feet or greater distance, then to look a foot or further to one side of the light until it appears less bright. By practice and by increasing or lessening the distance of the point fixed to one side, the patient may soon become convinced that the light is seen best by looking straight at it.

After central fixation is obtained for the light, the patient practices with the aid of the Snellen test card. The patient regards the top of a letter of the Snellen test card, a letter which is just barely distinguished or seen with some difficulty. If the bottom of the letter does not appear more indistinct than the top, the eye is not regarding the top of the letter by central fixation. The eyes are then to follow a pointer upward from the top of the letter until the bottom becomes more indistinct. This is repeated many times. After some practice, the patient will note that with the pointer a shorter distance above the top of the letter the bottom of the letter appears less distinct. Continued practice usually improves the ability to fixate so that the patient gradually becomes able, by looking directly at the top of a letter, to see it blacker or more distinct than other parts of the letter which are not fixed. The patient notes that after he becomes able to see the top better than the bottom, the whole letter is more distinct than in the beginning, when all parts appeared of the same shade of black. At first the letter may be seen by central fixation only occasionally. Later he may see it more frequently, until finally he becomes able to see a spot in the top of a letter better than the bottom of the same letter, and continuously. When one part of a letter is seen better than all other parts, the eyes are at rest, and most persons at once become conscious of the relief to the eyes after central fixation, and maximum vision is obtained. It is easier to obtain central fixation by regarding small rather than large letters and the patient should practice with the small letters on the tenth line at more than ten feet from his eyes.

It is usually more difficult to obtain central fixation at a near point, e.g., less than twenty inches, than at a distant point, such as twenty feet. A dot of about the size of a pica type period on a blank card is regarded at twelve inches and its clearness is noted with

both eyes. The dot is then regarded with each eye separately. It is then held nearer and further off until the distance is found where it appears clearest with both eyes or with each eye separately. The patient, by practicing in this way with the dot on the blank card, soon becomes able to see it quite clearly nearer and further than at the beginning. The patient is then given diamond type, Jaeger No. 1, to read. He is recommended to gaze at a period at a distance he can see it best with both eyes or each eye separately, and is told that when he sees it by central fixation the period will appear blacker than any part of a near letter and the part of the nearest letter closest to the period will appear as the blackest part of that or any other letter. The distance may be lessened to three inches and increased to twenty inches or more from the eyes by daily practice extending over many weeks or months. The ability to see one part of a small letter improves the vision for reading and affords a rest to the eyes. By alternately regarding diamond type by central fixation at the reading distance and the Snellen test card at twenty feet in the same way, the vision for near and far distance is improved. This method is usually successful in curing myopia, hypermetropia, and astigmatism.

Relapses usually occur unless the training of the eyes is continued daily for months or years after normal vision is obtained. It is necessary even for the normal eye to practice normal vision frequently, consciously or unconsciously, or some error of refraction is usually acquired. The normal eye always acquires myopic refraction when trying to see unfamiliar distant objects; while an effort to see near always produces hypermetropic refraction. The liability of a patient to relapse should be emphasized or his disappointment is probable. The following cases illustrate the value of the treatment:

Compound hypermetropic astigmatism: A woman, aged thirty-seven years, had vision of 20/100; with convex 3.50 D. S. and convex 2 D. C. 90° in each eye her vision was 20/30. She had worn glasses twenty years for the relief of **defective vision, eye pain, headaches, and fatigue when reading**. Her symptoms were not entirely relieved by her correction. After two months' treatment by education in central fixation for distance and near, her vision improved to 20/15 in each eye without glasses. She read Jaeger No. 1 at four inches and twenty inches. The subjective symptoms of headache, eye pain, and asthenopia disappeared. I believe that she will need to continue the eye training daily for a number of years to prevent a relapse.

Myopia, squint, and amblyopia: Man, aged twenty-four years, right vision 18/200, with concave 2.50 D. S. 18/15, left vision 18/100; glasses produced no improvement; with both eyes open, the left eye turned in, which is an unusual condition; convergent squint, the fixing or straight eye being myopic with less vision, while the amblyopic, emmetropic eye converged, although the vision was better. The use of atropine sulphate one per cent., instilled three times a day for a week did not alter the refraction or improve the squint or vision. Eye training by the methods suggested above was followed by relief in one month, when the vision became normal in both eyes, without glasses and the eyes became straight with binocular single vision. The patient was advised to continue the use of the Snellen card daily for some years to prevent a relapse.

Presbyopia. Since the lens is not a factor in the production of accommodation, the theory that presbyopia is caused by a hardening of the lens is not true. **In patients over fifty years old with normal eyes, hypermetropic or other errors of refraction are curable. The cure of presbyopia is accomplished by eye training which secures central fixation.** The patients are taught to regard the letters of the Snellen test card, the smaller letters first at ten or twenty feet, in such a way that they see a small part of each letter blacker or more distinct than the rest of the letter. After normal vision is obtained for distance, the eye training is continued for small letters at the reading distance. A period or comma is selected. The patient regards a letter near the period or looks further away until he can appreciate that the period is less black or worse. He then regards a letter nearer the period. The distance from the period is shortened, until by practice the patient can make the period appear less black by regarding a point but a very short distance away, the diameter of a small letter. He can now read the print. Then he is encouraged to practice holding the fine print closer to his eyes until he can read at four inches Jaeger No. 1. Some patients are relieved in a few days. Permanent relief is never obtained, without constant or daily practice, **reading diamond type without glasses at four inches to twenty inches. Patients sixty, seventy, and eighty years of age have obtained relief in a short time.** The efficiency of the eye is very much increased, and one reads more rapidly than with glasses and without pain or fatigue.

The prognosis in acute cases where glasses have never been worn or in cases not relieved of every discomfort by the aid of glasses, is favorable, and a cure is usually obtained in a reasonable length of time, such as a few weeks or months. In one case convex 2 D.S. and concave 5 D.C., 180°; in each eye under atropine, the patient obtained normal vision for distance by training of the eyes, and simultaneous retinoscopy revealed then no error of refraction. It was an interesting fact to me that in this case the eyes became normal, although atropine was instilled in the conjunctival sac three times daily. How could the hypermetropia disappear under atropine? The animal experiments answer this question satisfactorily to me, for it was learned from them that atropine, when injected deeply into the orbit, prevents the production of hypermetropic and myopic refraction by electrical stimulation.
Other cases could be cited. In general, all errors of refraction are benefited promptly. When the optimum is found, the problem is to teach the patient to make all objects an optimum. Until this has been accomplished no case has ever been permanently cured.

SUMMARY

Animal experiments demonstrate:

1. The lens is not a factor in the production of accommodation;
2. Hypermetropic refraction is always produced by a strain of two or more of the recti by electrical stimulation or advancement, and is always prevented by relaxation of these muscles by tenotomy;
3. Myopic refraction is always produced by a strain of two obliques and is always prevented by relaxation of these muscles by tenotomy;
4. Atropine prevents, when injected deep into the orbit, the experimental production of errors of refraction;
5. **The cause of all errors of refraction is a strain to see. The cure is accomplished by relaxation. Relaxation is secured by central fixation.**

The subjective symptoms of central fixation include the ability to see one part of a letter or other object better than the rest of it; maximum vision is thus obtained and the eyes feel at rest. The objective symptoms indicate no error of refraction by simultaneous retinoscopy and no corneal astigmatism by the use of the ophthalmometer, while the optic axes are parallel, with no squint or muscular insufficiencies (heterophoria). (Central fixation is combined with shifting – shift the center of the visual field part to part (point to point) on the object).

The subjective symptoms of eccentric fixation include the ability to see letters or parts of letters better outside the point regarded; the vision is always defective; monocular polyopia is frequent; and **pain** and **fatigue** are usually felt. The objective symptoms always indicate an error of refraction by simultaneous retinoscopy, usually some **corneal astigmatism** by the use of the ophthalmometer; the optic axes are seldom parallel, **squint, heterophoria, or muscular insufficiencies** being present.

The refraction of newborn children is not always permanent. All errors of refraction are produced by muscular action and are usually acquired.

Observations of the lensless human eye indicate that the absence of the lens does not prevent the production of errors of refraction by a strain of the extrinsic muscles.

The optimum is a letter or some other object which can be regarded with a minimum of strain, and when looking at such an object the patient has no error of refraction by simultaneous retinoscopy.

In treatment, discard glasses as soon as possible. Educate the patient in the fundamentals. **To stop twitching of the eyelids by pressure on the sides of the base of the nose is important. Central fixation is obtained by eye training with the aid of the Snellen test card at twenty feet and by alternately practicing central fixation with a dot or a fine point at twenty inches or nearer.**

The results are good. After central fixation is obtained, all errors of refraction are cured.

40 EAST FORTY-FIRST STREET.

BLINDNESS RELIEVED BY A NEW METHOD OF TREATMENT

Report of a Case.

BY W. H. BATES, M. D.,

New York Medical Journal, February 3, 1917, pp. 200-202.

A woman, fifty-four years of age, was first seen by me on May 9, 1915. Her son, who guided her into the office, stated that his mother had been "**going blind**" for a long time; that she could not see to find her way about the house; that she was unable to see the faces of people around her, and that she could not attend social gatherings with comfort. When out of doors she required the services of an attendant because of her inability to see passing people, obstructions on the sidewalk, or the curbstones or vehicles at street crossings.

The patient's husband, a banker, and a man of intelligence and accurate observation, gave the history of her progressive loss of sight. During the past twenty-five years he had consulted numerous oculists in various parts of the United States, each of whom had pronounced her condition incurable.

I am indebted to G. de Wayne Hallet, M.D., of New York, for the following record of the patient's condition when she was under his care:

July 7, 1910. The patient gave a history of failing vision for twenty years, first in the right eye and later in the left. The patient states that the vision is slightly worse in the left eye than it was two years ago. She said: "Everything is in a mist."

Right vision, fingers counted at two feet. Left vision, 15/200.

This is a case of **old neuroretinitis in each eye, a few blood vessels left, but for the most part only white lines extend off into the retina in place of old vessels. She has also choroiditis disseminata in both eyes.**

R Syr. acidi hydriodici, 3i once each day.

July 22, 1910. To read she has used a strong hand magnifying glass besides her spectacles. (Magnifiers cause/increase vision impairment.) When tested she read Jaeger No. 2 with +10.00 D. S. with the left eye only and she likes it. This glass was prescribed for the left eye.

September 21, 1011. Left vision, 10/200. Ordered for near vision, +12.00 D. S.

Cocaine was used in each eye to dilate the pupil in order to examine the fundus. Can see no change since the last examination.

Treatment: Continue the use of the hydriodic acid.

Following this period of observation by Doctor Hallet, the patient consulted other physicians as stated, always being given an unfavorable prognosis.

The patient was treated by me for the following conditions: **incipient cataract; vitreous, cloudy with floating bodies; neuritis, with partial atrophy of the optic nerves; retinitis, with obliteration of many blood vessels; choroiditis disseminata; glaucoma of the left eye, connective tissue in the anterior chamber of the left eye, obscuring the iris and pupil; functional myopia; functional divergent and vertical squint.**

The vision of the left eye, on May 9, 1915, was 5/200, field contracted. This was reduced to the perception of light, two days later, by an attack of acute glaucoma. Miotics, eserine, pilocarpine eye drops failed to relieve the tension and pain after three days; since then they have not been used.

With the assistance of Dr. C. Barnert, an iridectomy was performed. The pain and tension were relieved for a time, but the vision was not improved. **Hemorrhages into the anterior chamber occurred on different days during the following week. A mass of connective tissue replaced the blood clots in the anterior chamber, and was large enough to obscure the iris and pupil.** Dionin, ten per cent. solution, was instilled six times daily, and the powder once daily in the left eye only. The solution of dionin is still being used in the left eye only.

Later the patient had a number of mild recurrent attacks of glaucoma in the left eye, with pain and increased tension. After three months the tension remained normal. The tension of the right eye subsequently was increased at intervals, always subsiding at once after central fixation was obtained.

My experience with this case, and with others of various degrees of severity, has convinced me that the value of central fixation in the treatment of acute, chronic, and absolute glaucoma should be emphasized. **Central fixation**, as utilized by me, has relieved the symptom of glaucoma after operative and other treatment had failed. The value of the method employed in this case has been demonstrated in many other cases, and in various conditions other than glaucoma, of organic as well as of functional character.



FIG. 1.—Nose pressure, with the eyes closed, the patient imagining or remembering the black period.



FIG. 2.—Nose pressure, with the eyes open, the patient regarding the Snellen test card.

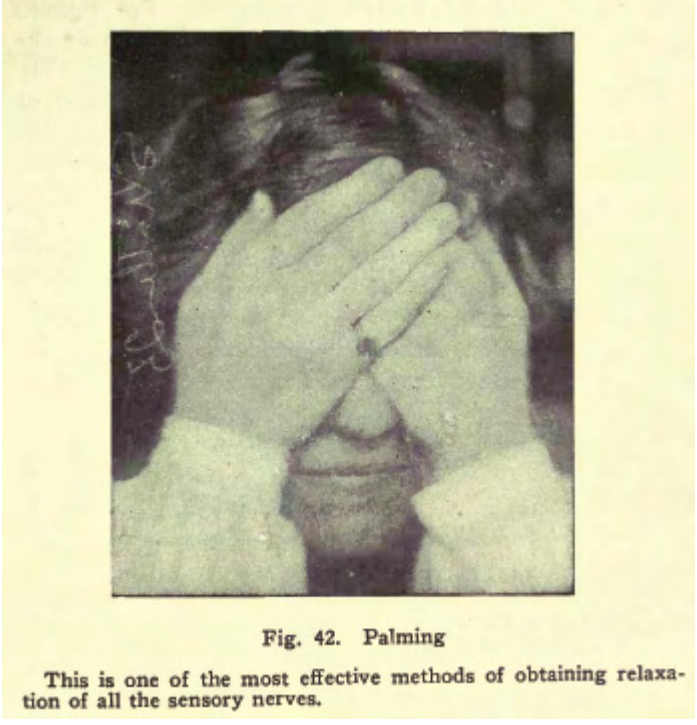


Fig. 42. Palming

This is one of the most effective methods of obtaining relaxation of all the sensory nerves.

Above photos: No pressure on eyeball.

The treatment described by me (1) with certain modifications, was employed in the case here cited, and was found beneficial, as will be seen. **Memory** and the **imagination** were useful. **A small black spot or period on the Snellen card was imagined.** When the sight was poor, at the beginning of the treatment, the period imagined was imperfect. The problem for this patient was to imagine the period as perfectly black and stationary (stationary is incorrect; the period must move, show oppositional movement as the eye shifts on it point to point. Later Bates stated the period must move 'swing' as result of the shifting of the eye. To remain stationary = eye immobility, staring) at all distances; then to be conscious of seeing a part or all of a letter without losing the period. The memory or imagination of a black period, at all times and in all places, secured for this patient unusual benefit.

It was explained to her that by "central fixation" is meant a passive, receptive, or relaxed condition of the eyes and brain. When the mind is sufficiently at rest the eye sees best the point fixed—in other words, the eye sees best what it is looking at. With the passive, receptive, relaxed condition of the eyes and mind, or with the absence of strain or effort, as manifested by central fixation, the sight was always improved. **The myopic refraction produced by all effort to see distant objects and the hypermetropic refraction produced by an effort to see near, were absent when the eyes became relaxed and central fixation was manifest. Color blindness, contracted field, pain and fatigue, and photophobia were also materially benefited or cured. The objective symptoms of increased intraocular tension, squint, strain of the muscles of the face, twitching of the eyelids and eyeballs, all disappeared instantaneously when the patient was conscious of central fixation. The organic lesions were seen to improve. With the blood vessels the changes were slow; but with the cloudiness of the lens, central fixation was followed immediately by an increased transparency readily demonstrated by the ophthalmoscope.**

In six days the sight of the right eye had improved to more than one tenth of the normal. Later, the patient became able to travel on the subway alone, to shop in the neighborhood of her home, to read and write letters, and to read books, magazines, and newspapers. She became able to see the color of the eyes of her husband, children, and friends, which she had never been able to do

before in her life. Her sight at night also improved, so that she saw the lights across the Hudson River, stationary and moving, more than a mile away. She won first prize at auction bridge twice, enjoyed theatres and moving picture shows, went to parties, receptions, dinners, and other social functions, and had a good time.

January 17, 1916. Patient went out of doors alone or without an attendant, and took a walk on Riverside Drive.

February 23, 1916. She is beginning to distinguish colors. Without an attendant she walked alone from her home at 142nd Street and Broadway to the subway station at 145th Street, thence went by train to the Grand Central Station, walked over to the uptown side, and returned home on the train.

March 3, 1916. Went to the theatre and enjoyed the play.

March 6, 1916. Plays cards. Tells the time with the aid of her small watch without glasses.

April 1, 1916. She won first prize at an auction bridge card party. With the eyes closed she believes that she can now imagine as well with the left eye as with the right, indicating an improved condition of the left retina.

April 6, 1916. Won second prize at auction bridge, 140 players.

April 18, 1916. Read a column of the *New York Times*, news section.

She sees the Hudson River boats, and houses and trees across the river. Lights on the boats were seen at night, but not the lights on the opposite shore.

April 28, 1916. The patient is beginning to read diamond type, Jaeger No. 1, at six inches, using two of her fingers as a pointer.

May 6, 1916. The new moon and the stars were seen for the first time.

May 15, 1916. The lights across the Hudson River, more than a mile distant, were seen when the room occupied by the patient was dark or the lights turned off. (Later, June 21, she was able to see the distant lights with the room occupied and well lighted.)

May 20, 1916. Patient was able consciously, at will, to produce the illusion of seeing one object as two or more—monocular polyopia, by a strain, eccentric fixation.

June 21, 1916. Did some sewing with a split needle. R., 14/30, without the consciousness of the black period. She runs short distances on the street without difficulty.

July 1, 1916. The patient writes letters without glasses better than with them, because she finds her sight confused with glasses. The imagination or the memory of a perfectly black period relieves or prevents the pain which is usually produced by the instillation of the dionin powder into the left eye.

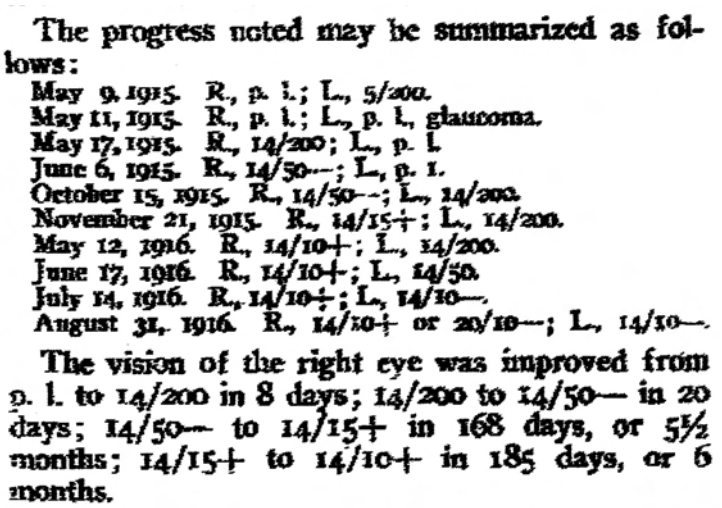
August 1, 1916. With the right eye a line of diamond type was read in five minutes, without glasses and without the aid of a pointer.

August 8, 1916. The left eye distinguished one letter of diamond type for the first time, without glasses, at six inches.

August 15, 1916. Diamond type, one line read in forty seconds.

August 31, 1916. With the right eye one line of diamond type was read in six seconds, without the aid of a pointer. With the left eye after some minutes one letter was seen with the aid of a pointer. For the first time the color of her own eyes was seen with the aid of a mirror.

The progress noted may be summarized as follows:


The progress noted may be summarized as follows:

May 9, 1915. R., p. l.; L., 5/200.
May 11, 1915. R., p. l.; L., p. l., glaucoma.
May 17, 1915. R., 14/200; L., p. l.
June 6, 1915. R., 14/50—; L., p. l.
October 15, 1915. R., 14/50—; L., 14/200.
November 21, 1915. R., 14/15+; L., 14/200.
May 12, 1916. R., 14/10+; L., 14/200.
June 17, 1916. R., 14/10+; L., 14/50.
July 14, 1916. R., 14/10+; L., 14/10—.
August 31, 1916. R., 14/10+ or 20/10—; L., 14/10—.

The vision of the right eye was improved from p. l. to 14/200 in 8 days; 14/200 to 14/50— in 20 days; 14/50— to 14/15+ in 168 days, or 5½ months; 14/15+ to 14/10+ in 185 days, or 6 months.

The vision of the right eye was improved from p. 1. to 14/200 in 8 days; 14/200 to 14/50- in 20 days; 14/50- to 14/15+ in 168 days, or 5 1/2 months; 14/15+ to 14/10+ in 185 days, or 6 months.

The vision of the left eye was improved from p.1. to 14/200 in 157 days, or 5 months; 14/200 to 14/50 in 246 days, or 8 months; 14/50 to 14/10- in 27 days.

In a letter received some months after she left New York, the patient wrote: "I do not think I have gone back any. I see very well indeed. Recently I saw in the garden, about one hundred feet away, a yellow butterfly alight on a red flower. My letters are written without glasses. The right eye really seems improved, but the left eye has not changed. I still use the dionin eye drops in the left eye only."

This case has been of special interest because it has demonstrated that central fixation, previously utilized in the treatment of functional disease of the eye, is also of distinct value in the treatment of certain organic diseases of this organ. Many such cases, which, treated solely along the lines of the customary ophthalmologic practice, would be consigned to the category of the practically hopeless, may be markedly benefited, and restored to active and useful life.

REFERENCE

1. BATES: NEW YORK MEDICAL JOURNAL, May 8, 1915

THE IMPERFECT SIGHT OF THE NORMAL EYE

BY W. H. BATES, M. D.,

New York Medical Journal, September 8, 1917, pp. 440-442

OCCURRENCE

This article is important – it explains how the clarity of vision in the normal eye can fluctuate, change: clear, less clear, then back to clear. When left alone, no eyeglasses used, or, if needed, Bates method is practiced - the eyes, vision return to normal clarity.

If a person experiencing temporary less clear vision goes to the eye doctor, the doctor will prescribe a unnecessary prescription for glasses. The glasses maintain and increase the unclear vision, result in addiction to stronger eyeglass lense prescriptions and development of other eye problems. The eyeglasses prevent the eyes natural fluctuation back to normal function and clear vision.

It is generally believed that the normal eye has perfect sight all the time. It has been compared to a perfect machine which is always in good working order. We have been taught that the normal eye is always normal and that the sight is always perfect, no matter what the object regarded may be, whether new, strange, or familiar, whether the light is good or imperfect, or whether the surroundings are pleasant or disagreeable. Even under conditions of nerve strain and bodily disease, the normal eye is expected to have perfect sight always.

A scientific study of the facts has convinced me that this impression so generally believed and taken for granted is far from the truth. After thirty years' special study of the refraction of the eye under different conditions **I am convinced that the normal eye has imperfect sight most of the time. It is unusual to find persons who can maintain perfect sight** (20/20 and clearer) **continuously longer than a few minutes under the most favorable conditions.** Of 20,000 school children studied by me, more than one half had normal eyes with perfect sight. Not one of them had perfect sight in each eye every day. The sight of many of them might be good in the morning and imperfect in the afternoon, while many with imperfect sight in the morning would have frequently perfect sight in the afternoon. Many children with normal eyes would read one Snellen test card with perfect sight, a second and different one with imperfect sight. Many children could read some letters of the alphabet with perfect sight but were unable to distinguish other letters of the same size under similar conditions. The amount or the degree of the imperfect sight varied within wide limits from one third of the normal to one tenth or less. The duration of the imperfect sight of the normal eye was also variable. Under some conditions in the classroom the imperfect sight might continue for only a few minutes or less. Under other conditions, however, a small number of pupils, sometimes all the pupils with normal eyes would have sufficient loss of sight to prevent them from seeing writing on the blackboard for days, weeks, or longer.

Adults with normal eyes do not have perfect sight all the time and what has been said of the normal eyes of school children is also true of them. Age is no exception. Persons over seventy years of age with normal eyes have had attacks of loss of sight variable in degree and duration. The retinoscope always indicated an error of refraction when the sight of the normal eye was imperfect. A man eighty years old with normal eyes and perfect sight had periods of imperfect sight which would last from a few minutes to several hours or longer. Retinoscopy always indicated myopia, sometimes 4D or more. Many adults with normal eyes, as well as children have attacks of color blindness. One patient with normal eyes with perfect sight and perfect color perception in the daytime has always been color blind at night. He had no perception of colors after sunset. It is true that all persons with normal eyes are always less able to distinguish colors correctly during the time that their sight was imperfect. Accidents on railroads, collisions, and other accidents at sea, trolley car accidents, automobiles with their high daily death list, occur usually because the normal eyes of the responsible persons for a time had imperfect sight. Accidents occur when nervous children or adults cross the street. They become confused, blinded, and are struck by automobiles, trolley cars, are injured because, although they had normal eyes, their sight was lost.

CAUSE

There is but one cause of functional imperfect sight, a strain or effort to see. The normal eye with good sight is at rest, but, with imperfect sight, the retinoscope always indicates an error of refraction sufficient to account for the defect in the vision. The strain may be an unconscious strain or it may produce results on the eyes, pain, discomfort, fatigue, of which the individual may be conscious. Quite often the strain may be a conscious effort without the production of discomfort. In all cases of strain it can be demonstrated that the eyes do not see best the point fixed but some other point to one side—the eyes do not see best where they are looking. If one letter or one word of a line is regarded, other letters or words on the same or other lines will be seen as well or better when the eyes are straining or making an effort to see. (Eccentric fixation)

The normal eye can be made to strain consciously by making an effort to see a letter or word better than the one regarded. The vision is always lowered for the letter or word regarded and an error of refraction is always produced.

Unfamiliar objects cause eye strain and are never seen perfectly. School children with normal eyes who can read with normal sight small letters one quarter of an inch high at ten feet always have trouble in reading strange writing on the blackboard although the letters may be two inches high. Myopia, temporary or permanent, is always produced. Strange maps always produce imperfect sight in the normal eye because they cause a strain or effort to see.

When the eyes are used for near work the normal eye is seldom properly focused. The retinoscope has always demonstrated that when an effort or strain is made to see more clearly at twelve inches, twenty inches, or less than twelve inches, the eyes are always focused at a greater distance with the production of astigmatism, usually temporary, but which has been observed to become permanent. Of course with the eyes not properly focused the vision is defective. School children and adults learning to read, write, draw, sew, or to do mechanical work suffer from defective vision although they have normal eyes. This matter is of such practical importance that the attention of teachers should be called to the facts. Many children lose interest in their school work, become truants, incorrigibles, and chronic sufferers from headaches and other neuroses who might have been relieved by proper treatment. I have described the relief obtained by school children when the teachers understood the problem (1).

Light has a very important effect on the vision of the normal eye. An unexpected strong light always produced defective vision. The vision of all persons is imperfect when the eyes are first exposed to the strong light of the sun or to strong artificial light. Rapid or

sudden changes in the intensity of the light always produce defective vision, not always sufficiently great to be manifest to the individual but which can always be demonstrated by careful tests of the vision and by use of the retinoscope. The defective vision produced by strong light may be temporary but it has been observed to continue in many cases for a number of weeks or months. It is never a permanent disability. Persistence in regarding a strong light after a time becomes a benefit. Some persons have become able to look directly at the strong light of the sun without any loss of vision whatever. When the light is dim or at night, the vision of the normal eye is usually good; but, when an effort is made to see, the vision becomes imperfect and the retinoscope indicates always an error of refraction.

Noise is a frequent cause of defective vision of the normal eye. All persons see imperfectly when they hear an unexpected loud sound. Familiar noises do not lower the vision usually, but unfamiliar, new, or strange noises always do with the production of a temporary error of refraction. **Country children from quiet schools, after moving to a noisy city, may suffer from the effects of defective vision for long periods of time, weeks, months**. In the classroom they do not do well in their work because their sight is impaired. It is a gross injustice for teachers and others to criticize, scold, punish, or humiliate them.

Moving pictures usually produce defective vision which is always temporary. Some of my patients have complained that they always suffered with pain and had poor sight whenever they regarded the screen with its flickering light. I believe that some years ago when photography was less perfect than it is now the pictures produced a great deal of eye strain, much greater then than at the present time. I always advised my patients under treatment for the cure of defective vision without glasses, to go to the movies frequently, practice central fixation (2), and become accustomed to the flickering light. They soon became able to stand the strain without loss or impairment of their vision. Other lights and reflections from smooth surfaces became less annoying and it seemed true that after the movies were unable to produce a relapse other lights were unable to lower the vision after they were relieved of errors of refraction, myopia, hypermetropia, and astigmatism by treatment.

TREATMENT

Eye training with the aid of a **Snellen test card** at ten feet or farther is very successful in correcting and in preventing the imperfect sight of the normal eye. One may use a distant calendar, a sign with small letters, or one small letter for daily practice. The normal eye is readily trained to read the Snellen test card with normal vision or to see other letters or figures or one known small letter at a distance of ten feet or farther. The vision always improves and becomes better than that of the average normal eye. **The practice of reading known or familiar letters once daily or more frequently with normal sight by the normal eye is a decided benefit and lessens the tendency to strain when regarding unfamiliar letters or objects.**

RESULTS

On my recommendation more than 20,000 **school children** have practiced eye training daily with the aid of the Snellen test card. The results were of great practical importance. The vision of the normal eye was always improved when the teachers used the method properly. Because the sight was always improved, myopia was always prevented. This is the first published method for the prevention of myopia which was successful. Many children wearing glasses to benefit imperfect sight, pain, and fatigue of the eyes, and headaches were relieved so completely that they became able to discard their glasses and obtained more perfect sight and a greater relief to their eye pain and headaches. The eye training demonstrated by the good results obtained that many thousands of children in the schools are wearing glasses that they do not need because their eyes are normal.

Artists, bookkeepers, lawyers, physicians, writers, mechanics, and others found their efficiency increased many times with the aid of eye training. Many recruits for the **army and navy** were found to have imperfect sight and were rejected, although their eyes were normal. Eye training improved their sight. Later they read the Snellen card with perfect sight and were accepted.

CONCLUSIONS

1. All persons with normal eyes and perfect sight do not have normal eyes and perfect sight continuously.
2. The cause is always an effort or strain to see.
3. **Treatment by eye training is successful when distant, small, familiar letters, are read a few moments at least every day.**
4. **The good results obtained justify the use of the method in all schools, the army, the navy, the merchant marine, on all railroads, in short by everybody who desires or needs continuous perfect sight.**

REFERENCES

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2. W. H. BATES: New York Medical Journal, May 8, 1915

40 EAST FORTY-FIRST STREET.

A STUDY OF THE IMAGES REFLECTED FROM THE CORNEA, IRIS, LENS, AND SCLERA

BY W. H. BATES, M. D.,

New York Medical Journal, May 18, 1918, Vol. 107, pp. 916-924.
(*From the Department of Physiology of Columbia University and the New York City Aquarium.*)

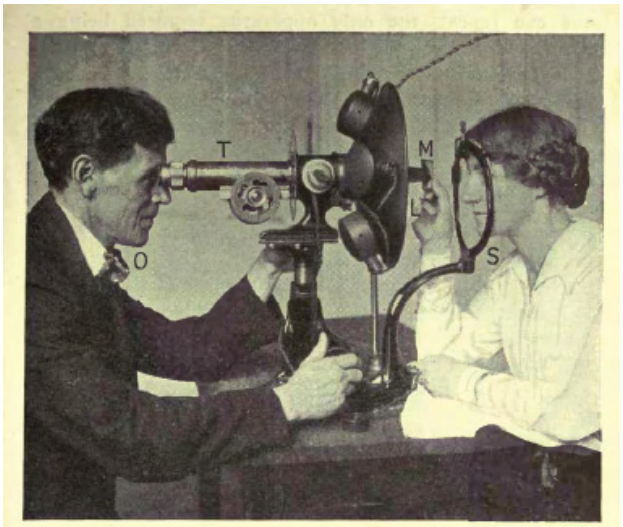

Fig. 33. Demonstrating That the Back of the Lens Does Not Change During Accommodation

The filament of an electric light (L) is shining into the eye of the subject (S), and the reflection on the back of the lens can be seen by the observer (O) in the telescope (T). The subject holds in her hand, at a distance of four inches, a mirror on which is pasted a small letter, and in which is reflected a Snellen test card hung above and behind her head at a distance of twenty feet. The retinoscope reveals that when she looks at the reflection of the test card and reads the bottom line the eye is at rest, and that when she looks at the letter pasted on the mirror it accommodates. The image on the lens does not change during these changes of focus. The telescope is the telescope of the ophthalmometer, the prisms having been removed. As there is no dispute about the behavior of the back of the lens during accommodation this image was not photographed.

PART I

INTRODUCTION

It is generally believed that the accommodative power of the eye is due to a change in the curvature of the lens. This view, Helmholtz says, was first advanced by Descartes (1596-1650), while the first proofs in support of the theory were presented by Young in his celebrated treatise, *On the Mechanism of the Eye*, published in 1801.

The theory attracted little attention at the time, but was accepted later, mainly upon the authority of Helmholtz, whose investigations into the cause of accommodation were published about the middle of the last century. Helmholtz was led to this conclusion by what appeared to him to be changes in the size of an image, or images, reflected from the front part of the crystalline lens. It appeared to him that during accommodation these reflections were smaller than when the eye was at rest; and since an image reflected from a convex surface is diminished in proportion to the convexity of that surface, he concluded the front of the lens must become more convex during accommodation. In the cornea he observed no change, and while he believed that a change took place in the back of the lens, he considered it so slight as to be negligible. Helmholtz used for his experiments: first a candle so placed that it was reflected from the cornea and the two surfaces of the lens; and then two lights—or one doubled by reflection from a mirror—so placed behind a diaphragm having two rectangular openings that the rays shone through the openings upon the cornea and lens. Of the images thrown upon the lens by means of the naked candle he says in his *Handbuch der Physiologischen Optik*: page 121.

"Both these images are very much fainter than the reflection from the cornea. That from the front of the lens forms an upright image of the flame somewhat larger than that reflected from the cornea but usually so faint that the form of the flame cannot be definitely distinguished."

The results obtained when a diaphragm was used with two lights were better. Two images were then formed on each of the reflecting surfaces; and it appeared to the investigator that those on the front of the lens approached each other during accommodation and separated when the eye was at rest. (See diagram, *Handbuch der Physiologischen Optik*, p. 122.)

Helmholtz appears to have been convinced of the correctness of these observations and of the theory based upon them, and was only doubtful of the means by which the supposed change was accomplished. His explanation of the phenomenon of accommodation was soon universally accepted, and has been universally stated as a fact. It is the accepted belief of modern ophthalmology, and has been summed up by G. E. de Schweinitz in his recent textbook on the eye as follows:

"Inasmuch as the eyeball is inextensible, it cannot adapt itself for the perception of objects situated at different distances by increasing the length of its axis, but only by increasing the refractive power of its lens." (*Diseases of the Eye*, pp. 24 and 25.)

There have, however, been many other theories of accommodation. Arlt ascribed the phenomenon to a lengthening of the eyeball, but later abandoned the theory out of deference to the authority of Helmholtz and Cramer. In the introduction to his treatise on shortsight (*Uber die Ursachen und die Enstehung der Kurzsichtigkeit*) he says:

"An hypothesis of the mechanism of accommodation (movement of the posterior wall of the eye—*Locomotion der hinteren Augenwand*) which later was proven to be untenable led me to the question whether, in myopia, the eyeball, as was to be expected according to that hypothesis, might be lengthened in the direction of the sagittal axis, and in the course of time it was possible to present anatomical proof that shortsight was generally associated with such a lengthening, due to a permanent bulging (Rückdrängung) of the posterior wall.

... Since the introduction of the ophthalmoscope into ophthalmological practice and since the demonstration by Cramer and Helmholtz that accommodation is effected through a change in the form of the lens, not of the eyeball, many different theories as to the origin and development of shortsight in relation to the aforementioned deviations from the normal in the shape of the eyeball have been advanced and defended."

[1]Diese beide Reflexe, Fig. 61, b und c, sind sehr viel lichtschwacher als der Reflex der Hornhaut, a. Der von der vorderen Linsenfläche, b, bildet ein aufrechtstehendes Bildchen der Flamme, etwas grösser als das von der Hornhaut entworfene, aber meist so verwaschen dass man die Gestalt der Flamme nicht genau erkennen kann, *Handbuch der Physiologischen Optik*, p. 121.

By some the muscles of the eye were believed to play a part in accommodation. Of this theory Donders says:

"Before physiologists were acquainted with the changes of the dioptric system they often attached importance to the external muscles in the production of accommodation. Now that we know that accommodation depends on a change of form in the lens this opinion seems scarcely to need refutation." (*On the Anomalies of Accommodation and Refraction of the Eye*, p. 22.)

According to other theories, accommodation is effected by a change in the curvature of the cornea; by a **change in the position of the lens**; by the contraction of the pupil; through the agency of the iris and so on. There have also been many hypothesis as to the means by which the supposed change in the curvature of the lens was accomplished, some of the guesses being so wild that Donders refused even to refer to them, considering they would detract from the scientific character of his work.

My own experiments, carried on during the last five years in the Physiological Laboratory of the College of Physicians and Surgeons, Columbia University, New York, and at the New York City Aquarium, demonstrate that the lens is not a factor in accommodation, but that **the change of focus necessary for perfect vision at different distances is effected by a change in the length of the eyeball, brought about by the action of the muscles on the outside of the globe**. In the earlier of these experiments, the

results of which were published in the NEW YORK MEDICAL JOURNAL of May 8, 1915, it was found that accommodation, as measured by the objective test of simultaneous retinoscopy, occurred in all *normal* eyes of dogs, rabbits, and fish after the removal of the lens, and that it never occurred after one or both of the oblique muscles had been cut across and the insertion of the muscle to the fascia completely separated. **It was also found that any form of refractive error could be produced in the normal eyes of these animals by manipulation of the outside muscles of the eyeball,** indicating that these conditions are not due to permanent deformations in the shape of the eyeball, as generally believed.

By normal eyes is meant those in which, in addition to other conditions of a healthy structure, both oblique muscles are present and active. In some animals it was found that one oblique muscle was absent or rudimentary. This was true in the case of all cats, and accommodation could never be produced in these animals by stimulation with electricity. Even in cats, however, when the rudimentary oblique muscle was strengthened by advancement, accommodation was always produced by stimulation of the eyeball, or of the third or fourth nerves, near their origin in the brain, the fourth nerve, contrary to previous belief, being just as much a nerve of accommodation as the third.

After the results of these experiments were published it was suggested to me by Dr. Frederic S. Lee that it would be well for me to repeat the experiments of Helmholtz, making a thorough investigation of accommodation from a study of the images reflected from the front of the crystalline lens and other parts of the eyeball. This work was undertaken some four years ago. For a year or more I was unable to obtain an image from the front of the lens which was sufficiently clear or distinct to be measured. It was much blurred, and because of this lack of distinctness, it was impossible to tell whether it became smaller or larger during accommodation. With a diaphragm I got a clearer image, but it still was not sufficiently clear to be measured. To Helmholtz the indistinct image of the naked candle seemed to show an appreciable change, while the images obtained by the aid of a diaphragm showed it more clearly; but I was unable, either with a diaphragm or without it, to obtain images which I considered sufficiently distinct to be reliable. Men who had been teaching and demonstrating Helmholtz's theory repeated his experiments for my benefit, but the images which they obtained on the front of the lens did not seem to me to be any better than my own.

After a year or more of failure I began work at the Aquarium on the eyes of fishes. It was a long story of failure. Finally, I became able, with the aid of a strong light—1,000 watts—a diaphragm with a small opening, and a condenser, to obtain, after some difficulty, a clear and distinct image from the cornea of fish. This image was sufficiently distinct to be measured, and after many months a satisfactory photograph was obtained. Then the work was resumed at the Physiological Laboratory on the eyes of human beings. By means of nearly the same technic an image was obtained on the front of the lens which was sufficiently clear and distinct to be photographed. This was the first time, so far as I have been able to ascertain, that a clear image was ever photographed from the front of the lens. The work was continued, until, after almost four years of constant labor, I finally obtained satisfactory pictures, not only from the front of the lens, but also from the iris, cornea, the front of the sclera, and the side of the sclera.

PART II
TECHNIQUE BY WHICH THE IMAGES WERE OBTAINED
THE FRONT OF THE LENS

Strength of the light.—Experiments were made first with a candle and then with electric lights of thirty watts, fifty watts, 250 watts, and 1,000 watts.

With a candle as a source of light a clear and distinct image could be obtained on the cornea. On the posterior surface of the lens it was quite clear; but on the front of the lens it was very imperfect, undefined, and of extremely variable intensity. At times no reflection could be obtained at all, while at others the size varied within wide limits, regardless of the angle of the light to the eye of the subject, or of the eye of the observer to that of the subject. Again the size might remain very nearly the same; and yet there would be a wide variation in the appearance of the image. After studying these appearances almost daily for more than a year, no reliable observation could be made. In fact, it seemed that an infinite number of variable appearances, or images, might be obtained on the front of the lens when a candle was used as the source of illumination.

With a thirty watt lamp, a fifty watt lamp, a 250 watt lamp, and a 1,000 watt lamp there was no improvement. The light of the sun reflected from the front of the lens produced an image just as cloudy and uncertain as the reflections from other sources of illumination, and just as variable in shape and size. To sum it all up, I was convinced that the front surface of the lens was a very poor reflector of light, and that no reliable reflections could be obtained from it by the means described. But with a condenser and diaphragm, the use of which was suggested by their use to improve the illumination of a glass slide under the microscope, and a 1,000 watt lamp, satisfactory results were at last obtained, although many difficulties still remained to be overcome. The addition of a condenser and the use of a strong light proved to be a decided improvement over the method of Helmholtz. (Fig. 1)

Reflections.—Complicating reflections were a perpetual source of trouble. Reflections from surrounding objects were easily prevented, but those from the sides of the globe were difficult to deal with, and it was useless to try to obtain images on the front of the lens until they had been eliminated, or reduced to a minimum, by a proper adjustment of the light. The same adjustment, however, did not always give similar results. Sometimes there would be no reflections for days; then would come a day when, with the light apparently at the same angle, they would reappear. When the light was placed below the point of fixation the best results were usually obtained by directing the long axis of the globe exactly toward the eye and then tipping the front downward so that the angle of its axis to a line drawn from the light to the eye was about ten degrees. By this adjustment reflections were often prevented entirely. The subject was able to tell when a satisfactory adjustment had been obtained by regarding the reflection of his eye in a concave mirror.

Multiple images.—With some adjustments of the light, multiple images were seen reflected from the front of the lens. (Fig. 9) Sometimes these images were arranged in a horizontal line, sometimes in a vertical one and sometimes at angles of different degrees, while their distance from each other also varied. Usually there were three of them. Sometimes there were more; and sometimes only two. Occasionally they were all of the same size, but usually they varied, there being apparently no limit to their possibilities of change in this and other respects. Some of them were photographed, indicating that they were real reflections. Changes in the distance of the diaphragm from the light and from the condenser, and alterations in the size and shape of its opening, appeared to make no difference. Different adjustments of the condenser were equally without effect. Changes in the angle at which the light was adjusted sometimes lessened the number of images and sometimes increased them, until at last an angle was found at which but one image was seen. The images appear, in fact, to have been caused by reflections from the globe of the electric light.

Distinctness of the image.—Even after the light had been so adjusted as to eliminate reflections it was often difficult or impossible to get a clear and distinct image of the electric filament upon the front of the lens. One could rearrange the condenser and the diaphragm and change the axis of fixation, and still the image would be clouded or obscured and its outline distorted. The cause of the difficulty appeared to be that the light was not adjusted at the best angle for the purpose, and I was not always able to determine exactly what this was. As in the case of the reflections from the sides of the globe, it seemed to vary without a known cause. There were, however, angles of the axis of the globe which gave better images than others, although these angles could not be determined with exactness. I have labored with the light for two or three hours without finding the right angle. At other times the axis would remain unchanged for days, giving always a clear, distinct image.

It was interesting to note that there were angles of the line of the light to the eye at which a clear and distinct image could be obtained from the iris, and none whatever from the front of the lens; also that with some adjustments no image could be obtained from the cornea, although the cornea is a much better reflecting surface than any other part of the eye. When the adjustments were such that an image could be obtained from the front of the lens, however, one could always be obtained from the iris, or the front of the sclera, and sometimes from the cornea also.

Distance of the light from the observed eye.—The distance of the light from the observed eye was very important. By experiment it was found that when the lamp was adjusted at a distance of nearly sixty-five inches from the eye an image of a desirable size could be obtained on the front of the lens; that is, it almost filled the area of the moderately dilated pupil of a normal eye. When the light was brought closer, the image obtained in the pupil was too large, less clearly defined, and less bright. With the light at a greater distance than sixty-five inches the image, although brighter and more distinct, was so small that it could not be so readily measured.

The diaphragm.—The diaphragm was usually a piece of cardboard from two to six inches square, with a small opening in the center. The smaller the opening the more distinct the image, but it was also less bright than when the opening was larger. When the opening was too large, or when the diaphragm was not used at all, the image obtained was very cloudy and indistinct. An opening one eighth to a quarter of an inch in diameter was found to be the most satisfactory. If it were made smaller, so little light was thrown upon the front of the lens that no distinct reflection was obtained. The shape of the opening seemed to be immaterial, as good results were obtained whether it was round, triangular, or square, regular or irregular. The distance of the diaphragm from the light and from the eye was very important. By varying this, one could increase or diminish the size of the image, its brightness or its distinctness. The closer it was placed to the eye, within certain limits, the smaller, more distinct, but less bright the image. Usually it was placed about forty-eight inches from the light. When brought closer than this, with a small opening, an image could be obtained on the front of the lens without the aid of the condenser; but it was not sufficiently clear or distinct. It should be emphasized that changes in the size of the opening, or in the distance of the diaphragm from the light, would alter very materially the size of the image reflected from the lens.

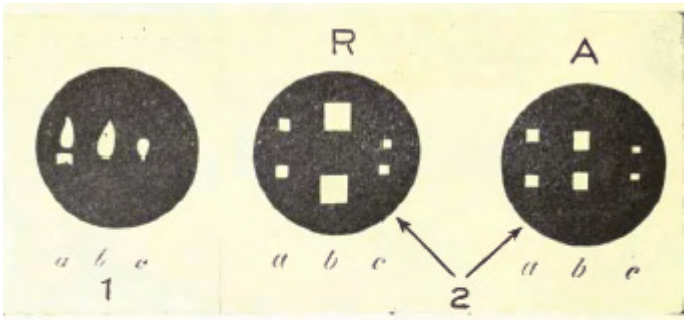

Fig. 9. Diagrams of the Images of Purkinje

No. 1—Images of a candle: a, on the cornea; b, on the front of the lens; c, on the back of the lens.

No. 2.—Images of lights shining through rectangular openings in a screen while the eye is at rest (R) and during accommodation (A): a, on the cornea; b, on the front of the lens; c, on the back of the lens (after Helmholtz).

Note that in No. 2, A, the central images are smaller and have approached each other, a change which, if actually took place, would indicate an increase of curvature in the front of the lens during accommodation.

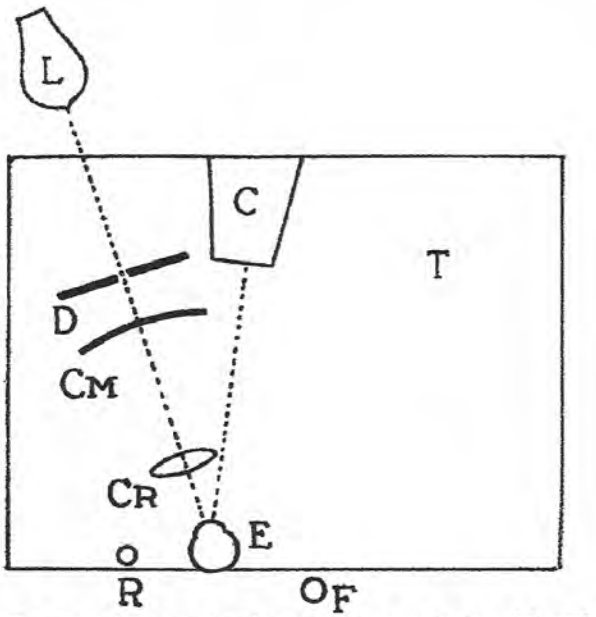

FIG. 1.—Adjustments for obtaining images on the lens, iris, and front of the sclera. T, table; C, camera; L, light, 1000 watts; D, diaphragm; Cm, concave mirror; Cr, condenser; R, stand for chin rest; F, stand for forehead rest; E, eye.

Pictures not shown are too dark - See similar pictures added to this book from the Book - The Cure of Imperfect Sight By Treatment Without Glasses by William H. Bates and Berkeley, Stanford Medical and public Libraries, USA and in Europe.

FIG. 2.—Multiple images. Photograph showing three images of the electric filament in the pupil. They are reflected from the anterior surface of the lens.

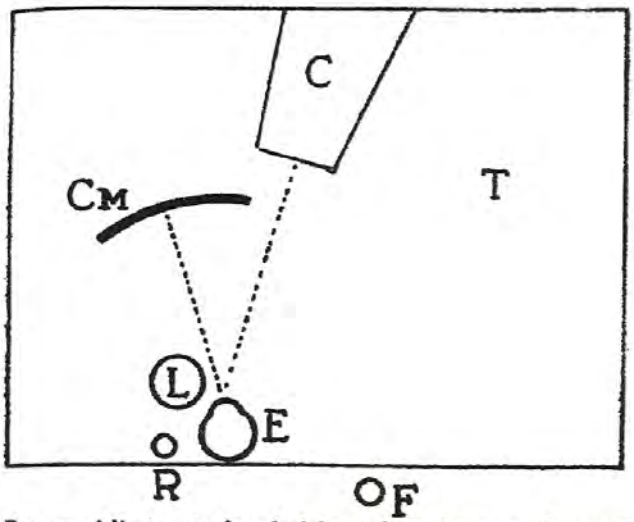

FIG. 3.—Adjustments for obtaining a large image on the cornea. T, table; E, eye; L, light, 30 candle power; Cm, concave mirror; R, stand for chin rest; F, stand for forehead rest; C, camera.

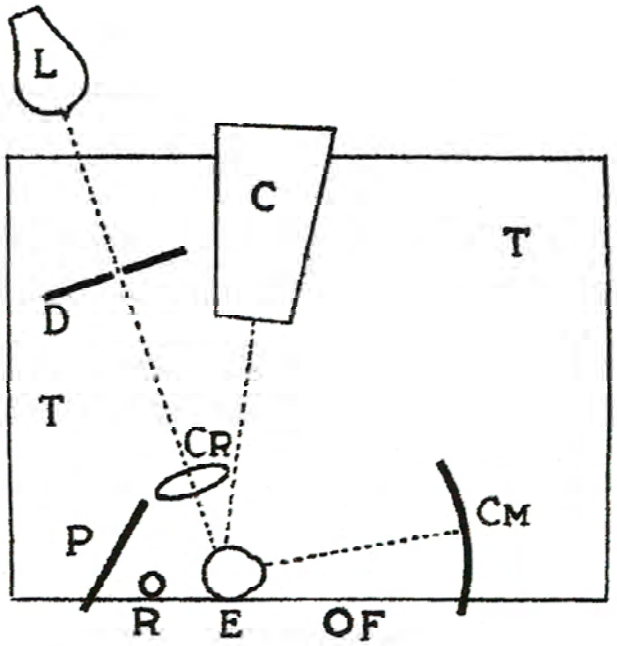

FIG. 4.—Adjustments for obtaining an image on the side of the sclera. T, table; C, camera; L, light, 1000 watts; P, plane mirror; Cm, concave mirror; E, eye; Cr, condenser; R, stand for chin rest; F, stand for forehead rest; D, diaphragm.

FIG. 5.—Images reflected from the anterior surface of the lens. The images are located in the lower and outer quadrant of the pupil. To the left of each is an accidental reflection from the cornea which could not always be prevented. It often resulted from a slight tipping of the condenser. Below the pupil is a reflection from the cornea produced by a thirty candle power lamp placed on the table to illuminate the eye while the photographs were being taken. Note the absence of a corneal image of the filament. The light was placed at an angle of ten degrees below the line of fixation and the subject regarded a concave mirror just above the condenser. The axis of the camera formed an angle of ten degrees with the line of fixation. R, rest. Simultaneous retinoscopy indicated emmetropia. A, accommodation. Simultaneous retinoscopy indicated myopic refraction of 6.00 D. The photographs show no appreciable change in the size of the image, and no change was noted by the subject or the observer. Note the change in the corneal reflection which indicates a change in the position of the eyeball during accommodation.

FIG. 6.—Images on the front of the sclera. R, rest. By simultaneous retinoscopy the refraction was emmetropic. A, accommodation. Simultaneous retinoscopy, concave 3.00 D. The image is smaller than when the eye was at rest, indicating an increase in the convexity of the surface of the sclera, a condition which one would expect when the eyeball was elongated.



FIG. 7.—Reflections from the side of the sclera. Hy, hypermetropia. The eye was straining unsuccessfully to see the image at a near point. Simultaneous retinoscopy indicated hypermetropia of 2.00 D. Note that the image is the smaller. A, accommodation. Simultaneous retinoscopy indicated myopic refraction of 6.00 D. The image is the larger. The reflections from the light used to illuminate the eye, seen at the sclerocorneal margin, also show well marked changes in their angle to the horizontal or vertical axis of the eye, which are also offered as evidence that the shape of the eyeball is changed during accommodation and when hypermetropia is produced.



FIG. 8.—Corneal images R, rest. By simultaneous retinoscopy the refraction was emmetropic. A, accommodation. By simultaneous retinoscopy the refraction was 6.00 D. The image is smaller.

The adjustment of the opening in the diaphragm in its relation to the light was best made by the subject, who regarded the light with the condenser removed, using a blue glass screen to mitigate its intensity. When the subject obtained an adjustment of the opening which enabled him to see the light clearly, the diaphragm was moved to his right until the light was just at the edge, or beyond the edge of the opening. This adjustment of the diaphragm in its relation to the light and the left eye of the subject, yielded better results after the condenser was adjusted than when the light could be seen by the subject through the opening with the condenser removed.

The concave mirror.—The mirror was three and a half inches in diameter, with a focus of nine inches, though a smaller mirror might be used or a plane one, but the latter would not be so satisfactory, because the image would not be seen so clearly as when magnified in a concave glass. The mirror was supported at the end of a horizontal bar, with its plane at right angles to the line of fixation, and its center at the same height from the table as the eye of the subject. The horizontal bar moved back and forth in the opening of an arm supported by a stand, and an adjustment was used whereby the arm could be raised or lowered, and turned at different angles on a horizontal plane. The horizontal bar was placed in the axis of vision, and when the mirror was properly adjusted, it could be moved toward or away from the eye, without altering the angle of fixation when the subject regarded the reflection of the image upon the front of the lens. The mirror was a great convenience in adjusting the diaphragm, the condenser, and the light; because the image was seen therein by the subject more clearly than by the observer, and the former could, therefore, determine the accuracy of the adjustments better than any one else. When the light was placed on a level with the eye it was necessary, in order that the subject might see past the condenser and observe the reflection of his own eye in the mirror, to place the latter in such a way that the axis of vision was at least ten degrees to one side of the line of the light. When the light was lowered ten degrees or more below the axis of vision, the mirror was placed directly over the line from the eye to the light, in order to enable the subject to see his own eye in the mirror over the top of the condenser. When the mirror was adjusted as close to the line of sight as it was possible to place it, clear and distinct images were seen by the subject reflected from various parts of his eye. Photographs were taken with the axis of vision not less than ten degrees from the line of the light to the eye. It should be understood that the images were photographed from the eye itself, not from the reflection in the concave mirror.

The condenser.—The condenser was a convex 11 D.S., about an inch and a half in diameter. This strength was found to be the most satisfactory in obtaining clear and distinct images. A stronger lens produced a brighter and smaller image; it had to be brought closer to the eye; and its adjustment required more careful manipulation, this being the greatest objection to its use. With a weaker condenser, +6.00 D.S., the image was too large for the size of the pupil. The condenser was supported by a stand, with an adjustment by which it could be raised or lowered, rotated either on its vertical or its horizontal axis, and moved nearer to or farther from the eye as desired. In nearly all cases the best results were obtained when the condenser was supported vertically, and was held nearly at an angle of ninety degrees to the line from the light to the eye. When tipped on its vertical or its horizontal axis five degrees, or even less, toward the light, or away from it, a clear and distinct image could not be obtained. Without a diaphragm the image focused by the condenser on the lens was cloudy; but with a diaphragm, a clear and distinct image was obtained with the condenser at about three inches from the eye. With a diaphragm, and the condenser at more than four inches from the eye, a faint and unsatisfactory image was sometimes produced. This was the cause of much trouble until the fact that there were two points at which an image could be obtained was discovered. Without the diaphragm, one of these points, the more distant one, was eliminated. It was therefore found to be an advantage to focus the condenser with the diaphragm removed, and then, after replacing the latter, to continue the adjustments. The conditions under which the fainter image was produced, with the condenser at a greater distance from the eye, were not discovered. The fact is mentioned, however, for the benefit of any one who may desire to repeat these observations.

Apparatus for supporting the head.—The most difficult part of the technique had to do with the apparatus for holding the head of the subject perfectly steady while the pictures were being taken. A rod of metal, firmly supported horizontally and covered with a sheet of paper, was grasped by the teeth, and served to hold that part of the head steady. A second horizontal rod pressed against the forehead, and it was sometimes an advantage to have a vertical rod pressing on the right temple. The subject was seated in a comfortable position.

THE CORNEA

A thirty candle power lamp—simply an ordinary electric globe—is sufficient to form a very large image on the cornea. It can be placed within an inch or two of the eye, as the heat is not great enough to interfere with the experiment. The closer it is, the larger the image. A blue glass screen can be used, if desired, to lessen the discomfort of the light, as the photographs of the image and the time of exposure will be the same whether the light is blue or white. The white light, however, is easier to focus than the blue. For absolute accuracy the light should be immovable, but for demonstration this is not essential. The subject can hold the bulb in his hand; and can demonstrate that the image varies according to whether the eye is at rest, accommodating normally for near vision, or straining to see at a near or a distant point. The clearness of the image may vary according to whether the light is adjusted vertically,

horizontally, or it an angle. When the left eye is used by the subject—and in all the experiments it was found to be the more convenient one for the purpose—the source of light is placed to the left of that eye, and as much as possible in front of it at an angle of about forty-five degrees. For demonstration it is not necessary that the eye of the subject should be immovable. He can look into a plane mirror, or into a concave one, which enlarges the image, using the image itself as the point of fixation, and the distance at which the eye focus can be altered by changing the distance of the mirror from the eye. The mirror should be fastened to a rod which moves in a groove backward and forward, and the angle of the rod must be so adjusted that the angle of fixation does not change when the mirror approaches the eye, or is withdrawn from it. The eye should be able to see the reflection by looking straight ahead, and the closer the reflection is to the edge of the mirror on the camera side the closer the camera can be brought to the line of fixation (Fig. 3).

Usually, not always, the retinoscope indicates that the eye is at rest—emmetropic—at the farthest distance of the mirror from the eye at which the subject is able to see the details of the reflection clearly. The greatest amount of accommodation is obtained at the nearest point at which the filament of the electric light can be seen distinctly. At this point the filament is distinctly smaller than when the eye is at rest. When the mirror is moved so far away that the image is no longer seen clearly, and the eye strains to see it more distinctly, the retinoscope indicates myopic refraction and the image again becomes smaller than when the eye is at rest. When the mirror is brought so close to the eye that the image appears indistinct and the eye again strains to see it more distinctly, the retinoscope indicates less myopic refraction and the image becomes larger. If the strain to see it is great enough, the eye becomes hypermetropic, and the image appears larger than when the eye is at rest. All these changes in the size and shape of the image can be correctly observed by the subject.

The angle of the camera to the optic axis is not very important. Better pictures can be obtained, however, when the camera is directed as nearly as possible on a line with the optic axis. Satisfactory pictures are obtained when the angle is thirty, forty or even sixty degrees; but after passing beyond sixty the results are not at all good. Generally it is not possible to get an angle smaller than ten degrees. While the photographs are being taken a screen should be placed between the light and the mirror to prevent the formation of a double image on the cornea.

THE SIDE OF THE SCLERA

To obtain an image from the side of the sclera, a plane mirror was used in addition to the concave one and other apparatus previously mentioned. It was about three inches in diameter, was supported on a stand at about the height of the eye, and was held vertical to the surface of the table, with one edge resting against the left temple of the subject and the opposite edge tipped about thirty degrees from the plane of the temple toward the nose. The concave mirror was so placed that the horizontal bar which supported it made an angle of about eighty degrees with the line from the eye to the right. When the two mirrors were properly adjusted, the image of the filament was reflected from the plane mirror into the concave mirror, where it was seen by the subject an inch or more above the center. The concave mirror was so adjusted that when it was moved nearer to, or farther away from the eye, the angle of fixation did not change. The condenser was slightly, perhaps half an inch, farther from the eye than from the center of the plane mirror, and was almost in contact with the edge of the mirror on the side nearest the light. Numerous very small reflections from the neighborhood of the sclera were a source of failure which was not easily overcome. Sometimes these reflections were very numerous when the image was reflected from the side of the sclera, and absent when it was reflected from the part nearer, the cornea. They were finally eliminated by adjustments of the light. Another difficulty was the dropping of the upper eyelid. This occurred when the point of fixation was lower than the eye, and was corrected when the eye looked more nearly straight or slightly above the horizon. To accomplish this the concave mirror was lowered part of an inch. The camera was placed where the object glass was seen by the subject in the space between the two mirrors. The axis of the camera made an angle with the line from the light to the eye of about fifteen degrees. The adjustments of the light, diaphragm, condenser, chin rest, head rest, two mirrors and the camera required a great deal of care. The subject was placed in a comfortable position to avoid the slightest strain, and during the few seconds of exposure of the plate the breath was held, because the act of breathing was sufficient to produce a movement of the eye. In order to illuminate the general surface of the eye during the time the plate was exposed two thirty candle power lamps were placed on the table (Fig. 4).

THE POSTERIOR SURFACE OF THE LENS

In order to see the image reflected from the posterior surface of the lens a telescope was employed, the telescope of the ophthalmometer being utilized, for convenience, after the removal of the prism, which produced a double image. A thirty candlepower lamp was placed as close as possible to the tube just below the distal end and secured immovably. The head of the subject was also held immovable by a head rest. A plane mirror, two inches by one inch, had a letter of diamond type pasted on it below the center and near the left edge, as regarded by the subject. This mirror was supported by the subject in contact with the right half of the objective glass, with the letter of diamond type in the line of the horizontal axis of the tube. Although one half of the end of the tube was covered by the mirror, no difficulty was experienced in obtaining a good view of the image reflected from the posterior surface of the lens. Twenty feet behind and above the head of the subject was hung a Snellen test card, and by tipping the mirror slightly he was able to read, reflected in it, without changing the line of fixation, a letter of the twenty line. When the subject regarded the small letter on the mirror at five inches simultaneous retinoscopy indicated the focus of the eye to be -8.00 D.S. When the letter on the Snellen test card was regarded without change in the position of the mirror, simultaneous retinoscopy indicated that the eye was at rest. At times the letter on the mirror was recognized by the subject when the accommodation was less or more than -8.00 D.S. When this happened, the fact was revealed by the retinoscope. During these changes of focus the observer was unable to note any change in the size or form of the image reflected from the posterior surface of the lens. Several persons have repeated this experiment and confirmed the original observations. Potential sources of error in the experiment were the possibility that the subject might not accommodate accurately, and possible movements of the eye and head. The first was eliminated by the use of the retinoscope, the second by an arrangement of the letter on the mirror and the letter reflected from the Snellen test card in such a way that either could be seen without altering the line of fixation; and the third by the head rest. The experiment was the first of the series described which was successful, the image being obtained without difficulty about three years ago.

IRIS AND FRONT OF THE SCLERA

Images on the iris and the front of the sclera were obtained by the same technique as was used for the front of the lens (Fig. 1). It was interesting to find that when the angle of the line of light to the eye and the line of fixation was as small as possible, about ten degrees, an image could be obtained on the iris without obtaining one on the cornea or lens. The camera was placed as close as possible to the line of fixation, its axis forming an angle of ten degrees with the line of fixation. The light was placed ten degrees below the horizon, and the line of fixation was directed to the concave mirror just above the upper edge of the condenser.

PART III
RESULTS

Although precautions were taken to prevent any movement of the head of the subject during the time the pictures were being taken, or while the images were being studied by the observer, and the subject even refrained from breathing for the five or ten seconds during which the plate was exposed, photographs usually showed, in addition to changes of size, manifest changes in the location of the images and changes in the exposed parts of the eyeball. This is what would be expected as the result of an elongation of the eyeball during the production of myopic or hypermetropic refraction. In many of the photographs it seemed that the diameter of the iris was increased or diminished. In some cases a larger or a smaller area of sclera was exposed. A protrusion or a recession of the eyeball often occurred. However, it should be emphasized that in spite of changes in the location of the image, before and after changes of refraction, the changes in its size were always what one would expect under the circumstances.

Lens.—Images reflected from the front (Fig. 5 and 9) and back of the lens showed no change in size during accommodation.

Front of the sclera.—Images reflected from the front of the sclera (Fig. 6) always showed marked changes when the refraction was changed, no matter whether the line of fixation was ten or ninety degrees from the light. When an effort was made to see, unsuccessfully, at a distance, simultaneous retinoscopy always indicated myopic refraction and the image always became smaller than when the eye was at rest, indicating that the front of the sclera had become more convex. The change was greater than those occurring under similar conditions with images reflected from other parts of the eye. During accommodation of 3.00 D., 6.00.D., or 8.00 D., measured by the retinoscope, the image became relatively much smaller than did images reflected from other parts of the eye when a similar change of refraction took place. Similarly, when hypermetropic refraction of 2.00 D., or more, was produced by an unsuccessful effort to see near, the image became relatively much larger than images reflected from other parts of the eye when the same degree of hypermetropic refraction was produced. The most marked **changes in the shape of the eyeball** obtained during these experiments were manifested by the front of the sclera, the changes in the size of the images reflected from the side of the sclera, the cornea, and the iris being so slight that sometimes they were scarcely apparent in the photographs, although they were always plainly apparent to the subject when magnified in the concave mirror, and could also be seen by the observer without the mirror.

The side of free sclera.—The changes observed in the images reflected from the side of the sclera (Fig. 7) were exactly the opposite of those noted on the front of the sclera, being larger where the former were smaller and vice versa. When an effort was made to see at a distance the image reflected from the side of the sclera was larger than the image obtained when the eye was at rest, indicating a flattening of the side of the sclera, a condition which one would expect when the **eyeball was elongated**. The image obtained during normal accommodation was also larger than when the eye was at rest, indicating again a flattening of the side of the sclera. The image obtained, however, when an effort was made to see near, was much smaller than any of the other images, indicating that the sclera had become more convex at the side, a condition which one would expect when the **eyeball was shortened**, as in hypermetropia. The changes of the images on the side of the sclera were not so marked as those on the front of the sclera, but the alterations in size were always sufficient to be readily recognized by the subject in the concave mirror, and by the observer without the mirror. They could be observed when the angle of the line of fixation to the line of the light to the eye was sixty degrees, or even less. The photographs usually showed changes, but to a less marked degree because, owing to the difficulty of photographing a white image on a white background, they were imperfect.

The cornea.—When the images reflected from the cornea were small no change in size was observed under varying conditions of refraction. When the images were large (Fig. 8) a series of slight changes similar to those noted on the front of the sclera could be observed. The change in the curvature of the cornea during accommodation is so slight that the ophthalmometer, with its small image, fails to show it, and has therefore been supposed to demonstrate that the cornea did not change during accommodation. The method described accomplishes what the ophthalmometer has failed to do.

The iris.—Images reflected from the iris were more readily obtained than those from the cornea or lens, and slight variations in size were always apparent to the observer and subject when hypermetropic or myopic refraction was produced, but these, however, were not always evident in the photographs.

SUMMARY

These studies of the images reflected from the various parts of the eyeball demonstrate:

The accommodation of the eye is effected by an elongation of the eyeball.

The lens is not a factor in accommodation. (Modern scientists state the lens and eye change shape to produce accommodation)

Myopia is produced by a strain to see distant objects.

Hypermetropia is produced by a strain to see near objects.

They have, therefore, confirmed my previous conclusions regarding the mechanism of accommodation, based on experiments on the eyes of animals, and also my earlier conclusions as to the cause of myopia and hypermetropia, based on observations with the retinoscope and published in the NEW YORK MEDICAL JOURNAL of March 16, 1912.

40 EAST FORTY-FIRST STREET.

IMPROVING THE SIGHT OF SOLDIERS AND SAILORS AND RELIEVING PAIN

A Suggestion to the Surgeon Generals of the Army and Navy

BY W. H. BATES, M. D.,

Medicine and Surgery in the Army and Navy

New York Medical Journal, October 12, 1918, pp. 639-641

UP to 1908 the United States required normal vision in its army. In that year Bannister and Shaw made some experiments from which they concluded that a perfectly sharp image of the target was not necessary for good shooting and that, therefore, a visual acuity of 20/40, or even 20/70, was sufficient for the soldier. This conclusion was not universally accepted; but normal vision had become so rare that it would, doubtless, have been useless to insist upon it. The visual standard for admission to the army was accordingly lowered to 20/40 for the better eye and 20/100 for the poorer eye and it was further provided that a recruit might be accepted when unable, with the better eye, to read all the letters on the 20/40 line, provided he could read some of the letters on the 20/30 line.

It is a matter of common knowledge that in the enrollment of the present army these very low standards have been liberally interpreted. It appeared; no doubt, to those in authority that there was nothing else to be done if an army was to be raised at all, for even under these standards 21.68 per cent. of all rejections—thirteen per cent. more than for any other single cause—were for eye defects. To keep the enlisted eye defectives supplied with glasses, an optical service has been organized both for the training camps and the men at the front, the overseas force consisting of a central optical shop with eight auxiliary units.

While the visual standards of the navy are higher than those of the army, they are still below normal, while, owing to the extreme rarity of good eyesight and the difficulty of securing the combination of physical and mental qualities required for successful flying, it is probable that the former high standards of the **aviation** service are not being very strictly enforced. The British air service is very lenient in the matter of visual tests, and it has been noted that (1) some of the most famous of the British fliers have had very poor eyesight. On the currently accepted theory that the only remedy for errors of refraction is the placing of correcting lenses before the affected eyes, this is truly an appalling state of affairs. No aid to vision, however carefully adjusted, can compensate for the loss of the natural powers of the eye. No optical service, however excellent, can insure that the lenses will not break, or become clouded, at the moment when they are most needed.

For thirty years I have been of the opinion that the usefulness of correcting lenses has been greatly overrated, and I have lately been able to present evidence (2) which seems to me to show conclusively that the defects for which they are worn are functional and curable. Since the beginning of the war I have had the privilege of making it possible for many young men to gain admission to the army, or to favorite branches of the service from which their eyesight had previously excluded them. I believe that these benefits need not be confined to the few, but that all soldiers and sailors may obtain normal vision without glasses, and I have supplied the Surgeon General of the **Army** with a plan whereby this end might be attained with far less time, trouble, and expense than will be necessitated by the optical service on which we are now depending. The same method could be used with equal success in the **navy**.

Easy Vision Improvement Method with Eyechart

The plan is similar to the one used successfully for eight years in the public schools of Grand Forks, North Dakota, and for a shorter time in Rochester, New York, and other cities. A **Snellen test card** was hung in each classroom, and the children were directed to **read it every day with both eyes, also with each eye separately—**the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. This required but **half a minute a da**y, but many children, finding that it improved their sight, or relieved their discomfort, **repeated the exercise at frequent intervals during the da**y and were encouraged to do so. As the card hung in the classroom all the time, the children **memorized it**. **It became a familiar distant object**, and they learned to **look at it without the strain always caused by unfamiliar distant objects.**

At the front, or on the parade grounds of the training camps, a Snellen test card might be impracticable, but there are other letters, or small objects, on the uniforms, on the guns, on the wagons, or elsewhere, which would serve the purpose equally well. An officer has buttons on his coat with letters on them. A noncommissioned officer has a belt with cartridges. The letters, the cartridges, or the spaces between the cartridges, could be used as points of fixation.

Letters, or objects, which require a vision of 20/20 should be selected by someone who has been taught what 20/20 means, and the men should be required to **regard these letters, or objects, twice a day. After reading the letters they should be directed to cover their closed eyes with the palms of their hands to shut out all the light, and remember some color, preferably black, as well as they are able to see it, for half a minute. Then they should read the letters again and note any improvement in vision. The whole procedure will take not more than a minute. It should be made part of the regular drill, night and morning, and men with imperfect sight should be encouraged to repeat it as many times a day as convenient.** They will need no urging; most of them are eager to adopt any means for improving their sight, as imperfect vision is a bar to advancement, and excludes them from the favorite branch of the service, namely, aviation.

In each regiment every ten men should be under the supervision of one man who has been trained in a manner to be described later. He should carry a pocket test card, consisting of a few of the smaller letters, and should test the vision of the men at the beginning of the training, and thereafter at intervals of three months, reporting the results to the medical officer in charge. Men wearing glasses should not be required to take part in the drill, but when they see the benefits of eye education they may wish to practice it. They should be permitted to do so, but should be required to discard their glasses, as the method will do them no good while these are worn.

The method will not only correct defects of vision that have become permanent, but will prevent those deviations from the normal to which every eye—no matter how good its sight may ordinarily be—is subject.

The normal eye is commonly supposed to have perfect sight all the time, but as I have pointed out in a previous article (3), this is very far from being the case. It is unusual to find persons who can maintain perfect sight continuously, even under the most favorable conditions, and under the stress and strain of army life it is not surprising that men should frequently become more or less blind. **Loss of color perception is frequent among persons whose sight is ordinarily normal**. **Night blindness of various degrees is also common. Errors of refraction of all kinds may be produced in normal eyes by various kinds of mental and physical disturbances**; many accidents in civil life and disasters in military operations are doubtless due to this unrecognized cause. Accidents to **aviators**, otherwise unaccountable, are easily explained when one understands how dependent the aviator is upon his eyesight and how easily **perfect vision may be lost amid the unaccustomed surroundings, the dangers and hardships of the upper air. It was formerly supposed that aviators maintained their equilibrium in the air by aid of the internal ear; but it is now becoming evident from the testimony of aviators who have found themselves emerging from a fog with one wing down, or even with their machine turned completely upside down, that equilibrium is maintained almost entirely, if not**

altogether, by the sense of sight (4). If the aviator loses his sight, therefore, he is lost, and we have one of these "unaccountable" accidents that are so unhappily common in the air service.

The cause both of continuous and of temporarily imperfect sight is a strain or effort to see, and eye training is very successful at relieving and preventing this strain. All persons connected with the army and navy, therefore, should make a daily practice of reading small, familiar letters, or observing other small, familiar objects, at a distance of ten feet or more. In addition, aviators should have a few small letters or a single letter on their machines, at a distance of five, ten, or more feet from their eyes, and should read them frequently when flying. This will greatly lessen the danger of visual lapses, with their accompanying loss of equilibrium and judgment. Arrangements should be made for illuminating these letters for night flying or fogs.

Eye education is important, not only because it improves the sight, but because **the control of the visual memory obtained by palming, or the practice of seeing black with the eyes closed and covered, is extraordinarily efficacious in relieving pain and fatigue and other physical discomforts.**

Many years ago **patients who had been cured of imperfect sight by treatment without glasses quite often told me that after their eyes were cured they were always relieved of pain, not only in the eyes and head, but in other parts of the body, even when the pain was apparently caused by some organic disease, or by an injury.** The relief in many cases was so striking that I investigated some thousands of cases, and found it to be a fact that persons with perfect sight, or the memory of perfect sight, do not suffer pain in any part of the body, while pain can always be produced in any part of the body by a strain or effort to see.

Perfect sight does not necessarily mean the perfect visual perception of words, letters, or objects, of a more or less complicated form. The color alone is sufficient, and the color which it is easiest to see perfectly is black. But perfect sight is never continuous. Careful scientific tests have shown that persons whose sight is ordinarily perfect may lose it temporarily for a few minutes, while most people lose it even more frequently. For practical purposes in relieving pain, therefore, the use of the **memory** is more satisfactory. With eyes closed and covered with the palm of the hands, shutting out all light, a person with good eyesight who has had a little training in the method is ordinarily able, in a few minutes, or less, to remember or see a perfect black. An untrained person may require the assistance of someone who understands the method. **When the black is seen perfectly, a temporary, if not a permanent, relief from pain always follows. By this means surgical operations have been performed and teeth extracted painlessly. The feeling of heat, the feeling of cold, hunger, fatigue, and the symptoms of disease, such as fever, weakness, and shock, have also been relieved by it. If soldiers understood this, not only much suffering, but many deaths from pain, shock, hunger, thirst, or cold, might be prevented.**

A soldier in a trench full of water, if he can remember black perfectly, will know the temperature of the water, but will not suffer from cold. He may succumb from weakness on the march, but will not feel fatigue. He may die of hemorrhage, but he will **die painlessly.** The method would also obviate the necessity for using morphine to relieve pain, and would thus prevent the soldier from becoming the victim of lifelong morphine habit.

The Germans use a bullet which breaks when it strikes the bone and causes intense pain; the men often die of this pain before help arrives. When they are rescued the surgeons at once give them morphine. A few hours later the injection is probably repeated. Then the drug is given less frequently, but in many cases it is not discontinued entirely while the man is in the hospital. A Red Cross surgeon, at a recent meeting of the New York County Medical Society, stated that he had been responsible for producing the morphine habit in 10,000 soldiers, and that every physician at the front had done the same. By such a simple method as **palming** all this might be prevented. If the black can be remembered perfectly with the eyes open, the same benefits will be obtained as by palming, and since there are times, as with soldiers on the march, when palming is feasible, all soldiers should be taught to remember black with their eyes open.

Why the memory of black should have the effect of relieving pain cannot be fully explained; but it is evident that the body must be less susceptible to disturbances of all kinds when the mind is under control, and **only when the mind is under control can black be remembered perfectly**. That pain can be produced in any part of the body by the action of the mind is not a new observation, and if the mind can produce pain, it is not surprising that it should also be able to relieve pain.

To provide a corps of instructors in eye education and palming, ten men—either officers, physicians, or privates—who have normal vision and do not wear glasses, should first be trained by an expert. Each one should then train ten other men, and each of the latter should train ten more. In this way an endless chain will be started which will soon provide competent instructors for every division in the army and every vessel in the navy. All nurses, all Red Cross or Y. M. C. A. workers, and all members of the Medical Corps should qualify as instructors, as they will have constant occasion to use the method for the relief of pain. If the method is to be a success it must be practiced by those in authority as well as by those in humbler positions. It is so simple that the rank and file cannot be expected to take it seriously unless they see that those of higher rank think well enough of it to use it themselves.

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40 EAST 41ST STREET.

NEW YORK CITY.

MEMORY AS AN AID TO VISION

BY W. H. BATES, M. D.,

New York Medical Journal, May 24, 1919, pp. 890-893

Associated with all functional eye troubles, including errors of refraction (1), strabismus, amblyopia (2), and various other conditions, is a strain or effort to see. This strain always originates in mental strain of some kind, and when the latter is relieved the sight always becomes normal. But the sensations of the eye and mind supply very little information as to the strain to which both are being subjected, those who strain most often suffering the least discomfort. In the treatment of these conditions, therefore, it is important to have some test by which the patient can know whether he is straining or not. This is supplied by the memory of black.

When the mind is able to remember perfectly any phenomenon of the senses, it is always perfectly relaxed. The sight is normal if the eyes are open, and when they are closed and covered so as to exclude all light one sees a perfectly black field, that is, nothing at all. **If one can remember the ticking of a watch, or an odor, or a taste, one's mind is completely at rest, and one will see a perfect black when one's eyes are closed and covered**. If one's memory of a sensation of touch could be equal to the reality, one would see nothing but black when the light was excluded from the eyes. If one were to remember a bar of music perfectly when one's eyes were closed and covered, one would see nothing but black. But in the case of any of these phenomena it is not easy to test the correctness of the memory, and the same is true of colors other than black. All other colors, including white, are altered by the amount of light to which they are exposed, and are seldom seen as perfectly as it is possible for the normal eye to see them. When the sight is normal, black is just as black in a dim light as in a bright one. It is also just as black at the distance as at the near-point, while a small area is just as black as a larger one, and, in fact, appears to be blacker. Black is, moreover, more readily available than any other color. There is nothing blacker than printer's ink, and that is practically ubiquitous. By means of the memory of black, therefore, it is possible to measure accurately one's own relaxation. If the color is remembered perfectly, one is absolutely relaxed. If it is remembered almost perfectly, one's relaxation is almost perfect. If it cannot be remembered at all, one has very little or no relaxation.

By means of simultaneous retinoscopy, these facts can be readily demonstrated. An absolutely perfect memory is very rare, so much so that it need hardly be taken into consideration; but a practically perfect memory, or what might be called normal, is attainable by every one under certain favorable conditions. With such a memory of black the retinoscope shows that all errors of refraction are corrected. If the memory is less than normal, the contrary will be the case. If it fluctuates, the shadow of the retinoscope will fluctuate. The testimony of the retinoscope is, in fact, more reliable than the statements of the patient. Patients often believe and state that they remember black perfectly, or normally, when the retinoscope indicates and error of refraction; but, in such cases, it can usually be demonstrated, by bringing the test card to the point at which the black letters can be seen best; that the memory is not equal to the sight. That the color cannot be remembered perfectly when the eyes and mind are under a strain, the reader can easily demonstrate by trying to remember it when making a conscious effort to see—by staring, partly closing the eyes, or frowning—or while trying to see all the letters of a line equally well at one time. It will be found that it either cannot be remembered at all under these conditions, or that it is remembered imperfectly.

When the two eyes of a patient are different, it has been found that the difference can be exactly measured by the length of time a black period can be remembered while looking at the Snellen test card with both eyes open, and with the better eye closed. A patient with normal vision in the right eye and half normal vision in the left could, when looking at the test card with both eyes open, remember a period for twenty seconds continuously; but with the better eye closed it could be remembered only ten seconds. A patient with half-normal vision in the right eye and one-quarter normal in the left could remember a period twelve seconds with both eyes open, and only six seconds with the better eye closed. A third patient, with normal sight in the right eye and vision of one-tenth in the left, could remember a period twenty seconds with both eyes open, and only two seconds when the better eye was closed.

In order that patients under treatment for the cure of functional eye troubles may recognize and avoid the conditions that produce strain, they are advised, whatever other method of improving their sight they may be using, to carry with them always the memory of a small area of black, such as a period. Some patients have obtained a complete cure in a very short time by this means alone. One advantage of the method is that it does not require a test card or any other equipment. At any hour of the day or night, whatever the patient may be doing, he can always place himself in a condition favorable to the perfect memory of a black period.

The condition of mind in which a black period can be remembered cannot be attained by any sort of effort. The memory is not the cause of the relaxation, but must be preceded by it. It is obtained only during moments of relaxation, and retained only as long as the causes of strain are avoided; but how this is accomplished cannot be fully explained, just as many other psychological phenomena cannot be explained. **We only know that under certain conditions that might be called favorable, a degree of relaxation sufficient for the memory of a black period is possible, and that by persistently seeking these conditions, the patient becomes able to increase the degree of the relaxation and prolong its duration, and finally becomes able to retain it under unfavorable conditions.**

The majority of patients find the conditions most favorable for the memory of black when their eyes are closed and covered with the palms of the hands in such a way as to exclude all the light, while avoiding pressure on the eyeballs. This usually lessens the strain to see to such an extent that the patient becomes able to remember a black object for a few seconds or longer; but there is a considerable minority of cases in which this result is not obtained. Some patients not only get no relaxation by palming, but may so increase their strain as to produce very serious symptoms. Their treatment often requires much patience and ingenuity, and cannot be considered here.

When the closing and covering of the eyes does produce sufficient relaxation for the memory of black, this period of relaxation can be prolonged in one of two ways:

#1 - Either the patient can open his eyes and look at a black letter by central fixation—by which is meant seeing best the part fixed (1)—at the distance at which it is seen best, (while also shifting on the part fixed) or

#2 - he can shift mentally from one letter to another, or from one part of a letter to another. By this means, and perhaps also through influences that are not clearly understood, most patients become able, sooner or later, to remember black for an indefinite length of time with their eyes closed and covered.

With the eyes open and looking at a blank surface, without trying consciously to see, the unconscious strain to see is lessened so that the patient becomes able to remember a black period, and all errors of refraction, as demonstrated by the retinoscope, are corrected. This result has been found to be invariable; and so long as the surface remains blank and the patient does not begin to remember or imagine things seen imperfectly, the memory and the vision may be retained. But, if with the improved vision, details

upon the surface begin to come out, or if the patient begins to think of the test card which he has seen imperfectly, the strain to see will return and the memory of the period will be lost.

When looking at a surface on which there is nothing to see, distance makes no difference to the memory, because the patient can always look at such a surface, no matter where it is, without straining to see. When looking at letters, or other details, however, the memory is best at the point at which the patient's sight is best, because at that point the eyes and mind are more relaxed than when the same letters or objects are regarded at distances at which the vision is not so good. By improving the sight at the most favorable distance, therefore, the memory of the period may be improved in some cases very rapidly.

If the relaxation gained under these favorable conditions is perfect, the patient will be able to retain it when the mind is conscious of the impressions of sight at unfavorable distances. Such cases are, however, very rare. Usually the degree of relaxation gained is markedly imperfect; and is, therefore, lost to a greater or less degree when the conditions are unfavorable, as when letters of objects are being regarded at unfavorable distances. So disturbing are the impressions of sight under these circumstances, that just as soon as details begin to come out at a distance at which they have not previously been seen the patient usually loses his relaxation, and with it the memory of the period. In fact, the strain to see may even return before he has had time to become conscious of the image on the retina, as the following case strikingly illustrates:

The Black Period

A woman of fifty-five who had **myopia** of fifteen diopters, complicated with other conditions which made it impossible for her to see the big C at more than one foot, or to go about, either in her house or on the street, without an attendant, became able, when she looked at a green wall without trying to see it, to remember a perfectly black period, and to see a small area of the wallpaper at the distance as well as she could at the near-point. When she had come close to the wall she was asked to put her hand on the door-knob, which she did without hesitation. "But I do not see the knob," she hastened to explain. As a matter of fact she had seen it long enough to put her hand on it; but as soon as the idea of seeing it was suggested to her she lost the memory of the period, and with it her improved vision, and when she again tried to find the knob she could not do so.

When a period is remembered perfectly, while a letter on the Snellen test card is being regarded, the letter improves, with or without the consciousness of the patient, because it is impossible to strain and relax at the same time, and if one relaxes sufficiently to remember the period, one must also relax sufficiently to see the letter, consciously or unconsciously. Letters on either side of the one regarded, or on the lines above and below it also improve. When the patient is conscious of seeing the letters, this is very distracting, and usually causes him, at first, to forget the period; while with some patients, as already noted, the strain may return even before the letters are consciously recognized.

Thus patients find themselves on the horns of a dilemma. The relaxation indicated by the memory of a period improves their sight, and the things they see with this improved vision cause them to lose their relaxation and their memory. It is very remarkable to me how this difficulty is ever overcome, but some patients are able to do it in five minutes, or half an hour. With others the process is long and tedious. There are various ways of helping patients to deal with this situation. One is to direct them to remember the period while looking a little to one side of the test card, say a foot or more; then to look a little nearer to it; and, finally, to look between the lines. In this way they may become able to note the blackness of the letters in the eccentric field without losing the period, and when they can do this they may become able to go a step further and look directly at a letter, without losing control of their memory. If they cannot do it, they are told to look at only one part of a letter—usually the bottom—or to see the period as part of the letter, while nothing that the rest of the letter is less black and less distinct than the part directly regarded. When they can do this they become able to remember the period better than when the letter is seen all alike. If the letter is seen all alike (1) the perfect memory of the period is always lost. The next step is to ask the patient to note whether the bottom of the letter is straight, curved, or open, without losing the period on the bottom. When he can do this he is asked to do the same with the sides and top of the letter, still holding the period on the bottom. I disagree: it is better to imagine, remember the period on the side of the letter the eyes are looking at. To imagine it on the bottom while looking at a different side, part of the letter is trying to think/see two different things and this causes diffusion, eccentric fixation, strain, blur. To look at and remember, imagine the period on the side/part of the letter the eyes are looking at is central fixation, relaxation, activates clear vision. Usually when the parts can be observed separately in this way the whole letter can be seen without losing the memory of the period; but it occasionally happens that this is not the case, and further practice is needed before the patient can become conscious of all sides of the letter at once without losing the period. This may require moments, hours, days, or months.

Imagine the letter is composed of hundreds of small dark black periods and shift, move the eyes/center of the visual field from part to part (period to period) on the letter to see each part correct, clear.

When looking at a part, example; left side; shift part to part (small point to small point) on the left side.

In one case, the following method succeeded:

The patient, a man with fifteen diopters of myopia, was so much disturbed by what he saw when his vision had been improved by the memory of the period, that he was directed to look away from the Snellen test card, or whatever object he was regarding, when he found the letters or other details coming out; and for about a week he went around persistently dodging his improved sight. (shifting to other parts, other objects). As his memory improved, it became more and more difficult for him to do this, and at the end of the week it was impossible. When he looked at the bottom line at a distance of twenty feet he remembered the period perfectly, and when asked if he could see the letters, he replied: "I cannot help but see them."

Some patients retard their recovery by decorating the scenery with periods as they go about during the day, instead of simply remembering a period in their minds. This does them no good, but is, on the contrary, a cause of strain. **The period can be imagined perfectly and with benefit as forming part of a black letter on the test card, because this merely means imagining that one sees one part of the black letter best, as the normal eye sees it;** but it cannot be imagined perfectly on any surface which is not black, and to attempt to imagine it on such surfaces defeats the end in view.

The smaller the area of black which the patient is able to remember, the greater is the degree of relaxation indicated; but some patients find it easier at first to remember a somewhat large area, such as one of the letters on the Snellen test card, with one part blacker than the rest. They may begin with the big C, then proceed to the smaller letters and finally get to a period. It is then found that this small area is remembered more easily than the larger ones and that its black is more intense. Some patients, instead of a period, find it easier to remember a colon, with one period blacker than the other, or a collection of periods, with one blacker than all the others, or the dot over an i or j. Others again prefer a comma to a period. **As it is impossible for the mind to think of one thing continuously, some patients find it helpful in the beginning to shift consciously from one of these black areas to another, or from one part of such an area to another, and to realize the swing, or pulsation, produced by such shifting;** but when the memory becomes perfect one object may be held continuously, without conscious shifting, (eyes shift subconsciously, automatic) while the swing is realized only when attention is directed to the matter.

Although black, as a rule, is the best color to remember, some patients are bored or depressed by it, and prefer to remember white, or some other color. **A familiar object, or one with pleasant associations, is often easier to remember than one which has no particular interest. One patient was cured by the memory of a yellow buttercup, and another was able to remember the opal of her ring when she could not remember a period. Whatever the patient finds easiest to remember is the best to remember, because the memory can never be perfect unless it is easy.**

When the memory of the period becomes habitual it is not only not a burden, but is a great help to other mental processes. **The mind when it remembers one thing better than all other things possesses central fixation, and its efficiency is thereby increased, just as the efficiency of the eye is increased by central fixation**. In other words, the mind attains its greatest efficiency when it is at rest, and it is never at rest unless one thing is remembered better than all other things. When the mind is in such a condition that a period is remembered perfectly the memory for other things is improved. **A high school girl reports that when she was unable to remember the answer to a question in an examination she remembered the period, and the answer came to her**. When I cannot remember the name of a patient I remember a period, and behold, I have it! A musician, who had perfect sight and could remember a period perfectly had a perfect memory for music; but a musician with imperfect sight who could not remember a period could play nothing without his notes, only gaining that power when his sight and visual memory had become normal. In some exceptional cases, the strain to see the letters on the Snellen test card has been so terrific that patients have said that they not only could not remember a period while they were looking at them, but could not remember even their own names. Memorize the letters – the brain stores a perfect clear image of the letters in the memory. This causes the chart to be a familiar object, relaxing to the eyes, mind – The letters are seen clear.

The accuracy of the memory of the period may be measured, not only by comparing it with the sight and by means of the retinoscope but by the following tests:

+When the memory of the period is perfect it is instantaneous. If a few seconds or longer are necessary to obtain the memory, it is never perfect.

+A perfect memory is not only instantaneous, but continuous.

+When the period is remembered perfectly perfect sight comes instantaneously. If good vision is obtained only after a second or two, it can always be demonstrated that the memory of the period is imperfect and the sight also.

The memory of a period is a test of relaxation. It is the evidence by which the patient knows that his eyes and mind are at rest. It may be compared to the steam gauge of an engine, which has nothing to do with the machinery, but is of great importance in giving information of the ability of the mechanism to do its work. When the period is black one knows that the engine of the eye is in good working order. When the period fades, or is lost, one knows that it is out of order, until a cure is effected. Then one does not need a period, or any other aid to vision, just as the engineer does not need a steam gauge when the engine is going properly. One patient who had gained perfect eyesight by treatment without glasses said, in answer to an enquiry about the method, that he had not only done nothing to prevent a relapse, but had even forgotten how he was cured. The reply was unsatisfactory to the inquirer, but is quoted to illustrate the fact the when a patient is cured, he does not need to do anything consciously in order to stay cured. It is only those who are imperfectly cured who have to continue the treatment in order to retain what they have gained. **It should be added, however, that complete cures, by which is meant the attainment of a measure of microscopic and telescopic vision, are very rare; and even in such cases the treatment can be continued with benefit, for no limits can be set to the visual powers of man, and it is always possible to go on improving them.**

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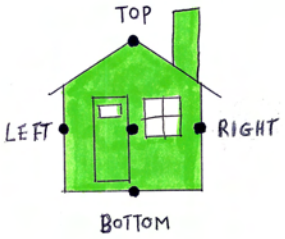
40 EAST FORTY-FIRST STREET.

SHIFTING AS AN AID TO VISION

BY W. H. BATES, M. D.,

New York Medical Journal, July 30, 1920, pp. 158-160



When the eye regards a letter with normal vision either at a near point or at a distance, the letters appear to pulsate, or move in various directions, from side to side, up and down, or obliquely. When it looks from one letter to another, not only the letters, but the whole line of letters and the whole card, appear to move from side to side. This apparent movement (oppositional movement) is due to the shifting of the eye and is always in a direction contrary to its movement. If one looks at the top of a letter, the letter is below the line of vision, and, therefore, appears to move downward. If one looks at the bottom, the letter is above the line of vision and appears to move upward. If one looks to the left of the letter, it is to the right of the line of vision and appears to move to the right. If one looks to the right, it is to the left of the line of vision and appears to move to the left. Persons with normal vision are rarely conscious of this illusion, and may have difficulty in demonstrating it; but in every case that has come under my observation the patients have always, in a longer or shorter time, become able to do so. **When the sight is imperfect the letters may remain stationary, or even move in the same direction as the eye.**



It is impossible for the eye to fix a point longer than a fraction of a second. If it tries to do so, it begins to strain and the vision is lowered. This can readily be demonstrated by trying to hold one part of a letter for an appreciable length of time. No matter how good the sight, it will begin to blur, or even disappear, very quickly, and sometimes the effort to hold it will



produce pain. In the case of a few exceptional people a point may appear to be held for a considerable length of time; the subjects themselves may think that they are holding it; but this is only because the eye shifts unconsciously, the movements being so rapid that objects seem to be seen all alike simultaneously, just as the parts of a moving picture appear to be seen as one.

The shifting of the eye with normal vision is usually not conspicuous, but by direct examination with the ophthalmoscope, it can always be demonstrated. If one eye is examined with this instrument while the other is regarding a small area straight ahead, the eye being examined, which follows the movements of the other, is seen to move in various directions, from side to side, up and down, in an orbit which is usually variable. If the vision is normal, these movements are extremely rapid and unaccompanied by an appearance of effort. The shifting of the eye with imperfect sight, on the contrary, is slower, its excursions are wider and the movements are jerky and made with apparent effort.



THE DIAGRAM ABOVE SHOWS A EXAMPLE OF THE NATURAL SHIFTING PATTERN OF THE EYES.. NOTICE THE EYES MOVE FREELY ON THE HOUSE IN A VARIETY OF PATTERNS, DIRECTIONS.

It can also be demonstrated that the eye is capable of shifting with a rapidity which the ophthalmoscope cannot measure. The normal eye can read fourteen letters on the bottom line of a Snellen test card, at a distance of ten or fifteen feet, in a dim light, so rapidly that they seem to be seen all at once. Yet it can be demonstrated that in order to recognize the letters under these conditions it is necessary to make about four shifts to each one. At the near point, even though one part of the letter is seen best, the rest may be seen well enough to be recognized; but at the distance, in a dim light, it is impossible to recognize the letters unless one shifts from the top to the bottom and from side to side. One must also shift from one letter to another, making about **seventy shifts in a fraction of a second**. A line of small letters on the Snellen test card may be less than a foot long by a quarter of an inch wide, and if it requires seventy shifts to a fraction of a second to see it apparently all at once, it must require many thousands to see an area of the size of the screen of a moving picture, with all its detail of people, animals, houses, or trees, and to see sixteen such areas to a second, as is done in viewing moving pictures, must require **a rapidity of shifting that can scarcely be realized.** Yet it is admitted that the present rate of taking and projecting moving pictures is too slow. The results would be more satisfactory, authorities say, if the rate were raised to twenty, twenty-two, or twenty-four a second.

The human eye and mind are not only capable of this rapidity of action, but it is only when the eye is able to shift thus rapidly that the eye and mind are at rest and the efficiency of both at their maximum. It is true that every motion of the eye produces and error of refraction; but when the movement is short this is very slight, and usually the shifts are so rapid that the error does not last long enough to be detected by the retinoscope, its existence being demonstrable only by reducing the rapidity of the movements to less than four or five a second. Hence, when the eye shifts normally no error of refraction is manifest. **The more rapid the unconscious shifting of the eye the better the vision, but if one tries to be conscious of a too rapid shift a strain will be produced.**

Perfect sight is impossible without continual shifting, and such shifting is a striking illustration of the mental control necessary for normal vision. It requires perfect mental control to think of thousands of things in a fraction of a second, and each point of fixation has to be thought of separately, because it is impossible to think of two things, or two parts of one thing, perfectly at the same time. The eye with imperfect sight tries to accomplish the impossible by looking fixedly at one point for an appreciable length of time, that is, by staring. When it looks at a strange letter, and does not see it, it keeps on looking at it, in an effort to see it better. Such efforts always fail, and are an important factor in the production of imperfect sight.

One of the best methods of improving the sight, therefore, is to imitate consciously the unconscious shifting of normal vision, and to realize that apparent motion (Oppositional Movement) produced by shifting. Whether one has imperfect or normal sight, conscious shifting and swinging are a great help and advantage to the eye; for not only may imperfect sight be improved in this way, but normal sight may also be improved. The eye with normal sight never attempts to hold a point more than a fraction of a second, and when it shifts it always sees the previous point of fixation worse (1). When it ceases to shift rapidly, and fails to see the point shifted from worse, the sight ceases to be normal and the swing is either prevented or lengthened; occasionally it is reversed. These facts are the keynote of the treatment by shifting.

In order to see the previous point of fixation worse, the eye with imperfect sight has to look farther away from it than does the eye with normal sight. If it shifts only a quarter of an inch, for instance, it may see the previous point of fixation as well or better than before; and instead of being rested by such a shift, its strain will be increased, there will be no swing and the vision will be lowered. At a couple of inches it may be able to let go of the first point; and if neither point is held more than a fraction of a second, it will be rested by such a shift, and the illusion of swinging may be produced. **The shorter the shift, the greater the benefit; but even a very long shift—as much as three feet or more—is a help to those who cannot accomplish a shorter one.** When the patient is capable of a short shift, on the contrary, the long shift lowers the vision. The swing is an evidence that the shifting is being done properly; and when it occurs the vision is always improved. It is possible to shift without improvement, but it is impossible to produce the illusion of a swing without improvement, and **when this can be done with a long shift the distance can be gradually reduced till the patient can shift from the top to the bottom of the smallest letter on the Snellen test card, or elsewhere, and maintain the swing. Later he may be able to be conscious of the swinging of the letters without conscious shifting.**

No matter how imperfect the sight, it is always possible to shift and produce a swing, so long as the previous point of fixation is seen worse. Even diplopia and polyopia do not prevent swinging with some improvement of vision. Usually the eye with imperfect vision is able to shift from one side of the card to the other, or from a point above the large letter to a point below it, and observe that in the first case the card appears to move from side to side, while in the second the letter and the card appear to move up and down.

In some cases the eyes are under such a strain that no matter how far a patient looks away from a letter he sees it just as well, so long as he sees it at all, as if he were looking directly at it. In these extreme cases of eccentric fixation considerable ingenuity is sometimes required, first to demonstrate to the patient that he does not see best where he is looking, and then to help him to see an object worse when he looks away from it than when he looks directly at it. The use of a strong light as one of the points of fixation, or of two lights five or ten feet apart, has been found helpful. In such cases the patient, when he looks away from the light, is able to see it less bright more readily than he can see a black letter worse when he looks away from it. It then becomes easier for him to do the same thing with the letter. The highest degrees of eccentric fixation occur in the high degrees of myopia, and in these cases, since the sight is best at the near point, the patient is benefited by practicing seeing worse and producing the illusion of a swing at this point. The distance can then be gradually extended until it becomes possible to do the same thing at twenty feet. Usually such patients can begin shifting at the near point with the letters of the Snellen test card, but occasionally it is necessary to use a light, or lights. In hypermetropia, too, the sight is often best at the near point, when the same methods can be used as in myopia.

After resting the eyes by closing, or by covering with the palms of the hands in such a way as to exclude all the light, shifting and swinging are often more successful. By this method of alternately resting the eyes and then shifting persons with imperfect eyesight have sometimes obtained a temporary or permanent cure in a few weeks.

Shifting may be done slowly or rapidly, according to the state of vision. At the beginning the patient will be likely to strain if he shifts too rapidly, and then the point shifted from will not be seen worse, and there will be no swing. As improvement is made the speed can be increased. It is usually impossible, however, to realize the swing if the shifting is more rapid than two or three times a second.

A mental picture of a letter can be made to swing precisely as can a letter on the test card. For most patients mental swinging is easier at first than visual swinging, and when they become able to swing in this way it becomes easier for them to swing the letters on the test card. By alternating mental with visual swinging and shifting rapid progress is sometimes made. **As relaxation becomes more perfect the swing (The swing=Oppositional Movement) can be shortened, until it becomes possible to conceive and swing a letter of the size of a period in a newspaper.** This is easier, when it can be done, than swinging a larger letter, and many patients have derived great benefit from it.

All persons, no matter how great their error of refraction, when they shift and swing successfully, correct their error of refraction partially or completely, as demonstrated by the retinoscope, for at least a short fraction of a second. This time may be so short that the patient is not conscious of improved vision, but it is possible for him to imagine it, and then it becomes easier to maintain the relaxation long enough to become conscious of improved sight. For instance, the patient, after looking away from the card, may look back to the large letter at the top, and for a fraction of a second the error of refraction may be lessened or corrected, as demonstrated by the retinoscope. Yet he may not be conscious of improved vision. By imagining that the C is seen better, however, the moment of relaxation may be sufficiently prolonged to be realized.

When swinging, either mental or visual, is successful, the patient may become conscious of a feeling of relaxation which is manifested as a sensation of **universal swinging**. This sensation communicates itself to any object of which the patient is conscious. The motion may be imagined in any part of the body to which attention is directed. It may be communicated to the chair in which the patient is sitting, or to any object in the room, or elsewhere, which is remembered. The building, the city, the whole world, in fact, may appear to be swinging. When the patient becomes conscious of this universal swinging he loses the memory of the object with which it started, but so long as he is able to maintain the movement in a direction contrary to the original movement of the eyes, or the movement imagined by the mind, relaxation is maintained. If the direction is changed, however, strain results. To imagine the universal swing with the eyes closed is easy, and some patients soon become able to do it with the eyes open. Later the feeling of relaxation which accompanies the swing may be realized without consciousness of the latter, just as the letters may swing without consciousness of the fact, but the swing can always be imagined when the patient thinks of it.

Associated with all failures to produce a swing is strain. Some people try to make the letters swing by effort. Such efforts always fail. The eyes and mind do not swing the letters; they swing of themselves. The eye can shift voluntarily. This is a muscular act resulting from motor impulse. But the swing comes of its own accord when the shifting is normal.

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40 EAST FORTY-FIRST STREET.

IMAGINATION AND VISION

BY W. H. BATES, M. D.

NEW YORK CITY

Journal of the Allied Medical Associations of America, October, 1921.
Read at 10th Annual Meeting, Allied Medical Associations of America, held in Atlantic City, June, 1921.

At this time I have to announce what I consider to be the most remarkable, the most valuable, and the most practical discovery that I have ever made. I have delayed this announcement for five years or longer, because I wished to be absolutely sure of the truth of my observations, which at first seemed incredible. With the passage of time, however, evidence has accumulated which seems to me to leave no more room for doubt.

I have already published the fact that under favorable conditions, as when the subject looks at a blank surface without *trying* to see, all errors of refraction no matter how great their degree or how long their duration, disappear for an appreciable length of time, as demonstrated by simultaneous retinoscopy although the patient is not conscious of the improved vision. I now know that all persons, whether they have what is considered to be normal sight, or whether they are suffering from errors of refraction, have **flashes of telescopic or microscopic vision,** and that even persons with organic disease, such as cataract, glaucoma, retinitis pigmentosa and atrophy of the optic nerve, may have such flashes. Everyone here is able to look up at the sky and see the moons of Jupiter, the rings of Saturn, or the double stars. But these flashes of supernormal vision are so short that they are not realized. Some persons, however, are able to prolong them and may even make them permanent. I have a number of patients who have obtained telescopic and microscopic vision permanently. **Two have told me that they can see the moons of Jupiter with the naked eye. A third was able to read ordinary newspaper type at a distance of twenty feet. A fourth read a photographic type reduction held close to her eyelashes, the letters being so small that I myself was unable to see them without a strong magnifying glass.**

Not only is it possible in some cases, to make this supernormal vision permanent, but **it is also possible for the conscious mind to realize the impressions made on the subconscious mind by a flash of improved vision. In other words, you can imagine letters you have not consciously seen.** The reason for this is that it is impossible to imagine anything which one has seen, either consciously or unconsciously, to be other than it is without strain. When one looks at a letter on the Snellen test card which can be seen distinctly, and tries to imagine the top straight or open when it is curved, or curved when it is straight or open, it will be found impossible to do so, and the vision will be lowered by the effort, to a greater or less degree. In one case the mere suggestion to a patient that he should imagine the top of the 200 letter, a C, to be straight, caused the whole card to become blank. When one looks at a letter seen indistinctly, without knowing what it is, and tries to imagine it to be other than it is, one is usually able to do so, but not without strain. **By making a series of guesses, therefore, and watching their effect upon one's relaxation, one can find out what a letter is without consciously seeing it.**

The relaxation may be most conveniently measured by the ability to imagine that the unknown letter is moving with a short, slow, rhythmical motion. Every object seen with normal vision has such a motion, because of the constant shifting of the eye. When this motion can be imagined it is an indication of relaxation. When it is lost it is a sign of strain. To ascertain whether an unknown letter is straight, curved or open at the top, therefore, it is only necessary to imagine each one of these conditions in turn, and watch the effect upon the imagined swing of the letter. If the top is straight, for instance, and one imagines it to be straight, the swing will be unchanged; but if one imagines it to be curved, the swing will be lengthened or lost, or will become less even and easy. If one is unable to tell the difference between two guesses, it is because the swing is too long, and by palming and remembering a letter of diamond type, with a short, slow swing, one may become able to shorten the swing of the letter on the test card. Having imagined each of the four sides of a letter correctly, one becomes able to imagine the whole letter, first with the eyes closed and covered, and then with the eyes open.

When one knows what the four sides of a letter are, its identification, in some cases, is a simple process of reasoning. A letter which is straight on top and on the left side, and open on the two other sides, cannot be anything but an F. If, on the contrary, it is straight on the bottom and on the left side, and open on the other two, it must be an L. Such letters can be imagined with a lower degree of relaxation than the less simple ones, like a V, Y, or K. If the letter is not imagined correctly, the swing will be altered, and in that case the process should be repeated from the beginning.

Having imagined the letter correctly, the patient is told to imagine it with the eyes closed and covered alternately, until he is able to imagine it as well when looking at the card as when palming. In this way it finally becomes possible for him to imagine it so vividly when looking at the card that he actually sees it.

This process sounds complicated, but is less so in reality. Some patients become able to recognize the letters by means of their imagination with incredible rapidity, even when they are so small that they could not be seen without telescopic vision. A little girl of ten, who could see nothing on the test card at ten feet except the 200 letter, was told how to make out the letters by the aid of her imagination and then left alone for half an hour. At the end of this time she had identified all the letters on the bottom line and had also become able to see the whole card consciously.

A patient with six diopters of myopia was able to imagine correctly letters of diamond type at fifteen feet, although consciously he could not see even the separate lines. That is, when asked to identify a particular letter of a particular word on a certain line he was able to do so. A patient with twelve diopters of hypermetropia (due to the removal of his lenses for cataract) imagined correctly letters on the bottom line of the test card when indicated with a pointer, although consciously he could not even see the pointer. Patients have also been able to imagine letters correctly when the card on which they were printed was seen the day before, or even several weeks previously. This is a striking confirmation of my previous observation that **when the vision is perfect the memory is perfect. Although the flashes of vision in these cases were so short that they were not realized, the letters seen were indelibly imprinted upon the memory.**

These facts are not only very interesting scientifically, but, as I said in the beginning, are of great practical importance, for the **realization, by the aid of the imagination, of things seen subconsciously is, in most cases, the quickest method of improving the sight that I know of.** Occasionally, for some unknown reason, it does not succeed.

A case in which it has been produced remarkable results is that of a patient with **retinitis pigmentosa**, complicated by a **high degree of myopia**. She had been seen by many specialists both in this country and in Europe, and all had told her that her sight could not be improved, and that if she lived long enough she must inevitably become blind. When I first saw her, on February 9th, 1921, her distant vision with glasses (concave 6.00 D. S., both eyes) was 20/40 in the right eye and 20/50 in the left, and her field had been reduced to ten degrees, so that she could see nothing above, below, or to one side of her line of vision. She has now become temporarily able, by the methods described, to consciously see the bottom line of the test card at ten feet. Her field is at times normal and has permanently enlarged so that, while formerly unable to see more than the face of the person to whom she was speaking, she can now see the hands and the chair in which such a person may be sitting at six feet. When going down the stairs of the subway, she is able to see the steps. Formerly she had to guide herself in such a case by feeling alone. **Night blindness and color blindness have also been relieved**. When she first came to the office she was unable to distinguish between the red floor and the tan rug. Now she cannot only distinguish these colors, but she can tell the difference between the spots of black and navy blue in the rug. This patient became able almost at the beginning of the treatment to identify all the letters on the test card at ten feet by the aid of her imagination, although she could not consciously see anything below the large letter at the top. As her imagination improved she became conscious of seeing the letters on the lower lines, at first in flashes and then more continuously.

Such cases might be multiplied almost indefinitely, and go to show that we all possess visual powers of which we are not conscious and which might be developed to a high degree by practice.

A STUDY OF IMAGINATION
By Ophthalmologist Bates
1900's

It is a truth that one can only imagine what one remembers. It is also a truth that one can remember only what one has seen and again we say that it is a truth that what we see is only what we imagine. Some people have started a debate on these statements and they theorize in various ways. One said that although he had never seen a devilfish he could imagine a fish with a very big mouth and with blue eyes or red eyes in spite of the fact that he had never seen any kind of a fish which had either blue or red eyes. He might just as well have said that he could imagine a written language composed of a series of straight, curved or crooked black lines, a combination of which might represent a word, a letter or a sentence. It is difficult for me to realize how one can imagine a fish with red eyes or blue eyes without having seen such eyes in something else than a fish, or how a man born blind can imagine a fish with red eyes.

We know that in the case of persons born with a ripe cataract and unable to see different colors that when, in isolated cases, these patients have been operated upon and obtained good vision, they are able to see blue eyes and brown eyes and can tell that there is a difference but of course require a period of education before they can use the words which describe the color. Such a person could not give you a description of a devilfish which had none of the characteristics of other animals because a blind man who has recovered his sight has never seen these things that he tries to describe. His sense of touch may enable him to compare the feeling of an elephant's

trunk and the feeling of a large rope. I am sure that the men who are blind who describe an elephant that they have not seen support my contention that you cannot imagine anything correctly unless you remember a mental picture of it which you have seen.

The old story, as most of us may remember, was that one blind man, who leaned up against the side of the elephant, said that it was very much like a house; another blind man who grasped the elephant's tail was very strong in his belief than an elephant was very much like a snake; another blind man who felt one of the legs of the elephants was very indignant with the other blind men, being equally strong in his belief that an elephant was very much like a column. Many new inventions are imagined but when we come to analyze the facts I cannot recollect a single instance where the inventor did not put into his discovery always something that he had remembered or seen before. There are many things which we may not have seen and which we of course cannot remember and which it is impossible for us to imagine. This is self-evident.

The imagination is capable of accomplishing results in curing imperfect sight which no drug and no operation has ever been able to accomplish. **It is a truth that when the myopic eye regards a blank surface where there is not much to see and makes no effort to see, the imagination is as good as it is when the eyes are closed and, while the imagination is good, perfect, the myopia disappears immediately.** When the imagination is imperfect, the normal eye when it regards the distance is always nearsighted. When a person with increased tension (in mind, boy, eyes) can imagine a letter "o" with its white center whiter than the card on which it is printed, the eyeball becomes as soft as the normal eye immediately. There are no exceptions. There are patients who have **absolute glaucoma**, no perception of light, terrible pain, with the eyeball as hard as a stone in which the symptoms, pain or loss of vision are immediately benefited when the patients became able to imagine a letter or some object perfectly. It is well known that absolute glaucoma is incurable and the only thing that can be recommended is enucleation when the pain is sufficiently severe. Bates method can cure glaucoma.

Conical cornea is a condition which has baffled the skill of the medical profession. It is usually progressive and goes on to total loss of sight. There is no operation, there is no treatment, which is of any material benefit. Those cases have all been relieved and cured when the patients become able to imagine things perfectly. It seems incredible but please be fair—no more incredible than the discovery of wireless telegraphy. Before condemning this statement, give it a trial. It is worth trying and certainly it is difficult to realize or believe how a perfect imagination could, in any way, make things worse.

Cataract has been produced in human beings with the aid of an imperfect imagination. It has been relieved and cured, permanently cured, when the patient became able to imagine things perfectly. Now cataract is more or less frequent. Many people hesitate to go through an operation. It causes them considerable worry and anxiety so that the non-operative cure of cataract should receive attention because of its great importance or value. Here again it seems to me a very wrong thing for ophthalmologists to ignore the facts. If it is a good thing it should be of universal use; if it is not what it claims to be, the facts should be known and the public protected.

Sympathetic ophthalmia is serious. Years ago when I knew less about eye diseases than I do now, the very thought of sympathetic ophthalmia gave me a cold chill. I had seen so many cases in the clinic lost over night in spite of the most skillful treatment. My sympathy went out to the physicians who sweated blood trying to save an eye afflicted with sympathetic ophthalmia. Occasionally these patients have come to me and now I welcome them with a smile. I just love a case of sympathetic ophthalmia because all my fear of the consequences has disappeared. Let it be published far and wide that the cure of sympathetic ophthalmia has been discovered! **And what is the cure of sympathetic ophthalmia? The ability to imagine things perfectly**. "This sounds very absurd," you say—but I did not feel absurd when my patients recover.

Besides these very serious inflammations and diseases of the eyes that are curable by a perfect imagination, there is a long list of milder cases.

Squint, for example, whether convergent, divergent or vertical, is cured by a perfect imagination. Cases in which an operation was done for convergent squint followed by divergent squint have also been relieved by a perfect imagination.

Acute conjunctivitis has also been relieved in the same way.
Pterygium is also curable in the same way.
Opacities of the cornea which have been present since birth have disappeared when the patient practiced a perfect imagination.
Inflammations of the cornea, of the iris, of the sclera, of the retina, of the optic nerve, of the choroids, have responded more quickly and to a greater extent through the effect of a perfect imagination than to any other treatment. It is remarkable that **detachment of the retina** can be cured and has been cured by the use of a perfect imagination. Again I fear a remonstrance; someone says it is impossible. What good is it to say it is impossible? What good is it to say it is possible? Disprove the impossibility. Test the perfect imagination in these cases. I am sure that others will become able to derive as much benefit from the use of a perfect imagination as the physicians who are already using it.

When we come to inquire how many people have a perfect imagination we find a very large proportion have an imperfect imagination or none at all. It is very rare to find anyone who is able to imagine as well with their eyes open as they can with their eyes closed. As a general rule we may expect many patients with normal vision to have a good imagination but I believe that even with them there are at least 50% who have a very poor imagination.

Persons with imperfect sight may have a wonderful, a very unusual imagination. It is such a comfort to meet them in my practice because it is so easy to cure their nearsightedness, their farsightedness, their astigmatism, their sympathetic ophthalmia, their glaucoma, or any disease which they may have. One may ask at this point—if a person with imperfect sight has a good imagination, why is his sight imperfect? This may be answered by calling attention to the fact that one needs a perfect imagination at all times and in all places to have perfect sight. Persons with imperfect sight who have a good imagination fail to use it; they suppress it and imagine things imperfectly by an effort which of course lowers their vision. Some persons have a perfect imagination with their eyes open and no imagination at all with their eyes closed. Then we have the reverse—patients with a perfect imagination with their eyes closed and no imagination at all with their eyes open.

I remember a girl, twenty years old, who had **no perception of light in the right eye** and normal vision in the left eye. When the good eye was covered, the patient was unable to imagine that she saw light. By treatment she was cured (became able to imagine and see light with the right and left eyes) and obtained normal vision in her blind eye. Now, please do not stop reading this important paper at this point. I know as well as others know that the ancient ophthalmologists or the ophthalmologists of fifty or a hundred years ago thought that an eye totally blind with no perception of light was absolutely incurable and that anybody who claims to cure such eyes is a quack. I used to believe it until I learned better. In my vanity, when I could not cure these cases I did not think anybody else could; what I didn't know, nobody else knew. These cases of blindness were all cured by a perfect imagination.

The variableness of the human mind is wonderful. The extremes to which the imagination may go is equally wonderful. One could write a book on the uncertainties of the imagination. What is more important, however, is to describe some of the methods which

have been successful in improving the imagination, especially to obtain benefit in diseases of the eyes.

One patient had normal sight and his imagination was good with his eyes open but he did not always use his normal sight and his normal imagination. Without any special reason he would strain, lose his imagination and his sight would become imperfect. He suffered for many years with **terrific pain in his eyes and head.** Glasses had not helped him; general and local treatment had been unsuccessful. The man was almost crazy with the continuous pain. He was directed to regard the large letter "C" on the Snellen test card at fifteen feet. He was asked if he could see the white center of the big "C" as white as the rest of the card. With some difficulty I convinced him that the white center of the big "C" was of the same whiteness as the rest of the card. It was a help for him to see the truth and he was very much surprised to find that when the black part of the big "C" was covered by a screen with an opening which permitted him to see the white center it became darker and of the same whiteness as the rest of the card. He looked to me for the answer.

"The white center of that big 'C'," I told him, is no whiter than the rest of the card but if you think you see it whiter, you really do not see it, you only imagine it. The halo that you see around the outer edge of the big 'C' is also a creature of your imagination."

"Close your eyes," I said. "Can you imagine that big 'C'?"

"No," he answered.

"Well, try," I said.

"I already have the pain," he replied, "and please do not ask me to increase the pain by trying to improve my imagination with my eyes closed."

"Open your eyes now," said I, "Can you see the white center of the 'C' whiter than the margin of the card?"

"It is coming," he said. A moment later, "I have it now."

"How is your pain?" I asked.

"It is gone," he replied with a smile.

I was very glad to see that smile because he did not often smile.

Then I said to him, "Have you ever seen anything as white as the center of that big 'C'?"

"Yes," he answered, "the snow-capped mountains near my house. When the sun is shining the tops of those mountains are whiter than that big 'C'."

At this point I was very jubilant because I knew now how I could cure him so that he could have mental pictures or an imagination of mental pictures with his eyes closed as well as with his eyes open.

Then I said to him, "Can you see one mountain at a time whiter than the white center of the big 'C'?"

"Yes," he said.

"Can you look from one mountain to another and see one at a time best?"

"Yes," he answered, "I can do that."

Then I asked him this very important question, "Can you see two at once?"

The smile left his lips; a look of pain came into his eyes.

"I have the most terrific pain when I do that," he cried out with agony, "I cannot stand it! I have lost the big 'C' and everything is blurred!"

"Don't think of the mountains," I said to him. "Forget them if you can and look at the big 'C'. If you look to the right of it, the 'C' is to your left; if you look to the left, the 'C' is to your right. Every time your eyes move to the right, the 'C' moves to the left; every time your eyes move to the left, the 'C' moves to the right. (oppositional movement) Do you see it move?"

"Yes," he answered, "and my pain is gone and my sight is now all right."

Several things were accomplished:

1. The imagination of halos and the white center of the "C".

2. The perfect imagination of the white center of the "C" enabled him to imagine perfectly the snow-capped mountains.

3. He could remember or imagine the mountain tops one at a time. That was easy; but to imagine two at the same time was impossible and trying to do the impossible was a strain which made his imagination imperfect.

4. With imperfect imagination he demonstrated that his sight was imperfect.

5. The imagination of the swing helped his sight, helped his imagination and relieved his pain.

6. With some encouragement he became able to imagine his body swinging about one-quarter of an inch from side to side. With the body swing he imagined the red floor was swinging. When looking straight at the card he saw the red floor indistinctly below his line of vision swinging with his body swing. The body swing helped him to hold the imagination of the red floor much redder than it really was. He could shift from a small area of the red floor that he could see best, to the imagination of a small area of the floor that he could imagine he saw best. Before long the patient became able to carry an imagination or memory of the red floor with him day and night. All the while that he was awake he had that red floor in his consciousness. With the red floor as a starter he became able to imagine other objects, one part best and always swinging. If he did not see one part best of the red floor he could not imagine the swing. One day after carrying the imagination of the red floor in his consciousness for part of a week, he said to me, "Doctor, I am getting tired of that red floor. At first I could not imagine it at all but now it is like the old man of the sea. I can't get rid of it."

I asked him the question:

"Can you remember one corner of the red floor best?"

"Yes."

"Can you remember two corners at the same time?"

"No, and I have lost my red floor."

7. This patient had a great deal of difficulty in remembering a mental picture of the American flag. He finally accomplished it by subdividing the flag, the moving flag, into parts and remembering each part best and in this way he improved. If he could remember the upper right hand corner best swinging he had a mental picture of it which was swinging. A slow, short swing when the mental picture was good, but when the mental picture was lost the swing was stopped or it might be lengthened. The imagination of the flag being placed on a pole and being raised from the ground one part at a time was a great help in obtaining a mental picture of the flag.

The great difficulty this patient had was that he desired to remember too much at once or he desired to imagine more than two things at once. It always spoils the mental pictures when one tries to remember too much at once. This patient became completely cured of a functional discomfort when he became able to use his imagination perfectly. His mental pictures became as vivid as though he saw them with his actual eyes. **In fact he devoted most of his waking hours to thinking of mental pictures with his eyes open alternating with his eyes closed.** He was so happy because **the terrible headaches had disappeared and he felt that he had some control over his eyes and could now manage them better.** His sight was always 20/10 even when the light was not very good. I received encouraging letters from time to time in which he stated that **the imagination of perfect sight had given him complete relief.**

Memory and Imagination with Eyechart

Mrs. M., aged 50, had very bad eyes. With the strongest glasses her vision was very poor. She could only see the large letter "C" at one foot with each eye. She was asked to remember the big "C" or imagine it better than she saw it, the best she was able to do, and then by looking at the big "C" alternately she became able to imagine it very much better than she saw it. The card was placed further away and she became able after a considerable time to imagine the big "C" at ten feet as well as she could at one foot, by alternately resting her eyes and flashing. This patient obtained the best results by closing her eyes and imagining the big "C" perfectly black with the white center perfectly white. Then she would flash the letter with improved vision. When we got her coaxed, however, to remember the big "C" perfectly at ten feet she refused to improve any further by this method. It is a truth, which I have discussed in many articles, that when one imagines one thing perfectly one cannot imagine something else imperfectly. She was asked to imagine the left hand side of the big "C" to be a curved line at fifteen feet. This she could do at twelve feet or nearer but she could also imagine the left hand side to be a straight line. However, she could not do this as well as she could imagine it curved. She could imagine the top and bottom better curved than she could straight or open, but the right hand side she could imagine better open than she could imagine it straight or curved. She could imagine it was the big "C". She could also imagine it a "G", a "Q" or an "O" but she could imagine it more perfectly to be a "C" than any other letter. The patient was not familiar with the card at her first visit and did not know whether the first spot on the line below the big "C" was a letter or a figure. It was the letter "R". I asked the patient if she could imagine the left-hand side to be straight.

"Yes," she answered.
"Can you imagine the left-hand side to be curved?"
"Yes."
"Can you imagine the left-hand side to be open?"

"Yes," said she.

My next question was,

"Which is best? Which is the easiest to imagine; straight, curved or open?"

"Straight," she answered.
"Straight is correct," I said. "Now, can you imagine the top straight, curved or open?"
"Yes," she answered.
"Which can you imagine is the blackest or the easiest?"
"Straight," she cried.
"Now, try the bottom. Can you imagine it straight? Can you imagine it curved? Can you imagine it open? Which is it?"
"Open," she replied.
"How is the right side? Can you imagine it straight?"
"Yes," she answered, "but I do not like it straight. I prefer it curved. It feels better."
"Now go over it again until you have the same imagination," I answered. "Is the top straight? left-hand straight? bottom open? right side curved?"
"Yes," she said.
"What letter is it? It might be the letter "R". Could it be anything else?"
She answered, "No."
"That is quite correct," I replied.

This patient got down as far as the figure "4" on the forty line by this method of improving the imagination. But here she rested and it became a problem of how to improve her imagination so that she could imagine more perfectly. She was directed to look at the figure "3" which she was unable to imagine that she saw. I said to her,

"Can you imagine the figure is moving about its own width from side to side?"
She answered, "Yes."
"Now if you look at the left-hand side of the figure and imagine it straight, what happens to your swing?"
"The swing is too wide."
"If you imagine the left-hand side is open, how is the swing?"
"It is all right."
"Just as well as you can imagine with your eyes closed?"
"Just as well," she answered.

The progress of the patient was somewhat slow at times. One method which seemed to help her a great deal was to remember the first letter of the ten line, the letter "F" at about six inches where she was able to see it best.

"Now close your eyes. Can you remember it as well as you saw it?"
"No, I cannot," she answered.
"Now look at it. Can you imagine it is moving?"
"Yes," she replied, "about one quarter of an inch from side to side."

"With your eyes closed, can you imagine it moving about one quarter of an inch from side to side?" (Shifting on the F and seeing oppositional movement in the imagination.)

She answered that she could.

"Now open your eyes and look at the "F" on the bottom line of the Snellen test card and imagine you see it."

At first her results were quite imperfect but after awhile her ability to imagine improved until she became able to imagine the "F" at fifteen feet as well as she could imagine it at six inches, and see it clear. Through her ability to imagine the letter "F" of the ten line at fifteen feet, she became able to see other letters on the bottom line of which she was ignorant. In other words, the perfect imagination of the letter "F" improved her vision of the other letters until she obtained normal sight.

These cases of imperfect sight could be multiplied, but the main thing to do in all of them is to improve the imagination. I have written a book on the subject "The Cure of Imperfect Sight without Glasses" and there are quite a number of pages devoted to the imagination. Since the book was printed many articles have appeared in the magazine "Better Eyesight." Any improvements in treatment have been published from time to time.

A very interesting case was a woman aged 60 whom I treated several years ago. **She came to my office and had great difficulty in finding her way. She ran into the furniture and had to feel her way like a blind man, with her arms outstretched.** Her glasses gave her only 10-200 vision. Off to one side it amounted to very little. She could see but a small area of the objects which she looked at and what she did see was usually seen best when she did look at it. She was very blind at night. Her ability to read and write, even with glasses, was very imperfect. She had **atrophy of the optic nerve, chorioretinitis pigmentosa, cataract. It was very interesting to observe the benefit this patient obtained by the use of her imagination. She took as the foundation of her imagination the memory of the letter "o" of diamond type with a white center as white as snow and the letter moving from side to side a short distance, not more than its own width.**

I said to her,

"How far apart can you see two of the Snellen test cards at once."

She said that they would have to be two feet apart when placed on a wall at fifteen feet.

"When I look at one Snellen test card I can see over to one side the other at two feet but everything else is a blank, a dark or light gray or a black."

"When you look straight ahead of you, can you see the light from the window shining in your eyes?"

"No," she said.

"Can you see the floor?"

"No."

"Can you see the rug?"

"No."

"Can you see the door over to the right of you?"

"No. I can see none of those things."

"If you imagine that you see the light of the window to your left, can you at the same time imagine your small letter 'o' with its slow, short easy swing?"

"Yes," she answered.

"Now, just imagine there is no window to your left, how is your imagination of the letter 'o' with its short swing?"

"Gone," she replied. "When I imagine the truth I am able to imagine the diamond type letter "o" quite perfectly. If I imagine an error, that the window is not there when it is, that is an imperfect imagination, which is registered by the imagination of the 'o' with its white center, its slow, short easy swing, becoming imperfect."

In the same way she could tell that when she imagined the floor was red, the reaction was normal, but when she imagined the floor was not red, green or some other color, the patient could not maintain the normal reaction with the letter "o".
(Imagining an object incorrect = produces strain in the mind, memory, eyes and blurs the vision causing all objects to be unclear.

The next step was to ask her the question,

"Can you see the red floor that you imagine you see?"

"Yes," she answered, "and I want to tell you that I have to imagine the truth because if I fail to imagine the truth the reaction of that letter "o" becomes imperfect, a strain and I suffer more pain and discomfort and nervousness which makes me very unhappy. I don't like to be unhappy so I imagine the truth as well as I am able to and then everything seems to be all right and I can find my way about in the dark without even holding my hands out like a blind man."

Memory, the imagination of perfect sight, cured this woman's night blindness, her contracted field, and improved her vision materially. For many years she had not been able to use her eyes at the near point with any success. She could not sew or knit or do fancy work or read the newspaper. With the practice of the imagination of perfect sight, her symptoms of imperfect sight disappeared. I know this case was a very bad one and I realize it does not sound very clear but one can demonstrate or prove the facts claimed.

RETINITIS PIGMENTOSA with its complications is very much benefited by the imagination treatment. The foundation test is usually very variable. One lady told me that the whitest thing that she could imagine was a white sand and that when she imagined the letter "o" with its white center as white as the sand the letter always moved from side to side a short distance, not greater than the width of the letter. (Imagining a object correct, clear causes the mind and eyes to relax, shift automatically, correct, and vision becomes clear. Now when she regarded a letter with which she as unfamiliar but which she could not see because of the blurred outline, she was able to remember each of the four sides either straight, curved or open. When she imagined each side correctly the reaction of the o" as white as the white sand was normal. When her imagination, however, of one or more sides was wrong or imperfect, the memory or imagination of the letter "o" and the white sand was modified.

Some patients require a different foundation test from others. Rarely do I find many people who use the same foundation test. In some cases the imagination cure is more efficient when the patient regards the foundation of his imagination rather than when he remembers or imagines it.

Some people can see the letter "o" of diamond type with a white center and imagine the white center as white as snow while they imagine the letter as swinging from side to side, not any more than its own width. The patient looks at the card at twenty feet, imagines one side of the letter and while doing so regards the card with the foundation at a distance at which he sees it best. If the patient has imagined one side of the letter correctly he will see that the reaction of the foundation is normal; or, in other words, he has imagined one side of the unknown letter at twenty feet with his imagination of the foundation at a near point where he sees it best. **When all four sides are imagined correctly it helps the patient to tell or imagine what the letter** is, which is confirmed by the reaction of the foundation at a near point. In some cases, what a patient imagines of the four sides of the unknown letter at twenty feet, might be the same for two or more letters. The letter "B" has four sides which resemble the four sides of the letter "D". If he imagines it to be a letter "B" correctly the foundation reaction will be more perfect than if he imagines it to be a letter "D" which is incorrect. Some times all four sides are open as is the case with the letters A, I, V, W, X, Y. When the letter is imagined correctly the reaction of the foundation is always best.

Subconscious Clear Vision, Memory and Imagination

By this and other methods, patients become able with the aid of a perfect imagination to accomplish unusual results. In one case a page of diamond type was held for forty seconds ten feet in front of a patient's eyes. At this distance the patient was not consciously able to read anything on the page. Simultaneously retinoscopy demonstrated that while the patient was regarding the fine print, that **there were moments of longer or shorter duration when the eyes were focused properly or accurately on the fine print, indicating that that it was possible for the patient to see perfectly for short periods of time,** and with perfect sight it was possible for the patient to remember all the letters on the card perfectly although **the vision, the memory and imagination were unconsciously seeing, remembering and imagining by the subconscious mind.** This patient was able, with the eyes closed and covered with the palms of the hands, to imagine correctly in the manner described above, the third letter on the sixteenth line, the fifth letter of the eighth word on the twelfth line, the last letter and the last word of the bottom line and many others. It was very remarkable that not only could the patient pick out any letter indicated but she was able to tell what the word was and a number of words, a sentence or more, for several lines coming after the letter indicated. With somewhat larger print this patient could read a larger amount of a paragraph by just imagining consciously the first letter of a sentence. She had been trained for six weeks; she was eight years old. Other patients, 20 years old, 30 years old, 60 years old, have done almost as well.

POLYOPIA. When a patient **sees one or more letters of a line double or multiple or partially double, arranged horizontally or vertically or obliquely,** he does not see the images multiple, he only imagines that he does and it can be demonstrated that this imagination is imperfect, for he sees under a strain and that it requires considerable effort and hard work to see two or more images. Some people have seen the head lines of a newspaper multiplied ten times or more. I have known quite a number of **people who could see nine moons where there was only one, a very imperfect imagination.** It is curious that some people will see every other line double, while the letters of the other lines are single. This is strong evidence that polyopia is **nervousness due to an imperfect imagination**. It is a very remarkable truth that cases of polyopia, which are supposed to be due to organic changes in the retina or to diseases of parts of the brain or to paralysis of some of the ocular muscles, are all due to an imperfect imagination and can be cured with a perfect imagination and without relieving necessarily a paralysis of the muscles or improving the changes in the retina or elsewhere. I believe that all cases of polyopia are caused by an imperfect imagination and that all cases can be cured by teaching the patient how to imagine things perfectly.

NYSTAGMUS. When the **eyes move more or less rapidly from side to side or in other directions it is called nystagmus.** Usually it is associated with a serious disease of the interior of the eye, **chorioretinitis pigmentosa** and has been considered to be incurable. I have seen it controlled almost immediately by the imagination of perfect sight or by a perfect imagination of any object. I shall always remember some **cases in school children which were produced voluntarily because it caused a disturbance in the class room**. These cases are so evident that all I had to do to cure them, was to tell them to stop doing it and it has always been a great surprise to me to see them do it at once. When I asked them to start it up again they had no trouble in doing it. When they had the nystagmus their sight was always imperfect and the patients demonstrated the fact. When the patient voluntarily stopped the nystagmus the vision was improved to the normal.

PHOTOPHOBIA. So many doctors consider photophobia a very serious symptom. On the contrary it is only the manifestation of an imperfect imagination. Persons who have a perfect imagination with its slow, short continuous, regular swing can look at the sun, imagine that it is moving a very short distance, slowly, and do it without any evidence of annoyance. They can at the same time read a Snellen test card while the light of the sun is shining directly into one or both eyes and they can look at the sun five minutes, ten minutes, or longer without being blinded. Young children, four years old or upward, can look straight at the sun when they have normal sight, or a perfect imagination. Persons with photophobia are benefited by the use of a burning glass, (Sunglass) described in my book, which focuses a very strong light on the sclera while the patient is looking down and the operator lifts the upper lid and focuses the light on the eyeball (Sclera, white area of the eyeball and avoiding shining the light into the pupil). Patients who were blinded by strong light flashed into their eyes from the violet end of the spectrum obtained from a very strong arc light, have been cured quite promptly by focusing the strong light of the sun, which I believe is stronger than most arc lights, into their eyes.

SQUINT. When the eyes turn in, it is possible by an effort to increase the squint with the eyes, by the use of prisms or in other ways. (Best to avoid prisms, they increase crossed, wandering eye conditions, vision impairment)
It is usually best to teach the patient how to see double when he has any kind of a squint and the greater the squint the more widely separated are the double images. These double images are imagined always, one more perfectly than the other. With the eyes open it is possible to imagine the images about three feet apart but with the eyes closed it is possible to imagine the images 40, 50, 1000 or more feet apart. There is no limit to the separation of the images by a strain of the imagination. This strain can be demonstrated, felt or realized by the patient to a greater extent with the eyes closed than open. In other words one can strain the eyes consciously a great deal more with them shut than with them open. When the eyes turn out the diplopia which is produced is crossed; that is, the image seen by the left eye is to the right while the image seen by the right eye is to the left. With the eyes closed the patient can separate the images a great deal more than with his eyes open. With the eyes open the patient may be able to imagine the crossed images five feet apart when the eyes are turned out. With the eyes closed one can imagine the crossed images forty, fifty or more feet apart and with the fingers lightly touching the eyeball one can feel them turn out. When the images are separated voluntarily by the imagination, a patient with convergent squint was able to imagine with his eyes open the two images

three feet apart and on the same side as the eye which sees them. With the eyes closed one can imagine a greater separation of the images and feel the eyes turn in more than before. **By imagining the images crossed with the eyes closed, one can feel the eyes which were originally turned in, turn out. When the patient imagines the crossed images widely separated with the eyes closed and then opens the eyes for a second or a flash, at the first moment when the eyes are opened, they are much less turned in or are straighter or they may be turned out to a greater or less degree. By practicing one becomes able to cure these cases of squint without glasses, without an operation, with nothing more than the use of the perfect imagination.**

In this incomplete paper I have described the possibilities of what the imagination can do in the cure of imperfect sight by treatment without glasses. All persons who are ill have an imperfect imagination. All persons who are normal and well do not have an imperfect imagination. When this truth is universally known and accepted it suggests a line of treatment the possibilities of which are infinite.

A CLINICAL AND EXPERIMENTAL STUDY OF PHYSIOLOGICAL OPTICS

WITH A VIEW TO THE CURE OF IMPERFECT SIGHT WITHOUT GLASSES

By W. H. BATES, M.D., New York City

American Journal of Clinical Medicine, July, 1921, pp. 437-443

EDITORIAL COMMENT.—To be able to do without one's eyeglasses, to read and write, to see at a distance, to recognize one's friends and enemies (debtors and creditors) across the street—to eliminate the, not inconsiderable, item of expense for broken lenses, new frames; not to speak of repeated visits to the ophthalmologist—'tis a consummation devoutly to be wished. Doctor Bates asserts that it can be done. His article, following below, and his book, reviewed on page 491 of this issue of CLINICAL MEDICINE, *show how. Surely, Doctor Bates' experiments and observations have been continued sufficiently long to merit consideration.*

AT the very beginning of my practice as an ophthalmologist, I noticed that patients with myopia often recovered their vision spontaneously. This was not a new observation. Every ophthalmologist had noted such cases, but it was customary to explain them away. If a case of myopia recovered, a mistake in diagnosis had been made. Donders had declared that myopia was incurable and, if the facts contradicted Donders, so much the worse for the facts. Donders himself set the example for this course by explaining away the cases of cured myopia reported by Von Hasner. Von Hasner was a man of eminence for whose accuracy Donders expresses great respect; but, when it came to the cure of myopia, this respect did not prevent him from questioning the correctness of his observations. Some of Von Hasner's cases, he states, were reported in such a way that they lost all value as proofs and, in one case, he suggests that spasm of the accommodation had previously existed or that myosis had followed.

I had sufficient confidence in my ability to diagnose errors of refraction, however, to believe that, when a patient to whom I had given glasses for myopia came back to complain that they did not fit him, and was found to have normal vision, he really had been cured of myopia. I could not take refuge in the theory of mistaken diagnosis.

What was true of myopia, was true of other errors of refraction. They persisted in disappearing or in changing their degree, after having been carefully diagnosed under atropine, and I was unable to explain these facts on the basis of any of the accepted theories. This was particularly true in the case of corneal astigmatism; for, the current explanations could not be made to apply at all to changes in this condition. Still less was I able to explain the well-known fact that some people can produce temporary corneal astigmatism at will. If the shape of the cornea could be changed at will from normal to abnormal and back again to normal, evidently something was wrong with the theory that astigmatism was due to a permanent deviation from the normal in the shape of the eyeball.

Fig. 1—Demonstration upon the Eye of a Rabbit that the Inferior Oblique Muscle is an Essential Factor in Accommodation. [Page 40, Fig. 13.]
1—The inferior oblique muscle has been exposed and two sutures are attached to it. Electrical stimulation of the eyeball produces accommodation, as demonstrated by simultaneous retinoscopy.
2—The muscle has been cut. Electrical stimulation produces no accommodation.
3—The muscle has been sewed together. Electrical stimulation produces normal accommodation.

Fig. 2—Demonstration Upon the Eyeball of a Rabbitt that the Obliques Lengthen the Visual Axis in Myopia. Page 46, Fig. 18.
R. rest. The eyeball is of normal length and emmetropic—that is, perfectly adjusted for distant vision. My, myopia. The pull of the obliques muscles has been strengthened by advancement and the retinoscope shows that myopia has been produced. It can easily be noted that the eyeball is longer. It was impossible to avoid some movement of the head between the taking of the two pictures as a result of the manipulation of the strings, but the rule shows that the focus of the camera was not appreciably changed by such movements.

The pages and figures refer to Dr. Bates' book on the same subject, which is reviewed on page 491 of this issue.-Editor.



Fig. 31. Multiple Images Upon the Front of the Lens

This picture illustrates one of the difficulties that had to be overcome in photographing images reflected from various parts of the eyeball. Unless the light was adjusted at precisely the right angle the filament was multiplied by reflection from the sides of the globe. Usually the image was doubled, sometimes it was tripled, as shown in the picture, and sometimes it was quadrupled. Often days of labor were required to eliminate these reflections, and for reasons that were not definitely determined the same adjustment did not always give the same results. Sometimes all would go well for days, and then, without any apparent reason, the multiple images would return.

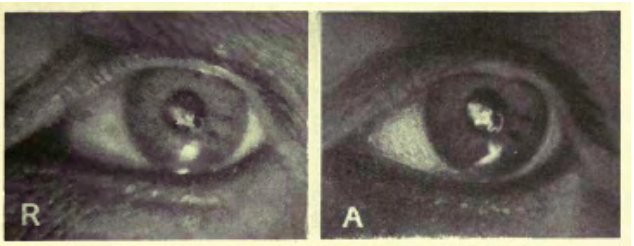

Fig. 26. Image of Electric Filament on the Front of the Lens

R, rest; A, accommodation. Under the magnifying glass no change can be observed in the size of the two images. The image at the right looks larger only because it is more distinct. To support the theory of Helmholz it ought to be the smaller. The comet's tail at the left of the two images is an accidental reflection from the cornea. The spot of light beneath is a reflection from the light used to illuminate the eye while the photographs were being taken. It took two years to get these pictures.

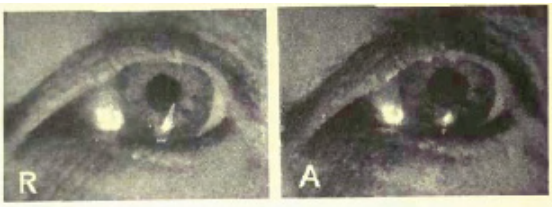

Fig. 29. Image of Electric Filament on the Front of the Sclera

R, rest; A, accommodation. During accommodation the front of the sclera becomes more convex, because the eyeball has elongated, just as a camera is elongated when it is focussed upon a near object. The spot of light on the cornea is an accidental reflection.

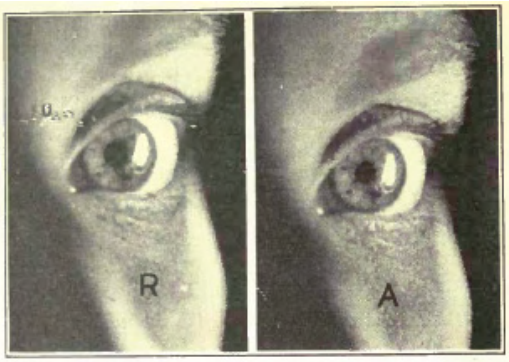

Fig. 28. Image of Electric Filament Upon the Cornea

R, rest; A, accommodation. The image is smaller in A, but the change is so slight as to be scarcely noticeable, showing that the alteration in the shape of the cornea during accommodation is very slight. For this reason the ophthalmometer, with its small image, has been thought to demonstrate that the cornea did not change during accommodation.

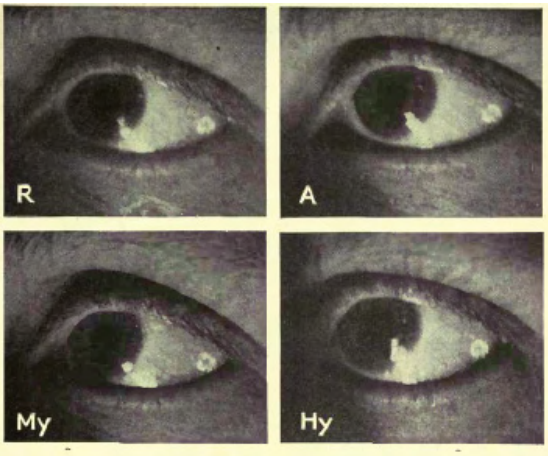

Fig. 30. Images on the Side of the Sclera

R, rest; A, accommodation. The image in A is the larger, indicating a flattening of the side of the sclera as the eyeball elongates. My, Myopia. The eye is straining to see at the distance and the image is larger, indicating that the eyeball has elongated, resulting in a flattening of the side of the sclera. Hy, Hypermetropia. The eye is straining to see at two inches. The image is the smallest of the series, indicating that the eyeball has become shorter than in any of the other pictures, and the side of the sclera more convex. The two lower pictures confirm the author's previous observations that farsight is produced when the eye strains to see near objects and nearsight when it strains to see distant objects.

Errors of Refraction Not Permanent

Instead of being explained away and ignored, it seemed to me that such facts ought to be investigated. In seeking light upon them, I examined an incredible number of eyes. In the course of time, I learned by the aid of simultaneous retinoscopy that not only astigmatism but any error of refraction could be produced at will. **I also discovered that myopia is not, as we have so long believed, associated with the use of the eyes at the near-point but with a strain to see distant objects, while strain at the near-point produces hypermetropia.** I became able, too, to cure the lower degrees of refractive error and to improve the higher ones. Out of deference to the teachings of the authorities, however, I continued for a long time to differentiate between functional myopia, which I was able to cure, and organic myopia, which I believed to be incurable. As late as 1912, in an address before the New York County Medical Society, I made this distinction.

Soon afterward, however, I learned, again by the aid of simultaneous retinoscopy, using the instrument at a distance of six feet or further, that **no error of refraction was ever permanent, for, under certain conditions, the highest degrees of these errors would temporarily disappear**. By this time, I had come to the conclusion that the whole problem of accommodation and errors of refraction needed to be reinvestigated. For the purpose of obtaining more light upon it, I undertook, about seven years ago, a series of experiments upon the eye muscles of fish, rabbits, cats and dogs, full details of which may be found in the *New York Medical journal* for May 8, 1915. In these experiments, I was able, by manipulation of the external eye muscles, to produce and prevent accommodation and errors of refraction at will.

Experimental Observations

When two oblique muscles were present and active, accommodation was always produced, as measured by the objective test of retinoscopy, by electrical stimulation of the eyeball or of the nerves of accommodation near their origin in the brain. It was also produced by any manipulation of the oblique muscles whereby their pull was increased, as, by a tucking operation or by an advancement of the point at which they are attached to the sclerotic. But, after one or both of the obliques had been cut across or after they had been paralyzed by the injection of atropine deep into the orbit, accommodation could never be produced by electrical stimulation. After the effects of the atropine had passed away, however, or a divided muscle had been sewed together, accommodation followed electrical stimulation as before. Again, when one oblique muscle was congenitally absent or rudimentary, as was sometimes found to be the case, accommodation could not be produced by electrical stimulation. Yet, when the rudimentary muscle was strengthened by advancement or the absent one was replaced by a suture which supplied the necessary counter-traction, accommodation could always be produced by electrical stimulation. (See diagrams above.)

In some of these experiments, the upper wall of the orbit was removed; and, whenever accommodation had been produced, either by electrical stimulation or by an operation upon the muscles, **the eyeball was found to have elongated, indicating that the eye adjusts itself for near vision just as the camera does, namely, by lengthening its axis**. This elongation was demonstrated by measurement and is shown in the accompanying photograph. (See diagrams above.)

Additional evidence of the relation of the **oblique muscles to accommodation was found in the response of the fourth cranial nerve to electrical stimulation.** In most textbooks on physiology, it is stated that accommodation is controlled by the third cranial nerve which supplies all the muscles of the eyeball except the superior oblique and the external rectus; but, in my experiments, the fourth nerve, which supplies only the superior oblique, was found to be just as much a nerve of accommodation as the third.

These and other experiments prove that accommodation can be produced by the oblique muscles changing the shape of the eye and: that unclear and clear vision can be produced by tension and relaxation of the oblique muscles causing abnormal and normal eye shape.

The Lens Not Concerned

The removal of the lens had no effect upon accommodation. In one experiment, the lens was removed from the right eye of a rabbit, the refraction of each eye having been first tested by retinoscopy and found to be normal. The wound was then allowed to heal. Thereafter, for a period of two years electrical stimulation always produced accommodation in the lensless eye precisely as in the eye which had a lens. The animal was exhibited at a meeting of the Ophthalmological Section of the American Medical Association, in Atlantic City, and was examined by a number of ophthalmologists present, all of whom testified that **electrical stimulation of the lensless eyeball produced accommodation precisely as in the normal eye.**

The recti muscles were found to be concerned in the production of hypermetropia. After one or both of the oblique muscles had been cut and while two or more of the recti were present and active, electrical stimulation of eyeball or of the nerves of accommodation always produced hypermetropia while by the manipulation of one of the recti, usually the inferior or superior, so as to strengthen its pull, the same result could be produced. The paralyzing of the recti by atropine, or the cutting of one or more of them, prevented the production of hypermetropic refraction by electrical stimulation; but, after the effects of the atropine had passed away or after a divided muscle had been sewed together, hypermetropia was produced as usual by electric stimulation.

It should be emphasized that, in order to paralyze either, the recti muscles or the obliques, it was found necessary to inject the atropine far back behind the eyeball with a hypodermic needle. This drug is supposed to paralyze the accommodation when dropped into the eyes of human beings or of animals, but it was found in all my experiments that, when used in this way, it had very little effect upon the power of the eye to change its focus.

Astigmatism was usually produced in combination with myopic or hypermetropic refraction. It was also produced by various manipulations of both the oblique and recti muscles. Mixed astigmatism was always produced by traction on the insertion of the superior and inferior rectus in a direction parallel to the plane of the iris, as long as both obliques were present and active; but, if either or both of the obliques had been cut, the myopic part of the astigmatism disappeared, and, if the superior or inferior rectus had been cut, the hypermetropic part disappeared. Advancement of the two obliques, with advancement of the superior and inferior rectus, always produced mixed astigmatism.

Conclusions from Experimental Results

All of these experiments were repeated many times and always with the same result. Scientific men who witnessed them said that they were without sources of error. I was unable, therefore, to escape the conclusion that: The lens has nothing whatever to do with accommodation; the change of focus necessary for near vision is dependent upon the action of the oblique muscles; and, errors of refraction are produced by the abnormal action of the external muscles.

In Opposition to Helmholtz

As this conclusion was diametrically opposed to that reached by Helmholtz on his studies of images reflected from the front of the lens, I determined to repeat the experiments of the great German and find out, if possible, why his results were so different from my own. I devoted four years to this work and was able to demonstrate that Helmholtz had erred through a defective technic, the image obtained by his method being so variable and uncertain that it lends itself to the support of almost any theory.

Helmholtz used for his experiments: first, a small, bright light so placed that it was reflected from the cornea and the two surfaces of the lens; then, two lights—or one doubled by reflection from a mirror—so placed behind a diaphragm having two rectangular openings that the rays shone through the openings upon the cornea and lens. Of the image obtained with the single unscreened light, he said that it was "usually so blurred that the form of the flame could not be definitely distinguished." When the two lights with the diaphragm were used, the images were clearer, and it seemed to him that, when the eye accommodated, they grew smaller and approached each other. This change, he said, could be seen "easily and distinctly."

I was unable, however, by either of these methods, to obtain images that were sufficiently clear or distinct to be measured or photographed. With a naked candle as a source of light, a clear and distinct image could be obtained on the cornea; on the back of the lens it was quite clear; but, on the front of the lens it was very imperfect. Not only was it blurred, just as Helmholtz had said, but, without any ascertainable cause, it varied greatly in size and intensity. At times, no reflection could be obtained at all, regardless of the angle of the light to the eye of the subject or of the eye of the observer to that of the subject. With a diaphragm, I got a clearer and more constant image, but it still was not sufficiently reliable to be measured. Men who had been teaching and demonstrating the theory of Helmholtz repeated his experiments for my benefit, but the images which they obtained upon the front of the lens did not seem to me any better than my own. After studying these appearances daily for more than a year I was unable to make any reliable observation regarding them. With a thirty-watt lamp, a fifty-watt lamp, a 250-watt lamp and a 1000-watt lamp, there was no improvement. The light of the sun, reflected from the front of the lens, produced an image just as cloudy and uncertain as the reflections from other sources of illumination, and just as variable in shape, intensity and size. To sum it all up, I was convinced that the anterior surface of the lens was a very poor reflector of light and that no reliable images could be obtained by the means described.

The Difference Explained

I now began to work at an aquarium on the eyes of fish. After many failures, I became able, with the aid of a strong light (1000-watts), a diaphragm with a small opening, and a condenser, to obtain, after some difficulty, a clear and distinct image from the cornea of these animals. This image was sufficiently distinct to be measured, a satisfactory photograph being obtained after many months. Then, work was resumed on the eyes of human beings. The strong light combined with the diaphragm and condenser proved to be a decided improvement over the method of Helmholtz and, by means of this technic, an image was at last obtained on the front of the lens which was sufficiently clear and distinct to be photographed. This was the first time, so far as published records show, that an image of any kind was ever photographed from the front of the lens. Professional photographers, whom I consulted with a view to securing their assistance, assured me that the thing could not be done, and declined to attempt it. I was therefore obliged to learn photography myself, of which I had previously known nothing, and I then found that, as far as the image obtained by the method of Helmholtz is concerned, the professionals were right.

The experiments were continued until I obtained satisfactory pictures before and after accommodation and during the production of myopia and hypermetropia, not only of images on the front of the lens, but of reflections from the iris, cornea, the front of the sclera and the side of the sclera. I also became able to obtain reflections on any surface at will without reflections from the other parts. This was not done, however, until many difficulties had been overcome, among which were the complicating reflections illustrated. (See diagrams above)

The images photographed from the front of the lens did not show any change in size or form during accommodation. The image on the back of the lens also remained unchanged as observed through the telescope of the ophthalmometer; however, as there is no dispute about its behavior during accommodation, it was not photographed. Images photographed from the iris before and during accommodation were also the same in size and form, as was to be expected from the character of the lens images. If the lens changed during accommodation, the iris, which rests upon it, would change also. (See diagrams above.)

The images photographed from the cornea and from the front and side of the sclera showed, however, a series of four well-marked changes according to whether the vision was normal or accompanied by a strain. **During accommodation, the images from the cornea were smaller than when the eye was at rest, indicating the elongation of the eyeball and a consequent increase in the convexity of the cornea. But, when an unsuccessful effort was made to see at the near-point, the images became larger, indicating that the cornea had become less convex, a condition which one would expect when the optic axis was shortened, as in hypermetropia.**

When effort was made to see at a distance, the image was smaller than when the eye was at rest, again indicating elongation of the eyeball and increased convexity of the cornea. (Fig, 5) The images photographed from the front of the sclera showed the same series of changes as the corneal images; but those obtained from the side of the sclera were found to have changed in exactly the opposite manner, being larger where the former were smaller and vice versa, a difference which one would naturally expect from the fact that, when the front of the sclera becomes more convex the sides must become flatter. **When an effort was made to see at a distance, the image reflected from the side of the sclera was larger than the image obtained when the eye was at rest, indicating that this part of the sclera had become less convex, or flatter, because of elongation of the eyeball.** The image obtained during normal accommodation was also larger than when the eye was at rest, indicating again a flattening of the side of the sclera. **The image obtained, however, when an effort made to see near was much smaller than**

any of the images, indicating that the sclera had become more convex at the side, a condition which one would expect when the eyeball was shortened, as in hypermetropia. (See diagrams above.)

The most pronounced of the changes was noted in the images reflected from the front of the sclera. Those on the side of the sclera were less marked, and, owing to the difficulty of photographing a white image on a white background, could not always be readily seen in the photographs. They were always plainly apparent, however, to the observer and subject. The alterations in the size of the corneal image were so slight that they were not always observable, except when the image was large, a fact which explains why the ophthalmometer, with its small image, has been thought to show that the cornea did not change during accommodation.

Practical Results

The results of these experiments, which were first reported in *The New York Medical Journal* for May 18, 1918, were not only in harmony with the results of my experiments upon the eye muscles, but they confirmed my earlier clinical observations as to the causes of myopia and hypermetropia, and convinced me that the science of ophthalmology is a far more hopeful one than we have heretofore believed. According to the accepted teaching, myopia, hypermetropia and astigmatism are due to permanent deviations from the normal in the shape of the eyeball, while presbyopia is attributed to the hardening of the lens and is considered as being one of the unavoidable ills of advancing years. **The foregoing experiments, combined with my clinical experiences, taught me that all of these conditions are due to a functional derangement in the outside muscles of the eyeball and are, therefore, both preventable and curable.** I have since then been able to cure or improve all such cases, no matter how high their degrees or how long their duration. If the treatment has been continued long enough, the patient has been cured.

The cause of the abnormal action of the muscles has been shown to be a strain, or effort, to see. This strain originates necessarily in the mind. Therefore, all methods of treatment have for their object the attainment of mental relaxation. This is accomplished in various ways.

The mere closing of the eyes for a few minutes is often sufficient to improve the sight noticeably and some people have been cured by alternately resting the eyes for a few minutes in this way and then looking at the Snellen test card for a few seconds. A still greater degree of rest can be obtained in most cases by covering the eyes with the palms of the hands so as to exclude all the light. If perfect relaxation is gained in this way, one sees a perfect black, so black that it is impossible to remember, imagine, or see, anything blacker. At the beginning, though, patients often see bright lights and colors, and usually see grey. **The use of the memory and imagination is a great help in obtaining relaxation. It is impossible to remember or imagine anything perfectly unless the mind is entirely relaxed, and, when the patient becomes able to remember or imagine perfectly even such a simple thing as a small black spot or period, the eye muscles relax and the sight becomes normal. Another method of gaining relaxation is to imitate consciously the unconscious shifting of the normal eye and to realize the apparent movement or swing produced by this shifting. The normal eye never holds a point more than a fraction of a second. When, however, the vision is imperfect, it has invariably been found that the eye tries to hold its points of fixation for an appreciable length of time. In other words, it stares. This produces a great strain which is relieved by conscious shifting. Temporary relaxation can usually be obtained very quickly by these methods, and permanent relaxation, which means a permanent cure, is a mere matter of continued practice.**

The same treatment has been found effective in many other conditions heretofore regarded as almost if not quite incurable, such as squint, amblyopia, cataract, glaucoma, atrophy of the optic nerve and retinitis pigmentosa. It is useful in many nervous conditions, and is miraculously effective in relieving pain.

WRITER'S CRAMP: ITS CAUSE AND CURE

By W. H. Bates, M. D.,

NEW YORK

Medical Record, September 3, 1921, Vol. 100, pp. 415-417.

Writer's cramp is one of a considerable group of so-called occupational neuroses occurring with more or less frequency among persons whose living depends upon their ability to use their hands rapidly and continuously for many hours a day, such as writers, telegraphers, pianists, violinists, seamstresses etc. It may affect only one or two muscles, or it may involve the entire hand, or the entire arm and shoulder. The chief symptom is inability to use the hand, or difficulty in using it, for writing or other occupational purposes. Writer's cramp, being the most common of these maladies, is usually treated as representative of the group.

There has been much discussion about the nature of this disease, but it cannot be said that much light has thereby been thrown upon it. About the symptoms the most astonishingly contradictory statements are made, and upon these contradictory observations contradictory theories are based.

Text-books often state without qualification that the difficulty in using the muscles is confined to the occupational act. Yet it is well known that there are many exceptions to this rule, and most writers state that in the advanced stages of the disease other actions may be affected, or that the occupational cramp may be complicated with other conditions which lead to difficulty in the performance of all finely coordinated actions. A few have reported that the trouble is never confined to the occupational act.

This last was the experience of Poore.[1] "The writer's cramp of the text-books, in which failure of writing is the sole symptom, I have never seen," he writes, and adds very significantly: "The conclusion that the patient can do everything but write is often drawn rather hastily from the fact, for example, that he can cut his dinner or play the piano without difficulty. A little consideration will show how widely these acts differ from writing. A dinner-knife is held by flexing the ring and little fingers into the palm, and the first dorsal interosseous if used at all is only called upon for a momentary contraction when the food is being cut. Again, the positions of the hand in writing and piano-playing are quite different. The strain in piano-playing falls upon the extensors of the wrists and fingers and the flexors of the elbows, and it is evident that the momentary contraction necessary for striking the key could be effected by a muscle which might not be able to steady a pen. A patient will often assert that he has no trouble except with writing, because any other trouble he may have is insignificant in the annoyance which it causes him. … There is usually no difficulty in discovering some muscular movement other than writing which is impaired."

In a carefully tabulated report of seventy-five cases involving loss of writing power Poore notes loss of function for other acts in sixty, there being no record in the other fifteen. In one case, the patient, after having at first denied having any trouble except in

writing, admitted that in holding a teaspoon his forefingers slipped up the handle, and that he experienced great difficulty in moving the regulator of his watch with a penknife. A third could not hold a coin between his thumb and forefinger without a sense of great effort.

Similar observations were made by Ross[2] and Paul[3]. The former says that "in those who suffer from writer's cramp the movements requisite for sewing, pianoforte playing, embroidery, buttoning up the clothes, and all actions requiring delicate manipulation are also impaired." The latter reported to the American Neurological Association in 1911 ten cases of occupational cramp in every one of which the difficulty extended to acts other than those demanded by the occupation.

The idea that the trouble is confined to the occupational act is the foundation of what is known as the central pathology. Duchenne of Boulogne, (4) who was the first to present a comprehensive description of the condition and to attempt an explanation, believed that the difficulty was confined to the occupational act, and noting also that the disease was likely to occur in the left hand after the patient had learned to write with it for the purpose of sparing the right, he argued that the disturbance must result from a morbid state of the brain centers which control the coordination of the muscles used in writing.

This view still prevails, and has been embodied in the name given to these conditions, namely, *occupational neuroses*. "There can be no doubt," says Dana, (5) "that the lesion in typical cases is central and involves the higher reflex centers and indirect motor and sensory paths." Oppenheim (6) postulates "a disturbance of the innervation of the muscles, which occurs only in complicated movements which are acquired by practice, the muscles responding to the will in every other action." Starr (7) regards the condition as a manifestation of a localized neurasthenia. "Any finely coordinated act," he says, "requires the orderly and adjusted contraction of a series of muscles in proper sequence, and this is secured by impulses sent out from the educated set of interrelated nerve centers. If the act is repeated too often, fatigue results. If, in spite of the fatigue, the act is continued, structural changes in the mechanism underlying it may be caused. These changes may be in the cortical centers of direction; in the subcortical tracts of transmission, *i. e.* the motor tracts, the spinal neurons, or the nerves; or in the muscles. One or all give out under the excessive use." "In writer's cramp," says Stewart, (8) "the patient can use his hand normally for piano-playing or for grasping and using a heavy tool. This is because the weakness is not due to muscular, but to cerebral fatigue."

The smaller number of writers who believe that the trouble is not confined to the occupational act agree in holding to the peripheral pathology. Paul argues for a probable peripheral pathology produced by trauma of peripheral nerve structures, and maintains further that occupation neurosis and occupation neuritis, so-called, are essentially the same in origin, but exhibitions of different degrees of trauma suffered at different loci. Poore[1] says: "I have never seen a case without evidence of a peripheral change, and in the great majority of cases there was no reliable evidence of any pathological change except at the periphera." Beard (9) advanced what he called a compromise view. "This disease," he says," is primarily a peripheral and local disease of the nerves and muscles; secondarily and rarely it becomes central and general, or it may result from various central lesions; and it may affect any point between the extreme periphery and the center. The theory that writer's cramp is a result of lesions or disturbance of special coordinating centers in the brain is not sustained by a single properly understood fact; on every point it fails to account for and harmonize the phenomena."

In spite of these divergent views about the symptoms and pathology of the disease, all writers agree that the existing cause is the excessive use of the hand in the occupational activity; but, because this factor is manifestly inadequate to account for it, much importance has been attached to secondary causes. Duchenne laid stress on the importance of mental factors, and this view is now widely held, as it affords a convenient method of accounting for much that would otherwise be accountable. Meige (10) puts mental factors in the foreground, holding that in many cases the motor trouble appears very distinctly as a consequence of the mental trouble. He believes that the condition is essentially allied to the tics. Jelliffe (11) says: "Psychoanalysis is of great service for the strictly psychogenic cases, and a great many are such."

There is also a substantial agreement as to the value of rest in the treatment of the condition. "Abstinence from writing, in the writer's cramp form, is the first requisite," says Jelliffe (11). According to Oppenheim (6) the quickest remedy is "absolute avoidance of the act which brings on the spasm." Starr (7) considers the prognosis good for recovery, "provided a sufficient period of rest can be enforced. This rest must, however, be absolute rest of the function affected," he says. "If it is writer's cramp, the pen or pencil should not be touched or the fingers placed in the writing position for two years." Even writing with the left hand he considers inadvisable, owing to the liability of the disease to develop in that hand after it has appeared in the right. "The wisest counsel one can give," says Meige (10), "is the complete cessation of writing with the hand affected by the cramp." And so one might go on indefinitely.

My own experience with occupational cramps has convinced me that none of the writers whose works are available to me has understood the cause of these troubles. My practice as an ophthalmologist has brought me into contact with a number of persons who were suffering from occupational cramps, and in trying to help one of them, after the neurologist to whom I had sent him had failed, I discovered a remedy so simple that I hesitated to publish it, fearing that my colleagues, as on numerous other occasions, would not believe me. Yet, knowing how general these conditions are, and how disastrously they affect those who suffer from them, I now feel it is my duty to do so.

CASE I.—About thirty years ago a court stenographer consulted me about his eyes. He was wearing glasses for myopia, and these, while somewhat helpful, were far from being satisfactory. He became able to see perfectly without his glasses, and was very grateful. A few years later he returned, very much excited and unhappy because he was suffering from writer's cramp and feared that he might be obliged to give up his work.

The trouble was not confined to the writing act, but affected the use of his hand for every purpose. He handled his knife and fork awkwardly, and even **shaking hands was a painful ceremony**. He had consulted a number of physicians and taken all kinds of treatment, such as electricity, massage, baths, and internal medication, but had obtained no material benefit, and he had now been told that the only thing for him to do was to stop work. He asked me to recommend a nerve specialist, and I sent him to a man who at that time was regarded as the highest authority on diseases of the nervous system in the city. This doctor confirmed the diagnosis of his colleague and prescribed the same remedy, absolute rest until the condition was cured.

The patient returned to me very much discouraged and also much puzzled. He did not understand why he should be told to rest when he worked only ninety days a year and a very few hours at that, while during long vacations the hand was worse than when he was working. Furthermore, it was always worse in the morning than after he had been at work for a while, and he sometimes had more trouble in the left hand than in the right, though he never tried to write with the former. He had told these things, he said, to the eminent neurologist, but the latter did not seem to attach any importance to them. To me the facts seemed highly significant, and I concluded that the man either did not have writer's cramp or that writer's cramp was not what the book said it was.

"Let us get more facts," I said. "We know what you do with your hands in the daytime. Perhaps it would be a good plan to find out what you do with them in the night."

So he had his wife watch him at night, with the result that he came back a little later and told me that he was cured. It appeared that he had **been sleeping with his hands under his head.** When this was discovered he tied his hands down at night, but so

strong was the inclination to put them under his head that at first he tore them free in his sleep. His wife continued to keep watch over him, however, and saw that **pressure on his hands and arms was prevented. Immediately relief followed, and in a week the cure was complete.**

Thus it became clear why the cramp had been so much worse in the morning than after the hand had been in use for a time, why the left hand had been affected as well as the right; and why the condition had been worse during vacations than when the patient was working, for in the summer he had spent many daylight hours in the hammock with his hands under his head.

The patient was not only very happy over his cure, but very indignant with the eminent neurologist who had told him that the only remedy lay in giving up his work. He wanted to sue him for damages and show him up in courts, and it was only by telling him that the object of his animosity had treated thousands of poor people in hospitals and clinics without pay that I was able to persuade him to let the matter drop. The cure was permanent as long as the cause was avoided, and whenever symptoms of relapse were noticed, **prompt relief was obtained by measures which prevented any pressure upon the hands during sleep.**

CASE II.—Another case of occupational cramp that came to my attention was that of a telegrapher. She suffered from fatigue and severe pain in her right hand and arm, accompanied at times by inability to do her work, and at such times she had difficulty, not only in manipulating the keys of her instrument, but in using her pen. After rest at night the trouble did not seem to be relieved, but after a few hours' work she was always better. She found that she was **sleeping with her right hand under her cheek, and when this habit was corrected the cramp immediately disappeared.**

CASE III.—A third case was that of a violinist who was having trouble not only with his eyes but also with his hands. His symptoms were extremely variable. At times he would be all right. At other times he could not play at all. The fatigue varied within wide limits. The pain was also variable both in intensity and location. Sometimes it would be felt only in the fingers, sometimes it would be in one arm and sometimes in the other. Although the fingers of the left hand, which manipulated the strings, were subject to more strain than the bowing or right hand, the pain was sometimes more severe in the right hand than in the left. I suggested to him that his trouble was probably due to his posture in sleep, but he treated the idea as ridiculous, being convinced that he always slept with his arms lying straight by his side and never bent them under his head. I suggested to his wife that she watched him at night, as the wife of the patient previously mentioned had done, and she **found him sleeping, first with both hands under his head, and later with his face resting on his hand**. He refused to believe this when told, but was convinced when wakened in one of these postures. The same precautions were taken as in CASE I and the cramp quickly disappeared.

I have never known a case of occupational cramp that did not yield to this simple treatment, and in addition to those I have cured myself, many others have been cured by cured patients. The court stenographer told me that he had cured fifty cases, and that many of these patients had cured others.

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40 EAST FORTY-FIRST STREET.

Sunning Examples

Face the sun with the eyes closed and move the head/ face slowly, relaxed side to side; left, right, left, right...
Feel and see the sun move across the face/closed eyes.
Then, move the head/face up and down, then circular; trace around the sun counter clockwise, clockwise.
The eyes, head/face (and body) move together, at the same time, in the same direction.

Do the rock while sunning;
Face the sun with the eyes closed and rock the entire body side to side, left and right.
Do the long swing.

Sit facing the sun, relax, eyes closed and daydream pleasant thoughts.
Occasionally move the head/ face side to side.

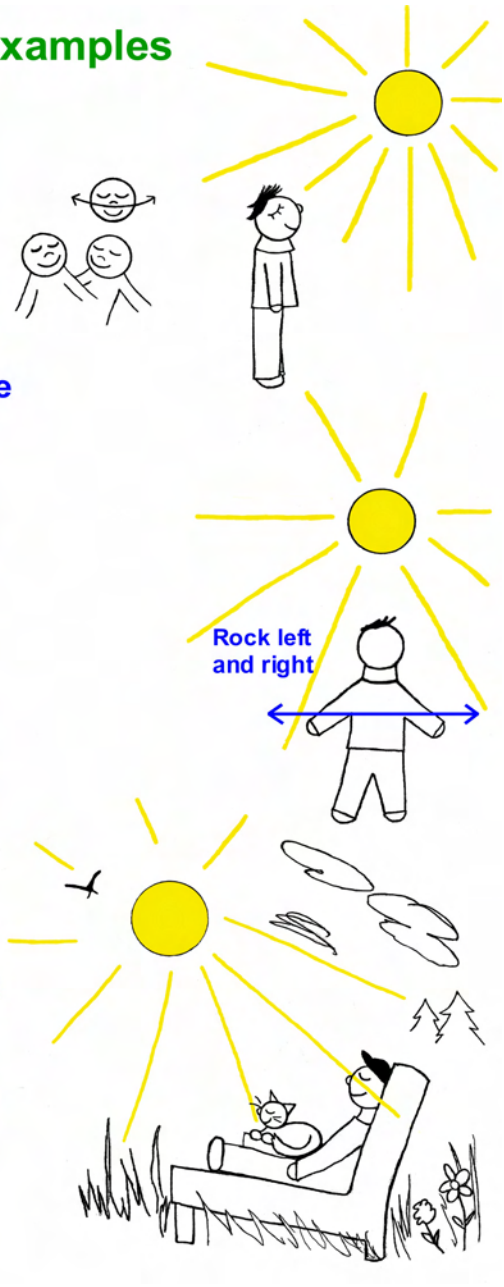




Fig. 1. Patagonians

The sight of this primitive pair and of the following groups of primitive people was tested at the World's Fair in St. Louis and found to be normal. The unaccustomed experience of having their pictures taken, however, has evidently so disturbed them that they were all, probably, myopic when they faced the camera. (see Chapter IX.)



Fig. 44

No. 1.—Owing to paralysis of the seventh nerve on the right side, resulting from a mastoid operation on the right ear, the patient is unable to close her lips.

No. 2.—After palming and remembering a perfectly black period she became able not only to close the lips, but to whistle. The cure was permanent.

CURING EYES WITHOUT GLASSES! HOW? BY EXERCISING THEM
By Dr. William H. Bates
The Bridgeport Telegram, March 9, 1922

Curing Eyes without Glasses! How? By Exercising Them

Oculists and optometrists throughout the world are watching with interest the experiments of Dr. William H. Bates, eye specialist, who is endeavoring to rectify disorders of the eyes without glasses. Dr. Bates, in the following article written for NEA Service, tells his theory.—Editor

BY DR. WILLIAM H. BATES.

Eye Specialist, Lecturer and Author of "Perfect Sight Without Glasses."

NEW YORK March 8.—If you wear glasses, discard them.

You can be cured of near-sightedness, far-sightedness and astigmatism if you learn to rest your eyes.

It is not quite as easy as it sounds.

Yet school children have done it as well as adults. Among my assistants at a hospital clinic are 16 girls between 10 and 14 years old. They used to wear glasses. But they helped cure themselves and are now curing others.

All eye trouble is caused by strain. If the normal eye strains to read at a near point, it becomes far-sighted. If the eye strains to read at a distance, it becomes near-sighted—always.

But this condition is only temporary. Remove the strain and the eyes become normal.

Glasses Can"ot Remove Strain.

The wearing of glasses cannot remove the strain. If it did, the eye would become cured and glasses would no longer be necessary. As a matter of fact, once a person starts wearing glasses, the strength of the lenses may have to be increased steadily.

Yet when people break their glasses and go without them for a week or two, they frequently observe that their sight has improved.

The human eye resents glasses. Every oculist knows that patients have to "get used" to them—sometimes they never succeed in doing so.

Glasses have been prescribed on the old theory that the eye changes its focus for vision at different distances by altering the curvature of the lenses of the eye. When the ciliary muscles, supposed to control the lens, get into a continuous state of contraction or expansion, the eye becomes permanently out of focus and correction is necessary.

This correction is supposed to come with the wearing of the glasses. But cure? Never.

The problem puzzled me. I studied the eyes of the lower animals and particularly fish.

I soon discovered that the errors in refraction are due not to a permanent deformation o fthe eyeball but to a functional and therefore curable derangement in the action of the extrinsic muscles—brought on by strain.

Remove the strain and the eye becomes normal.

Strain To See Is Strain Of Mind.

Primarily the strain to see is the strain of the mind. To secure relaxation requires considerable time and much ingenuity. The same method cannot be used with everyone. But the best way to bring about this rest is

First. Close the eyes.

Second: Cover with the palms of the hands, shutting off all light.

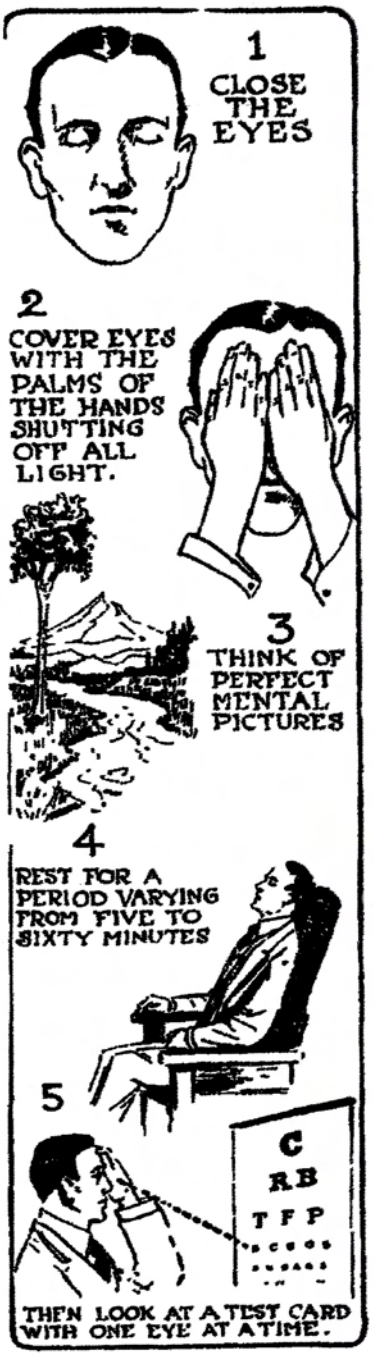
Third: Think of perfect mental pictures, about the snow, grass, sunset.

Fourth: Rest for a period varying from 5 to 60 minutes.

Fifth: Then look at a test card with one eye and then the other.

The sight will be improved and the eye strengthened. In some cases five or ten minutes treatment is sufficient to restore the eye to normal. In other instances it is necessary to continue the relaxation for several months.

Continue this exercise for a few minutes a day to prevent a relapse. When the cure is complete, it is always permanent.



Dr. William H. Bate's Exercises For Curing Defective Vision.

Bates Method is really not eye exercise. Relaxation of mind, body, eye muscles, eyes and correct eye function is the basis of the Bates Method.

THROW AWAY YOUR GLASSES

BY W. H. BATES, M.D.

Hearst's International, September, 1923, vol. 44, (3), pp. 42-43 & 128-132

Dr. Bates Describes Modern Eye Treatment

Editor's Note: When Mr. Hapgood was in Berlin he was astonished to see that the authorities had taken glasses off the school children. An American is pioneer in the movement.

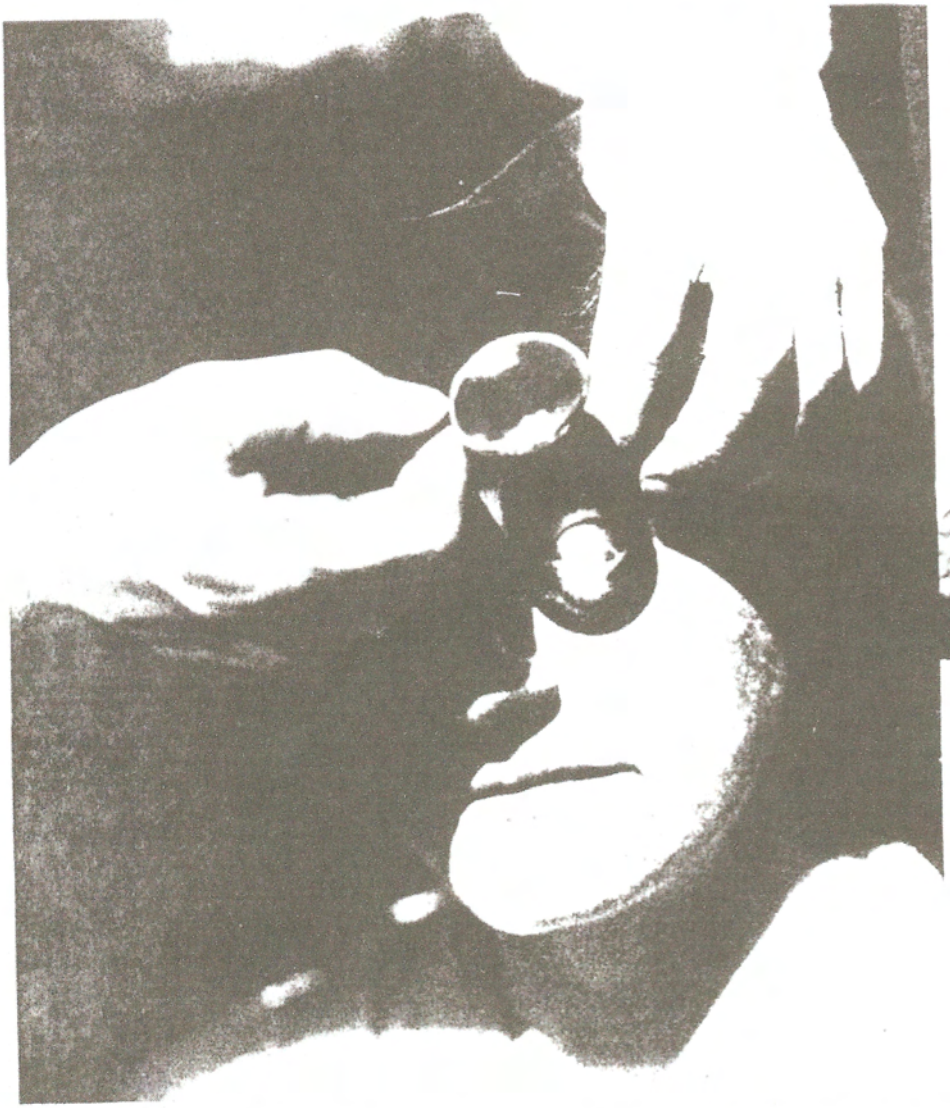


Fig. 1-A boy with normal eyes reading the X line of the Snellen test card at ten feet. Note the expression of the eyes with the focus completely relaxed.

Fig. 2 – The same as figure one regarding a picture at twenty feet. Simultaneous retinoscopy indicated compound myopic astigmatism. He was *unconscious* of the fact that his eyes were focused for a near point. Note the manifestation of effort by staring.

Fig. 3 - Functional myopia produced voluntarily by partly closing the eyelids (squinting) and making an effort to read the Snellen test card at ten feet.

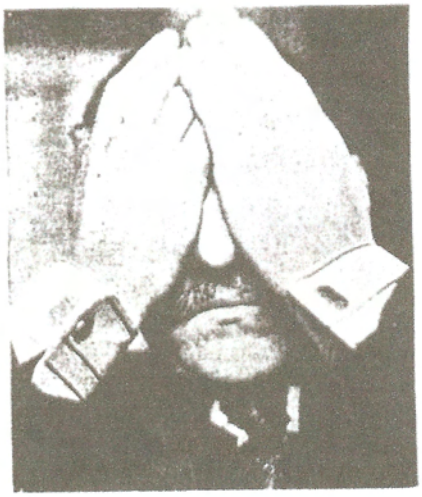
Your Glasses



¶ A burning glass focuses light directly on the eye with beneficial results.



¶ Mrs. Lierman, Dr. Bates's assistant during four years of arduous labor, helped him make the tests that showed the way to new methods of healing imperfect eyesight.



¶ Palming or covering the eyes with the hands is one of the most effective methods of obtaining relaxation of all the sensory nerves.

THIRTY years ago, not knowing any better and being guided by the practice of other eye doctors, I recommended patients with imperfect sight to throw away their eyes and see with their glasses. Since that time I have made some valuable discoveries which have enabled me to cure people without glasses. The slogan now is: "Throw away your glasses and see with your eyes."

We are rapidly becoming a four-eyed nation. The enthusiasm of the eye doctors is putting glasses on many people who do not need them. Just as soon as we go to the doctor and complain about our eyes or some nervous trouble with our minds and our heads, the stomach or something else, the doctor prescribes glasses. Fifty years ago the number of persons wearing glasses was very much less than it is now. Human nature is such that when one person gets glasses we believe everybody else should do as we do and wear glasses. When prominent people set the fashion the rank and file feel that they must do the same. It is a matter of record in this country with a population of one hundred and ten million or more, that all persons over forty years of age, according to the old theories, should wear glasses.

Some eye specialists have gone so far as to say that all children attending school should wear glasses either to relieve imperfect sight or to prevent their eyes from failing. This matter was considered by the Board of Education of the City of New York in 1912 and

much pressure was brought to bear to have it done. I was the only physician that went before the Board of Education and recommended the method of treatment which had cured and prevented imperfect sight in school children.

The craze for glasses has even included nursing babies. It is all wrong, and the evidence has been accumulating through the years that imperfect sight is curable without glasses. Most of us should have an interest in the welfare of every child and get busy and investigate the facts. The medical profession has neglected its duty. They have done noble work in the study and prevention of yellow fever and other conditions, but when it comes to the eyes the doctors can only recommend glasses. My investigations have demonstrated many facts of great practical importance.

In the first place all children under twelve years of age with imperfect sight can be cured without glasses. This is a challenge. If there is one child who cannot be cured by my treatment I am wrong about the whole thing. There is no exception and when a proposition has no exception we call it a truth.

They can be cured not only by me but by their parents, by their teachers, by anybody who has normal sight, but **they cannot be cured by people who have imperfect sight**. The teachers in the public schools have succeeded by practicing my suggestions with the children, **reading the Snellen test card with each eye as well as they can every day, devoting in most cases only a few minutes daily. Those children whose sight is already normal only need to read with normal sight, one minute or less, every day to prevent eye-strain and imperfect sight.**

One day I visited a classroom and I said to the teacher: "Can you pick out the children who have imperfect sight?" She selected a number of children that she thought had imperfect sight. In every case her selection was made because of the way the children used their eyes. Some of them squinted, some of them strained in other ways.

I tested the sight of these children and found it imperfect. Then I suggested to the teacher that she ask the children to use their eyes without strain, without making any efforts to see. You will find how well they can see when they use their eyes easily, without effort.

Much to her surprise they all read the card with normal vision. Some of these children were wearing glasses. When they removed their glasses at first their sight was imperfect but after resting their eyes by closing them for five minutes or longer their vision became very much improved. In one classroom the teacher found that all her children had imperfect sight; but by showing them how to rest their eyes, by avoiding the strain, and by closing them, the vision of all of them was improved and all obtained perfect sight except one. I learned that this one also obtained perfect sight a few weeks later. It is impossible to cure those children while they are wearing glasses.

In all my enthusiasm I felt that it was not proper for me to interfere with children who were under the care of a physician while wearing the glasses he prescribed. Of course I could not be blamed if the children lost their glasses and got well without them.

It should be emphasized that **teachers wearing glasses have a larger percentage of pupils with imperfect sight than have the teachers whose sight is normal and who do not wear glasses. Why is this? The facts are that children, being naturally great imitators, not only consciously or unconsciously practice the strained look of the eyes of the teachers with imperfect sight, but the strain of all the nerves of the body is imitated by the children.** For the benefit of the school children no teacher wearing glasses or who has imperfect sight should have charge of children in any public or private school.

Parents wearing glasses are under a nervous strain almost continuously. It can be demonstrated in all cases that the children's eyes tend to strain and that the sight becomes imperfect because most children, if not all, imitate consciously or unconsciously the nervous strain of their parents. The future of our country is in the hands of the children and I believe that we should all make any sacrifice which can be made for their welfare.

Throw away your glasses, become cured. *It was demonstrated that all persons I tested wearing glasses were curable without glasses.* I have demonstrated this fact, that the **eyes of all near-sighted persons become normal while looking at a distant blank wall without trying to see**. The same is true in all other cases, in far-sightedness, in astigmatism, no exceptions.

+ It can always be demonstrated that when the normal eye with normal sight makes an effort to see at the distance the eye becomes near-sighted; again, no exceptions.

+When the normal eye strains to see at the near point the eye tends to become and does become less near-sighted and produces a measure of far-sightedness.

In astigmatism the strain can always be demonstrated. One can by will produce in the normal eye any kind of imperfect sight by the necessary strain. The normal eye is always at rest and nothing is done in order to see. If anything is done it is always wrong and always produces imperfect sight. This suggests treatment and prevention. Treatment can only succeed when perfect rest is obtained.

And what shall we say of the physicians, the oculists, the opticians and all persons engaged in the work of prescribing glasses? Every physician wearing glasses, like every child, every man, every woman, has to strain to make his eyes fit the glasses. In every case this fact can be demonstrated. Surely the leaders in this movement for the benefit of the eyes of the school children can be or ought to be the medical profession, and I feel that we are lax in our duty when we neglect to study these methods and practice these methods which cure imperfect sight without the aid of glasses.

Imperfect sight is usually contagious. Actors on the stage do not feel the need of glasses. Fancy some operatic star going through a performance wearing strong glasses. The strain would spoil the music.

Many people are afraid of the light. They protect their eyes with dark glasses when they go to the seashore, they use umbrellas, sunshades. In tropical countries special kinds of hats are popular, hats which are supposed to prevent the bad effects of the sun.

Bookkeepers and people who work by artificial light wear contrivances of all kinds to shade their eyes from the artificial light. Is sunlight injurious? It is not. Of course after remaining in a dark room and suddenly going out into the bright sunlight one feels the change, and if one is at all nervous the effect of the light on the eyes is magnified, exaggerated. Some people believe it injures the eyes to read in the bright sunlight with the sun shining on the page. They complain that the light dazzles their eyes.

I know a farmer who for fifteen years had never been able to do a stroke of work out in the sun. He complained that the light blinded him and so he remained in a dark room most of the time and was not as happy as he might have been. He had a large family and in their sympathy they believed as he did and all the time cautioned him to protect his eyes. If someone opened the door suddenly and let in the daylight there was a great rush to close the door and protect the gentleman from the light.

He came to me with his eyes well wrapped up and protected from any light striking his eyes. I darkened the room and had him look down, and when he looked far down I lifted the upper lid and focused a strong light on the white part of his eye, first the artificial light and then the strong light of the sun.

The effect was miraculous. He smiled and walked around the room, looked out the window, put on his hat and walked down the street and came back feeling first rate. Ever afterwards he enjoyed the light instead of suffering from it. All he needed was a little encouragement. Focusing the strong light in his eyes with the aid of the burning glass and doing it right caused him no pain or discomfort whatever.

I know a white man who lives in Borneo, an island in the tropics. This man goes around without a hat. He told me that the natives did not wear hats and had no discomfort from the sun and what was good enough for the natives was good enough for him, and it certainly worked. He has lived there forty years or more and the sun does not do him any harm. Did he ever suffer sunstroke? No. Did anybody else ever suffer sunstroke in Borneo? There is no record. Out in the Canadian northwest in the summer time the sun is very strong and the crops mature in a few months. They raise fine wheat there. Do you hear of anybody being sun-struck working in the wheat fields?

In New York City the papers publish from time to time during the hot weather cases of sunstroke. I have been called to attend such cases. Quite a number of people living in tenement houses have been ill during the very hot weather and I am quite sure that many years ago I believed that I was treating cases of sunstroke. It is very queer but many of these cases never saw the sun and most of them had a breath that we in the days of prohibition might envy.

I do not believe any baseball player or any tennis player in spite of his strenuous exercise on bright sunshiny days has ever suffered from any bad effect of the sun. Most tennis players do not ever wear a cap to protect their eyes from the sun and you have to have good eyesight to play a good game of tennis. **When they serve the ball the light of the sun often shines directly into their eyes and the experts are able to drive the ball quite accurately in spite of the sun.**

Many years ago I listened to the older and the wiser men who treat the eye and they complained that something ought to be done to prevent children playing out in the sun without any hats on. We are more liberal now and treat tuberculosis in children by exposing not only the head and eyes but their whole bodies naked to the sun and I understand it is a very successful treatment. **Miners who seldom see the sun always have disease of their eyes. All people who wear dark glasses and avoid the bright sunlight always have trouble with their eyes.**

I had a patient once who spent two years in a hospital here in New York many years ago, occupied a dark room and had her eyes bandaged with a black cloth so that not a ray of light could possibly enter her eyes, and at the end of her treatment left the hospital worse than she was before. I cured her by having her practice looking at the sun. At first when she did it she was temporarily blinded. She said that she had no perception of light whatever, but in a few hours she recovered and her eyes felt better.

I undertook to caution her by suggesting that she do it gradually not to get too much of the sun at once, to wait until she became more accustomed to it; but she paid no attention to what I said and went ahead and blinded her eyes again and kept it up every day, with very rapid improvement in her sight, until it was not more than a week or so before she could look straight at the sun without suffering any inconvenience whatsoever. Her vision which had been one-tenth of the normal with glasses became normal without glasses after the sun treatment.

Some scientists in Boston experimented on the eyes of rabbits. They focused the strong light of the sun directly into the eyes and then examined the retina with a microscope and much to their surprise found nothing wrong. They tried strong electric arc lights and found that the retina was not injured. They used every known light on the eyes of these animals and in no case was the light ever an injury.

I called on a friend of mine who had an Alpine lamp which he was using for treating different diseases. He said that one should wear a dark glass to protect the eyes from this light because it was very injurious to the eyes. Right away I had him turn it on full force and I looked at the strong light of the lamp.

"What did you do that for?" he asked.

"To see if it would make me blind," I answered.

"Well how do you feel now?" he asked after a few minutes.

"All right," I answered.

"Is your sight all right?"

"It certainly is," I replied.

This was some years ago and I am still able to see.

About ten years ago the Scientific American published a series of articles on the effect of light on the eyes and published that some of the rays were injurious. I tested the facts and found that the man who had written the article had neglected to report the exceptions.

Recently an acquaintance of mine told me that he had seen in the last three months seventy-four cases of disease of the eyes from exposure to strong light from the electric arc. I told the gentleman that he had had an unusual experience, but in my heart I knew he was a liar.

CONCENTRATION

For many years it had been drummed into my mind by my teachers when I first went to school and later by my professors in college, that in order to accomplish things and to make a success of life, one should practice concentration. Recently in New York I received an advertisement from a man who delivers popular lectures, an invitation to attend the lecture with the title "Concentration the Key-note to Success." About the same time one of my patients suffered very much from imperfect sight. The patient bought a book of 500 pages on concentration. He bought the book to improve his memory and sight.

For many years from time to time patients from the faculties of Columbia, Yale, Harvard, Princeton, Cornell and other colleges come to me for **treatment of their eyes.** They all say that not only are they unable to use their eyes for any length of time but that they are also **ill in a great many other ways, physically, mentally, with their nerves all shot to pieces.** They complain that they have lost the power to concentrate.

By investigating the facts I find that invariably they have been teaching concentration. It does me a great deal of good personally to get square with them because these are the people who cause so much imperfect sight. It can be shown that all persons with imperfect sight are trying to concentrate. I have repeatedly published and described the evidence which proves conclusively that concentration of the eyes is impossible.

Trying to do the impossible is a strain, an awful strain and the worst strain that the eyes can experience. So many people have a theory that concentration is a help and if we could all concentrate we would all be much better off. The trouble is that concentration is a theory and not fact. If you try to concentrate your mind on a part of a large letter of the Snellen test card at ten feet or twenty feet it can be demonstrated that the effort fails and the vision becomes imperfect.

The same is true of the memory and of the imagination. The dictionary says concentration is an effort to keep your mind fixed on a point. I have tested a great many people and not one of them was ever able to accomplish it for any length of time, and the result is always bad with the eyes, with the memory, with the imagination, with the nerves of the body generally. If the professors of concentration were wise they would avoid trying to practice it. It is only in that way that they can avoid trouble.
The opposite of concentration is = to let the mind, eyes move from object to object, part to part of a object, thought to thought on a subject and subject to subject. The eyes, mind can always return to the original object, thought then move away again.
Example: Einstein, the great scientist figuring out, creating a formula. He thinks on the subject then lets his mind drift to other thoughts about the formula, a variety of ideas, returning to original idea until he gets the answer, complete formula.
If his mind gets stuck he stops thinking about the main subject, takes a break, lets the mind think of other things, takes a nap, walk..
Then later, when he returns to the subject, many new thoughts, ideas come to mind concerning the subject.

CONCENTRATION

From 'Better Eyesight Magazines'

THE dictionary defines concentration to be an effort to keep the mind fixed on a point continuously. It can be demonstrated that this is impossible for any great length of time, a few seconds or part of a minute. **All persons with imperfect sight whether due to nearsightedness, astigmatism, cataract or glaucoma try to concentrate**. Since concentration is impossible, trying to do the impossible is a strain. It does a patient no good to tell him that concentration or trying to concentrate is an injury. To obtain real benefit he must prove the facts, experimenting on his own eyes.

Most people can look at the notch at the top of the letter C at ten or fifteen feet and try to keep their minds fixed on one point of the notch continuously. (Staring, not shifting) After some seconds all patients demonstrate that an effort is required and that the longer the point is fixed, the greater becomes the effort. The eyes, and the mind become tired from the effort and sooner or later the eyes move away from the notch (shift) or the vision becomes blurred. This seems like a simple demonstration, but it may fail with individuals who have the ability to imagine erroneously that they are concentrating successfully and continuously, while unconsciously failing by closing the eyes or blinking or by shifting to some other point. These cases are difficult to manage and usually require a great deal of patience and ingenuity before the patient becomes able to demonstrate the facts.

Shifting, oppositional movement of a letter

With the eyes closed the patient may be able to remember a letter C with its notch, continuously, and demonstrate that the eyes are moving from one point of the C to another. If the patient is directed to keep the mind fixed on one point of the notch continuously and endeavor to keep the point stationary, after a few seconds or longer the notch or the point are not remembered. If one looks to the right of the notch the notch is always to the left of where one appears to be looking with the eyes closed. Still with the eyes closed, if one imagines they are looking to the left of the notch, the notch is to the right. Every time the eyes or the mind look to the right, the notch in the C moves to the left. Every time the eyes or mind move to the left the notch moves to the right and by alternating, looking from one side to another, one can imagine the notch of the C moving from side to side in the opposite direction a short or a longer distance. This movement or swing prevents concentration and the memory, imagination or/and vision usually improve.

The normal eye when it has normal sight does not try to concentrate. If one consciously tries to concentrate the vision always becomes imperfect.

One day a professor of Psychology called at the office to consult me about his eyes. His first remark was: "Doctor, I have lost the power of concentration. My eyes are very bad and so far I have not been able to obtain glasses which could help me. I am so fatigued most of the time that I find it exceedingly difficult and often impossible to deliver my lectures. I have no appetite; I do not sleep well and feel quite miserable generally."

His vision with each eye was normal, 15/10 and although only 40 years of age he was not able to read the newspapers. The first thing I asked him to do was to try and keep his eyes on the left hand side of the small letter O, 15/15. After a part of a minute I asked him how he was getting along. He replied: "Badly. I lost the letter O. The harder I try and with all the efforts that I make it is impossible for me to bring back that letter O and, in fact, it seems to me that the harder I try the less I see."

I said to him: "When I try to concentrate on the left hand side of that letter O my vision soon fails, just like yours did."

He jumped out of his chair and said:

"Wait a moment, Doctor," and went out into the waiting room and brought back with him a friend who was apparently perfectly well and who had normal sight. He asked his friend to try to keep his eyes and mind concentrated on one point of the left hand side of the small letter O. In a few seconds the friend looked away and said to the patient:

"Don't ask me to do that again."

The patient asked: "Why?"

The friend replied: "Because it spoilt my sight and worse than that it gave me a pain and a headache and I don't like it."

The patient smiled and motioned to his friend to retire to the waiting room again.

"Pardon the confirmation," the patient said and asked this question:

"If I avoid looking at a point continuously will that help me?"

I answered: "Yes it will help you and if you always avoid concentration you will always be relieved of your eye and nerve trouble."
Shift part to part on the letter O, left and right, top and bottom, diagonally, blink for relaxation and clear vision.

I suggested that he close his eyes and demonstrate the facts that it was just as impossible for him to concentrate on the memory or a mental picture of a point on one side of the letter O, and that when he tried to do it he lost the memory of the O and the effort to concentrate, while it interfered with his memory, also made him uncomfortable.

I asked him if he had demonstrated sufficiently to be convinced that one cannot concentrate for any length of time when one looks at a point or when one remembers a point with their eyes closed.

He replied: "I am convinced. I wrote a book once on concentration and it had quite a sale. I have been teaching concentration for years and I have many friends who are also teaching it."

My answer was this: "Let me remonstrate with you and with all people who advocate concentration. In the first place you do not know what concentration is, what you are doing, or that you are teaching people to ruin their eyesight and their general health. **It is**

the effort, the concentration which is always present with imperfect sight, with pain, fatigue of the eyes and the body generally. You can demonstrate that with the help of trying to concentrate pain can be produced and other symptoms of disease. It is not possible to improve the eyesight without eliminating concentration or the stare. One cannot see, remember or imagine when concentration is practiced or an effort made to practice concentration."

I taught the patient to shift, to keep looking from one place to another because it prevented concentration. I taught him how to imagine things moving which also prevented concentration. Palming also helped him very much. The swing and the blinking at the same time gave him the greatest relief and I kept him practicing the **long swing and the blinking** for a considerable time, an hour or longer, when he declared that he felt perfectly well and not only could see the Snellen Test Card with normal sight continuously but he also became able to read the newspaper without any difficulty and also diamond type at six inches or less.

What became of him? I received a letter recently from the gentleman in which he said among other things: "Thank you very much for your inquiry. I have changed my occupation and no longer teach concentration. I feel perfectly well and happy and am full of gratitude for what you did for me."

Crossed/wandering eyes cure

One day a lady came to see me with a child about four years old suffering, from an alternating **squint**. Sometimes the right eye turned in, at other times the left eye turned in. His mother said the child was quite nervous and had not been strong or well for some time. **With the mother standing and facing me I took hold of both her hands and had her sway in unison with me from side to side. The child was interested. I then took the child in the circle, the mother holding one hand and I the other and we all three swayed from side to side.** The child was delighted and enjoyed it very much.

I said to him: **"Keep looking up at the ceiling," which he did while swinging.** The color came into his face, he smiled and laughed and best of all the **eyes were perfectly straight.** I advised the mother after her return home to **encourage the child to laugh, sing, to play, to dance and to have a good time generally and that she should spend some hours daily playing with the patient.**

She said: "I don't know any games."

I answered: "I will teach you a few," and I placed the mother in one comer, the little boy in another, while I stood in the third. **When she tried to run from one corner to another, I ran after her and tried to get there first. The child sought another corner and got it, while I tried unsuccessfully to beat him to it. It was not very long before the child was laughing and screaming with delight. We kept this game up for quite a while and some of the patients in the waiting room came and looked in at the open door to see what was going on. The more the child laughed, the more he screamed, the more he ran, the straighter became his eyes.**

The mother said: "That is easy to do."

My reply was: "I am not so sure of that. You have many duties and I am afraid you will neglect the child." She answered: "Oh, no, I promise you."

I requested her to write to me and let me know how he was getting along at the end of a week. At the end of the week instead of writing she called and when the little boy saw me he ran to me, threw himself in my arms and held up his face to be kissed. I was quite willing to kiss him because his eyes were perfectly straight.

TREATMENT

If you have imperfect sight and desire to obtain normal vision without glasses, I suggest that you keep in mind a few facts. In the first place **the normal eye does not have normal sight all the time, so if you have relapses in the beginning do not be discouraged.** First test your sight with a Snellen test card with each eye at twenty feet, then close your eyes and rest them. Cover them with one or both hands in such a way as to shut out all the light and do this for at least an hour, then open your eyes for a moment and again test your sight with both eyes at the same time.

Your vision should be temporarily improved if you have rested your eyes. If you vision is not improved it means that you have been remembering or imagining things imperfectly and under a strain. With the eyes closed and covered at rest, with your mind at rest, you should not see anything at all, it should be all black. If you see colors, red, green, blue, or flashes of light, you are not resting your eyes but you are straining them.

Some people when they close their eyes let their minds drift and think of things which are pleasant to remember, things which come into their minds without their volition and which are remembered quickly, easily and perfectly. Some patients have great difficulty in improving their sight by closing their eyes and trying to rest them. If you fail, get someone with perfect sight to demonstrate that resting the eyes is a help and who can show you how to do it.

Persons with normal eyes when they have normal sight suffer no pain, discomfort, headaches or fatigue. When a person with imperfect sight closes the eyes and rests them successfully the eye becomes normal for the time being. **When such a person looks at the distance and remembers some letter, some color or some object perfectly the eyes are normal and the vision is perfect. T**his is a very remarkable fact, it has been tested in thousands of cases and one can always demonstrate that it is true.

One of the quickest and most satisfactory ways of improving the sight is a perfect imagination. The normal eye at twenty feet imagines it sees a small letter of the same size as it does at one foot. The eye with imperfect sight on the contrary usually sees a letter at twenty feet larger than it really is.

The normal eye imagines the white of a Snellen test card at twenty feet, ten feet, as white as it is at one foot. The eye with imperfect sight sees the whiteness of the card less white or a shade of gray.

The white centers of the letters are imagined by the normal eye to be whiter than other parts of the card, while the eye with imperfect sight imagines the white centers of the letters to be less white than the margin of the card. Persons with imperfect sight have been cured very quickly by demonstrating these facts to them and encouraging them to imagine the letters in the same way as the normal eye imagines them.

When reading small print in a newspaper or in a book the normal eye is able to imagine the white spaces between the lines whiter than they really are. The whiter the spaces are imagined the blacker the letters appear and the more distinct do they become.

Persons with imperfect sight do not imagine the white spaces between the lines of fine print that they are endeavoring to read, to be as white as the margin of the page. Persons with imperfect sight do not become able to read fine print until they become able to imagine the white spaces between the lines of letters to be whiter than they really are.

When people with normal vision have normal sight they are always able to see one letter best or one part of a letter better than all the rest. It is impossible to see a whole letter at one time perfectly. One has to imagine different parts best. Persons with imperfect sight, when they regard a line of letters that they do not read, discover that they do not see best one part of the line of letters, but rather do they see most of the line a pale gray with no separation between the letters.

By Central Fixation is meant the ability to see best where you are looking. When one sees a small letter clearly or perfectly it can be demonstrated that while the whole letter is seen at one time, one sees or imagines one part best at a time. The normal eye when it has normal vision is seeing an illusion and sees one letter best of a line or one part of one letter best at a time.

We do not see illusions, they are imagined. Central fixation is a truth to which there are no exceptions and yet it is all imagination. The more perfect the imagination, the more perfect the sight, the more perfect is central fixation.

It is interesting to realize that the truth about vision in all its manifestations, does not obey the laws of physiology, the laws of optics, the laws of mathematics, and to try to explain in some plausible way, why or how all these things are so, is a waste of time, because I do not believe anybody can explain the various manifestations of the imagination.

Most people have an imagination that is good enough to cure them if they would only use it. What we see is only what we think we see or what we imagine we see. When we imagine correctly we see correctly, when we imagine imperfectly we see imperfect. People with imperfect sight have difficulty in imagining that they see perfectly at twenty feet the same letter that they do at one foot or less.

It can be demonstrated that when one remembers a letter perfectly one cannot at the same time remember some other letter imperfectly. The same is true of the imagination and of the vision. This fact is of the greatest importance in the treatment of imperfect sight without glasses. If one can remember perfectly a mental picture of some letter at all times, in all places, the imagination and vision for all letters regarded are also perfect.

One can improve the memory by alternately remembering a letter with the eyes closed for part of a minute or longer and then opening the eyes and remembering the same letter for a fraction of a second. Unfortunately it is true that many people with imperfect sight are unable to remember or imagine mental pictures perfectly. The treatment of these cases is complicated.

One patient when he looked at a white pillow saw it without any difficulty. He thought he saw it all at once. When he closed his eyes he could not remember a mental picture of the pillow.

With his eyes open I called his attention to the fact that he did not see the whole pillow equally white at the same time but that his eyes shifted from one corner that he saw best to another corner or to another part of the pillow and that he successively imagined one small part of the pillow best. With his eyes open he could not see two corners of the pillow best at the same time. He had to see it by central fixation, one part best, in order to see it perfectly. I suggested that when he closed his eyes he remember the pillow in the same way, one corner at a time or one small area best at a time.

He immediately for the first time in his life obtained a mental picture of the pillow. Afterwards he became able to remember or imagine a mental picture of the pillow with his eyes closed by practicing the same methods. He became able to imagine mental pictures of one letter at a time. Always he found that he could not remember the whole letter at once. The strain was evident and made it impossible. By alternately remembering a mental picture of a letter with his eyes closed and remembering the same picture with his eyes open for a short fraction of a second he became able to remember the mental picture of a letter when looking at a blank wall where there was nothing to see, just as well as he could with his eyes closed.

It required many hours of practice before he could remember the letter perfectly when looking anywhere near the Snellen test card, because he could not remember one letter perfectly and imagine one letter on the Snellen test card imperfectly without losing the mental picture. In other words he could not imagine one thing perfectly and something else imperfectly at the same time.

After a patient has become able under favorable conditions to imagine mental pictures as well with the eyes open as with the eyes closed, his cure can be obtained in a reasonable length of time. One patient, for example, could not see the largest letter on the Snellen test card at more than three feet but by practicing the memory of the mental picture of a letter, alternately with his eyes closed and with his eyes open, he was permanently cured in a few weeks.

In the beginning even with the strong glasses the vision that he obtained was one-tenth of the normal, but with the help of the mental pictures he became able to read without glasses at twenty feet a line marked ten on the Snellen test card. School children who have never worn glasses, under twelve years of age, can easily be cured by their teachers in two weeks or less.

It is very important that all patients who desire to be cured of imperfect sight should discard their glasses and never put them on again for any emergencies. It is not well to use opera glasses. Going without glasses has at least one benefit: it acts as an incentive to the patient to practice the right methods in order to obtain all the sight that seems possible.

PREVENTION OF MYOPIA IN SCHOOL CHILDREN

About ten years ago I introduced my method for the prevention of myopia in school children in a number of the schools in the City of New York. In one year I studied the records of twenty thousand children who had been tested before and after the treatment. To prove a negative proposition, to prove that something does not occur because something else is done, is a difficult or impossible proposition. When I recommended my treatment for the school children I claimed that every child who used the method properly would see better and that no matter how poor the sight might be or how long the sight had been imperfect the vision would be improved always.

If there were one exception I made the statement that my method was only a working hypothesis at best or a theory, and that I was wrong about everything I said. Since all the children who used the method had their sight improved it is evident that imperfect sight from myopia was prevented in those children at that time.

I have published from time to time reports on results of my method for the prevention of myopia in school children. These reports are on file in the New York Academy of Medicine and can be consulted by anybody.

In 1912 I read a paper on this subject before the New York County Medical Association in which I made the statement that every child with normal eyes and normal sight who strains to see at the distance becomes temporarily or more continuously near-sighted. There are no exceptions.

If one competent ophthalmologist can prove that I am wrong about one case, I am wrong about all the statements I have made about myopia. This experiment can be performed in the doctor's office or at his clinic and the facts determined with the aid of a retinoscope, an instrument used for measuring the amount of near-sightedness which may be present in the eye.

There were present at this meeting a large number of prominent eye doctors of the City of New York. They knew that I was going to make this statement and issue this challenge because I sent a copy of my paper to these gentlemen two weeks before I read the paper. It would have been very easy for any of them to have tested the matter and determined whether I was right or wrong, but when the Chairman of the Society called on them to discuss my paper they declined to say anything about it or to publicly deny it.

I have the records of many persons who threw away their glasses and now have perfect sight with normal eyes.

They did it.

Everybody can do it.

You can do it.

Hearst's International keeps its readers abreast of the big steps in the conquest of disease. Dreyer and his fight against Tuberculosis, in Hearst's International for October.

The following articles about Dr. Bates are from Ophthalmology Magazines, letters, newspapers.



BEATS ALL "MENTAL HEALING"

New York Physician Comes Forward With Really New Method for the Relief of Pain.

Dr. W. H. Bates, a well-known physician of New York, has discovered a new way to get rid of pain. It beats "mental healing" and other such methods hollow.

All you have to do to make the pain quit is to "see black." It is quite simple, but you must learn how.

Well, then, shut your eyes; cover them with the palms of your hands, so as to exclude all light, and presently you will see a perfect black. When the black is seen perfectly, a temporary, and perhaps a permanent, relief from pain always follows.

"By this means," says Doctor Bates, "surgical operations have been performed painlessly and teeth extracted without suffering. Distress from cold, heat, hunger, fatigue and even disease symptoms—such as fever, weakness and shock—have been relieved in this way. If soldiers could grasp the idea, not only suffering, but many deaths, might be prevented.

"A soldier in a trench full of water, if he can remember black perfectly, will not suffer from cold. He may succumb from weakness on the march, but will not feel fatigue. He may die of hemorrhage, but he will die painlessly. The method would also obviate the necessity for using morphine to relieve pain."

When once a person has been taught to see black, says Doctor Bates, he can easily learn to remember black at will. Merely to remember black will dismiss all pain.

Why not try it and see how it works?

HEALTH AND HAPPINESS

WILL A MENTAL PICTURE OF BLACK HELP TO RELIEVE PAIN?

By DR. LEONARD KEENE HIRSHBERG.
A. B., M. A., M. D. (Johns Hopkins University.)

MEMORY is a wonderful thing. You can remember easily happy, interesting, useful, valuable events and things. But you cannot remember pain. Try as you may, a pain is not impressed upon your mental cosmos. The pangs of sorrow, the anguish of mind after a stroke of grief or the pains of a wound, terrible as these are in reality, once they are gone for good, there is no memory left, especially of physical pain.

These facts have led Dr. W. H. Bates of New York to suggest to the surgeon generals of the army and navy of a simple method by which the use of "dope" and drugs to relieve pain can be avoided. It is suggested that a memory image of black, if it can be brought into thought, will blot out the real sensation of pain. The color, if it can be called a color, which, it appears, is easiest to see perfectly, is black.

To relieve pain, according to Dr. Bates, you are to close your eyes, cover them with the palms of your hands, and thus shut out all light. Most individuals with good vision and a little practice are soon able to train themselves to picture a perfect black.

When black is seen perfectly, Dr. Bates maintains, a temporary relief, which may become permanent, soon follows. It is said that teeth have been extracted, broken bones set, and surgical operations have thus been performed.

The sensation of cold, heat, fatigue, hunger, thirst, shock and the like are all said to have been relieved by remembering how to picture black before your eyes. Thus, if a soldier in a trench can recall the color black perfectly he may feel the icy water in which he is standing, but he will not suffer cold.

A soldier may succumb from weakness on the march, but he will not feel exhaustion if he thinks black.

Why the memory of black should behave so beneficially as a human anesthetic is not yet clear. It is, however, evident that the textures of mankind are apparently less disturbed by pain whenever the attention and the thoughts are directed at something else and away from the physical distress.

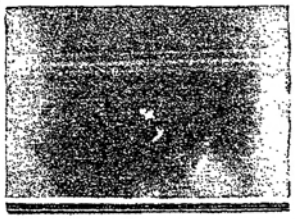
Black, it seems, can only be remembered thoroughly when mental control is absolute; when the bull's-eye of your attention is shot directly at black.

So simple an anesthetic or a counter-irritant is a memory picture of perfect black that it is logical and

SIX. SYRACUSE HERALD: SUNDAY MORNING, JULY 11, 1920. MAGAZINE SECTION

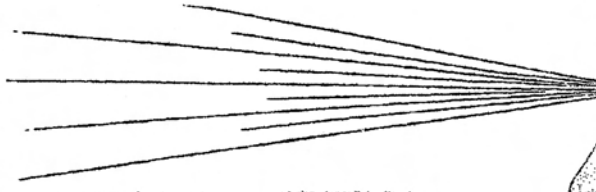
Has Nature Played Trick on Us? Are Our Eyes Fit Only for Tasks of Primitive Ancestors?

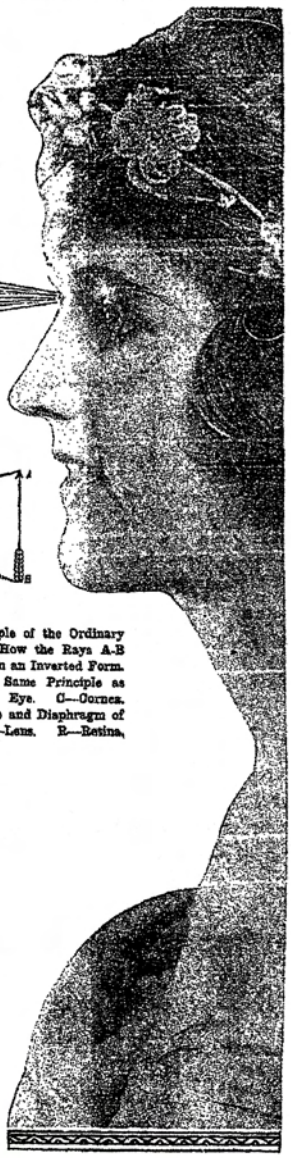




TWO REMARKABLE PICTURES WHICH IT REQUIRED TWO YEARS TO SECURE

Above, the Eye in Rest (distant vision). On the Right, Accommodation (near vision). Under the Magnifying Glass No Change Can Be Observed in the Size of the Two Images Reflecting an Electric Light, a Fact Upon Which Dr. Bates Bases His New Theory of Accommodation.





Spectacles May Be Banished by the Revolutionary Discovery of Dr. W. H. Bates, Who Holds That the "Helmholtz Experiment," Upon Which Recent Science Has Acted, Was at Fault, and That It Is the Eye Ball and Not the Pupil That Does the "Accommodating." ↳(Lens)

By OLIVE MARSHALL

HAS nature played a trick on man? Has she let him progress to the present heights of modern civilization, only to have him discover that his eyes were not intended for any tasks but those which occupied his primitive ancestors? Many scientists have come to such a conclusion. They say that man's eye was constructed for distant vision, for sighting game in the forest, or fish deep in the stream, and it is impossible for it to stand the strain of the printed page, the artificial light, and above all, the "movie." More and more people each year need glasses, and there might seem to be no hope for the future. Nature, it has been maintained, simply has not developed the eye to meet the demands made upon it today.

So say *most* scientists—but not all. Voices of protest are raised against this indictment of Dame Nature. One significant voice is that of Dr. W. H. Bates of New York. "It is man who is at fault," says Dr. Bates. "He has accepted without question the idea of one man, the great scientist Helmholtz, concerning human sight, and for over sixty years practically all treatment of the eye has been based on this one scientist's theory."

Helmholtz set out to discover what happens in the eye when it looks at an object at the near-point. All anatomists knew that when the eye was at rest, parallel rays of light coming from distant objects were focussed exactly upon the retina at the back of the round eyeball. The question was, How did the convergent rays of light from near objects contrive to get themselves focussed exactly upon the same surface?

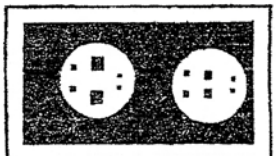


Diagram by Which Helmholtz Illustrated the Changes He Thought He Observed in Images Reflected from the Front of the Lens. A—Rest (distant vision); B—Accommodation (near vision); a—Images on Cornea; b—Images on Front of Lens; c—Images on Back of Lens. Middle Images in B Are Smaller Than in A and Have Approached Each Other.



Various Types of Eyes Illustrating the Great Divergence in Superficial Structure as Science Meets Them in the Course of Its Study.

How Helmholtz Solved the Problem.

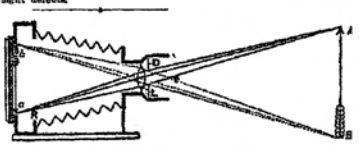
In the hope of solving this problem, Helmholtz began to study the images which are reflected from the two surfaces of the lens, front and back, and from the cornea when a small, bright light is held in front of and a little to one side of the eye. He easily convinced himself that no appreciable change took place in the corneal reflection and in the reflection from the back of the lens during changes of focus, because these images are very distinct and any such changes could easily be observed, if they took place. But the middle reflection, the one from the front of the lens, bothered him. It was very difficult to see this image, and sometimes he could not distinguish the form of the flame at all.

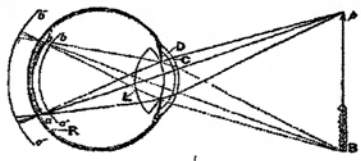
So he put two lights behind a screen having two rectangular openings, and arranged the whole so that the lights shone through these openings upon the cornea and lens, and formed two images upon each of the reflecting surfaces. He now noted the behavior of these images when the eye looked at a distant object and when it focussed for near vision (accommodation), and it seemed to him that in the latter case the two images on the front of the lens grew smaller and approached each other. From this he inferred that the lens became more convex during accommodation, because an image reflected from a convex surface is diminished in proportion to the convexity of that surface—as every one knows who has ever looked at the reflection of his own face from the back of a spoon.

Helmholtz appears to have been fully convinced of the correctness of his own observation, which he illustrated by the accompanying diagrams. But he was unable to find any satisfactory explanation of the way in which the supposed changes in the lens were brought about. Finally he concluded that the so-called ciliary muscle, by alternate contraction and relaxation, must change the shape of the lens; but he put forth this explanation merely as a theory, and explicitly stated that he considered it only "probable." Nevertheless, it is frequently stated today *as a fact* and it is upon the diagrams shown here that all subsequent study of the problem of the power of the eye to change its focus has been based.

Discounting Theory of Accommodation.

Now comes a new scientist who says that Helmholtz did not see what he thought he saw, and that he was quite right in being doubtful about the way the lens changed its curvature—because it doesn't change at all. And modern science has the camera to back up its claims. Dr. Bates was not convinced that the accepted theory about accommodation was right, so he started experimenting for himself. Day after day for a whole year he worked, trying—by the method of Helmholtz—to get images on the front of the lens that were distinct enough to be photographed. Day after day he failed even to get an image clear enough to justify any conclusion as to its behavior during the changes in the focus of the eye. Then finally a special adjustment of a 1,000-watt electric light was discovered whereby very distinct images were obtained on the lens. A photograph of this image was taken when the eye was at rest and again during accommodation (vision at the near-point), and these pictures did not resemble Helmholtz's drawings at all. Instead, they showed absolutely no change. Evidently the lens was the same when the eye focussed on a near point as when it was at rest.





Above, the Principle of the Ordinary Camera Showing How the Rays A-B Pass to the Plate in an Inverted Form. On the Left, the Same Principle as Revealed by the Eye. C—Cornea. D—Iris of the Eye and Diaphragm of the Camera. L—Lens. R—Retina.

A further series of pictures of images reflected from the cornea and sclera (white of the eye), showed the changes that the lens photographs did not show. These indicated that the whole eyeball changes its shape when the focus is changed. Images on the cornea and the front of the sclera became smaller during accommodation, indicating that the eyeball had elongated, making the front more convex; but images on the side of the sclera became larger when the eye focussed for a near-point, indicating that this part of the eyeball had become flatter.

There had been other scientists before and up to the time of Helmholtz who believed that it was the eyeball and not the lens that changed its shape during changes of focus, but none of them could prove his theory. It remained for a man of our own time, with electricity and the camera at his disposal, to present the proof of the correctness of the idea.

Those observations confirmed conclusions which Dr. Bates had previously arrived at as a result of observations upon his patients, and experiments on animals, viz.: That the accepted theory of accommodation is wrong. It is not the lens, but the eyeball that changes when we change the focus of the eye. When we want to look at a near object, two muscles which form an almost complete belt around the eyeball contract and lengthen it. When we want to look at a distant object, these muscles are relaxed, and the ball resumes its original spherical shape. The principle is the same as that which governs a camera.

To focus a near object on the plate, the camera is extended; while to focus a distant object, the lens is brought up close to the plate. So with the eye.

Muscular Control of Eyesight.

Of course, if this is true, it follows that all treatment of the eye based upon the old theories must be wrong. Dr. Bates has new methods of treating eye defects which are as original as his views of accommodation. He claims that all errors of refraction—nearsight, farsight, astigmatism and even old-age sight—are due to a mental stress resulting in imperfect functioning of the muscles on the outside of the eyeball. Shortsight is due to a persistent contraction of the muscles of accommodation: farsight, including old-sight, to a persistent contraction of another set of muscles running from the front backward; and astigmatism to the foregoing action of these various sets of muscles.

The cure for all these conditions, Dr. Bates finds in relaxation. There is no need for drugs; above all, there is no need for glasses. By relaxation alone he has cured not only many cases of imperfect refraction, but many other abnormal conditions of the eye. By the attainment of relaxation he has discovered that the training of the memory and imagination helps greatly. Perfect imagination (or picturization) means perfect relaxation and perfect sight; and when you have attained one, you have attained all three.

Dr. Bates's contention is indeed revolutionary. It must excite wide debate, first as to his primary contention, second as to the bearing of that contention upon the question of glasses. How far "accommodation" can be treated by consciousness, by non-mechanical or by drug treatment, is as certain to excite dispute as any other revolutionary proposition. But his experiments and his successes must furnish food for profound thought by the scientists and wide interest on the part of all who recognize the vital importance of any discovery relating to the eyes.

In fact, if Dr. Bates enforces new experiments upon those who have followed the Helmholtz theory without

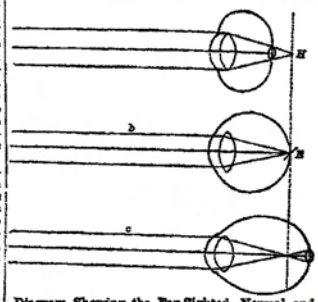


Diagram Showing the Far-Sighted, Normal and Near-Sighted Eyeballs. H—Far-Sighted. E—Normal. M—Near-Sighted. Lines Indicate How Rays Are Transmitted by the Three Types.



Modern scientist's state that both the eye and lens change shape, together to produce accommodation (clear close vision) and un-accommodation (clear distant vision).
The lens might also move as in a camera.
The pupil changes size when looking close, far, in light, dark and this also affects focus of light rays in the eye for perfect clear vision.

WHAT OCULISTS ARE DOING

DEFECTS OF VISION CURING WITHOUT USE OF GLASSES.

FACTS WHICH SHOW THAT MANY PERSONS WEAR SPECTACLES WHO NEED NOT—A SURGICAL OPERATION PROPOSED TO CURE ASTIGMATISM.

The common notion of an oculist is that he is a person who examines eyes and prescribes spectacles, using the knife once a week or so to remove a cataract or to straighten out a case of strabismus. Along with this notion goes the understanding that the nearsighted, the farsighted, the weakeyed, and all those who are suffering from astigmatism and other eye troubles, are incurable and must wear glasses. In other words, the oculist is generally supposed to be for the most part a sort of feeder to the optician. Even the makers of Webster's Dictionary seem to be of the opinion that the oculist is not much of a fellow, for after declaring that he is "one skilled in treating diseases of the eye," they append the disparaging qualification "or one who professes to cure them."

The truth is that the oculist is in many cases a curer of defects of vision and that the best eye specialists invariably endeavor to treat their patients without the use of glass, and count as their best performances the restoration of the power to see well in eyes which have been dimmed and the rectification of malformations which have existed from birth. Thousands who place themselves under the care of oculists, expecting to be sent with prescriptions to the spectacle makers, get what they are after in entirely different ways.

For example, a young woman whose eyesight had become very much impaired was ordered, first of all, to have ten or a dozen amalgam fillings drilled out of her teeth. She was told that she might take her choice between having the holes stopped up with gold and having all the teeth drawn. She was next ordered to stop wearing corsets, and next she was subjected to a course of treatment to allay a stomach trouble, a sort of mild dyspepsia. The doctor told her that though glasses might give her temporary help, pathological treatment must be resorted to to produce a permanent improvement in her eyesight.

Another young woman, an art student, went

that THE TIMES may do something to remove the prevalent notion than an oculist is able to do very little, except in the way of mechanical diagnosis of eye troubles and the prescription of spectacles. I hope this, not so much because I want the public to rate us properly, as because I want the people to know what oculists can do for them."

to an oculist in this city, complaining that for several months she had been steadily losing her power to see well. The oculist, after a careful examination, discovered in the young woman's nose a pointed bit of cartilage, which, pressing out against the side of the nose, was producing irritation. He applied cocaine to the irritated spot and immediately the patient could read "diamond finest" with perfect ease. The effect of the cocaine being very quickly spent, there was a return of the inability to see well. Then the oculist took a little saw and sawed off the bit of cartilage, and as soon as the operation was completed, vision was normal again. The doctor learned by inquiry that years before the young woman had broken her nose, and his diagnosis was that in the healing the bit of cartilage had formed, which, gradually hardening, had produced the effect already described.

For four years the patient saw perfectly. Then she broke her nose again and came once more for treatment, suffering, she said, just as she had previous to the earlier treatment. It was a curious thing, but the second fracture had produced a growth similar to that which had been removed and in precisely the same place. "We'll do the same thing as before," said the oculist. It was done, and the result was gratifying to both patient and operator.

As one goes about New-York he can hardly fail to take note of the fact that a great many little children are wearing glasses. Referring to this fact an oculist recently said: "Civilization causes it to some extent. For example, last Winter I prescribed glasses to relieve eye fatigue and nervous headaches, &c., for a young girl aged twelve years. She was the child of poor parents. I do not believe she had enough to eat nor enough of sunlight in the tenement house where she lived. The glasses helped her eyes. She moved into the country. Three months later she called to see me at the dispensary able to see perfectly well without glasses. She said that the glasses hurt her eyes. She was browned by the sun and had lost that tenement-house complexion which she had when I first treated her.

"Children are not fed properly. A case in point: A boy, cross-eyed, wore glasses to make him see straight. After his diet was so regulated that he had simple food at regular intervals he recovered and had no longer to wear glasses.

"A boy, nine years old, had chronic inflammation of the eyes relieved by glasses. He came to me. I took the glasses off and gave his parents a common-sense talk on cleanliness, fresh air, and proper diet, and they went away and carried out my directions. The boy is now perfectly well and wears no glasses.

"Here's a slightly different case—that of a girl, ten years old, who had myopia. She could not see the blackboard at school.

"'How many hours do you study?' I asked.

"'I study all day and evening and go to bed at 10.'

"'When do you play?'

"'I have no time to play. I have to study all the time to keep up with my class.'

"After I had stopped this nonsense the girl regained her sight without the use of glasses."

Discussing the general proposition that the best prescription for defective vision is not always one for spectacles, the oculist said: "The evidence is growing that we can cure more and more errors of refraction without glasses than ever before. If, then, we see the use of glasses increasing, it it is because of the great relief immediately obtainable from them, and because treatment to cure without glasses is generally troublesome, tedious and expensive. It is not everybody who can afford treatment but I believe that many who could afford it content themselves with glasses simply because they do not know that they may get relief in any other way. I shall be very glad if through THE TIMES the impression may be corrected, which seems to be general, that glasses are always necessary when they are prescribed. I want the public to know that oculists are not simply prescribers of glasses."

Dr. W. H. Bates of this city, in a recent number of the New-York *Medical Journal*, published an article in which he gave the records of a number of cases of near-sightedness, which showed that a great many persons suffering from even that supposed to be irremediable disease of the eye had been successfully treated without the use of glasses. The conclusion which he appended to the records was in these words:

"The vision in many cases of myopia (near-sightedness) can be improved very much by treatment without glasses, and frequently this improvement is so marked as to render glasses unnecessary."

Speaking to a TIMES reporter, Dr. Bates said: "Often it happens that nearsightedness is caused by affections of the throat and nose, which can be easily treated. For instance, a sailor thirty-five years old became nearsighted. The cause was a slight inflammation of his eyelids, nose, and throat. Treatment cured this, and he was able to see without glasses. Another case was that of a schoolboy who had to wear glasses for nearsightedness. He had a small stoppage of one nostril, hardly of sufficient importance to demand attention. The removal of this at once cured him, and he now has perfect sight without glasses.

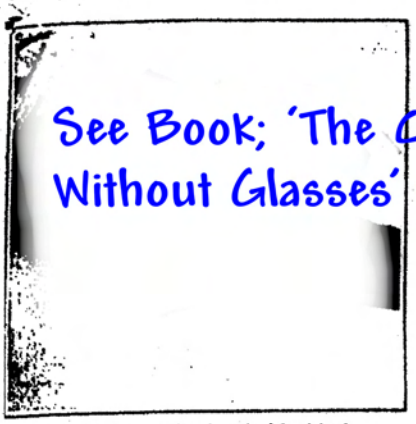
"A physician, aged thirty, had worn glasses for ten years to see at a distance. He had a chronic trouble with his nose and throat. Treatment of his nose was successful, and it resulted in the cure of his defective eyesight. He found, to his great delight, that he could see perfectly without glasses. A stenographer similarly affected was similarly treated, and with equally satisfactory results. I could mention scores of cases of a like nature. Every oculist meets with such cases, and I may say that, here in New-York at any rate, the oculists are attempting more than ever before to give relief to their patients without the use of glasses. I believe that in the next few years some important discoveries will come from these efforts which will be fraught with great good to the people."

Questioned about astigmatism, which is a very common disease of the eyes, Dr. Bates made some very interesting observations. An astigmatic eye, he said, was one the meridians of which were of unequal length. Experiments had satisfied him that an operation in surgery, if it could be properly performed, would cure this inequality and give the eye perfect vision in place of the blurred vision which is the characteristic of the astigmatic eye.

"I have found," said the doctor, "a great many cases of astigmatism caused through the shortening of a meridian of the eye through accident. A wound made in the eye by a bit of iron shaving when it has healed has contracted a meridian and so destroyed the sphericity of the eye. Now, why would not a wound made intentionally with a surgeon's knife at right angles to the accidental wound restore the sphericity? Start them with an eye that has not been injured but which has unequal meridians. Why might not a puncture in the cornea of the eye at right angles to the longer meridian produce a contraction? And if the wound were made of just the proper size would not the result be to equalize the meridians?

"This operation would not be a dangerous one like that once performed by a German oculist who attempted to equalize the meridians by cutting a slice out of the eye and sewing the parts together. Any oculist could perform the operation without danger of profaning the result which attended the German oculist's experiment, the loss of the eye. The difficulty would be in regulating the operation. The problem, I believe, can be solved as easily as the same problem was solved in the case of operation for strabismus. At any rate the matter is worth studying, and I am free to say that I am interesting myself in it to a large extent."

"I presume," said Dr. Bates in conclusion, "that other oculists have said the same thing to you, but at the risk of repeating what they may have said, I feel like expressing the hope



A backward pull makes the animal far-sighted



Pulling the string forward produces near-sightedness



A pull at right angles to the eyeball causes astigmatic vision

By pulling in different ways upon a string fastened to the eye muscles of a rabbit every kind of defective refraction may be produced

See Book; 'The Cure Of Imperfect Sight By Treatment Without Glasses' for Clear Photos of Rabbit Experiments.

New Light Upon Our Eyes

An Investigation Which May Result in Normal Vision for All, Without Glasses

By Mary Dudderidge

THE revelations regarding the physical condition of the American people which have resulted from the amination of men for military service under the Draft w have come as a shock to the nation, but are no more an was expected by those who had previously been ring attention to such matters. Even under a liberal terpretation of the lowered standard which we adopted 1909, when we abandoned the attempt to raise an my and navy with normal vision, defective eyesight s been one of the leading causes of rejection for service both the Army and Navy, if it has not actually headed list. In 1915 it was by far the most common of the fects found among applicants for enlistment in the Navy d Marine Corps. The total number refused for this use among 108,392 was 12,374, while flat feet came t with only 8,188 cases. This too was under a ndard which, while higher than that of the Army d Navy, is only three-quarters normal.

The fact is that defective sight is a world-wide plague, aking its appearance along with civilization, and inasing just in proportion as modern modes of living are opted. Statistics for the last fifty or one hundred ars show that nine out of every ten persons over 21 ually have imperfect sight. At 31 the proportion larger. Above 40 it is almost impossible to find a an or woman with perfect sight. For 100 years the edical profession has wrestled in vain with the problem, ding no means compatible with the conditions of modern for preventing errors of refraction, and no means of ieving them except eyeglasses. These, at their best, poor substitutes for natural sight and often fail to ieve discomfort or to stay the progress of the malady, ich is a much more serious one than most people imag-. The oculist knows that present conditions are ninous of evil for the future, that the near-sighted, farhted, or astigmatic eye is disposed to all sorts of ocular nases.

At the present time the general attitude of the medical ofession toward this evil, which we have learned to take htly only because it is so common, is one of hopelessness. riters of books on the subject, practising ophthalmists d others, while admitting the inadequacy of the eyeses, all assure us that it is the only remedy for errors of fraction; while the only means of prevention they can ggest is that of sparing the eye as much as possible from e close application necessitated not only by the modern educational system, where most of the trouble begins, but by many of the employments upon which human life now depends. Some have even concluded that nature, who could not have been expected to provide for such a tremendous change as has taken place in the environment of the human animal, was not in a position to make the eye properly, while several scientists of repute have held that a moderate degree of myopia is a kind of a natural adaptation, and should not be looked upon as abnormal. And while it is a commonplace that the hernia and the varicose veins so commonly found can be remedied by comparatively simple operations, that tuberculosis in its earlier stages will yield to rest and food and fresh air, and even that incipient cancer can be cut out, defects of vision are accepted as incurable, and no means of alleviating them are suggested except the one, fraught with peril to the soldier, of placing convex or concave glasses before the eyes.

It is therefore not a little surprising to find one eye specialist who has actually been curing errors of refraction without glasses for 30 years, and who as the result of a remarkable series of experiments has been able to present evidence which appears to invalidate most of the theories on which the present practice of opthalmology is based. Dr. William H. Bates of New York is already well known as the discoverer of the properties of adrenalin, an extract from the suprarenal gland of the sheep which is now used all over the world as an astringent and haemostatic; but his remarkable experiments on the eyes of animals and the startling conclusions that has drawn from them have, as yet, attracted comparatively little attention. Reported only in a few isolated articles, they have not yet found their way into the general literature of the subject and have scarcely been heard of by the lay public. Yet they promise to revolutionize the practice of opthalmology and are at the present moment of tremendous import to the country.

We were all taught at school that the accommodation of the eye depends upon an alteration in the curvature of the crystalline lens. Now defects of vision have been found to be associated with deviations from the normal in the shape of the eyeball, which ought to be a perfect sphere; and such deformations are always supposed to be permanent. In near-sight the sphere is elongated, so that it can be focussed accurately only on near objects. Rays of light coming from a distance are focussed in front of the retina instead of upon it. In far-sight the eyeball is too short, and the light rays are focussed behind the retina. In astigmatism the eyeball becomes lopsided, the deviation from the normal curvature not having been uniform. In an effort to overcome these conditions the crystalline lens is supposed to alter its curvature, through the agency of what is known as the ciliary muscle; on which theory the unfortunate muscle would have imposed upon it not only the ordinary labors of accommodation, but the duty of compensating for refractive errors; and from these labors it would practically never be free so long as the eye was open. The thought is really an appalling one, and is enough to drive the victim to eyeglasses, even if the physical discomfort of the situation did not do so.

Under the influence of this theory Dr. Bates at first diagnosed such cases of myopia and other refractive errors as he succeeded in curing as being merely functional, without any permanent change of shape in the eyeball. His success in treating the more severe forms of refractive error, however, led him to doubt the existence of an incurable class, and five years ago he undertook the series of experiments above alluded to for the purpose of testing the accepted theories. By the manipulation of the exterior muscles of the eyeball, the function of which has long been a matter of dispute, he was able to make the eyes of fishes, rabbits and other animals near-sighted, far-sighted or astigmatic at will. He therefore concluded that it was by the abnormal action of these muscles, rather than through the agency of the crystalline lens, that similar conditions were produced in the human eye, a view which was confirmed by observations on the human eye itself. He also observed accommodation taking place in eyes from which the crystalline lens had been removed.

In a series of experiments not yet concluded, Dr. Bates is attacking the problem from a new angle. Since light reflected from a curved surface must change its focus if there is any change in the curvature of that surface, he is photographing the filament of an electric light reflected from various surfaces of the eyeball. As no photographer could be found to do this work, he had to learn photography himself for the purpose, and it was two years before he was able to get any satisfactory pictures. The testimony of these photographs is that the whole eyeball

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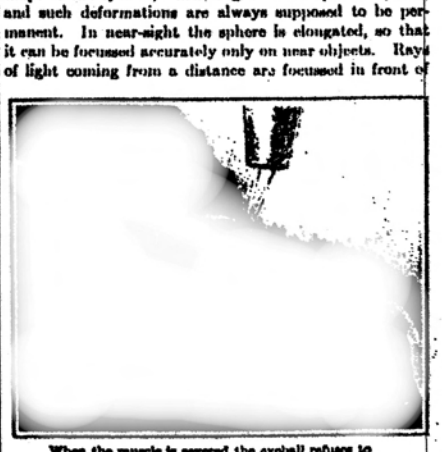
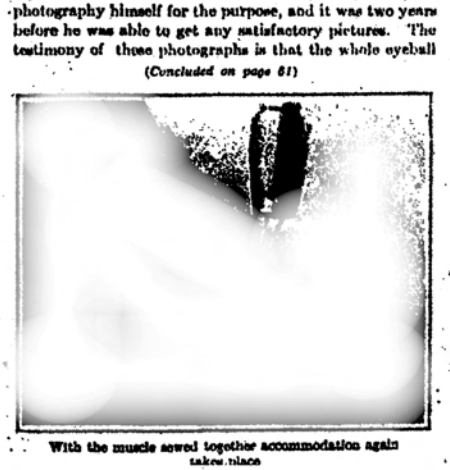
With the muscle intact the eyeball responds to electric stimulus



When the muscle is severed the eyeball refuses to accommodate



With the muscle sewed together accommodation again takes place

New Light Upon Our Eyes

(Concluded from page 53)

changes its shape during accommodation, and that the crystalline lens does not. The image has changed on the sclera, or white of the eye, and on the cornea, growing larger or smaller according as the convexity of the reflecting surface was altered; but no change was observed when it was reflected from the lens. These results are as yet wholly tentative; the investigation upon which they are based is still in progress, with the hope of attaining greater accuracy.

These accumulated observations have left no doubt in Dr. Bates' mind that the deformations of the eyeball upon which errors of refraction depend are due to an abnormal strain upon the extrinsic muscles of the orb of vision, and that, far from being permanent, they last only so long as the strain continues. This abnormal action always results from a strain to see, conscious or unconscious. When the eyes strain to see distant things the oblique muscles contract and by elongating the eyeball produce the myopic refraction. When they strain to see near things the recti muscles contract and by flattening the eyeball produce the hypermetropic refraction. The problem of curing errors of refraction, therefore, is to induce the eyes to take it easy, and look at things without effort.

This is accomplished by a system of eye education so simple that patients, when they are cured, proceed at once to cure their relatives and friends. Teachers have also used it successfully to prevent and cure myopia in their pupils. More than one thousand children with defective sight have regained normal vision by this means. In one class in which there had been 27 eye defectives, 25 were reported cured, while one truant and one incorrigible had become good students, because they were now able to study without pain.

The fundamental principle of this new system of eye training is what Dr. Bates calls central fixation. The trouble with the civilized eye, he says, is that we use it as though it were a photographic camera. The camera can see everything which falls upon its sensitive plate equally well, but the human eye is not built that way. The retina has more nerve cells in the center than any where else, and therefore is designed to see one point better than others in its field of vision. In other words, we see best in the direction in which we are looking. When we submit to this, the eye, is at rest, and, Dr. Bates asks us to believe, contrary to all previous testimony and experience on the subject, it can never tire, no matter how much it is used for near work or any other kind of work. It can work all day and all night, he says, and while the rest of the body will tire it will not. But when the eye attempts to see every point in its field of vision about as well as the central point, not only is its visual power lowered, but it is subjected to a severe strain, as anyone can observe for himself by trying to see every part of any surface of four or five inches in extent, or even much less, equally well at one time. This strain Dr. Bates believes to be at the bottom of most eye troubles.

Central fixation is attained by two methods, practice and rest, the latter coming first. To rest the eyes the patient is told to look at something black and then cover his eyes in such a way as to exclude the light and avoid pressure on the eyeballs. If he remembers the black perfectly, he will see black. Otherwise he may see all the colors of the rainbow, but usually sees gray. When one does succeed in seeing black the effect is very surprising. The vision is noticeably improved, though it may be only for a moment, and letters on the test card that one was unable to see before stand out clearly. The explanation offered for this phenomenon is that the eyes and brain are relaxed by seeing black, thus enabling the former to function normally. Incidentally if one has had any headache or pain in the eyes it will probably be gone. Whether the black is seen or remembered, the effect is similar, and he who wants to see normally must learn to remember black just as well with the eyes open as shut.

The familiar Snellen eye chart, used by all oculists to test the eyes of their patients, is used as a basis for the practice of central fixation, the patient being directed to try to see one part of a letter better than another. The relief which this simple expedient gives to tired eyes is astonishing, and the smaller the letter selected for the purpose the greater it is.

By means of this simple system of eye education Dr. Bates maintains that the organs of vision can be kept always in a normal condition. The savage presumably got this education from his daily life. He was obliged, as a condition of continued existence, to focus his eyes for accurate vision at all distances. If he didn't he was eliminated. We who are protected from all the dangers from which our savage forebears could protect themselves only by their good eyesight, and whose eyes are limited for a great part of the time to a narrow range of vision, quite naturally lose this power. Under a similar conditions wild animals lose it also, becoming myopic in captivity, although they neither read nor write nor sew nor set type. The remedy is not to close our schools and stop our printing presses and return to a primitive condition in which there was no astimatism or short sight, but to practice the art of seeing perfectly for a few minutes every day.

Health and the Eyes

YOUR EYES HAVE TOLD ME. By Dr. Louis H. Schwartz. 208 pp. New York: E. P. Dutton & Co. $2.75.

By CHARLES FRIEDMAN

TO the trained specialist the eyes are more than just organs of vision. They are related to other organs, a point Dr. Schwartz emphasizes in discussing the immense value of the eyes as a barometer of one's general health. Often the eyes give warning signals of disease elsewhere in the body and hence they are a main factor in diagnosis and treatment. "No other organ," he says, "bears a comparable relationship to the body as a whole."

Consulting ophthalmologist to the City of New York and for the past ten years attending surgeon and instructor in ophthalmology at the Harlem Eye and Ear Hospital, Dr. Schwartz stresses definitions of the four O's—optician, optometrist, oculist and ophthalmologist. The last two are synonomous, specializing in diseases of the eye. Unlike the optician and optometrist, they are regular physicians who are acquainted not only with the pathology and treatment of the eye but of the whole human body.

The author regards it as unfortunate that there are still many people who are not aware of this fact. He has found patients reluctant to talk openly and answer intimate questions relevant to their eye problems. They are surprised when he tells them that oculists are frequently dependent on specialists in other fields—the surgeon, the neurologist, the pediatrician and all the others—for data and assistance of various kinds. "When you have occasion to visit an oculist," he urges, "it is well to remember that he is a physician first."

New and Interesting Facts from Science and Life

SOME NEW LIGHT on THE EYE

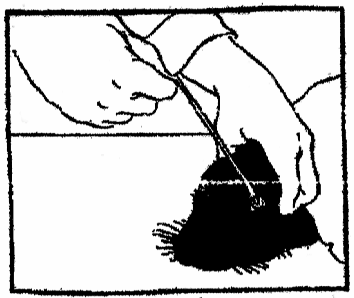
How DEFECTS of VISION May Be CORRECTED Without the Aid of GLASSES

DEFECTIVE sight is a world-wide plague, making its appearance along with civilization and increasing just in proportion as modern modes of living are adopted. Statistics for the last 50 or 100 years show that nine out of every ten persons over 21 usually have imperfect sight. At 21 the proportion is larger. Above 40 it is almost impossible to find a man or woman with perfect sight.

For 100 years the medical profession has wrestled in vain with the problem, finding no means compatible with the conditions of modern life for preventing errors of refraction, and no means of relieving them except eyeglasses. These, at their best, are poor substitutes for natural sight and often fail to relieve discomfort or to stay the progress of the malady, which is a much more serious one than most people imagine. The oculist knows that present conditions are ominous of evil for the future, that the near-sighted, far-sighted or astigmatic eye is disposed to all sorts of ocular disease.

At the present time the general attitude of the medical profession toward this evil, which is taken lightly only because it is so common, is one of hopelessness.

In this connection, revelations regarding the physical condition of the American people which have resulted from the examination of men for military service under the draft law have come as a shock to the nation, but are no more than was expected by those who have previously been giving attention to such matters. Even under a liberal interpretation of the lowered standard which was adopted in 1909, when Uncle Sam abandoned the attempt to raise an army and navy with normal vision, defective eyesight has been one of the leading causes of rejection for service in both the army and navy, as it has not actually needed the list. In 1915 it was by far the most common of the defects found among applicants for enlistment in the navy and marine corps. The total number refused for this cause among 104,892 was 12,874, while flat feet came next with only 3188 cases. This, too, was under a standard which, while higher than that of the army and navy, is only three-quarters normal.

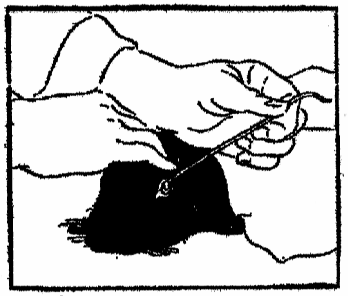


How the Backward Pull of a String Attached to the Eye Muscles of a Rabbit Made the Animal Far-Sighted.

Writers of books on the subject, practising ophthalmists and others, while admitting the inadequacy of the eyeglass, all declare that it is the only remedy for errors of refraction.

"It is therefore not a little surprising," says Mary Dudderedge in the Scientific American, "to find one eye specialist who has actually been curing errors of refraction without glasses for 20 years, and who as the result of a remarkable series of experiments has been able to present evidence which appears to invalidate most of the theories on which the practice of opthalmology is based.

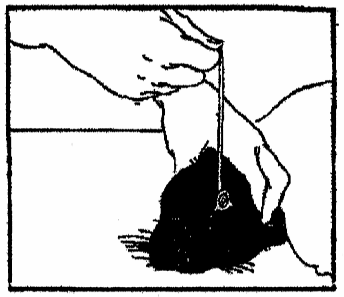
"Dr. William H. Bates of New York is already well known as the discoverer of the properties of adrenalin, an extract from the suprarenal gland of the sheep which is now used all over the world as an astringent and haemostatic, but his remarkable experiments on the eyes of animals and the startling conclusions that have been drawn from them have, as yet, attracted comparatively little attention, yet they promise to revolutionize the practice of opthalmology and are at the present moment of tremendous import to the country."



Near-Sightedness Is Produced by Pulling the String Forward.

Miss Dudderedge tells how Dr. Bates's success in treating the more severe form of refractive error, however, led him to doubt the existence of an incurable class, and how he undertook the series of experiments for the purpose of testing the accepted theories. By the manipulation of the exterior muscles of the eyeball, as shown in the three accompanying illustrations, the function of which has long been a matter of dispute, Miss Dudderedge says that Dr. Bates was able to make the eyes of fishes, rabbits and other animals near-sighted, far-sighted or astigmatic at will. "He therefore concluded," continues this writer, "that it was by the abnormal action of these muscles, rather than through the agency of the crystalline lens, that similar conditions were produced in the human eye, a view which was confirmed by observations on the human eye itself. He also observed accommodation taking place in eyes from which the crystalline lens had been removed.

"In a series of experiments not yet concluded, Dr. Bates is attacking the problem from a new angle. Since light reflected from a curved surface must change its focus if there is any change in the curvature of that surface, he is photographing the filament of an electric light reflected from various surfaces of the eyeball. As no photographer could be found to do this work, he had to learn photography himself for the purpose, and it was two years before he was able to get any satisfactory pictures. The testimony of these photographs is that the whole eyeball changes its shape during accommodation, and that the crystalline lens does not. The image has changed on the sclera, or white of the eye, and on the cornea, growing larger or smaller according as the convexity of the reflecting surface was altered; but no change was observed when it was reflected from the lens. These results are as yet wholly tentative; the investigation upon which they are based is still in progress, with the hope of attaining greater accuracy.



Pulling the String at Right Angles to the Eyeball Causes Astigmatic Vision.

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"This is accomplished by a system of eye education so simple that patients, when they are cured, proceed at once to cure their relatives and friends. Teachers have also used it successfully to prevent and cure myopia in their pupils. More than 1000 children with defective sight have regained normal vision by this means. In one class in which there had been 27 eye defectives, 25 were reported cured, while one truant and one incorrigible had become good students, because they were now able to study without pain.

"The fundamental principle of this new system of eye training is what Dr. Bates calls central fixation. The trouble with the civilized eye, he says, is that we use it as though it were a photographic camera. The camera can see everything which falls upon its sensitive plate equally well, but the human eye is not built that way. The retina has more nerve cells in the center than anywhere else, and therefore is designed to see one point better than others in its field of vision. In other words, we see best in the direction in which we are looking. When we submit to this the eye is at rest and Dr. Bates asks us to believe, contrary to all previous testimony and experience on the subject, it can never tire, no matter how much it is used for near work or any other kind of work. It can work all day and all night, he says, and while the rest of the body will tire it will not. But when the eye attempts to see every point in its field of vision about as well as the central point, not only is its visual power lowered, but it is subjected to a severe strain, as any one can observe for himself by trying to see every part of any surface of four or five inches in extent, or even much less, equally well at one time. This strain Dr. Bates believes to be at the bottom of most eye troubles.

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"The familiar Snellen eye chart, used by all oculists to test the eyes of their patients, is used as a basis for the practice of central fixation, the patient being directed to try to see one part of a letter better than another. The relief which this simple expedient gives to tired eyes is astonishing, and the smaller the letter selected for the purpose the greater it is.

"By means of this simple system of eye education Dr. Bates maintains that the organs of vision can be kept always in a normal condition. The remedy is not to close our schools and stop our printing presses and return to a primitive condition in which there was no astigmatism or short sight, but to practice the art of seeing perfectly for a few minutes every day."

Now Cross-Eyed Tommy Looks Straight At Future



EYES RIGHT for Caroline Gowdy as she performs eye muscle strengthening exercise. As the instructor (left) moves the the string fastened between two pencil-like tubes. Caroline follows it with her eyes. The exercises is designed to help the eyes co-ordinate.

By FRED ZAVATTERO
NEA Staff Correspondent

SEATTLE, Wash. —(NEA)—"Yah! Yah! Cross-eyed can't be on our side."

For 15 years Tommy suffered while his schoolmates poked fun at him for his crossed-eyes and thick-lensed glasses. But now Tommy has taken off his glasses. He doesn't need them. His eyes are straight.

To the boy and his parents, it's unbelievable. But to the men and women who developed the technique of correcting eye defects without the use of glasses, it's just a sample of what can be achieved by a new system for correcting vision.

A New York oculist, Dr. W. H. Bates, gave up his practice in the early part of this century to seek a new way of treating his patients. Eyeglasses, he knew, don't always help. Bates found another way.

After a number of experiments, Bates discovered that vision defects were often caused by the habitual imporper use of the eyes.

He also found that this improper usage was related to mental and emotional strain. By easing the strain and teaching the eyes to see in a relaxed way, a large percentage of his patients regained normal vision.

Since his death in 1931, the doctor's work has been carried on by the American Association for Eye veloped for relaxing the eyes. "Palming," or covering the eyes with the palms of the hands at regular intervals, is restful. Blinking rapidly is helpful.

Exposing the eyes to the sun —"sunning"—has helped to correct eye ailments. "Dark glasses may give you Hollywood glamor, but they don't do the eyes any good," reports one instructor.

"Above all," eye trainers caution, "use your eyes and keep them in motion. The lover who stares for hours at the picture of his heart's desire may satify his soul, but he's ruining ihs eyes."

School children, who worry about their lessons, often develop nervous tension which creates eye strain. Once their worries are relieved, their vision improves.

In spite of active opposition from some groups, the Bates method is arousing interest and has chalked up some successes.

A 24-year-old woman who wore glases for 11 years now has normal vision without glasses. She has been training her eyes less than two months.

After six weeks' work, an eight-year-old girl, near-sighted and crossed-eyed, now has normal vision. Her schoolwork has improved along with her sight.

The best record in Seattle was achieved by a 63-year-old man who wore glasses for 50 years. With only light perception in one eye and only 25 per cent vision in the other when he started, he has gained almost normal sight in less than two years. His instructors think he will recover completely within another year.

Some Seattle schools use the Bates method to prevent eye tension and

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE JOURNAL'S BUREAU OF INVESTIGATION, OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER GENERAL MATERIAL OF AN INFORMATIVE NATURE

THE OPTICAL THEORIES OF W. H. BATES

"Throw Away Your Glasses" and Buy My Book

W. H. Bates, M.D., of New York City has been urging for some time that people with errors of refraction "throw away their glasses" and purchase his book "Perfect Sight Without Glasses," price $5.00. This book, we are told, "demonstrates that all persons wearing glasses are curable without them." Until recently, Dr. Bates' advertising efforts, while somewhat extensive, have not been of such a nature as to warrant much attention being paid to his activities in this line. However, a recent issue of a popular magazine of wide circulation contains an article by Dr. Bates promulgating his weird theories. Going to the public under such respectable auspices as this, the propaganda and preposterous theories of Dr. Bates assume an importance out of all proportion to their scientific value.

The sum and substance of the Bates' theory seem to be that any person suffering from errors of refraction may train his eyes to perfect vision by performing certain ocular exercises and exposing his eye to intense light. This hypothesis is not only unsupported by, but is very definitely opposed to, the accumulated evidence of the science of ophthalmology.

When a physician promulgates theories that are unsupported by scientific evidence and opposed to the accumulated knowledge of experts in its particular field, and especially when he commercializes such theories it is proper to inquire into his professional antecedents.

According to information on file, William Horatio Bates was born in Newark, N. J., in 1860; was graduated in 1885 by Columbia University, College of Physicians and Surgeons; was licensed in New York the same year and in North Dakota in 1903. Newspaper clippings record that in August, 1903, Dr. Bates mysteriously disappeared from New York City. Two months later he was discovered in London, England, "acting as an assistant in a hospital." He is alleged to have given two explanations of his disappearance. One was that he had been called to perform an operation on a sailor and that, while doing this, the ship in which the sick man lay sailed away. The other explanation was that he had left New York "while suffering from an acute case of aphasia" (amnesia?). Two days after being found in London he again disappeared and his name did not appear in the newspapers for nearly nine years. Then, in May, 1911, the New York papers reported that one of Dr. Bates' old friends had "found him quite accidentally in Grand Forks, N. D." and had persuaded him to return to New York. While the newspaper accounts give the impression that Dr. Bates' whereabouts from 1903 till 1911 were unknown, the medical directories show that Dr. Bates was in Grand Forks from 1904 to 1910 inclusive. He seems to have been a member of the local medical society during most of that time. Dr. Bates has been a member of the Medical Society of the County of New York for some years and, through this, has qualified as a Fellow of the American Medical Association.

Dr. Bates' bizarre claims and methods regarding refraction began to be brought to the attention of THE JOURNAL in 1913 when letters from laymen were received asking about his special "treatment for poor eyesight." In 1917 Bernarr Macfadden, the "physical culture" faddist, collaborated with Dr. Bates in turning out what was heralded as "A New Course of Eye Training." This was heavily advertised in *Physical Culture*, a sheet whose advertising pages have reeked with medical and quasi-medical freaks, fads or fakes. In addition, the public was circularized by *Physical Culture* urging it to purchase this "course." Later, for some reason, Dr. Bates' name was dropped from the advertising but Macfadden and *Physical Culture* continued to feature the course. The title was changed to "Strengthening the Eyes." This is described as "Prepared by Bernarr Macfadden in Collaboration with one of the World's Leading Eye Specialists."

In July, 1919, Bates began publishing *Better Eyesight*, "A Monthly Magazine Devoted to the Prevention and Cure of Imperfect Sight Without Glasses." This is essentially an advertising house-organ for Dr. Bates. It is not admitted to second-class rates. While the publication purports to be sold at 20 cents a copy or $2.00 a year, the thing is, apparently, sent out broadcast without charge.

Some of the material in *Better Eyesight* reads as though it were the product of a psychopathic ward. As an example of Dr. Bates' lucid style, we quote the following from the first issue:

"When he [the patient] comes to realize, through actual demonstration of the fact, that he does not see best where he is looking, and that when he looks a sufficient distance away from a point he can see it worse than when he looks directly at it, he becomes able, in some way, to reduce the distance to which he has to look in order to see worse, until he can look directly at the top of a small letter and see the bottom worse, or look at the bottom and see the top worse."



Cover of an advertising booklet widely circulated by the Physical Culture Publishing Company in an attempt to sell to the public an alleged course in strengthening the eyes.

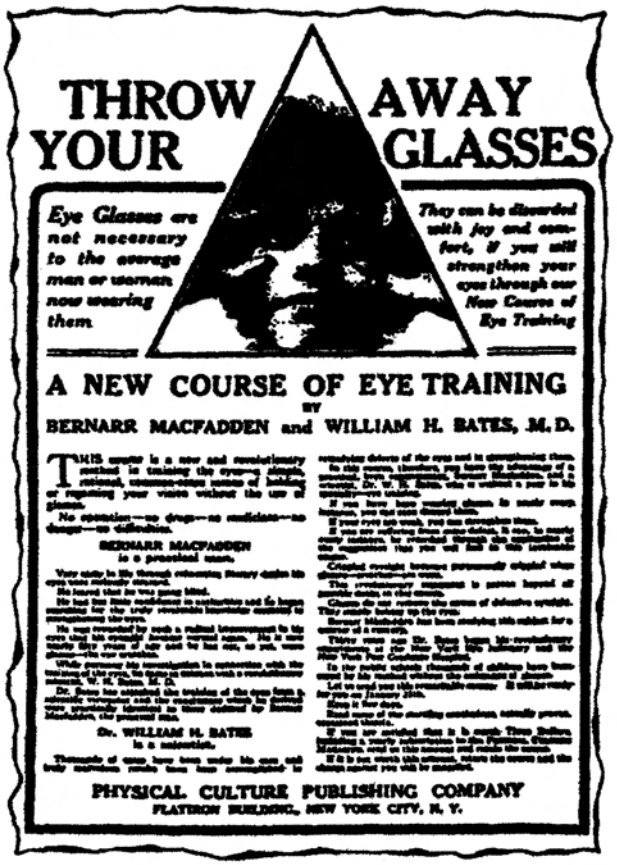
Could anything be plainer? But errors of refraction, it seems, are not the only conditions that Dr. Bates' methods will cure. At the time of the influenza pandemic *Better Eyesight* featured an alleged "quick cure" for influenza. Thus we read:

"When one palms perfectly, shifts easily, or has a perfect universal swing, not only the muscles which control the refraction, but the muscles of the arteries which control the circulation of the eyes, nose, lungs, kidneys, etc., are relaxed, and all symptoms of influenza disappear. The nasal discharge ceases as if by magic, the cough is at once relieved, and if the nose has been closed, it opens. Pain, fatigue, fever and chilliness are also relieved. The truth of these statements has been repeatedly demonstrated. The Editor is very proud of this discovery which is now published for the first time."

These are but specimens of what may be found in almost any issue of *Better Eyesight*. Many issues contain testimonials from alleged cured patients.

Dr. Bates seems to be an active member of that egregious organization, the "Allied Medical Associations," a concern that caters to physicians who live and move in the twilight zone of professionalism. In 1920 his name appears as fourth vice-president of the "Allied Medical Associations" and in 1921 he read a paper before the organization—and, of course, received the necessary newspaper publicity.

In closing, we cannot do better than quote from an editorial on Dr. Bates' theory that appeared in the *American Journal of Ophthalmology* more than three years ago under the title



A typical advertisement from *Physical Culture* advertising the "course" prepared by Dr. Bates and Bernarr Macfadden in collaboration:

"Science Versus Sensationalism." After calling attention to the fallacy of Dr. Bates' theories and the entire lack of scientific evidence for them, that journal said:

"Of course this hypothesis takes its sensational value from the fact that a great many people do not like to wear glasses. Thousands that are wearing them would like to discard them, and tens of thousands who do not wear them prefer to strain their eyes rather than give the needed assistance to their focusing powers. Such people would welcome any 'system' that would enable them to get along without glasses, as they would welcome any system that enabled them to live without paying for what they eat or wear."

The Optical Industry/Medical Association wrote many articles against Dr. Bates work in an attempt discourage the public from learning the Bates Method.
The doctors preferred to sell eyeglasses, surgery, drugs.

BATES: "CURE OF IMPERFECT SIGHT"

The Cure of Imperfect Sight by Treatment Without Glasses. By W. H. Bates, M. D. New York: Central Fixation Publishing Co. 1920.

In this book, Doctor Bates presents a résumé of clinical observations and animal experiments which have led him to the conclusion that the accepted teaching about accommodation and errors of refraction is wrong. He believes that accommodation is controlled, not by the lens but by the muscles on the outside of the eyeball, and that errors of refraction (including presbyopia) are due to a functional derangement in the action of these muscles. Hence, he concludes that all errors of refraction (again including presbyopia) are preventable and curable.

This derangement in the action of the muscles he attributes to the influence of the mind, and a system of treatment designed to secure mental relaxation is presented. These methods are said not only to cure errors of refraction, but various other conditions long held to be incurable.

One chapter is devoted to the prevention and cure of imperfect sight in school children and a method is described which has been used in the Public Schools of New York, Rochester, Grand Forks, N. D., and other cities. The author states that this method has been the means of curing defects of vision in thousands of children and that it has also prevented the development of such defects, as was demonstrated by comparative statistics.

BATES, William Horatio, physician, was born in Newark, N.J., Dec. 23, 1860, the son of Charles and Amelia (Halsey) Bates. He was graduated A.B. at Cornell university in 1881 and received his medical degree at the college of physicians and surgeons in 1885. Establishing a practice in New York city, he served for a time as clinical assistant at the Manhattan Eye and Ear hospital and was attending physician at Bellevue hospital, 1886–88, the New York Eye infirmary, the Northern dispensary and the Northeastern dispensary, 1886–98. He was an instructor in ophthalmology at the New York Post-Graduate medical school and hospital, 1886–91. In his professional work Bates at first devoted his attention to the various organs of the head but finally restricted himself to the eye alone. He resigned his hospital appointments in 1896 and for several years engaged in experimental work. After practicing for several years at Grand Forks, N.Dak., he returned to New York and was attending physician at the Harlem hospital during 1907–22. In his researches Bates proved experimentally that the normal fixation of the eye is central, but never stationary, and the technique developed by him for treating imperfect eye sight without the use of glasses was based on this principle. From a physiological point of view, this technique was but the practical application of the psychological theory of the field of consciousness, which is predicated as a point of focus, the so-called point of apperception, surrounded by a field of increasing vagueness. His method was to develop central fixation by training the patient in the dual art of relaxing and focusing the eyes. While carrying on his experiments he developed a method of photographing the eye to reveal changes in surface curvature as the eye functioned. The work is discussed in "A Study of Images Reflected from the Cornea, Iris, Lens, and Sclera" (N.Y. Med. Jour., May 18, 1918). His researches on the influence of memory upon the function of vision are described in "Memory as an Aid to Vision" (N.Y. Med. Jour., May 24, 1919). In 1894, while seeking to determine the therapeutic effect on the eye of the active principles of the ductless glands, he discovered the stringent and hemostatic properties of the aqueous extract of the suprarenal capsule, later commercialized as adrenalin. In 1896 he announced this discovery in a paper read before the New York Academy of Medicine. He introduced a new operation for the relief of persistent deafness in 1886, consisting of puncturing or incising the ear drum membrane. He published a book, "Perfect Eyesight Without Glasses" (1919), which he had to issue at his own expense, expounding his theories which were for the most part contrary to established ophthalmological practice. He also wrote articles describing his methods. He was a member of the New York State Medical Society and was affiliated with the Dutch Reformed church. He was fond of sports, especially of tennis in which he won several awards and while living in North Dakota was state champion. He was an excellent runner and at the advanced age of fifty-eight was still able to win a prize. Bates was a quiet, modest man, a serious student of literature and astronomy, with a fondness for children. He was married three times: (1) in 1883, to Edith Kitchell of New York city, by whom he had one son, Halsey Bates; she died in 1886; (2) to Margaret Crawford, who died in 1927, leaving two children, William Crawford, and Milo Bates, wife of Charles McComb; and (3) Aug. 9, 1928, to Mrs. Emily (Ackerman) Lierman, daughter of Robert Ackerman, of Newark, N.J. Bates died in New York city, July 10, 1931.

Special Articles

THE STRANGE CASE OF MR. HUXLEY'S EYES

HAMILTON HARTRIDGE, M.D., SCD CANTAB., F.R.S.
PROFESSOR OF PHYSIOLOGY IN THE UNIVERSITY OF LONDON, AT ST. BARTHOLOMEW'S MEDICAL COLLEGE

Mr. Aldous Huxley's book, *The Art of Seeing*,[1] has disturbed public confidence in orthodox methods of treating disorders of vision. His argument therefore requires an answer.

"Ever since ophthalmology became a science," he writes, "its practitioners have paid attention exclusively to eyes, not at all to the mind which makes use of the eyes to see with."

"I have been treated by men of the highest eminence in their profession, but not once did they so much as faintly hint that there might be a mental side to vision . . . They gave me spectacles and they let me go . . . Whether I used my mind and my bespectacled eyes well or badly . . . were to them matters of perfect indifference."

The reader might be excused if he concluded that Mr. Huxley was suffering from some psychological defect of vision. Such was not the fact however.

"At sixteen," he writes, "I had a violent attack of keratitis punctata . . . My subsequent inability to see was mainly due to opacities in the cornea of both eyes, but there was also hyperopia and astigmatism."

"At first I was advised by my doctors to do my reading with the aid of a powerful hand magnifying glass, but later I was promoted to spectacles . . . With these I was able to read tolerably well—provided always that the pupil of the better eye was kept dilated with atropine . . . A measure of strain and fatigue was always present."

"Things went on in this way for twenty-five years, when, in spite of greatly strengthened glasses, the task of reading had become increasingly difficult and fatiguing."

But, just at this time, Mr. Huxley happened to hear of Dr. Bates's methods of visual re-education. Within two months he was reading without glasses, with neither strain nor fatigue, and the corneal opacities which had remained unchanged for upwards of 25 years were beginning to clear up.

THREE CHARGES AGAINST THE PROFESSION

From these and similar statements we may formulate Mr. Huxley's case against the medical profession as follows:—

(1) They treat the eye, but ignore the mind, and the patient to which both belong.

(2) They prescribe glasses which neutralise symptoms only. Eyes fitted with these tend to grow progressively weaker, and to require stronger glasses for their correction.

(3) They regard as unorthodox the methods of visual re-education such as those of Dr. Bates. Had they prescribed these methods at the start, Mr. Huxley's eyes might well have been cured in a few months.

Let us, then, take each of these accusations in turn, to see how the profession stands.

(1) All medical students, before they enter the wards, learn the position and structure of the visual parts of the brain, together with the courses of the optic nerves and tracts which connect these with the retinæ. During their clinical studies they repeatedly see patients in the general parts of the hospital being sent to the eye department for diagnosis or treatment. Later on, when they themselves are attending as students in the eye department, they see patients being sent to the medical, the surgical, the neurological and the other special departments. These frequent events can hardly fail to emphasise in their mind the importance of the connexion between vision and every other part of the patient's make-up. Further, any English textbook of ophthalmology should quickly convince Mr. Huxley; for in it he will find, on nearly every page, references to the other organs, or to the patient as a whole.

(2) With regard to spectacles; there is no doubt that these do neutralise symptoms and moreover experience shows that, in nearly every case, the more complete the neutralisation, the better for the ultimate welfare of the patient. That spectacles aggravate symptoms is entirely untrue. There are eye diseases where the symptoms get worse; but this is in spite of, not because of, the spectacles which the patient is wearing.

(3) Mr. Huxley is quite wrong in thinking that doctors regard visual re-education as unorthodox. Such methods have been used for years for the treatment of, for example, squints and amblyopia. That Dr. Bates's precise methods are not more used is probably due to the recognition that his methods have no special advantages, and in some ways may not be so good as those proposed by others. The profession did not advise Mr. Huxley to use such methods, presumably because they appeared to be inappropriate to Mr. Huxley's case. When Mr. Huxley states that in two months he could read without glasses, and that the corneal opacities were smaller, I accept his statement. What I am quite unable to accept is his assurance that visual re-education brought about these dramatic changes.

All the criticisms brought by Mr. Huxley against the medical profession have thus been met, and I now propose to advance a hypothesis to explain the various phases of Mr. Huxley's illness which he so aptly describes.

THE DISABILITY

Until the age of sixteen Mr. Huxley appears to have had normal, or nearly normal vision; the hypermetropia of childhood was easily dealt with by an efficient mechanism of accommodation. At sixteen, the attack of keratitis punctata left corneal opacities, hypermetropia and astigmatism. Corneal irregularities produced by the disease may have caused the two latter, but to my mind a much more plausible explanation is that both were due to over-corrected spherical aberration.

Tscherning[2] refers to the observations of Thomas Young, Volkmann and Brudzewski, who found that the normal human eye often exhibits spherical aberration in the peripheral zones of the pupil. In some cases these zones are myopic, and in others hypermetropic. On theoretical grounds we should expect this spherical aberration to be accompanied by some degree of astigmatism of the second order. Eyes in which these peripheral defects are present usually have excellent visual acuity under normal conditions of illumination, because the peripheral zones of the pupil are cut off by the iris. Only when the iris dilates, for example, in feeble illumination, do these peripheral zones transmit light and produce their deleterious effects; but, as retinal acuity is low in feeble illumination, the fall in definition of the image does little or no harm.

Very different is the condition of an eye in which an opacity of the cornea or lens cuts off these central rays of good definition. Under these conditions the iris dilates, in order to admit light to the retina, and in so doing uncovers the peripheral zones of the pupil, causing a serious fall in visual acuity.

Two further factors adversely affect the situation—the Stiles-Crawford effect and veiling glare. It will be remembered that the former is the retinal direction phenomenon, which restricts the subjective intensity of the light which has passed through the periphery of the pupil. The latter is due to the light which is scattered haphazard over the retina through diffusion by the optical media of the eye. In normal eyes this veiling glare is small in amount; on the other hand, in pathological eyes it may have a very serious effect on vision. This is due to the fact that the light which is broadcast over the retina reduces the differences in intensity of light and shade, and thus renders the appreciating functions of the retina far more difficult. In eyes where the peripheral rays alone form focused images this veiling glare becomes still more harmful, because the peripheral rays are themselves, as we have seen above, reduced in intensity by the Stiles-Crawford effect.

Now that is the condition that I picture Mr. Huxley's eyes were in, when, following keratitis punctata, he was left with two corneal opacities occupying the centres of the pupils. Small wonder that the visual acuity in the better eye was reduced, so that using spectacles and with the pupil dilated with atropine, he could just see the 70-foot line on Snellen's type at 10 feet.

1. London: Chatto and Windus. 1943.

2. Tscherning, M. H. E. Physiologie Optique. Philadelphia. 1904

That this veiling glare was a factor of considerable difficulty to him is clearly shown by two improvements which he describes in his book—the use of an electric spotlight for reading, and the use of a black screen, with an aperture in it, which could be held in the hand and moved to and fro over the page. The spotlight produces the maximum light on the page, and the minimum light on the corneal opacity; the black screen reduces the intensity of light reflected from the page on to the corneal opacity; the two in combination would be expected on theoretical grounds greatly to diminish the amount of veiling glare.

I have gone into the question of glare rather thoroughly because I think that this factor was likely to have had effects on Mr. Huxley's vision which were more serious than those of the hypermetropia and astigmatism which he mentions. It was probably serious in its effects, not only on vision, but also on diagnosis. It would make difficult, if not impossible, the use of the excellent mirror test (retinoscopy), used by ophthalmologists, and would force them to depend exclusively on subjective tests. These are quite good when visual acuity is satisfactory and the patient is a good witness, but correspondingly vague when visual acuity is a small fraction of the normal.

I have no means of ascertaining what amount of hypermetropia or astigmatism Mr. Huxley had, but I think it doubtful that the hypermetropia was large in amount. For if it had been large it seems to me unlikely that he would have been allowed by his doctors to use atropine to dilate his pupil, for fear of precipitating an attack of glaucoma. As to the astigmatism it seems to me unlikely that it exceeded 2 dioptres.

THE DETERIORATION

I have now reconstructed, so far as I am able, what may be called the first phase of Mr. Huxley's visual defect. The second phase now presents its problems—namely, to explain the steady deterioration during the 25 years which followed the acute condition.

"In spite of greatly strengthened glasses," he writes, "I found the task of reading increasingly difficult and fatiguing. There could be no doubt of it; my capacity to see was steadily and quite rapidly failing."

What could have caused matters to approach a climax like this after all those years? Of a number of possible explanations, two only seem to me to meet the case: (1) that the climax was due to a decrease in pupil diameter, and (2) that it was due to a reduction in the opacity of the cornea, or to both these factors in conjunction.

It is quite usual for the pupil diameter to suffer a decrease as age advances. If this had occurred in Mr. Huxley's case, it would have had the effect of reducing the intensity of the rays, which, in conjunction with the spectacles that he wore, were producing focused rays on the retina; whereas it would have had no such effect on the glare-producing rays from the corneal opacity.

With regard to this opacity, the ideal treatment would have been to remove it altogether if possible; the next best would have been to have rendered it completely opaque to all light—e.g., by the injection of a suitable aniline dye—for this would at once have cut off the glare-producing rays. The worst thing that could happen would be for the opacity to become more transparent to light rays, for this would have the effect of increasing the glare.

Now, we must suppose, that that is precisely what did happen to Mr. Huxley's eyes: by degrees, year by year, the opaque material began to soften and disintegrate, allowing more scattered rays to fall on the retina. This alone may have made vision increasingly difficult, leading to asthenopia, and possibly setting up a vicious circle. If at the same time the pupil diameter was decreasing, then one could readily imagine that sooner or later a climax would be reached.

THE CURE

We must now turn to the dramatic third phase of Mr. Huxley's illness, about which he writes: "In two months I was reading without spectacles."

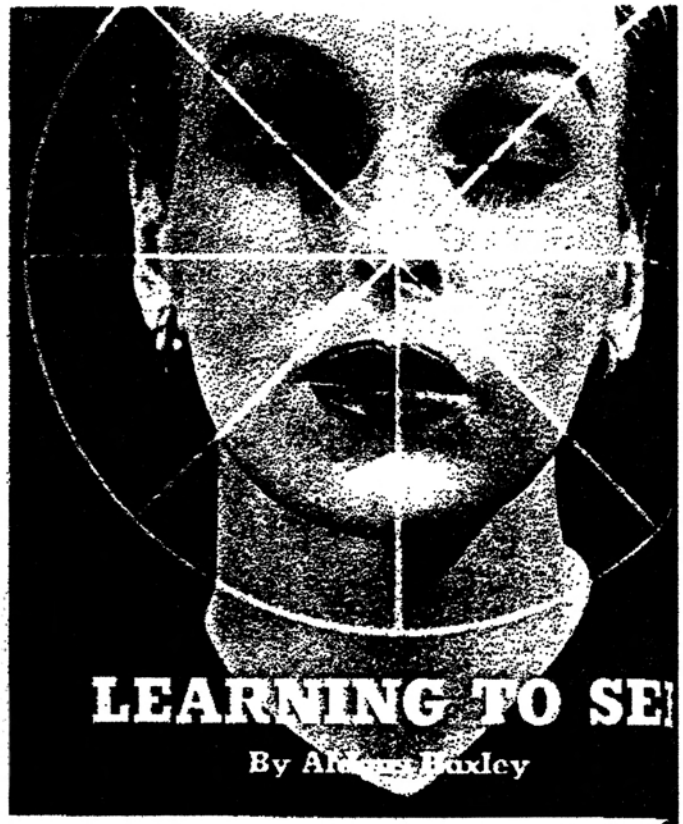
Many explanations might be tentatively offered for his sudden and miraculous improvement—e.g., that a sudden sclerosis of the crystalline lens had neutralised the hypermetropia. Two arguments can be advanced against this explanation: (1) that the hypermetropia was only a small part of the disability, and (2) that it is hardly credible that this sclerosis should have occurred at precisely the same time that Mr. Huxley began to visually re-educate himself.

An explanation must therefore be sought elsewhere. To my mind it is to be found in Mr. Huxley's own book. "Moreover," he writes, "there were definite signs that the opacity of the cornea, which had remained unchanged for upwards of twenty-five years, was beginning to clear up."

Suppose the diameter of the opacity was suddenly reduced. Then certain beneficial effects would follow: first, there would be a decrease in the intensity of the rays which were producing glare; secondly, there would be an increase in the intensity of the rays which were producing focused images; and, thirdly, there would be a constriction of the pupil, which would cut off the peripheral rays which were causing the hypermetropia and the astigmatism.

The problem that still has to be solved is how the decrease in the diameter of the opacity could have been brought about. I have already stated that I find it impossible to credit that this was the result of visual re-education as such, but it is quite likely that it was due to the vigorous eye movements which form a part of some of the exercises. Those eye movements would be expected to cause relative motion between the anterior eye structures and the aqueous humour. Gentle lavage of the posterior surface of the cornea would take place, and the opaque mass, softened by the lapse of time, would be progressively eroded, starting at its edges and working towards its centre. The little particles as they became separated would be slowly swept out of the anterior chamber via the spaces of Fontana and the canals of Schlemm into the scleral veins.

The above hypothesis may require modification as fresh facts come to light. But until it is definitely disproved Mr. Huxley cannot claim that beyond all doubt his cure was due to Dr. Bates's methods. Another explanation is evidently possible; and this is also true of the other cases of defective vision which he claims were cured by visual re-education.



LEARNING TO SE

By Aldous Huxley

PHOTOGRAPHS BY IN

Here is an early morning exercise. Sit up, close the eyes and visualiz the pattern shown above. Imagine you have a pencil on the end of yo nose and trace the circle and the lines again and again in your fan

Near-blindness forced Mr. Huxley to learn to use his eyes. Here the distinguished novelist relates his experience and shows you how, through the art of seeing, you can improve and preserve your own sight

SAINT PAUL used to call the human body "The body of this death." More humorously, but hardly more politely, Saint Francis of Assisi gave it the name of "Brother Ass." And asinine it certainly seems, this heavy aching lump of flesh and bones, when it simply won't permit us to do the things we want to do—a stubborn donkey. But even in his worst disability, Brother Ass can sometimes create new values and teach the most useful lessons.

I myself am able to say this with a special conviction: for I know by personal experience the uses that can be made of a physical disability—in my own case, a spell of near-blindness during my teens and, since that time, thirty years of a serious visual defect. I know that it is possible to adapt oneself very rapidly to most unfavorable physiological conditions—and not only to adapt oneself to them; actually to make them yield a profit. For, as it turned out, from my Braille and the undergraduate, four or five older than myself, who acted as my I learned things that have turned out much more valuable for me than w should have learned in the ordinar at school.

Later, when one opacity-clouded had cleared up sufficiently to perm reading with the aid of a powerful nifying glass, I went to college—t study biology and medicine, as I h ways intended (for any laboratory was out of the question), but literatur philology. At the time, this seemed a second best; but I have had reasons then to be thankful for the enf change of plan.

At the end of my time in college, th ulists promoted me to spectacles, an next twenty-four years were passed unremitting struggle between the m desire for knowledge and Brother reluctance to read, except with the a atropine and progressively more pow lenses, and except at the cost of overwhelming fatigues which are th sult of eyestrain.

Things went on like this for the best of a quarter century. Then, in the w of 1938-1939, Brother Ass showed sig increasing obstinacy. In spite of very t glasses, I was finding it more and m difficult to read; and the harder I tried worse things seemed to go. It was t

ses in teaching persons with defective vision to see better.

I had not at that time devoted any seri- thought or study to the process of ing, and the idea of visual education emed of dubious validity. But Brother Ass's unwillingness to go on giving me even the very inadequate service I had hitherto received from him removed all hesitation and I decided to try my luck.

To my amazement and delight, the luck turned out to be very good. Within a couple of months I had learned to do what I had not done since 1911—to read without the aid of artificial lenses. And not only could I read without glasses; I could also read without strain and fatigue—for I had learned to avoid the conditions making for strain and to get rid of fatigue as soon as it began to manifest itself.

Seeing as Through a Curtain

Nor was this all. The violent attack of keratitis, or inflammation of the cornea, to which all my troubles were originally due, had left my eyes clouded with opacities. These opacities, which caused me to see everything as through a curtain, had remained practically unchanged for more than twenty years. But as I proceeded with my course of visual re-education, they started to clear up. With the worse eye, which had little more than light perception, it has now become possible for me to read large, nursery print.

A corresponding improvement in the organic condition of the less seriously affected eye was also initiated by the process of re-education. I have good hope as well as good reason to suppose that the process which has been begun will con- of seeing without fatigue and without mechanical aids. This method was originally developed by a New York oculist, Doctor W. H. Bates, who died in 1931, and it is now used, with modifications and additions, by a number of instructors in this and other countries. The aim of the method is to teach persons with defective vision to use their seeing organs in the right way rather than the wrong way, to get rid of bad habits of improper use and to restore normal and natural functioning.

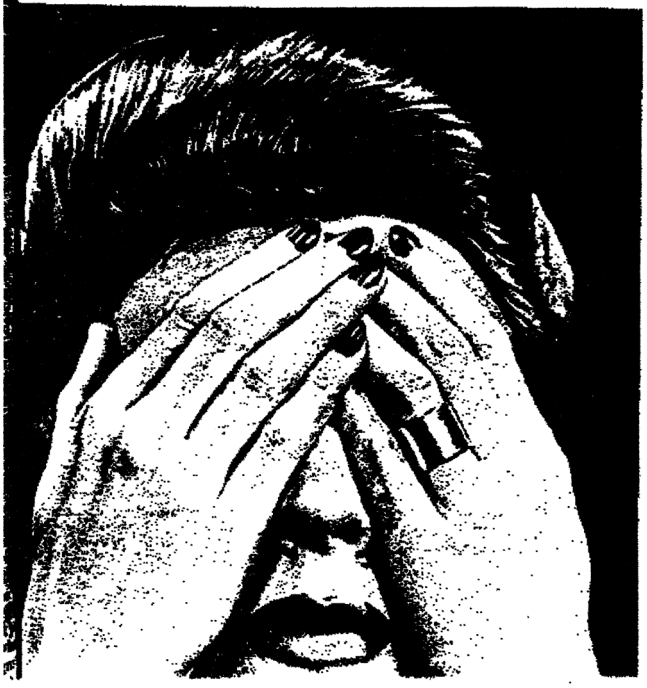
The eyes do not see; they merely record sense impressions, which are then used by the mind to see with. A newborn baby has well-developed eyes and a rudimentary mind. Consequently, it does not see objects in the outside world; it is merely aware of patches of color. Some time must elapse before it learns to interpret those colored patches as the appearances of objects external to itself; and the capacity to interpret correctly and to see accurately goes on increasing with the accumulation of experience in the memory.

The fact that it is the mind that sees, and not the eyes, has been recognized by philosophers from at least the fifth century B. C. And yet, for some inexplicable reason, orthodox ophthalmology has almost completely ignored the part played by the mind in the total process of seeing, and has concentrated on the eyes alone. Moreover, as though to make its one-sideness more complete, this concern has been almost exclusively a concern with structure, not with functioning.

Oculists and optometrists are interested primarily in the shape of the eyes at the moment of their examination. They almost never inquire how those eyes (much

(Continued on page 28)

Palming relaxes the sensing eyes and the seeing mind. Sit down, comfortably place elbows on a table, cover closed eyes as shown in the illustration. Base of the palms should rest on cheekbones to exclude light though eyeballs remain untouched



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less the seeing mind) are being used, or what may be the effect upon vision of proper use on the one hand, improper use on the other. All they do is to prescribe artificial lenses, which are to defective eyes what crutches are to defective legs. These eye-crutches mechanically neutralize the symptoms of defective vision; they do not remove its causes.

In Doctor Bates' method of visual re-education, the mental side of seeing is taken fully into account, and the main stress is laid not on the shape of the physical organs at the time of examination, but on the functioning of eyes and mind during the ordinary circumstances of everyday life.

Like other skills—from those primary skills, such as walking and talking, which are acquired at the same time as the skill of accurate vision, to the most elaborate of accomplishments—seeing can be done either well or badly. As one would expect, bad habits of using the eyes and the mind in relation to the eyes have an adverse effect upon seeing in exactly the same way as bad habits of using the throat and the mind in relation to the throat have an adverse effect upon talking and singing.

In regard to what I have called the primary skills—walking, talking, using the hands, adopting a correct posture—most people acquire good habits unconsciously during childhood. But some fail to do so, while many more lose their good habits (especially in the matter of seeing and posture) during adolescence and in later life.

As with all other similar skills, it is difficult for people suffering from serious defects to acquire proper habits of use without the aid of a competent teacher. But there are certain simple procedures which can be easily learned without a teacher's help, and the practice of which can do much to relieve the discomfort so often associated with defective vision, and to improve the capacity for seeing, sometimes to a marked extent. In what follows, I shall describe the more important of these procedures, as I myself practice them in the course of an ordinary day.

Exercises Relieve Eyestrain

Persons with defective vision frequently wake up in the morning with a more or less acute sense of fatigue and eyestrain. This is because the mental and physical tensions set up by habits of improper use are not necessarily relaxed during sleep. For reasons which will be touched on later, normal seeing depends on mobility of the attention and of the eyes. To restore this mobility, the following simple techniques should be practiced on first awakening from sleep.

Squeeze the eyes tightly shut for a second or two, then blink the lids lightly and rapidly ten or twenty times. Squeeze again and repeat the blinking. Then tightly close first one eye alone, then the other, three or four times, and end up with more blinking. This may be followed by an imagination drill, designed to encourage the free shifting of the attention, and consequently of the eyes.

Sit up, close the eyes, visualize a sheet of paper and imagine that you have a long pencil somehow attached to the end of your nose. Moving your head, draw a circle with this imaginary pencil upon the imaginary sheet of paper. Go over the circle half a dozen times and with the eyes of your fancy follow the lines as you trace them out.

Blinking and nose-writing are followed by a spell of what Doctor Bates called "palming," a procedure for relaxing the sensing eyes and the seeing mind. To palm, sit down, place the elbows on a table, or on a well-stuffed cushion laid across the knees, and cover the closed eyes with the hands. The base of the palms should rest on the cheekbones, and the fingers on the forehead. In this way, light may be completely excluded, while the eyeballs remain untouched.

In this position, visualize pleasant scenes out of your past history (or imaginary scenes if you prefer it), always taking care to remember or imagine things and persons in motion, or alternatively to think of yourself as moving among them. This is necessary, since mental staring produces a corresponding fixation of the eyes, and all rigidity in the organs of seeing should be avoided.

Persons with defective vision should palm as often as they possibly can. For them, it is the most profitable way of occupying vacant moments. They will even find it worth while to make time often for palming, going so far as to interrupt any task requiring concentrated seeing. Such interruptions for palming pay handsome dividends in reduced fatigue and increased capacity for seeing over a longer period.

Movement, as the psychologists have long been insisting, is the necessary condition of normal perception. Complete inhibition of the natural shifting of the attention causes complete loss of sensation. Partial inhibition results in diminishing the acuity of perceptions. Where seeing is concerned, free shifting of the attention must be accompanied by a rapid and [illegible] mally unconscious shifting of the eyes.

Eyes record clear images only at [illegible] center of the retina. Consequently, if [illegible] object of any size is to be seen clearly, [illegible] eyes must shift in such a way that an [illegible] age of every part of the object shall [illegible] upon this tiny central area.

The Danger of Staring

Most people with defective vision try [illegible] overcome their disability by staring. S[illegible] ing is a greedy attempt to see too m[illegible] too well, by partially immobilizing the [illegible] tention and the eyes. But it is physic[illegible] impossible to see the whole or a large [illegible] equally well at the same time; and it [illegible] psychologically impossible to have c[illegible] perceptions unless the attention is c[illegible] stantly shifting from part to part, or fr[illegible] aspect to aspect, of the object being look[illegible] at.

When the bad habit of staring has be[illegible] acquired, it cannot be got rid of except [illegible] a process of conscious re-education. H[illegible] are a few procedures which I myself ha[illegible] found of value for the purpose of unfix[illegible] the eyes and attention:

When walking, or when riding in a v[illegible] hicle, observe the way in which things [illegible] pear to move in the opposite direction [illegible] which you are going. Be conscious of t[illegible] fact that the world is in continuous m[illegible] tion.

As you pass, glance rapidly at billboa[illegible] and signs; then turn away, close your e[illegible] and visualize the words you were able [illegible] read. Do not try to immobilize the ph[illegible] ing letters in an effort to see them be[illegible] merely flash an easy glance and then l[illegible]

away. If you have seen the words, so much the better. If not, never mind; you will see them at some future date.

And what pleasure when one finally does see them! I shall not soon forget the delight I experienced when, at a certain street corner, I caught a glimpse, for the first time in all the months I had been passing that way, of the words, "Original Cut-Rate Drugstore." Not a specially inspiring message. But for me it meant more, at that moment, than the weightiest aphorism, the most lyrical of poems.

Whenever you have to look at an object with concentration, deliberately shift your attention from point to point. If, for example, you are looking at somebody's face (and faces are among the things that people with defective sight stare at most fixedly) shift your attention rapidly from eye to eye, from forehead to chin, from cheek to cheek, and from the mouth back to the eyes again. This will have the double advantage of helping you to see the face better and of relieving the owner of the face from the embarrassment of being stared at. This process of analytical looking should be used on all occasions.

The Sunshine Treatment

An important relaxation drill, almost as valuable as palming, is the sunning of the eyes. To persons suffering from certain kinds of severe vitamin deficiency, strong light may be harmful. But very few people in a reasonably well-nourished population are afflicted in this way. Provided ordinary common sense is used, the vast majority of us can take the sun on the eyes without any danger.

Sitting comfortably, close the eyelids and turn toward the sun, taking care to swing the head gently but fairly rapidly from side to side, so that the closed eyes move back and forth across the source of light. Persons in whom the terror of light is very strong will do well to confine themselves to this exercise for some days or weeks. Others may proceed, after a minute or two, to take the sun on the open eyes.

Still swinging the head from side to side, cover one eye with the hand and open the other. Blinking rapidly, direct your attention first to a point in the sky to the left of the sun, then, as the head swings, to a point to the right of it, and so on, back and forth. After making two or three such swings, cover the eye that was open and repeat the process with the other. Then take the sun on the closed lids once more, and finish off by palming.

On dark days, or at night, a bright electric lamp, preferably a spotlight, may be used as a substitute for the sun. The effect to relax tired seeing organs and to stimulate them to better vision. Just as one can overdo sun bathing, so it is possible to take too much sun on the eyes. But if one is careful never to stare fixedly at the light, to keep the head continually swinging from side to side, to expose only one eye at a time and to blink as one swings across the sun, the procedure is entirely beneficial.

Those who, when driving at night, suffer from the glare of head lamps should take a hint from the sunning procedure. Never stare directly at headlights, but keep the attention constantly shifting from a point a little to one side of them to a point a little to the other side, blinking frequently as you do so.

My profession compels, and my inclination encourages me to do a good deal of reading. In order to accomplish this task efficiently and without undue fatigue, I have to make sure that external conditions are favorable, and that mind and eyes are being used in the proper way. To this end, I do the following things:

First, I never read except under good illumination. A person with physically perfect eyes and proper seeing habits can read without serious effort or fatigue in illuminations ranging from ten thousand foot-candles (full sunlight in summer) to less than one foot-candle (the light of a single candle at a little more than one foot from the page, or of a sixty-watt electric lamp at ten feet).

Persons whose eyes are not physically perfect, or who have acquired habits of improper use, should avoid low illuminations, since it is almost impossible for them to read by poor light without increasing the strain, tension, and ocular and mental fixation, which contribute so much to their poor vision. Such persons would be well advised never to do close, concentrated seeing in illuminations of less than a hundred foot-candles (approximately the light of a hundred-watt lamp at eighteen inches); and if they can get a thousand foot-candles or more, so much the better.

On a clear day, one can enjoy nearly a thousand foot-candles close to an unobstructed window, and a full thousand out of doors, in the shade of a tree or house. At night, illuminations in the neighborhood of a thousand foot-candles can be obtained by reading within two or three feet of a 150-watt spot lamp, which projects a concentrated beam of light.

I myself do a good deal of reading out of doors in full sunlight, or, when the weather is too hot or too cold, in a patch of reflected sunlight thrown into the house by an adjustable mirror. In schools, offices and public buildings, people are expected to do concentrated seeing in illumination-

Second. [illegible] work requiring concentrated seeing, I interrupted myself at more or less frequent intervals for rest. At the end of every sentence, or every other sentence, I close my eyes for a second or two, "let go" and visualize as clearly as I can the last word I have read, or even a single letter or punctuation mark.

Closing the eyes and "letting go" bring rest; visualization improves the memory for letters, and so makes them easier to see on future occasions, and at the same time brings mental relaxation—for, as we have all experienced, accurate remembering can be done only when we cease to strain for memory. But absence of strain is the mental and physical prerequisite of good seeing. Consequently, an act of clear remembering or imagining always helps us to see better afterward.

At longer intervals, I take a minute or two off to palm and treat the eyes to a brief exposure to the sun or a bright electric light. These interruptions pay for themselves many times over in increase of reading capacity and diminution of fatigue.

Third. I remind myself to blink frequently; and from time to time I squeeze the eyes tightly shut and follow up with a dozen or twenty light and rapid blinks.

What Frowning Leads To

Fourth. Many persons with defective vision, both spectacled and unspectacled, wear a continual frown and, at all times, but especially when reading, partially close their eyelids. By narrowing the aperture through which they look, they diminish the size of the visual field and so cut out many irrelevant and distracting stimuli. This improves vision temporarily, but at the cost of increasing muscular and psychological strain, which leads in the long run to further deterioration of functioning and worse seeing.

The eyelids should not be tensely narrowed, but kept easily and loosely at their normal stretch. While seeing habits are being normalized, distracting stimuli may be cut out, not at the eye, but on the printed page. Take a sheet of stout black paper and, in the middle of it, cut out a rectangular slot, slightly longer and slightly wider than the average line of print. Do to screw up one's eyes or peer out at the page through a narrow loophole between the lashes. And it is extraordinary how this simple little device can improve reading vision, especially for those whose eyes are clouded by any kind of opacity.

Such, then, are the procedures which I myself most frequently employ in the course of an ordinary day for the purpose of restoring and preserving those habits of proper use, of normal and natural functioning, upon which good sensing by the eyes and good seeing by the mind so largely depend. Numerous other procedures have been devised; for visual defect takes many different forms, and the general principles of the method require to be applied in a variety of ways. As time passes, many new procedures will certainly be developed.

For example, it doubtless will be possible to improve the system by working into it what is already known, and what may be discovered in the future, of training children and adults in the power of accurate observation. Recently, too, the problem of better vision has been approached from another angle by a group of Russian investigators, headed by Professor Kercheev, whose results were published in Nature. These men studied the psychological and physiological conditions under which sensation in general and vision in particular are most acute.

Meanwhile, the method developed by Doctor Bates and his followers, though capable of improvement, like every other useful art, takes its place as a well-conceived and efficient educational system. It represents the application to seeing of exactly the same fundamental principles of training as are applied by the teachers of every other psycho-physical skill.

"If you wish to succeed, work hard, but don't strain. Be active, but combine activity with ease and relaxation." Such is the advice given by all good teachers in every field of psycho-physical skill, from elocution to piano playing and golf.

Doctor Bates and his pupils give the same advice to persons suffering from defects of vision, and teach them how to improve their seeing habits by putting this advice into practice.

THE END

Another Home

By THOMAS BARNSFELD

WHEN Aldous Huxley arrived in New York aboard the Normandie in the Spring of 1937 he came only to visit. Now he has taken up residence in America, the years between have developed into one of the most interesting periods of his life.

Accompanying him were his Belgian wife Maria, his 17-year-old son, Matthew, and his close friend, the English philosopher, Gerald Heard. Huxley first came into contact with Heard in 1929, while the latter was editing The Realist, a magazine partly founded by Julian Huxley. However, it was not until 1935 that Huxley became vitally interested in Heard's work. Together with Huxley's family, the two men spent the first seven months of their visit driving across the United States, from New York to Los Angeles.

Huxley had seen enough America by now to remark that "geography and a lack of homogeneity of population, preclude a high degree of centralization, because of the many foreigners in the United States and their adherence to old culture patterns. It will take at least five generations before there is any real homogeneity. The vitality of the nation is amazing. The advertising men, with their stream of propaganda implying that you're eternally disgraced if you haven't the latest refrigerator, have taken care of its modernity. I'm not so sure of its prosperity."

The party traveled at a leisurely pace in Huxley's Ford to Denver, Col. Maria Huxley, who is very fond of driving, was at the wheel much of the time. In Denver they stayed with friends until the late D. H. Lawrence's wife, Frieda, installed a shower in an "extra" house on her ranch seventeen miles outside of Taos. They then moved in there.

With Europe growing increasingly tense and American friends urging both writers to stay, they decided to take up residence in the United States. Huxley remarked at this time: "The thing that strikes me most about this country is it hopefulness. In spite of the depression, in spite of everything, I find an extraordinary hopefulness running through people. It is this quality that distinguishes your continent from Europe, where there is a hopeless depression and fear. It makes for a comfortable atmosphere, and, from a practical point of view, it is sound."

Heard and Huxley moved on to Los Angeles in the Spring of 1938. Soon after his arrival, Huxley began a treatment of "Madame Curie" for Metro-Goldwyn-Mayer and Greta Garbo. When he was almost finished, he told the story to a producer, only to have the amazed fellow reply, "Jees, who's going to go for a dame who goes for chemistry?" Shortly afterward, the story was shelved.

During the fall and winter of 1938 Huxley's eyesight began to decline. Ever since his Oxford days he had suffered from eye



Paul Dorsey-Pic.

Aldous Huxley at Work on a New Novel.

the condition had grown much worse. Then, in the winter of 1938-39, he was put in touch with Mrs. Margaret Darst Corbett of Los Angeles, who introduced to him the Bates technique of eye relaxation and exercise. After several months of steady training, his eyesight began to improve; and now, after four years of practice, Huxley's eyes are returning to a natural state of good vision. Huxley paid his tribute to Mrs. Corbett in an excellent book on the Bates method, which was published last fall under the title "The Art of Seeing."

The technical difficulty of getting ideas across to the public through the novel has preoccupied Huxley ever since he began writing. In regard to his own work, he said: "I think perhaps ideas stick out less violently in my work now than they did in my earlier books. I should say that I have learned the art of embodying the ideas more into the substance of the novel. That is one of the great modern problems, embodying ideas into works of art, expressing them in dramatic or symbolic form." Asked about his earlier books, and his life while he was writing them, he added: "I have a strong aversion from reading things about myself, partly due to the fact that I don't want to think back to my own past writings. When it is impossible to do anything in the way of omission or amelioration, reflection upon them is vain as well as distracting from present occupations—the only ones a writer can profitably be concerned with."

Questioned about the value of using the novel instead of the essay as a vehicle for ideas, Huxley answered, "D. H. Lawrence has an interesting comment on that in his letters. He says it does penetrate better. You have it carried, so to speak, on an emotional wave. You can't get such accuracy, perhaps, but you can get a wider range. In the novel ideas can be expressed over the whole scale, to take a process things in terms of the top three notes of an octave."

Another aspect of novel writing that concerns Huxley is the difficulty in portraying the "good man," a man like Mr. Propter in "After Many a Summer Dies the Swan." He remarked, "It does look as though, in a certain sense, it were quite impossible for the artist to render this highest type of humanity, probably for the very good reason that he is not of the highest himself. One trouble, of course, is that the lives of the saints were written mostly by people without any literary talent."

Huxley's Hollywood friends consist of a small circle of writers and motion-picture people. He frequently sees Ronald Coleman, directors Cukor and Mamoulian, Anita Loos and Charlie Chaplin. Occasionally, he gives picnics for such diverse figures as Bertrand Russell and Greta Garbo. At first meetings with some of the picture people were interesting, if not embarrassing. When Huxley first visited Twentieth Century-Fox, the studio guard recognized him immediately and said he regretted he did not have a copy of "Point Counterpoint" handy for an autograph. When Sam Goldwyn was introduced to him, he exclaimed "I'm delighted to meet you, Mr. Huxley. I understand you're practically a genius." In conversation with Walt Disney Huxley praised the philosophy of the Mickey Mouse cartoons and asked how the artist had arrived at those underlying subtleties. Disney said, "We make pictures for entertainment, and then the professors tell us what they mean."

In the fall of 1941 the Huxleys purchased a desert ranch some sixty miles from Los Angeles. They remodeled the six-room ranch house, built a studio and purchased shares in water stock for irrigation. Maria Huxley does all her own work, and her husband, with the help of a hired man, cultivates five acres of vegetables and fruits. This spring

tation of "Jane Eyre," as the next screen venture for Orson Welles. He is also working hard on a new novel, which will probably be ready for the Winter of 1943-44.

At the time the Huxleys moved to their ranch Gerald Heard moved from his small "hut" in the Hollywood hills to Laguna Beach, to live in the beautiful home of his close friend, the music critic, Christopher Wood. Here he spends his time writing and speaking to small groups. As a hobby he has also published mystery stories under the slightly altered name of H. F. Heard.

Friends of the philosopher who are interested in his school of thought have founded a semi-subsistence group of students, and housed the group in a set of buildings near Laguna, called Trabuco College. The mediatation hall is large enough so that twenty-five persons can live in well-appointed rooms, share a common dining room, and read, listen and meditate in an unusual chapel. Surrounding the buildings are several hundred acres which they hope to farm. The group associated with Trabuco is small; its most active members are the Huxleys, who have been frequent visitors, and Allen Hunter, the minister of the Hollywood Congregational Church.

Huxley has often denied that he and Heard are developing a "new religion." Today he is going through the earlier stages of the mystic. This explains his desire to live quietly—to put into actual practice, as Heard has done, the basic pattern of his beliefs. He has yet to prove to his readers that he can translate this pattern in a novel that will satisfy the artist as well as the thinker. "Grey Eminence" was a successful presentation of certain aspects of mysticism, but it was a biography, not a novel. Perhaps Huxley's new novel will put him on a firmer basis—not as a profound thinker, for he already proved he is that, but as a great novelist who can present the ideas of the thinker in an artistically perfect,

Reviews

ALDOUS HUXLEY ON VISION

The Art of Seeing. By Aldous Huxley. (Pp. 143. 7s.) London: Chatto and Windus. 1943.

Aldous Huxley had bilateral keratitis at the age of 16 which left him with greatly reduced vision. As is common in such cases, his sight improved towards middle life. After he had become an ardent devotee of the Bates method of visual training his vision improved so that it was "twice as good as before." To repay a debt of gratitude to his benefactor and to make his art more widely known, Huxley has ventured into medical literature and written a book—*The Art of Seeing.*

Bates's hypothesis is, of course, well known to the medical profession: visual derangements and refractive errors are due to a deformation of the eyeball by a condition of nervous and muscular strain in the extra-ocular muscles; for this reason, according to Bates, the refraction may change "a dozen times or more in a second," if a child tells a lie, and so on. According to Huxley "disappointed love" can produce refractive errors; and myopia in children, while it may be influenced by physical factors, is essentially due to the fact that school children "are often bored and sometimes frightened . . . so that they emerge from the educational ordeal with myopia or some other defect of vision." The universal treatment in all cases is the induction of cerebral and ocular "dynamic relaxation," on the achievement of which the eye becomes normal. This desirable condition is attained by exercises which include palming (covering the closed eyes with the palms of the hands and imagining a beautiful scene), butterfly blinks, relaxed breathing, sunning ("letting go and thinking looseness," and turning the eyes to the sun), swinging (rhythmic swaying of the body while looking out of a window to make the mind "friendly to movement" and "soothe," it "as do the movements of the cradle"), nose-writing (writing with an imaginary pencil attached to the end of the nose), flashing with dominoes, shifting, rubbing and kneading the upper part of the nape of the neck, and a host of other procedures which Huxley admits are undignified but which he assures us permanently help the vision.

Whatever be the value of the exercises, it is quite unintelligent of Huxley to have confused their advocacy with so many misstatements regarding known scientific facts. It has been shown that the hypothesis upon which these methods of treatment are based is wrong; but Huxley, while admitting he is ignorant of the matter and unqualified to speak, contends that this is of no importance because the method works in practice and gives good results; it comes into the category of "art," not of "science." This argument is perfectly allowable, for in other spheres than medicine empirical methods have often produced effective results the rationale of which may be mysterious. The most stupid feature about his book, however, is that he insists throughout on the physiological mechanism whereby these exercises are supposed to work. It would at least have been logical if he had continued to allow the reader to assume that he was speaking in ignorance of anything except results. He only borders on the ridiculous when he says that these methods result indirectly in the relief or cure of many serious diseases of the eyes, such as glaucoma, cataract, iritis, or detachment of the retina, because they "reduce nervous muscular tension, increase the circulation and bring back the *vis medicatrix naturæ* to its normal potency." Like the bone-setter who treats by forcible manipulation every joint whether rheumatic or tuberculous, or most obsessionists who believe that every virtue resides in one particular drug or practice, he treats all visual troubles as one all-embracing unity, all amenable to one sovereign remedy.

There is, of course, another side to the argument. There would appear to be no doubt that these exercises have done Aldous Huxley himself a great deal of good. Every ophthalmologist knows that they have made quite a number of people with a similar functional affliction happy. And every ophthalmologist equally knows that his consulting-room has long been haunted by people whom they have not helped at all. Huxley is quite right when he says that there is a tendency for the ordinary person, when there is a falling-off in vision, to "hurry off to the nearest spectacle shop" and there get fitted for a pair of glasses by someone who has "no knowledge of him as a physical organism or as a human individual." Nothing could be worse medicine than the indiscriminate and mechanical prescription of spectacles. He is quite right in saying that visual disabilities are often muscular and often psychopathic in origin. But every competent ophthalmologist treats the former with curative exercises (of a more scientific type than those recommended here), and, in the second case, at the least should advise the patient of the origin of his difficulties and suggest steps for their amelioration. For the simple neurote who has abundance of time to play with, Huxley's antics of palming, shifting, flashing, and the rest are probably as good treatment as any other system of Yogi or Coué-ism. To these the book may be of value. It is hardly possible that it will impress anyone endowed with common sense and a critical faculty. It may be dangerous in the hands of the impressionable who happen to suffer from glaucoma or detachment of the retina, and undoubtedly will be dangerous in the hands of the anxious parent of a myopic child who may be misled into neglecting the fundamental medical problems of growth, constitution, endocrinology, and rational ocular care, and may be persuaded to subject it to dangerous eye-strain in the absence of spectacles. But the greatest value of the book will be to the psychiatrist as an intimate and revealing self-study in psychology.

STEWART DUKE-ELDER.

Time - March 15, 1943. 44-5

MEDICINE

Exercise v. Eyeglasses

Though it is popularly supposed that all boys who want to be airmen must have perfect eyesight, many an Army & Navy air cadet knows better. Eye exercises sufficiently improved his faulty eyes to give him a crack at the course. And many an enlisted man has eye exercises to thank for his uniform. Examples:

One boy who failed to get into Annapolis because of weak eyes (20/40 in one eye,* 20/80 in the other) got there after two months of exercises, has since become a flyer. Another boy was refused by the Coast Guard for 20/100 vision, got in after a month and a half of eye training. Neither the Army nor Navy keeps tab of how many of their men have eye-muscled their way in, but the American Optometric Association has records of 1,000.

Unchangeable Eyeballs? Nevertheless, very few ophthalmologists will undertake to correct nearsightedness, farsightedness or astigmatism (unequal eye images) by exercise; the practice is limited almost entirely to certain psychologists, opticians and physical therapists. Reason: different schools of thought about how the eye works.

Orthodox explanation of eye function is that the shape of the eyeball is as unchanging as a glass eye; focusing is done by the elastic lens at the front of the eye; the six muscles around each eye have no function except to turn the eyeball. In myopia (nearsightedness) the eyeball is usually long from front to back; in farsighted people it is often short. In a nearsighted eye, the image falls in front of the retina; in a farsighted eye, behind the retina. Astigmatism is usually laid to slight eye distortions. As orthodox doctors agree that a patient's efforts can not alter the shape of an eyeball, they accept distortions as final, prescribe glasses.

But they use exercises for difficulties which they recognize as muscular (cross eyes, wall-eyes, etc.). Exercise equipment may be simply a pin which a patient watches while it is brought up to his nose, or a complex instrument like the synoptophore, third cousin to a stereoscope, which not only exercises eyes but helps diagnosis as well. An eye-exerciser sponsored by American Optical Co.'s Dr. J. F. Neumueller (*see cut*) combines mirrors, lenses, lights and stereoscopic images to give eye muscles a strenuous workout.

With & Without Bates. Optical orthodoxy is just a finger-snap to many U.S. therapists, whose offices have as many discarded eyeglasses as Lourdes has crutches. They will try to fix almost any eye disorder (except infections, tumors, etc.) by exercise. Some follow the theory of the late Dr. William H. Bates (died 1931) that the six outside eye muscles not only turn the eye but change the shape of the eyeball.



International

DR. NEUMUELLER, EXERCISING
Some advocate blinking, swaying, looking at the sun.

Among present-day Bates disciples are Mrs. Bates and Optometrist Harold Peppard of Manhattan. Novelist Aldous Huxley was so much helped by the Bates method that he wrote a book about it (*The Art of Seeing*).

Mrs. Bates sticks closest to her late husband's teaching. To get eye relaxation a patient covers his eyes with his hands and thinks of blackness ("palming"); blinks frequently. He practices reading fine print. He "suns" his eyes (rolls his head while glancing sunward). Mrs. Bates has successfully treated many patients, including Ignace Jan Paderewski.

Batesian Peppard features "the long swing" (a relaxing exercise done by swaying the body from side to side); the deliberate reading of each letter in a word separately; tennis (especially for nearsighted people, to promote shifting and prevent staring); and reading upside down.

Samuel Renshaw, Professor of Experimental Psychology at Ohio State University, believes that training may not only correct many eye defects but also improve normal vision. His methods have been adopted by Ohio State's Naval Recognition School, which has sent some 500 Navy teachers out to help sailors recognize enemy aircraft, spot distant periscopes and life rafts.

The indisputable point about eye exercise: sometimes it works.

* That is, he could see at 20 feet what he should have seen at 40.

When looking at a small object close to the eyes; shift part to part on it, shift on tiny parts and blink. This prevents staring, strain & blur.

It is beneficial to look at a very close object, placed in the *central field* as shown in the picture. But; the object must be placed up to eye level. The eyes must shift (*move* the attention) on the object from part to part. Blink. It must be done with relaxation. No force, no strain, effort. When looking at an object close to the eyes (or at any distance); shift part to part on it. Shift on tiny parts. Blink and Relax.

This prevents staring, strain. It maintains relaxation, clear vision. It is natural, the normal function of the eyes, vision. It is taught by Dr. William H. Bates. It can cure myopia, farsight, presbyopia and many other eye, vision problems. Reading microscopic print close to the eyes is also healthy for the eyes, maintains clear vision at all ages. It perfects Central Fixation, Shifting, the Eyes' Saccades, tiny shifts, Convergence, Accommodation.

Warning; *Avoid Auto-Stereograms, Magical Eyes pictures, Stereoscope Machines, Methods... (Also called Artificial 3-D)* referred to on the top, right side of this article. They are all unnatural. They are NOT Dr. Bates' Method. Various forms of it are used by some Behavioral Optometrists and unnatural vision teachers. It can cause; unclear vision, double vision, crossed/wandering eyes, sprained eye muscles, astigmatism, detached retina and vitreous, impaired brain function with the retina, lens, eyes, eye muscles...

< The eye exercise in this antique picture of Dr. Neumueller might be, or be similar to the unnatural *Artificial 3-D Auto-Stereograms, Stereoscope… pictures method*; use of *abnormal* fusion by placing 2 objects in the left-right peripheral field to create an *illusion* of a 3rd object *appearing to be* in the central field between the 2 peripheral objects. AVOID it! It is NOT Dr. Bates' method. Eye muscles-eyes-the brain must be relaxed and their functions, interactions perfected gently, naturally. NEVER forced, strained by 'strenuous workouts'. NEVER applying 'abnormal eye, visual system function.' Read the *Copyright, Disclaimer, Directions, Warnings - Avoid Unnatural/Harmful Vision Methods, Artificial 3-D, Auto-Stereogram Pictures..*, *Fake Vision Teachers* PDF and Video on the website; https://clearеyesight-batesmethod.info/id110.html

Use Dr. William H. Bates' TRUE Natural Vision Improvement Method; This is a healthy, natural, relaxed way to look at objects, improve the vision; Do not use force when crossing the eyes inward to look at a close object. Do it gently. Relax. Avoid staring. Shift *move* the attention part to part on the object. Blink. Example; Place an object 1 - 20 inches from the eyes, at eye level, in the central field (between the eyes). A flower, stone, pencil... Look directly at it and shift part to part on it. Blink, relax. No effort to see. Then; look at a far object beyond/in line with it in the central field. Shift on it. Blink. Then; move back to the close object. Shift on it. Blink. Then; move to the far object. Repeat. Practice with 3 small dots or tiny beads placed at a variety of close, middle, far distances from the eyes; place them in the central field, at eye level. Shift on them. Blink. Look at, shift on one dot/ distance at a time. This is NATURAL True 3-D (3-Dimensional) vision. It produces perfect convergence/accommodation, divergence/un-accommodation, shifting movements of the eyes, perfect function of the lens. Prevents myopia, farsight, presbyopia, cataract...

Sun (Sunning) is done with the eyes closed and moving. Some people prefer Sunning with the eyes open; always with the eyes moving *shifting* and blinking, and a time limit to prevent staring, over-exposure. The head/face moves in synchronization with the eyes.

ARCHIVES OF OPHTHALMOLOGY

VOLUME 32 (old series volume 89) SEPTEMBER 1944 NUMBER 3

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PRESENT STATUS OF EYE EXERCISES FOR IMPROVEMENT OF VISUAL FUNCTION

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BOSTON

One of the fundamental laws of biology is that repetition of an act facilitates its performance. The first time one does something one may do it clumsily and laboriously; the hundredth time it may be done dextrously and with ease. No principle of physiology and psychology is more firmly established than this. It is, of course, the basis of acquiring skill in any performance. To understand its modus operandi one must recall the way the nervous system is organized and how it operates. There are a prodigious number of nerve cells and an intricate network of communicating fibers. These fibers afford pathways for messages—nerve impulses—from one "center," or group of nerve cells to another and, finally, to a muscle or gland or other effector, unless somewhere along its course the impulse is arrested by inhibitory forces. When an act is clumsily performed, the messages are not passing smoothly and freely along the proper pathways; false turnings must be corrected before the desired end is reached. If the act is repeated over and over again, the passage of the nerve currents in the proper pathways is made easier and more efficient, i. e., with fewer false turns or hesitations —is "facilitated" as it is called.[1]

Repetition is the essential feature of exercises, training and learning, as these terms are used here. Obviously, repetition of an act with a faulty method will serve to confirm the fault just as surely as repetition with a correct method will confirm the good habit. This is why the capable coach or trainer or teacher watches early for faulty performance. For instance, the golfer who practices his swing in a faulty way only confirms his faults; he will improve and, if he has some natural talent, may consistently get below 100; but unless he has a competent teacher, he cannot expect to break 80 except by a rare streak of luck; his play will be erratic and uncertain.

So in orthoptics, for example in bar reading, the more the patient reads in the wrong way, shifting his fixation from eye to eye, so swiftly perhaps that he reads aloud smoothly line after line, the more deeply rooted does his suppression become. The experienced orthoptist could cite many other examples of ways in which exercises, perhaps with automatic electric motor contrivances, cause the patient to make certain movements but do not guard against his carrying them out by a faulty method.

If the act involves muscular performance, as most acts do, the muscles involved increase in size and power (hypertrophy) and become stronger. If the muscles are already strong enough, no increase results from the exercise. For example, in learning to row two things are involved, skill in handling the oars and muscles strong enough to do the work required.

There are many activities which call for increased strength of the muscles, as well as increased skill in using them. This is notably the case if the learning of a given skill is undertaken before the person has reached full muscular development. If a boy of 12 takes up golf, he can learn to swing the clubs with great skill and graceful coordination; but until his muscles become stronger, he cannot strike the ball hard enough to make a long drive. So the man who is strong—has plenty of muscle—will say that the secret of a long drive is the skill and coordination ("timing" he may call it) used; the weak-muscled player will say it is the power one can put into it that makes the ball go a long way. In fact, of course, both skill and power are essential. In faulty ocular movements such as convergence insufficiency, there are still many who think it is strength of muscular power that is lacking.

Read at the Forty-Eighth Annual Session of the American Academy of Ophthalmology and Otolaryngology, Chicago, Oct. 13, 1943.

1. This statement simplifies too much the matter of learning. The result would be rigidity, lack of flexibility. If repetition, by facilitating the passage of messages along a fixed route, were the whole story, how could one account for the important fact that when one has learned how to do something, one is able to adapt the performance to unexpected variations in conditions which may arise and may call for immediate changes in the way the act is best performed in some of its details?

Others, realizing the great excess of muscular strength that is provided in the ocular muscles, stress the lack of coordination, the inability to use the muscles, the lack of "skill," employing that word in a broad sense.

That exercise and practice improve the performance of muscular, or motor, activities no one is likely to deny. In the case of sensory activities there may be certain doubts. How, one might ask, will practice improve sight or hearing? The dioptric images formed on the retina serve as the stimulus; the only way to improve sight is to get a better image on the retina. This cannot be obtained by practice or exercises. This concept of seeing is far from correct. The first step in seeing is the formation of a good image on the retina, by fixation on the best part of the retina, the fovea; but this is only the first step.

It is well established that it is impossible to experience a pure, isolated sensation. There are two factors which affect all sensations as they reach consciousness and become perceptions. The first is concerned with all the other sensations coming into consciousness at the same time through the visual apparatus, and not merely through the visual apparatus but through tactile, kinesthetic, auditory and all other avenues.

The second factor comprises memories of past experiences, and even inherited predispositions. I wish there were time to elaborate on this phase because it is of enormous practical importance in an understanding of how one sees. It explains how a mere glimpse, perhaps in dim light, of an object well known from previous experience, results in one's "seeing" many details which, as a matter of fact, are supplied by memory. For example, the apparent color of a dress may be altered by the color of the lighting under which it is seen, but because one knows from many past experiences what the color is under daylight (white light), the object is "seen" as having its well known, not its apparent, color.[2] So, in even greater degree with apparent size, apparent distance and apparent form, the pattern as a whole is appreciated as a unitary and complete pattern, without any conscious analysis of its individual details. Different stimuli, often apparently contradictory, may produce the same response. A square card seen obliquely makes an image on the retina which is not square, but it is "seen" as square, from whatever angle it is viewed. "The essential factor, therefore, in the emergence of any pattern is its meaning."[3] I must assume that the reader is thoroughly familiar with these facts, about which volumes have been written.

The memories of past experiences (usually unconscious) affect profoundly the various sensations. It is obvious that exercises and practice serve to build a substratum of experience, a storehouse of memories, which facilitate perception of whatever is the subject of the practice and exercises.

The effects of exercises which I wish to stress are as follows:

1. The facilitation of pathways and of conditioned reflexes.

2. The accumulation of a fund of experiences, a storehouse of memories and associations, from which are evoked responses by the immediate sensations, which lead to interpretations and which altogether build up and determine the perception. In short, seeing is only half ocular: the other half is cerebral. One cannot say that either half is the more important, since the two are equally indispensable and in practice inseparable.

An effect which I wish not to stress, but to minimize, is the increase in muscular strength which results from exercise.

Examples of the effect on sight of practice or exercises follow:

1. Treatment for color blindness in men rejected from military service. The usual procedure, called the light and filter treatment, as described by optometrists, consists in the fixation of colored sources of light for several minutes and the use of filters, with a daily check of progress on the pseudoisochromatic plates.

Two instructors in optometry at Ohio State University, Bridgman and Hofstitter,[4] skeptical about this method of improving color vision, tested several subjects, 3 of whom had passed the Navy tests successfully after treatments by a practicing optometrist. The authors concluded that their results did not in any way support the assumption that the exercises intended to train color vision are of any assistance. It appeared, on the contrary, that the exercises are merely time consuming and that the improvement in scoring is related only to the learning made possible by repeated testing.

A color-blind subject from the eye clinic, tested in the usual way, had a score of 15 of 46 plates in the first test. He was tested four times. He was told when he was wrong but was not given the correct answer. His scores were 27, 35, 43 on the second, third and fourth tests. Similar results were obtained with other subjects. The

2. Duke-Elder, W. S.: Text-Book of Ophthalmology, St. Louis, C. V. Mosby Company, 1933, vol. 1, p. 1019.

3. Duke-Elder,[2] p. 1023.

4. Bridgman, C. S., and Hofstitter, H. W.: Improving Color Vision, Optom. Weekly 34:471 (May 27) 1943.

authors showed how this improvement can be explained. They concluded that those who criticize the practice of training color vision are entirely justified. They find no evidence that color filter treatment is effective in improving color blindness. They questioned the type of evidence which has been accepted as a conclusive indication of improvement in color vision. Proof of such improvement can be supplied only by measurement of fundamental color vision functions, such as the Rayleigh Equation. The treatment, they concluded, is not justified since it may lead to the acceptance of responsibilities which the patient cannot fulfil, though he erroneously believes himself cured of color blindness.

This is an excellent piece of work, such as one has learned to expect from the optometry laboratory of Glen Fry. It is to be noted that though the color blindness is not cured, the subjects do learn to see the plates more correctly, an illustration of how practice operates.

2. Peripheral vision.[5] Over 200 subjects were tested under properly controlled conditions. The evidence indicated that peripheral visual acuity can be trained. Twenty per cent of the original group of 100 subjects when retested showed improvement of 16 per cent. The improvement was roughly proportional to the amount of time taken by the test.

3. Speed with which a number of digits or letters are seen. Renshaw [6] reported work on the Polish lightning calculator Dr. Finkelstein, who memorized 8 digits in .003 second, 12 digits in 0.824 second and 16 digits in 1.73 seconds. Renshaw then took 12 university students, 2 of whom were able in time to surpass Finkelstein's record. For example, after twelve practice sessions of thirty minutes each, one average student was able to memorize a 12 digit number in 1.5 seconds, although at the beginning it took him 90 seconds. A more highly trained subject memorized a 21 digit number in 4.372 seconds instead of 90 seconds, as in early trials.

Renshaw commented:

> The difference between the expert and the novice in the rapid and accurate perception of visual material is the same difference as that between the expert and the novice in the performance of any skilful act. We have to learn to see just as we have to learn to swim, to play the piano, or to speak French. This can be done with skill and efficiency, or it can be done haltingly and ineffectively. When we train children to learn to spell English words by replacing the wasteful and ineffective disjunctive method of seeing words, with the proper method of visual perception, spelling difficulties disappear. Not only does a child spell accurately and easily, but he comes to enjoy spelling. An incidental by-product also is that his rate of reading and index of comprehension automatically show a corresponding improvement.

4. An experiment in which a person with practically normal eyes wears an eikonic lens magnifying one meridian of one eye. This throws his binocular space perception out of gear but does not affect his monocular judgment of space. For a few days, especially in the morning, he is somewhat annoyed by this defect, but as time goes on he learns to suppress his faulty binocular perceptions and rely on his monocular clues. If he is placed in an environment in which monocular clues are few or absent, he is much disturbed. Since most situations present abundant monocular clues, a room for instance, he is aware of little or no effect on his seeing. He has learned to adapt himself to the new conditions.

5. Orthoptic training for heterophoria or heterotopia.

(*a*) A bookkeeper did his work laboriously and more slowly than he ought, with too many errors and with undue fatigue and frequent headaches. He had considerable heterophoria, with suppression which made it unduly difficult to follow lines across the paper correctly and to add up columns of figures. A few weeks' training by an orthoptist, with faithful home work, resulted in his learning how to use his eyes more skilfully, so that his work was made easy and rapid, with greatly reduced fatigue.

(*b*) A girl aged 12 years had accommodative convergent strabismus with hypermetropia of 3 D. and slight astigmatism. Convergence without glasses was 25 prism diopters, and with glasses, 5 prism diopters (with the eyes cosmetically straight). Her mother did not want her to wear glasses. A few months' training by an orthoptist resulted in the patient's learning to hold the eyes straight without glasses.

(*c*) A child with convergent strabismus and amblyopia of the left eye first learned to see with the amblyopic eye by occluding the right eye; he next learned simultaneous perception, then fusion, then stereoscopic depth perception on the synoptophore and, finally, good binocular vision as a habit, i. e., not merely on the synoptophore but in casual seeing.

6. True myopia. An important group of patients with true myopia and other defects earnestly desire to get rid of their glasses. They have been told by an ophthalmologist or optometrist that they must wear glasses all the time. They go to a follower of Bates who tells them to dis-

5. Low, F. N.: Studies on Peripheral Visual Acuity, Science **97**:586 (June 25) 1943.

6. Renshaw, S.: Psychology of Vision, released through the optometric extension program, Duncan, Okla., 1939 to 1942.

card their glasses, which are crutches. To their surprise, nothing serious happens! Their sight, of course, is still blurred for distant objects, but they find that by practice they acquire the ability to make out objects better through the blur than they did when they wore glasses constantly. They are apt to exaggerate this gain in talking about it.

A young man who had been wearing concave lenses asked if there was any way he could pass the test for 20/20 vision. Vision was 20/15 with glasses but was 20/30 without glasses. He was given a + 1.00 D. sphere for each eye to wear constantly for three days. His visual acuity was 20/15 without glasses and 20/15 with a + 0.50 D. sphere, and he read some letters of the 20/20 line with a + 1.00 D. sphere. Was his myopia cured? No, because he did not have myopia to begin with. He learned to relax his accommodation. He was judged to be myopic by some one because when a — 0.50 D. sphere was placed before his eye, he said, "that is better, clearer." That a young man with 20/15 vision sees better with a — 0.50 D. sphere shows that he has good accommodation, not that he has myopia. Other evidence is necessary before such a diagnosis is justified. He should read one or two lines more with the minus glass than he reads without it.

In each of the examples I have cited, the progress of the patient depended on his learning to use his eyes better. He learned to see the isochromatic plates better only by greater skill or proficiency in interpreting his visual sensations. In the first case, the sensations were no better; he was still color blind, but he had learned to make so much better use of his defective apparatus that he fooled the examiner. Another learned to see better with the peripheral portion of his retina not because the sensations were better or the retinal images better, but because he had learned by practice to perform better the cerebral processes which are an important part of seeing. The third subject learned to take in a group of figures in a small fraction of the time it required at first not because his visual sensations had improved, but because he had learned how to use them by practice, by exercises. The man who experimented with eikonic lenses became adapted to them by practice, by learning to suppress what was not to his advantage to "see" and to utilize instead what he found to be dependable, and therefore advantageous. Perhaps one might think the bookkeeper with the heteropboria derived his relief from strengthening certain weak muscles. This I stoutly deny. His muscles were not weak when he began, and they were not notably stronger when he had recovered from his disability. His bad habits had been changed to good ones by skilfully directed exercises and practice. Probably he had been suppressing, for one thing, and that certainly cannot be cured by strengthening muscles. The patient with accommodative convergent strabismus learned to use her muscles so as to hold the eyes straight by relaxing certain muscles, not by strengthening them. The seventh case is the most beautiful demonstration of all. The amblyopia was cured by exercises, by practice, by learning to see. The patient was guided skilfully through the intricacies of acquiring binocular vision, in its various stages, to a complete cure. Does any one think the secret was in strengthening certain muscles—in this case the lateral rectus muscle?

The eighth illustration shows how much can be gained in learning to see by persistent practice, even when the visual acuity is low. Here belong the patients who acquire improved speed and accuracy of recognition through practice when the question is not one of improvement in visual acuity—the sailor, the airman, the hunter, the fisherman, the prospector, all acquire by practice, i. e., by exercise, the ability to see better, though the visual acuity remains the same. The last example shows how the wearing of a concave lens can induce such a tonic contraction of the ciliary muscle as to counterfeit myopia and how the wearing of a convex lens may induce relaxation by a few days of practice in learning how to see.

I have tried to make it clear that exercises and practice are effective in learning to see better or to use the eyes better in many ways. Use is made of these principles in other branches of medicine, notably, in orthopedics, in which posture is corrected and various disabilities are relieved. Lately, the Kenny treatment for infantile paralysis has been in the limelight. It has achieved some brilliant results. The explanations given by the originator of the method have been shown by competent investigators[7] to be false, but that is not sufficient reason for abandonment of the treatment, the good points of which should be adopted.

Similar comments may be made about the Bates treatment, lately given such publicity by Huxley, by other authors and by numerous

7. Moldaver, J.: Physiopathologic Aspect of Disorders of Muscles in Infantile Paralysis, J. A. M. A. 123:74 (Sept. 11) 1943. Watkins, A. L.; Brazier, M. A. B., and Schwab, R. S.: Concepts of Muscle Dysfunction in Poliomyelitis Based on Electromyographic Studies, ibid. 123:188 (Sept. 25) 1943.

articles in the lay press.[8] The number and prominence of these articles are evidence that the public is interested. Several editorials and reviews have appeared in professional journals.[9] Notice was taken of the problem by the National Committee on Optics and Visual Physiology at its last meeting in June 1943. It is not surprising, therefore, that the secretary selected this subject as suitable for discussion here.

If one studies the various publications with an open mind, searching for the things which will explain why the public wants this treatment, one will be forced to admit that buried in a mass of what to ophthalmologists seem foolish gestures and performances, best defined as hocus-pocus,[10] there are sound and fruitful ideas. It is these that account for the survival and spread of the cult. It certainly is not foolish to believe that people can be taught to use their vocal organs in speaking or in singing, that they can be taught to play musical instruments, to dance, to skate and to play games, such as billiards or golf, and, as a result of teaching, can learn to perform better than they can without instruction and training. In the same way, the public argues, they should be instructed in the use of their eyes. They consult the ophthalmologist and are provided with glasses, but are given little information about the nature of their trouble or about measures which might help them to use their eyes successfully. Yet they hear of some one who went to a follower of Bates and got plenty of instruction. There are many, very many, patients who do not want to wear glasses, who would go to almost any length to escape that fate. This should be taken account of in dealing with such patients. The alternatives should be pointed out. Most of them appreciate having things explained to them. This takes time and patience, but the physician need not do the teaching himself; he can employ some one to do it for him. Thus he can be sure it is done right. The patient is given sound instruction, not mixed with hocus-pocus. The patient, of course, cannot discriminate between the pseudoscience of the partly educated followers of Bates and the sound truths of the well trained ophthalmologist.

However, it is important to point out that the hypothetic well trained ophthalmologist is often ignorant of certain phases of the art and science of which he is supposed to be master. He is apt to make the mistake of arguing that because Bates's theory of accommodation is incorrect, his whole program is unsound. The history of medicine is a long list of tentative theories later proved to be erroneous, but the facts they tried to explain remain firmly established, though the theories are swept away. Quinine cured malaria and continued to cure it, though the theories invented to account for its action were entirely erroneous. Likewise, lime juice cured scurvy, and so on.

Among the important things emphasized by Huxley are: The value of relaxation and the harm of tension; the pernicious influence of fear, e. g., fear of light, fear of blindness, fear of using the eyes; the dual nature of seeing—sensation plus interpretation equals perception—and the necessity of giving attention and treatment to the cerebral side of the function.[11] The fact that in carrying out treatment along these lines the method indulges in numbo-jumbo should not prevent one from making use of the good points concealed therein.

Then, with a sounder theoretic basis, and therefore more intelligent execution, the good results will be still more impressive. Orthoptics manages to cure certain of the conditions for which it is used by a more or less clumsy routine based on the erroneous theory that some muscle needs to be strengthened. With a more skilful technic, based on a wiser, more rational, theory, the progress is far more rapid and sure in the hands of persons who know how to apply the better methods.

SUMMARY

There is abundant evidence for the general proposition that exercises, repetition, practice

8. (*a*) Huxley, A. L.: The Art of Seeing, New York, Harper & Bros., 1942. (*b*) Bates, W. H.: Perfect Sight Without Glasses, New York, Central Fixation Publishing Co., 1920. (*c*) Corbitt: How to Improve Your Eyes, Los Angeles, 1930. Ross, J. A., and Rehner, L.: How to Get and Keep Good Eyesight, Garden City, N. Y., Sun Dial Press, Inc., 1943. Huxley, A. L.: Learning to See, Collier's **111**:24 (April 12) 1943. Barensfeld: Aldous Huxley's Seven Years in America, Book Review, New York Times, June 27, 1943.

9. (*a*) Sorsby, A., cited by Huxley,[8a] Appendix I. (*b*) Duke-Elder, W. S.: The Art of Seeing, by A. L. Huxley, Book Review, Brit. M. J. **1**:635 (May 22) 1943; Arch. Ophth. **30**:582 (Oct.) 1943. (*c*) Crisp, W. H.: More About Eye Exercises, Am. J. Ophth. **26**: 872 (Aug.) 1943. (*d*) Pascal, J. I.: On Aldous Huxley's "The Art of Seeing," ibid. **26**:636 (June) 1943. (*e*) Aldous Huxley's Vision, editorial, J. A. M. A. **122**:951 (July 31) 1943.

10. Duke-Elder[9b] referred to them as "Huxley's antics of palming, shifting, flashing, and the rest are probably as good treatment as any other system of Yogi or Coué-ism."

11. It is often pointed out that Huxley's visual acuity has not improved in any extraordinary way. He admits that. The point is that he has learned how to use what he has to better advantage. It is not the primary retinal sensation that is improved; it is the neglected, but vitally important, cerebral part of seeing that has been trained.

and learning lead to better performance, to the acquisition of skill.[13] Many ocular conditions exemplify this law. Since seeing is only partly a matter of the image on the retina and the sensation it produces, but is in still larger part a matter of the cerebral processes of synthesis, in which memories play a principal role, it follows that by repetition, by practice, by exercises one builds up a substratum of memories useful for the interpretation of sensations and facilitates the syntheses which are the major part of seeing. Also, motor functions are perfected by practice, by learning, and reflex pathways are facilitated. Ophthalmologists have neglected this field and have concentrated their attention on the primary source of the sensation, the image on the retina, leaving to irregular, half-trained workers the cultivation of that field. The achievements obtained by the clumsy practices which have been developed should stimulate ophthalmologists to investigate and discover the valuable possibilities in this field which, I am convinced, await intelligent development. Finally, in assessing the value of exercises it must not be forgotten that many patients have a neurotic or psychic element and that such patients are often favorably affected by hocus-pocus. Do not make the mistake of thinking that this is the whole story.

I have said nothing about actual structural changes which are wrought by exercises, other than hyperplasia and hypertrophy of muscles and the consequent changes induced in tendons, and perhaps in bones. Frankly, I am skeptical of such an effect. A clearing of corneal opacities often occurs to a rather slight degree, but not by means of exercises. I doubt whether any changes in size or shape of the eyeball are brought about by such means. Certainly, the burden of proof is on those who make such claims. Permit me to quote Jesus, who said: "Which of you by taking thought can add one cubit unto his stature?"

12. Here are some quotations from Huxley[4a]: "The art of seeing does not stand or fall with any particular hypothesis [page 33]."

"The art of seeing is like other fundamental or primary psycho-physical skills, such as talking, walking and using the hands."

"People may have the most fantastic views about physiology; but this will make no difference so long as their theory and practice of psycho-physical functioning remain adequate to their purpose. If psycho-physical skills depended for their development on a correct knowledge of physiology, then nobody would ever have learnt any art whatsoever. It is probable, for example, that Bach never thought about the physiology of muscular activity; if he did it is quite certain that he thought incorrectly. That, however, did not prevent him from using his muscles to play the organ with incomparable dexterity [page 34]."

AMERICAN JOURNAL OF OPTOMETRY
and ARCHIVES *of*
AMERICAN ACADEMY OF OPTOMETRY

Vol. 29 April, 1952 No. 4

"FLASHES" OF CLEAR VISION AND NEGATIVE ACCOMMODATION WITH REFERENCE TO THE BATES METHOD OF VISUAL TRAINING*

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On rare occasions in clinical practice, a myopic patient is seen who relates that every once in awhile his usually blurred vision suddenly and briefly becomes beautifully sharp without glasses. This evanescent clarity, termed "flashes" of clear vision, cannot be elicited at will in the refracting room and demonstrated with a visual acuity test chart. The skeptical refractionist who wants to believe the patient, has no opportunity to measure this reported will-o'-the-wisp phenomenon.

What are these flashes? Do they occur as a result of a change of the refractive power of the eye (negative accommodation)? How much do they improve vision? These are some of the questions this investigation will attempt to answer.

BATES AND HIS DISCIPLES

Dr. William Horatio Bates, a New York ophthalmologist, was a maverick in his profession. In 1920 he published a book entitled "The Cure of Imperfect Sight by Treatment Without Glasses"[1] and started a school of vision practitioners (or educators) which is vigorous today.

Most of his claims and all of his theories have been considered false by practically all visual scientists. The quotations taken from throughout his book give, in substance, some of his principal ideas.

> [In retinoscopy] the observer is so near the subject that the latter is made nervous, and this changes the refraction. . . . This means that it must not be brought nearer to the eye than six feet; otherwise the subject will be made nervous, the refraction for reasons which will be explained later, will be changed, and no reliable observations will be possible.

Bates did not believe that the crystalline lens is the agent of accommodation because of two pieces of evidence. First, after four years of effort, he failed to find alterations in curvature of the anterior

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*Read before the annual meeting of the American Academy of Optometry, New York, New York, December 10, 1951. For publication in the April, 1952 issue of the AMERICAN JOURNAL OF OPTOMETRY AND ARCHIVES OF AMERICAN ACADEMY OF OPTOMETRY.

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surface of the lens during accommodation as indicated by changes in the size of the image of a reflected light source.§

His other evidence against lenticular accommodation was the occasional cases of apparent accommodation in aphakics.‡ It seemed evident to him that accommodation was effected by changes in the length of the eyeball.**

Let us return to quotations from Bates.[1]

The obliques are the muscles of accommodation: the recti are concerned in the production of hypermetropia and astigmatism.

Straining to see at the near point produces hypermetropia.

Myopia produced by unconscious strain to see at the distance is increased by conscious strain.

A person may have good vision when he is telling the truth: but if he states what is not true an error of refraction will be produced, because it is impossible to state or imagine what is not true without an effort.

I may claim to have discovered that telling lies is bad for the eyes . . . [causing a change of refraction seen by retinoscopy].

With such a [practically perfect or normal] memory of black, the retinoscope shows that all errors of refraction are corrected.

Persons with normal sight have been able to look at the sun for an indefinite length of time, even an hour or longer, without any discomfort or loss of vision. . . . Even total blindness lasting a few hours has been produced. Organic changes may also be produced. Inflammation, redness of the conjunctiva, cloudiness of the lens and of the aqueous and vitreous humors, congestion and cloudiness of the retina, optic nerve and choroid, have all resulted from sun-gazing. These effects, however, are always temporary. . . . Some persons who have believed their eyes to have been permanently injured by the sun have been promptly cured by central fixation, indicating that their blindness had been simply functional.

In his book, Bates reported some experiments on animals, which have been criticized for their lack of proper techniques and a flouting of basic facts of anatomy and pharmacology.

Later editions of his book were published by his wife after his death in 1931. They were watered-down and more cautious.[6, 7] In the latter it was no longer claimed that imagining black could be used as a substitute for anesthesia in surgery, nor was it specifically stated that one should look directly at the sun. The original theories and most claims remained.

The fundamental principles of treatment are based on relaxation which, it is implied, is supposed to reduce to the vanishing point, all types of ametropia and ideally beget permanent emmetropia for its

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§Many investigators including Helmholtz had observed the phenomenon and in more recent years Kirchhof[2] made dynamic recordings of this third Purkinje image. Allen[3] has developed the technique still further.

‡The rarity of these cases should be sufficient to make them suspect as a normal method of accommodation. Excellent evidence has been presented that there is no change in the refractive power of the eye in these cases.[4, 5]

**It is interesting to note that it would take about one millimeter change in axial length of the eyeball for each three diopters change of refractive power. Hence a youth accommodating 15 D. would shorten his globe by five millimeters. To the writer's knowledge, no corresponding anterior-posterior corneal movement has ever been reported.

fortunate follower. Relaxation is gained as follows:[7] 1. Resting the eyes. 2. Palming (excluding light and seeing maximum black). 3. Swinging (a gentle rotary motion of the trunk with the toes fixed). 4. Memory. 5. Imagination. 6. Flashing* or blinking (furtive glances and blinking from an eyes-closed position). 7. Central fixation (opposite of staring—looking all about an object). 8. Sun treatment (eyes closed, later open them but look downward).

Many other books have been published on the Bates method but few of them have offered anything original.[8-12] Most authors since Bates have leaned on him completely for scientific backing. In England, Price[13] followed the basic practices of Bates but did not adopt all of his theory. Price's book is moderate. While he does believe that strain is the basis of poor vision, he does not take sides in the accommodative theory by which poor vision is supposed to improve. Furthermore he made none of the extraordinary claims found in Bates' original book. One cannot help but feel that an honest attempt was made by Price to get to the basis of the reported phenomenon of flashing.

Mrs. Margaret Darst Corbett of Los Angeles, California, is a widely known, active and enthusiastic Bates practitioner who has developed a new group of teachers of the Bates method. Her two books[14, 15] show that she has experimented and adopted new techniques. The theory of Bates is at the core of her practices and she eulogizes it. A few quotations will illustrate her viewpoint.

> . . . vision is *nine-tenths* mental and only one-tenth physical.
>
> Near-sighted eyes need much done for them to bring them to normalcy. First they must have their tension relaxed so that the oblique muscles that belt the eye too tightly about the middle will let go. Then, the recti muscles must be strengthened so that they can flatten the eyeball for the distant focus; and in addition their endurance must be built up so that they can maintain their hold on the eyeball longer than a mere second or "flash" which most near-sighted eyes can get after just a little relaxation.
>
> Myopic eyes of clients get a flash—a touch of normal vision. Suddenly the oblique muscles let go and the recti contract, shaping the eyeball normally for a moment or two so that the entire panorama stands out perfectly just as with normal vision.

It would seem that in Mrs. Corbett's view, the "nine-tenths mental" part of vision acts to bring about changes in its "one-tenth physical" part.

> . . . carefully avoid squinting, or squeezing the lids, to clear vision. This is trick vision and injures the eyes. We want only normalcy, no tricks.
>
> Hold in the fingers of both hands a soft rubber ball. Squeeze it flat from front to back. Let it swell out round again. Then squeeze it around the middle so that it bulges long from front to back. Let it come round again. Watch the ball change shape from a lozenge to an eggshape. Do this repeatedly, rhythmically, saying aloud
>
> Squeeze it flat from front to back
> let it come round again
> Squeeze it long from front to back
> let it come round again

*It is to be noted that Bates did not use the term "flash" as it is used in this paper, to denote a sudden transient increase of visual acuity.

This doggerel by Mrs. Corbett presumably suggests the changing shape of the eyeball and through autosuggestion, a better control of ametropia is supposed to be gained.*

The intellectual giant of the Bates group is the well-known expatriate British author, Aldous Huxley. Whereas the books of Mrs. Corbett are best for learning the practice in cookbook fashion, the book of Huxley[16] is, without question, the best written and the most profound. It is relatively cautious in regard to the theories and to some of the claims of Bates.

Huxley had two reasons for writing this book. First as a debt of gratitude to Bates and to Corbett who, he believed, helped him to improve his own vision which was poor as a result of a bilateral keratitis acquired at the age of 16. His second reason was to "correlate the methods of visual education with the findings of modern psychology and critical philosophy." Huxley speaks thus:

> Vision is not won by making an effort to get it; it comes to those who have learned to put their minds and eyes into a state of alert passivity, of dynamic relaxation.
>
> This guess [The Bates theory of the mechanism of accommodation] may be correct; or it may be incorrect. I do not greatly care. For my concern is not with the anatomical mechanism of accommodation, but with the art of seeing—and the art of seeing does not stand or fall with any particular physiological hypothesis. Believing that Bates' theory of accommodation was untrue, the orthodox have concluded that his technique of visual education must be unsound. Once again this is an unwarranted conclusion, due to a failure to understand the nature of an art, or psychophysical skill.

Huxley, then, while showing respect for Bates, is not tied to his theories as most of the others appear to be. He seems willing to stand on improved visual acuity as the important demonstrable phenomenon in the Bates method.

Since this paper was written, it has been brought to the writer's attention that an article entitled "Variable Acuity" by James R. Gregg has appeared in an unabstracted journal (Jour. Amer. Optom. Assn., 18, 432-435, March, 1947). The results of this paper essentially agree with the data presented here in relation to the increase of visual acuity and the lack of change of accommodation as measured by skiametry. Two of the three subjects had a very low degree of myopia and were able to flash to 20/20. The third subject who was a myope of about —4.50 D. could flash only to 20/50.

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BATES' METHOD OF OCULAR TREATMENT

By

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The value of the methods of treating refractive and other eye conditions introduced by Bates (Bates, 1920) has long been a subject for controversy. In this paper a critical assessment of these methods, and of those of his successors, has been attempted. A bibliography has also been compiled of the writings of advocates and opponents of Bates. A Bates practitioner was interviewed during the course of the investigation and much valuable information on current practice and organisation was obtained.

Dr. William Horatio Bates, the instigator of the Bates system of eye training was an eye, ear, nose and throat specialist in New York. He graduated from Cornell in 1881, obtained his degree from the American College of Physicians and Surgeons in 1885, and then held the posts of clinical assistant at the Manhattan Eye and Ear Hospital, attending physician at the Bellevue Mental Hospital, and later attending physician at the New York Eye Infirmary. From 1886 to 1891 he lectured in ophthalmology at the New York Postgraduate Medical School and Hospital. Then, in 1902, he disappeared.

Later in 1902 he was found to be working as an assistant at Charing Cross Hospital, London. Two years later he set up private practice in Grand Forks, Dakota, where he continued for some six years. In 1910 he assumed the post of attending physician at the Harlem Hospital, New York, working there until 1922. He died in 1931; his obituary appeared in the *New York Times* of July 11, 1931.

It was in 1920 that Bates published his first book *Cure of Imperfect Eyesight Without Glasses*. Much of the material had appeared previously in papers in several medical journals (Bates 1912, 1915, 1918). A revised condensed version of the book was published 20 years later.

The generally accepted theory of accommodation, usually referred to as the Helmholtz theory holds that the dioptric system of the eye changes its power by means of changes in curvature of the crystalline lens. A rival theory (Sturm 1697, Listing 1851 and others) holds that the dioptric power of the eye remains constant, but that the axial length of the eye is changed by means of pressure exerted on the globe of the eye by the extrinsic ocular muscles. Bates supported the latter school, carrying out work on the eyes of humans, fish, and other animals in attempts to gather the support of experimental evidence.

Fincham states that Bates at one time produced photographs which purported to show that the cornea changed its curvature during accommodation, but

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the evidence was unconvincing and now there is overwhelming evidence that the corneal curvature remains constant and that the lens changes its shape (Fincham 1936).

Bates also claimed that photographs he produced of the third and fourth Purkinje images (Bates 1920) showed that these did not alter substantially during accommodation. This claim is at variance with photographic and direct observation by many observers, including the present writers.

Basis of Bates Treatment

As a result of conclusions drawn from his work on accommodation Bates formulated a system of treatment of refractive errors which did not involve the use of correcting lenses.

He reasoned that correcting lenses only removed the symptoms; they did not eliminate the causes. The eye did not revert to its normal functioning (Huxley 1942), while the causes of the condition remained operative. The result was a further deterioration necessitating still stronger lenses, and so the condition would progress as a result of the treatment instead of being arrested by it. Bates therefore considered that orthodox optical methods proceeded in the wrong direction.

Bates held that the cause of deterioration of vision was mental strain, resulting from eyestrain due to the over-zealous attempt to see in adverse visual conditions. Aldous Huxley enlarged on this, enumerating the causes as low mental and physical vitality, grief, anxiety, irritation, fear and similar negative emotions, also poor diet and incorrect posture. Huxley refers to Joseph E. Barmat who held that boredom increased the appreciation of sensations such as pain, hunger, discomfort and eyestrain. An increased appreciation of eyestrain, he suggested, leads to an increased effort to see. Hypermetropes may have difficulty in reading and close work, while myopes may have difficulty in taking part in games and in seeing distant peoples' faces clearly. In both cases aggravation of the condition may result from over-zealous attempts to see.

Bates therefore suggested that a more appropriate treatment of visual defects would be to induce mental relaxation, and train the patient to use his eyes correctly in a relaxed manner, an approach which would appear to accord with present day views on orthoptic treatment, and also on the training of spastics and post-paraplegics.

Training of Bates Practitioners

Although some Bates practitioners possess qualifications as medical auxiliaries, there are no colleges or similar training institutions in this country, nor are there any special qualifications. Most Bates practitioners here are people who have undergone the Bates treatment for their own visual troubles, and have as a result taken upon themselves the visual training of other people as a full-time occupation. Bates visual training is simply the establishment of new visual habits, and a person who has these habits well ingrained is considered qualified to instruct other people in acquiring them.

In America there are several schools for training large numbers of people to overcome their poor vision by the Bates technique, but the largest establishment of this kind in the world is the Bates Academy in Johannesburg, South Africa.

The official body representing Bates practitioners in this country is the London Association for Eyesight Training, 46, Portland Place, London, W.1. The Association is small, having less than a dozen members, six of whom practise in the London area. In addition there are in existence a number of people who make similar claims to the Bates practitioners, but who are not recognised by the Association. The Association does not have a journal.

Patients

The practitioner interviewed stated that the majority of patients who visit Bates practitioners do so on personal recommendation. The underlying reason in almost all cases is the wish to avoid wearing glasses. Some desire to be rid of glasses which are already being worn, the patient feeling dissatisfied with this method of treatment and seeking an alternative. Others who do not wear glasses wish to undergo a form of treatment for poor vision which will not necessitate the wearing of spectacles.

Relationship between Orthodox and Unorthodox

The orthodox optical and medical professions do not completely ignore the Bates practitioners since patients are not infrequently referred from one class of practitioner to another.

Methods

According to the practitioner interviewed, Bates practitioners in general see the same proportion of cases of high refractive error, low error and disease as does the ophthalmic optician, although they may see more low and medium myopes, the majority of whom, perhaps significantly, are office workers.

As may be expected, the Bates practitioner shares few techniques with the ophthalmic optician, but he does carry out ophthalmoscopy, and the patient's vision is determined on the Snellen letter chart. There is a striking similarity between modern orthoptic methods and the Bates treatment of squint (diplopic image exercises and the two needle exercise are two examples), although the two systems have apparently developed independently. (For a description of the exercises used in the Bates system of eyesight training see Appendix).

Ocular Disease

Bates's exercises were primarily aimed at improving poor vision, but cases of chronic glaucoma are claimed, by the practitioner interviewed, to have benefited from certain of these exercises. It was also stated that cases of acute glaucoma are referred for orthodox treatment, while other conditions such as cataract, corneal ulcers and opacities are frequently referred to homoeopaths. Keratitis was said to be frequently treated by ' steaming ' with a pad soaked in boiling water, but this treatment is restricted to cases where the patient can be relied up to " use his common sense ".

Success of Treatment

The criteria for success are the same as those for many other habit-training procedures (e.g. voice training, deportment, speech training, etc.), that is, when the desired effect becomes normal habit, or when the standard of performance ceases to improve or, simply, subjective satisfaction.

Possible Application of Hypnotism

It has been seen that the Bates visual training system consists mainly of exercises aimed at producing mental relaxation, and for promoting relief from nervous tension by psychological means. These exercises have changed little since Bates first introduced them, and it is the opinion of the practitioner interviewed that relaxation might equally well be obtained by hypnotic means.

Conclusion

Although Bates cleaved to a theory of accommodation which is no longer considered tenable, and although he used explanations based on this theory to explain the working of his system, there can be little doubt that many patients who undergo Bates's regimen are convinced of its efficacy. Whether or not Bates's treatment can be regarded as successful seems to depend on the criteria used.

The view has been expressed that any success obtained is psychological and consists entirely in the effects of suggestion on susceptible patients. One theory which enjoys considerable support is that no actual optical improvement is made, the patient learns to extract more information from the retinal blur. Duke-Elder states that " . . innumerable instances are on record wherein an improvement in visual acuity can be attained amounting to a line or two in Snellen's test types by assiduous practice which improves the interpretative faculties, leaving the dioptric imagery unchanged." Writing about Aldous Huxley (a controversial figure in the sphere of Bates treatment), Walter B. Lancaster, an American ophthalmologist said that " only by having learned to adapt himself to his defective vision, and to make the best of it, was he able to achieve an enormous increase in mental satisfaction and a greater contentment with his lot. This is no small achievement, but it is not to be confused with improvement of visual acuity, which is what most people mean by improved vision."

It is known that improvement of efficiency of vision may be obtained by training a subject to extract more information from the retinal image. Again, Duke-Elder points out that " practised efficiency at the higher (a cortical interpretative) level can compensate for a considerable degree of failure at the lower (dioptric) level".

Low (Low 1943) showed that the efficiency of peripheral vision can be increased by some 16 per cent. with suitable training. This fact is utilised in the quick-reading courses now well established in the U.S.A. and currently becoming popular in England.

The adoption of eye exercises similar to those of Bates finds more support in the United States than in England. Dr. Laurence Lewison, an American pioneer in the field of "sight without glasses" research, states in a recently published book that "approximately 5 per cent to 10 per cent of the spectacle-wearing population could be relieved of their glasses with proper remedial measures in living and working conditions, both physical and psychological. Approximately 10 per cent to 15 per cent could be spared the need to wear glasses by the proper application of eye exercises or what is called visual training". It is also of note that faith in the efficacy of the Bates system has been expressed in that optometrists are instructed in its use in a special post-graduate course.*

The emphasis on relaxation and re-education so prominent in Bates's teaching is echoed in the modern techniques of treating spastics, post-paraplegics and squinters. There remains a possible explanation that changes in the tone of the ciliary muscle would be produced as the result of exercises, and this would manifest itself as a change in refraction. A final answer must await a controlled experiment in which two groups of similar subjects are kept under observation over a suitable period, one group being treated by the Bates method. In addition tests of visual performance such as those devised by Weston would also reveal whether there is any improvement in seeing ability.

APPENDIX

THE BATES SYSTEM

The methods attributed to Dr. Bates may be divided into four main categories:—

(i) General Relaxation (ii) Mental Relaxation
(iii) Training (iv) Squint Training

The limits of these categories are ill defined so that they tend to merge into each other.

(i) General Relaxation

Resting:— The patient should make himself comfortable physically, close his eyes and think about something agreeable. Few people, it is claimed, do not benefit temporarily from this.

Palming:— Probably this is the best-known of Bates's techniques for inducing relaxation. Both eyes are softly closed and covered with the palms of the hands (the latter being cupped to avoid pressure on the eyeball), the fingers of one hand crossing those of the other on the forehead. There should be no tenseness in the hands or the eyes. If vision is normal "perfect black" will be seen. However, no effort should be made to see black as it appears automatically when the eyes and mind are relaxed. Some practitioners advocate

* Optometric Extension Programme. Visual Training.

the use of a black object which may be recalled to memory; once the patient succeeds in seeing "perfect black" he has achieved "perfect relaxation".

Swinging:— Basically the patient stands with the feet about one foot apart and proceeds to "swing" through an arc of 180° by alternately lifting the left and right heels and allowing the trunk, head, and shoulders to turn smoothly and easily about the vertical axis of the body at the rate of 16 complete turns per minute. The eyes should remain in the primary position relative to the head and any apparent movement of surrounding objects ignored. Any dizziness shows that the eyes are staring and the muscles are not relaxed completely. Swinging "not only improves vision but also relieves or cures pain, discomfort and fatigue" (presumably ocular). In the case of a person suffering from "eyestrain after or during sleep" swinging is advised 50 times before retiring and after rising. Clara Hackett (Hackett, 1955) a Bates disciple, specialised in the swing, producing such variations as the short swing; the x-swing; the lazy-daisy swing; the cogwheel swing and many others, the names being self-explanatory.

(ii) Mental Relaxation

Memory:— According to Bates, when the sight is normal the mind is always perfectly relaxed and when the memory is perfect the mind is also at rest, therefore it is possible to improve the sight by the use of memory. The eye is always relaxed to some degree by looking at familiar objects, possibly because the observer does not need to give any great attention to the object. Memory is incorporated by some in palming.

Imagination:— This is closely allied to memory and it is stated by Bates that in the treatment of imperfect sight the two can scarcely be separated. "Vision is largely a matter of imagination and memory". He is also of the opinion that these mental activities are impossible without perfect relaxation and their cultivation not only improves the interpretation of the retinal pictures but improves the pictures themselves. "When you imagine that you see a letter on the test card you actually do see it, because it is impossible to relax and imagine the letter perfectly and at the same time strain and see it perfectly". Once the patient can imagine that a letter on the bottom line is blacker than the largest letter he will at once be able to read the bottom line.

(iii) Training

Flashing:— Patient quickly looks at an object and then imagines detail on the object. The eyes may be gently closed or even palmed in between flashes; the period of observation is too small to allow effort to spoil sight.

Blinking:— Place a Snellen chart five to 10 feet from the patient and, without his glasses, ask him to read the four smallest lines he can see "easily and lightly", blinking after each letter, for about five minutes.

Swaying:— This follows on from the blinking which continues during the swaying. The test chart is read while the body sways slowly and smoothly

from side to side for about five minutes. It is emphasised that the occluder should be constructed so as not to touch the eye in order that the occluded eye may blink in unison with the observing eye.

Central Fixation:— With regard to this Bates said, " When the vision is imperfect it is invariably found that the eye is trying to see a considerable part of its field of vision equally well at one time. This is a great strain upon the eye and mind as anyone whose sight is approximately normal can demonstrate by trying to see an appreciable area all alike at one time ". Fine print is recommended as the best visual exercise, read in the dimmest light possible and as close to the eye as possible consistent with the print remaining legible.

Test Chart Practice:— The chart should be placed permanently on the wall in good illumination about 10 to 20 feet from the patient who then reads as far down the chart as he can without effort or strain. He looks at the last letter he is able to read, and then palms, thinking of that letter; on looking at the chart he should find he can easily read the line underneath. This is continued for the lower smaller Snellen letters on the chart. Failure may be attributed to inefficient palming.

(iv) Squint Training

Occlusion:— This is the only treatment advised for very young children, using an eye patch over the fixing eye. The deviating eye has to be used and the loss of function then diminishes until the eyes co-ordinate and the condition requires no further attention. Increased wearing times for the occluder are advised until full-day wearing is achieved.

Elimination of Hypermetropia:— A combination of relaxation and training exercises is used with and without occlusion. The exercises include swinging, blinking, central fixation and also " shifting " of the eyes.

Fusion:— To restore this faculty to a normal level a special piece of equipment is required called the eyescope (" An adaptation of the old-fashioned stereoscope "). The special cards give either a perspective impression or a flat impression so that a clear contrast may be formed in the patient's mind. The cards are adjustable both vertically and horizontally and " placed at the most suitable position for the individual pair of eyes." Once fusion is achieved the cards may be moved slowly to induce the eyes back to the normal position. Peppard (1936) claimed that this instrument represented the greatest non-surgical advance in the past 50 years for treating " cross eyes".

Physiological Diplopia:— The technique utilising this is basically the same as the two-needle test used in orthodox orthoptics, differing only in the fact that there is no check for abnormal retinal correspondence. The patient observes a coloured pencil placed at the point of intersection of the axes of the two eyes. A second pencil is then placed between the patient and the first pencil and is seen in crossed diplopia. On converging to the second pencil the first is seen in uncrossed diplopia. The distance of working is increased after practice and suppression eliminated by covering the non-suppressing eye.

Pairs:— Fusible pairs of card are observed so that the patient has one binocularly-seen image with a fainter monocular diplopic image on either side. This is achieved by centrally fixating the cards (at about 40 cm.). When the blurred images have been fused the central image is kept single while the patient accommodates to see it clearly. Moving the cards slowly apart may be used as an abduction exercise. Secondly for adduction the patient views the right card with his left eye and left card with his right eye, fusing the resulting images, at the same time relaxing his accommodation. Moving the cards apart induces convergence.

Sunning

In addition to the above exercises 'Sunning' is frequently recommended for strengthening the eyes. In the original Bates teaching the patient stared at the sun which might conceivably have resulted in burns of the macula lutea. Benjamin recommended that the eyes should be closed, while other practitioners advise the patient to look down and raise the upper lid with one finger; the sun is then allowed to fall on the sclera while the eye is kept in motion. The sun is looked at directly only for extremely brief periods or not at all.

This is to be contrasted with the 'Sunning' of certain Indian sects which has been practised since antiquity, certainly before the invention of spectacles—in this case the sun is looked at directly but only at times of day when the attenuation of harmful rays by the atmosphere is relatively high, i.e., dawn and dusk.

ACKNOWLEDGEMENT

We are indebted to the Bates practitioners we interviewed for the full and frank way they answered our queries. Mr. W. Swaine, former Head of the Ophthalmic Optics Department, Northampton College, London, gave us great assistance by reading and criticising the original draft.

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DR. WILLIAM H. BATES threw a bombshell into the ophthalmological world 35 years ago with the publication of *Perfect Sight Without Glasses*. It has been exploding in a chain reaction ever since.

Bates meant exactly what the title said—even though it seemed impossible. He was a practicing New York eye specialist who developed a theory which violated about every orthodox idea of how we see, why we lose sight—and what can be done to regain it without reliance upon glasses as the sole corrective.

Bates' ideas were originally dismissed as utter foolishness, and are still being vigorously discussed pro and con. But, according to those who use and have improved upon Bates' techniques, they have brought normal or practically normal sight to scores of thousands of people long considered hopelessly nearsighted or farsighted, or otherwise afflicted and forced to wear glasses the rest of their lives.

After a few months of practicing Bates' theory, a nearsighted woman with 1/10th normal vision, who had worn glasses for most of her life, passed a driver's test with 20/40 vision, wearing no glasses. Two years later, she passed it again with 20/20, or normal, vision.

A farsighted businessman, for whom print was only a blur without the glasses which he had worn for half a dozen years, was able to discard them in less than three months.

Miss Clara A. Hackett, an outstanding teacher, and author of the recently published book, *Relax and See* (written in collaboration with Lawrence Galton and published by Harpers—Ed.), has added many techniques to increase the effectiveness of the original Bates methods and founded her own school. She and her trained instructors have helped not only nearsighted, farsighted and crossed-eye people but also more than 400 others with cataract, glaucoma and other eye ailments.

WHAT IS the Bates theory? In essence it is that, contrary to long-held belief, poor sight doesn't cause strain; rather, strain causes poor sight.

According to orthodox theory, you see near and far because the lens of your eye changes shape to focus light rays so they form a sharp image on the retina. If you look at something far away, the lens flattens. If you look at something nearby, it bulges.

Unfortunately, according to this theory, while the lens is remarkably elastic in youth, it gradually hardens with age, becoming less able to bulge and dooming most of us to "middle-aged" sight, or presbyopia. There's only one remedy—glasses to aid the natural lens. They're crutches—useful ones—but nothing more.

Bates, however, came to doubt this; and to doubt, in fact, the whole orthodox theory. For one thing, he had noticed that if a lens were removed surgically, the eye was still capable of some focusing for distances. How could you explain this in terms of the old theory? And how explain that visual capacity changed, even in normal eyes, when a person was ill or working under great tension or upset by emotional problems? He developed an entirely different theory that could explain all this.

If you're using a camera and want to take a close-up picture, you lengthen the distance between lens and film; you do the opposite for a distant shot. So with the eye, Bates held. Accommodation is accomplished by a change in the shape of the whole eyeball, rather than of the lens alone.

Six external muscles hold the eyeball in its socket and some of them also move the eye right, left, up and down, as you direct them. But they have another action, too. One set pulls back on the eyeball to flatten it for viewing distant objects; another lengthens the distance for near sight. If one set of muscles is too contracted, opposing the action of the other set, there's a loss in near or far sight.

What causes the over-contracted state? All muscles are activated by nerve impulses. Frequently, the impulses are set off by emotional stress. A tic is one example; a nervous stomach another.

So, Bates held, stress and strain may cause vision loss. It's actually almost a vicious cycle. When you're nervous and upset, you don't see well. And as you don't see well, you strain to see—peering, squinting, using trick vision. Eventually, you wind up producing your own eye troubles.

The techniques used by Bates and his followers aim at re-establishing

proper use of these muscles. And the cardinal principle is relaxation: the muscles are strained and clamped; relaxation is used to ease the strain and unclamp them.

You can't exercise them—not consciously—because they're not under conscious control. But once you get the tension out of them, get them fully relaxed, then you can get them working properly by practicing certain principles of good sight. As you practice these, automatically the muscles begin to function properly. No hard work is involved. You see better as you let your eyes see easily.

ALTHOUGH THERE ARE many techniques, here are some of the major ones:

SUNNING: On a sunny day, stand or seat yourself in front of a window and, with your eyes closed, turn your face to the sun. Or seat yourself comfortably in a chair about three feet away from a 10-watt light bulb, facing it with your eyes closed.

Keeping the lids closed, slowly move your head first toward one shoulder and then toward the other. The movement should be gentle and easy, with the neck and whole body relaxed.

Just a few minutes at a time is all that's necessary, and you'll notice a growing feeling of relaxation—in your eyes and, indeed, in your whole body. In addition, you may find that when you open your eyes after sunning, objects about you will appear a little sharper and clearer than they were before.

PALMING: After sunning, seat yourself comfortably in a chair and prop your elbows on a pillow or two held in your lap. Close your eyes and cover them with your cupped hands.

Let the heels of the palms rest lightly on the cheekbones, with the fingers of one hand resting on the forehead above the bridge of the nose and the fingers of the other hand crossed on top. The palms should not touch the eyes, the eyes should be lightly but not tightly closed, and there should be no tensing of fingers or brows.

The darkness coming after the light of sunning, plus the warmth from your hands, will give you a definite feeling that the eyes are relaxing still more.

SWINGING: Stand facing a window, with your feet about 12 inches apart, in an erect, easy posture, your hands hanging loosely at your sides. Gently, easily, swing your body to the left, shifting the weight on the feet so your right heel comes off the floor. Then swing to the right with your left heel rising, at the rate of a slow waltz.

As you swing from side to side, your eyes should follow a steady, eye-level, horizontal path. Don't stare. Blink occasionally, keep relaxed, and you'll soon get an illusion that as you swing in one direction, the room is revolving in the other. This is the basic "Long Swing" devised by Dr. Bates to help relax muscles not only in the eyes but also throughout the body.

MOBILITY DRILLS: If you have a sight loss, the chances are that you have a decided tendency to stare, trying to force yourself to see better. This does more than produce tension; it also adds to the sight loss. For, when you fix your eyes on an object and try hard to pull it all into sight, you actually defeat yourself by using less sensitive areas of the retina.

Good sight, Bates instructors teach, is centralized sight, making use of the central sensitive portion of the retina. And it involves mobility. You see best when you try to see only a little at a time, moving quickly from one small portion of an object to other portions, until you've sighted the whole.

Mobility drills aim at re-establishing the habit of making sight mobile and centralized. One, for example, involves merely counting. Look around a room, turning your head and eyes from one picture to another, and count them. In the same way, count books, colors, furniture pieces, glasses on a shelf—it doesn't matter what, as long as you turn your head and eyes in the process in order to set your sight squarely on each object, allowing rays from it to center on the retina. Outdoors, you can count the windows in a building, the letters on a sign, the cars in a block, the people on the street.

ACCOMMODATION DRILLS: These involve practice in shifting vision between near and far to build up your ability to see equally well at all distances.

You can, for example, practice by looking from your wrist watch to a large clock in the distance, from a pencil in your hand to anything across the room. As you ride in a bus, you can look up from a line in a newspaper to a line on a sign in the bus or across the street.

In practicing accommodation you discard your glasses, as you do with all other practice, for short periods at a time. If you are nearsighted, you will not at once see objects clearly at a distance. Similarly, there'll be blurring in nearby ones if you're farsighted.

But gradually, as you continue the practice, you'll note improvement. For you will be viewing objects at bothersome distances in a new way—not just trying hard to see them in old ways.

Eyesight re-education is not, of course, a substitute for medical diagnosis and care. Bates teachers will not diagnose eyesight problems or diseases—and they do not treat them. Even if your problem is seemingly only nearsightedness or farsightedness, many request you to consult a doctor first to make certain no disease is present.

An increasing number of physicians now believe that the methods Bates originated, and the many others developed by teachers like Clara Hackett, help, because a lot of sight is mental—and tension may be a factor in the mind, if not in the muscles.

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mittee, inaugurated by Governor Roosevelt, the division is in direct touch with the organized workers of the State for the prevention of accidents as well as occupational diseases.

J. D. HACKETT,
Director, Division of Industrial Hygiene New York State Department of Labor.

New York, July 14, 1931

The Late Dr. William H. Bates.

To the Editor of The New York Times:

The press notices upon the death of Dr. William H. Bates failed to give adequate consideration to the truly significant aspects of the career of a man whose unique achievements have not yet been properly understood or generally appreciated.

Meager attention has been given to his priority in the therapeutic application of adrenalin and to his immensely important researches concerning the influence of memory upon vision.

His verification, by every known scientific means, of the fact that the normal fixation of the eye is central, and never stationary, but, on the contrary, constantly unsteady, either swinging or shifting in every direction, and his successful application of this principle to the treatment of eye strain symptoms, should alone be sufficient to merit recognition among his fellow-men.

Here, after all, he but developed practically—that is, through clinical application in the field of ophthalmology—the psychological ideas of Leibnitz and Herbart and the physiological principles of Titchener and Wundt upon the existence of any moment in the consciousness, as in the retina, of a clear point in the centre and a field of increasing vagueness as it departs from that point: the so-called point of apperception.

Of course the technique which he evolved from these fundamental concepts is in direct opposition to the methods ordinarily used for the treatment of errors of refraction and their accompanying symptoms — methods based upon principles still almost universally accepted. It is not to be wondered at, therefore, that the theories and methods of Dr. Bates should have always aroused violent antagonism. But those of us who derived benefit from his new doctrines can testify to the scientific worth of their originator.

R. R. A.

New York, July 12, 1931.

DR. W. H. BATES DIES; AN EYE SPECIALIST

Victim, Many Years Ago of a Strange Form of Aphasia, He Disappeared Twice.

DISCOVERED VALUED DRUG

Added Suprarenal to Field of Optic Surgery—Wrote Book, "Perfect Sight Without Glasses."

Dr. William H. Bates, a specialist in diseases of the eye, died yesterday, after a year's illness, at his residence, 210 Madison Avenue. He is survived by a widow, the former Mrs. Emily Ackerman Lierman, who had been his assistant and partner in experimental research for seventeen years before their marriage in August 1928, and by a son of the first of two earlier marriages. Dr. Bates was twice a widower.

The death of Dr. Bates recalls some years ago his two strange disappearances, which medical men regarded as among the most remarkable instances of aphasia or loss of memory. In 1902, seven years after his graduation from the College of Physicians and Surgeons, when he was making his way rapidly in his profession and was at work on an important medical book, he vanished from the sight and knowledge of his friends. The day that he was last seen, on Aug. 30, he had written an affectionate, characteristic letter to his wife, who was then visiting her mother in Newport, and had sent her books and instruments from his apartment in the Lonsdale, 567 Madison Avenue.

When he failed to return to the apartment for several days the janitor informed Mrs. Bates, his second wife, who hurried to the city and began the search for her husband. Six weeks later she learned that he was working as an assistant in the Charing Cross Hospital, London, to which he had been taken as a patient. Mrs. Bates went to London, where she found her husband in an exhausted, nervous state, with no recollection of recent events. She took him to the Savoy Hotel, where he rested for two days and then disappeared again.

Mrs. Bates sought her husband on the Continent and in this country in vain, tracing every clue that reached her. She died before he was heard of again. How he was discovered and induced to return to New York and resume his practice has never been revealed in detail. According to the best version, a fellow-oculist, Dr. J. E. Kelly, found Dr. Bates, by accident in 1910, practicing in Grand Forks, N. D. A few months later the two men occupied offices together in this city, and thereafter Dr Bates worked as hard and as successfully as he had done before his original disappearance.

The theories and methods of eye treatment used by Dr. Bates did not always accord with those of the majority of eye specialists. He was the originator of a method of treating imperfect eyesight by mental relaxation. He discovered the drug suprarenal, which has been called almost as valuable as cocaine in optic surgery. The best known of his books is "Perfect Sight Without Glasses."

Carrying On Dr. Bates's Work.

To the Editor of The New York Times:

I wish to express my gratitude to R. R. A. for the fine tribute he paid my husband, William H. Bates, M. D., in his letter in THE NEW YORK TIMES of July 16. What he said was true. I myself have had the honor and the privilege of assisting the doctor in his research work during a period of six years at the Psysiological Laboratory of the College of Physicians and Surgeons in New York City, also working by his side for nine consecutive years at the clinic of the Harlem Hospital. I have also had the privilege of instructing students in his method of curing imperfect sight without the use of glasses. I am now going on with the work, which he left for me to do, in an educational way. There is a Bates Academy in Johannesburg, South Africa, where students of Dr. Bates are doing his work, and we have representatives in Germany, England, and in various cities throughout the United States.

EMILY A. BATES.

New York, July 16, 1931.

This article describes how Plus lenses were prescribed when the persons eyes were normal. 3,4 years later the person still wears glasses.

Plus lense treatment consists of wearing Plus Lenses (close vision eyeglass lenses) for close and distant vision in an attempt to force the eye muscles, eyes to function for close distance when looking at close and far distances - in the attempt to force the eye muscles, eyes to change function, to force the abnormally lengthened eye that causes unclear distant vision to change shape, shorten nearer to the round eye shape that produces clear distant vision. (A round/slightly lengthened eye produces clear close vision).

The Bates Method is against the use of Plus Lense Treatment.

MY TECHNIQUE IN MYOPIC CASES in the "Land of Myopes"

By DR. C. P. RAKUSEN, Shanghai, China

The author, with 15 years of practice and research in the "Land of Myopes," reaches surprising conclusions in regard to pseudo-myopia in youthful cases and results from use of plus repression prescriptions.

I was greatly interested in the article "Simple Myopia; Preventive Treatment" in THE JOURNAL-REVIEW'S issue of March 1, 1936, in which Doctor Haberfeld comments on his "technique for lessening the tendency of myopia in children." He "feels that every optometrist should know of the basic principles involved" in what he calls his "Teleopto lens formula." Doctor Haberfeld submits the article as a synopsis of the principles of his lecture before the A.O.A. convention at Miami in June, 1935.

This subject should be brought to the attention of optometrists everywhere, and I welcomed Doctor Haberfeld's treatise as a means to this end. While editorial reference to the article stated that the newspapers referred to the "Teleopto" as the discovery of a new lens for myopic cases, I regret that the subject should have been handled thus. There is, of course, no new lens-invention involved at all; it is only the technique of handling these cases which is new.

On the technique and much of the subject matter of Doctor Haberfeld's article, I wrote in articles from 1930 onward, culminating in an article in 1933 on "Optical Prisms" and in 1935 an article entitled "Plus Lenses for Myopia." These articles were, to my knowledge, the first published to advocate plus repression lenses and (or) plus Rx, with prisms for youthful myopes.

I have been working on the subject in China ("Land of Myopes") for over 15 years, during which time, in discussions of my technique with oculists in China and with optometrists in other parts of the world, I have often been ridiculed at my "crazy ideas of plus lenses for myopes." One oculist, with whom I was corresponding, wrote to me in 1928, "your next step should be minus lenses to reduce hyperopia."

On account of this ridicule and of the radical technique involved, I hesitated to publish an article on the subject until about 1930 when, while examining several hundred school children among whom were a large percentage of myopes, I selected 10 whose age and history indicated recently acquired myopia. All had a manifest myopic spasm of one to two diopters, and naked vision of 20/200 to 20/100.

At first I had the school physician present to verify the naked vision, and then fitted all the children with plus repression lenses, with prism-base-in, to be worn constantly at all close work and, as much as possible, indoors. One week later, a recheck showed every one of the 10 had improved naked vision; three of them had normal 20/20 vision. A careful record for two years afterward showed further improvement in all cases and no retrogression, where plus lenses continued to be worn for all close work. In one case, where the glasses were later discarded, the myopic spasm returned.

More recently, in the past few years, since publication of my articles on the subject, I have received praise and commendation of my technique from medical practitioners in China, also from many well-known optometrists in America.

Illustrating the value of prescribing plus lenses in all cases of eyestrain, I may mention a child, aged 7, who was brought to me for eye-examination in January, 1930, complaining of headaches. Refraction showed entirely negative findings, except for a tendency to hold the book closer than usual, and no difficulty in reading the 20/20 line. I prescribed weak plus lenses, with weak prism base-in for school and home close work.

The child returned for periodical rechecks during the period 1930 to 1932 and when last seen, late in 1932, naked vision was O.U. 20/20 readily and was O.U. 20/40 with the plus lenses as worn. I next saw the patient almost three years later, in 1935, when she returned to China, when she was wearing O.U. minus 2.00, minus 0.50 axis 180.

The facts were, that after seeing me late in 1932, the parents returned to America and left the child with relatives to attend school in America. She broke her glasses and went without any for over a year when, eye-discomfort recurring, the relatives took her to an oculist who prescribed weak minus glasses. However, she continued to have headaches and visited one or two other oculists, each of whom changed the prescription, resulting in the final O.U. minus 2.00, minus 0.50 previously reported, which, I found, gave only O.U. 20/30.

I have little doubt that if the patient had continued to wear these glasses for several more years she would now be even more myopic and require stronger minus glasses.

I worked on the case for a year, and succeeded in reducing the myopic spasm by more than half, and patient is wearing my weak plus repression prisms for all close work.

Let me tell of one more interesting and very recent case:

Patient, a boy then aged 12, was brought in by his grandmother in 1931 complaining of eyestrain. Examination showed entirely negative findings, naked vision being 20/20 readily, amplitude of accommodation, etc., all normal. I advised "no glasses needed." I have not seen the patient since, but a few days ago a Rx was brought in by a local eye surgeon who does some refraction and with whom I am on very friendly terms, as he refers all his difficult cases to me. The Rx bore the patient's name, which I recalled, and reference to my files showed, by the date and age, that it was the same patient.

My oculist friend informed me that the patient, now aged 17, came to him complaining of eyestrain and wearing R. minus 1.25 sph.; L. minus 2.00 sph., fitted about two years ago by a local optician. The oculist's Rx, brought in to me, called for R. minus 2.00; L. minus 2.75.

It is interesting to note that this Rx was arrived at after examination with "drops," proving the fallacy of the theory that paralysis of the accommodation eliminates spasm. I am quite confident that this is another example of myopic spasm, wrongly "corrected" by minus lenses.

Inquiry showed that several years after I examined the boy in 1931, he happened to visit a local optician in company with a school friend who was having his broken glasses repaired. The optician "tested" both the boys' "sight" and prescribed for the one, as the boy was "short-sighted," which information was communicated to the parent who authorized the glasses to be made.

I could quote hundreds of similar cases, all proving beyond any question that this psuedo myopia in youthful cases should be treated with plus repression Rx, to relax the accommodation-convergence spasm. I would go so far as to recommend that weak plus lenses be given to all children, even those with only very slightly lowered vision, and including even those with normal vision who complain of eyestrain or ocular discomfort.

THE BOOKSHELF

By JOSEPH I. PASCAL, O.D., M.D.

Optometric Questionnaire, by H. C. Hughes, O.D., Monroe, La.; single copy, $1.75; in lots of 10, $1.50 each; in lots of 25, $1.25 each.

THIS is a mimeographed folder containing a series of about 2000 questions on practically all phases of optometry. It includes questions on the anatomy and physiology of the eye, on theoretic and practical optometry and on theoretic and practical optics. The questions are based primarily on Laurence's *Visual Optics*, though there are some supplementary questions, the answers to which will have to be sought in other books.

From the standpoint of testing one's knowledge or of prodding one on to find the answers for the questions he cannot answer, the set is quite satisfactory. It should help to set the student thinking more clearly on what he has read, as is always the case when one is asked to show one's knowledge of a subject by answering definite questions instead of merely rambling on. The questions on the whole are brief, definite and to the point.

This method is unnatural, very harmful to the eye. It causes extreme tension, strain, dysfunction in the brain, eyes, eye muscles, causes increased blur, cataracts and other eye problems. Wearing eyeglass lenses for the incorrect distance causes confusion, dysfunction, chronic tension, strain in the brain, left and right hemispheres, visual cortex, visual system, eye muscles, eyes and increased vision impairment. Headaches, neck tension occur.

The Bates Method of Natural Eyesight Improvement relaxes the brain, eye muscles, eyes, returns all to normal function, returns the eye to correct shape for clear close and distant vision and keeps the eyes healthy. Avoid all eyeglasses, use the Bates method.

Reading fine print, shifting, central fixation on small details of small objects (stone, jewelry...) changes the eye to the normal round/slightly lengthened shape for clear close vision and coaxes the eye to avoid a abnormally lengthened shape and to change to the normal round shape when looking to the distance for clear distant vision.

This article on the use of Plus lenses to treat unclear distant vision, Myopia is included in this book to show that the method is not effective. Plus lenses are eyeglass lenses that are prescribed for unclear close vision. Close vision eyeglass lenses cause fast, increased vision impairment at close and far distances and are a main cause of cataracts and other eye problems. People that have tried plus Lense treatment have developed cataracts and other vision impairments. Notice that the person in this article never stopped use of eyeglasses.

A negative, minus eyeglass lens for distant vision causes increased eye muscle tension and abnormal lengthening of the eye = increased distant and close vision impairment and other eye problems; detached retina, macula degeneration, cataracts...
A positive, plus eyeglass lens for close vision causes increased eye muscle tension and abnormal shortening of the eye - increased close and distant vision impairment and other eye problems; detached retina, macula degeneration, cataracts...
Avoid all forms of eyeglass lenses. Use the Bates Method.
See article Above;

'Better Eyesight Magazines' by Dr. Bates describes many effective treatments for a variety of eye conditions.
Also see – 'Stories From The Clinic' by Emily C. Lierman/Bates.

USE YOUR OWN EYES

UNIV. OF CALIFORNIA

BY

W. B. MacCRACKEN, M.D.

Published by the Author
Berkeley, California
1 9 3 7

Use Your Own Eyes
by
William B. MacCracken, M. D.

Dr. MacCracken obtained Natural Eyesight Improvement Training from Ophthalmologist William H. Bates and applied the Bates Method to cure his patient's eyesight.

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by
W. B. MacCracken, M. D.

GIFT OF
AUTHOR

PRINTED BY
The Professional Press
BERKELEY, CALIFORNIA

THIS book is dedicated to the memory of W. H. Bates, M. D. It was his discovery, and his lifework, that founded and established the system which can prevent the impending degeneration of the eyes of civilized humans. His genius and his fine courage made it possible for him to bequeath this magnificent gift to the race.

■

THE mighty silence of the great open spaces, the soft warm calm under the palms out on the sands, the cold stillness of the silent frozen worlds, the majestic grandeur of the sunset in the West, the weird influence of the soft light of the moon, the story of the ages in the cold gleaming of the star worlds in the sky, the lure of the lonely vastness of the sea, the soothing cadence of the melody of music in the ears, the silent touch of tender memories, the thrill of a soul in the presence of love—these and kindred of the great primal forces are the real influences guiding the motives and powers of human life.

Our lives are modified, more than we know, by these constant, active influences. Not only are our minds molded, obeying unconsciously these silent orders; but our bodies and organs. There are serious chronic nervous diseases which have no found cause in any change of tissue structure, and which are modified or cured by emotions and impulses. Emotions and impulses are actually only automatic reactions to impressions which are often not even possible to discover. It is established that emotions cause specific changes in many of the body functions: the action of the heart and lungs, the tension of the blood vessels, the conduct of muscles and even tendons. In normal healthy bodies muscular tremors have been demonstrated by laboratory instruments, produced by arousing mental conditions such as curiosity, or fear, or anger. And it is common to find tendon reflexes modified by similar emotions, or even by ordinary excitement. And just such mental conditions are present as the cause of many abnormal physical conditions such as constant eyestrain, indigestion, insomnia, and even distinct diseases with muscle spasms and mental disturbances. And above all, the brain itself with all its nerves, is dominated by the same impressions from the world it lives in, and is molded like the sofest clay.

Suppressions, conscious or unconscious, increase these abnormal conditions of tension, and we are constantly suppressing. And worst of all, we are thoughtlessly allowing abnormal and harmful influences to suppress the natural normal functions of our subconscious mind, and mislead us into complexes that are the causes of many diseased conditions.

It is possible to relieve these abnormal conditions by the simple expedient of securing a state of relaxation of the muscles of the body. Without muscular relaxation there never is mental relaxation. And when the muscles are relaxed mental relaxation is always present. There are different methods and varieties of technique by which this muscular relaxation may be secured. But they all must depend upon the same laws of psychology and physiology. It is necessary to enlist the cooperation of the subconscious mind. This can be accomplished by occupying the conscious mind so completely with some carefully chosen impression that the subconscious mind is also fully occupied with the same thought and purpose for a period of time. This method has been proved. It is scientific and successful. It requires, however, that the patient be receptive, earnest, and confident.

The story in this book is founded on these truths. Vision is the most precious of the senses which feed the life and the happiness of the human. That vision should be allowed to degenerate into a crippled dependent upon a mechanical device is an ominous threat to the future of the race. If the mind can be roused into a consciousness of its loss, the recovery of the natural power of the eye will be the smallest of the glorious achievements that will come with the new life.

It has been interesting to try to imagine the mighty spirits of the past contemplating the modern hosts that are helpless without their pieces of glass. How could those independent souls understand this new habit? How long will it be before the minds of children, who are beginning their lives, will be taught to use their own eyes, with the freedom and the power which belongs to them, and which will give them a new fullness of life?

W. B. M.

Berkeley, California
February 1937

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This book is dedicated to the memory of W. H. Bates, M. D.
It was his discovery and his lifework that founded and established the system which can prevent the impending degeneration of the eyes of civilized humans. His genius and his fine courage made it possible for him to bequeath this magnificent gift to the race.

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INTRODUCTION

THE mighty silence of the great open spaces, the soft warm calm under the palms out on the sands, the cold stillness of the silent frozen worlds, the majestic grandeur of the sunset in the West, the weird influence of the soft light of the moon, the story of the ages in the cold gleaming of the star worlds in the sky, the lure of the lonely vastness of the sea, the soothing cadence of the melody of music in the ears, the silent touch of tender memories, the thrill of a soul in the presence of love—these and kindred of the great primal forces are the real influences guiding the motives and powers of human life.

Our lives are modified, more than we know, by these constant, active influences. Not only are our minds molded, obeying unconsciously these silent orders; but our bodies and organs. There are serious chronic nervous diseases which have no found cause in any change of tissue structure, and which are modified or cured by emotions and impulses. Emotions and impulses are actually only automatic reactions to impressions which are often not even possible to discover. It is established that emotions cause specific changes in many of the body functions: the action of the heart and lungs, the tension of the blood vessels, the conduct of muscles and even tendons. In normal healthy bodies muscular tremors have been demonstrated by laboratory instruments, produced by arousing mental conditions such as curiosity, or fear, or anger. And it is common to find tendon reflexes modified by similar emotions, or even by ordinary excitement. And just such mental conditions are present as the cause of many abnormal physical conditions such as constant eyestrain, indigestion, insomnia, and even distinct diseases with muscle spasms and mental disturbances. And above all, the brain itself with all its nerves, is dominated by the same impressions from the world it lives in, and is molded like the softest clay.

Suppressions, conscious or unconscious, increase these abnormal conditions of tension, and we are constantly suppressing. And worst of all, we are thoughtlessly allowing abnormal and harmful influences to suppress the natural normal functions of our subconscious mind, and mislead us into complexes that are the causes of many diseased conditions.

It is possible to relieve these abnormal conditions by the simple expedient of securing a state of relaxation of the muscles of the body. Without muscular relaxation there never is mental relaxation. And when the muscles are relaxed mental relaxation is always present. There are different methods and varieties of technique by which this muscular relaxation may be secured. But they all must depend upon the same laws of psychology and physiology. It is necessary to enlist the cooperation of the subconscious mind. This can be accomplished by occupying the conscious mind so completely with some carefully chosen impression that the subconscious mind is also fully occupied with the same thought and purpose for a period of time. This method has been proved. It is scientific and successful. It requires, however, that the patient be receptive, earnest, and confident.

The story in this book is founded on these truths. Vision is the most precious of the senses which feed the life and the happiness of the human. That vision should be allowed to degenerate into a crippled dependent upon a mechanical device is an ominous threat to the future of the race. If the mind can be roused into a consciousness of its loss, the recovery of the natural power of the eye will be the smallest of the glorious achievements that will come with the new life.

It has been interesting to try to imagine the mighty spirits of the past contemplating the modern hosts that are helpless without their pieces of glass. How could those independent souls understand this new habit? How long will it be before the minds of children, who are beginning their lives, will be taught to use their own eyes, with the freedom and the power which belongs to them, and which will give them a new fullness of life?

W. B. M.

Berkeley, California
February 1937

CHAPTER I

THE PROBLEM

WHEN the human eye begins to falter, whether in adults or in the youngest children, the conventional method of treatment is to call in the assistance of compensating lenses. The claim that is made for these lenses is that they neutralize the effects or symptoms of the conditions which are present as the cause of the failing function.

If it is necessary for men, women, and children who are wearing glasses to continue to wear them, let us hope they will all secure the best possible fit. But if it is possible to correct the fault that is interfering with normal vision, why do we not relieve the abnormal condition, instead of ignoring the eye, and using glass lenses instead? During hundreds of thousands of years the human eye developed into the most marvelous and the most necessary of the sense organs. Upon what grounds has it come to be an accepted belief that there is no possible way to cure an abnormal function in the mechanism of vision, even though abnormal functions and diseased conditions are being cured in every other part of the body?

There is a prevalent impression in the public mind that when any difficulty in seeing becomes apparent, there is no other help available but wearing of artificial lenses. This vague consciousness might be spoken of as a belief. But it is not a belief that is founded on any knowledge of the subject. The public mind knows very little of the factors or the mechanism of vision; it asks no questions, and it does not even consider the plain facts which are generally known. Just a little consideration of the many simple, established, obvious aspects of this most vital question arouses an astonishing reaction to a situation which is of national importance.

Whence comes this vast ignorance about the impending calamity to the power of vision? Why is the United States fast becoming a nation helpless in its daily life unless it has a pair of artificial lenses attached to its eyes? Why have the people come to believe this anomalous misinformation, as though it were the very truth?

Where there is a great cloud of smoke one knows there is a fire. This habit of wearing glasses, in this country of ours, out of all proportion greater and worse than in any other country, is growing like the size of a large ball of snow rolling down a hill. There are many factors at work in this strange development. But the chief factor is the activity of a vast modern sales organization, which is using all the devices of psychological salesmanship to persuade the population of the country that the only relief they can hope for, when their eyes begin to falter, is the life-long dependence upon artificial lenses. This propaganda even goes beyond that and warns now that those whose eyes are showing no signs of failure, should hurry and put on glasses anyhow—even though it is well known that eyes always grow more dependent after glasses are imposed on them, and they rarely ever relinquish them once they are attached.

But if it has been decided by the medical profession that this artificial aid is the only known method of relief, would it not be wise to consider the import of this final answer from the men upon whom we must rely for whatever help is to come in this most serious extremity?

If further search for relief is to cease, the situation is a promise certainly of the progressive degeneration of the human eye. That is the law. The glass lens will become the master of the lens in the eye. Just as the wearer is to become the property of the lens maker, so the eye is to become the slave of the glass lens. We are beginning already to see the warrant for such a statement in the rapidly increasing use of artificial lenses. In our own country this custom of wearing lenses is becoming a contagious habit. Furnishing the glasses has become a tremendous enterprise.

In the Great War it was found necessary to lower by half, the standards for vision required of soldiers. These standards were already well below those required for average normal vision. Having allowed for the use of lenses, the United States Army found it necessary to accept men with only one-fifth normal vision without lenses, if one eye could be brought up to one-half normal vision with glasses.

Some have estimated that of those in civilized life today over twenty-one years of age, only one in ten has normal sight. Personally I have met many, mostly children, however, who can read readily at fifteen or twenty feet the line required to be read at ten. At forty years of age there are very few without visual defects.

This problem of defective vision has been disturbing the medical profession for a century. In Germany the Imperial Government tried for years to stop the increase of the use of glasses. The effort failed completely. But in Germany today many are having success with their eyes, in an organized system of schools for the improvement of vision. In a translation into English of an article in a German medical magazine published in Leipzig, the principles upon which their work is founded are credited specifically to the discoveries of Dr. Bates.

As illustrations of their success, it is stated that a class of young men was received in the army who were nearsighted (unclear distant vision) because their eyes had been habituated to functioning with work which demanded nearsighted vision. (Demanded clear close vision? Unclear at distant while their vision is clear at close? Misprint? Nearsighted means unclear distant vision. Does this sentence mean that the men had clear close vision but unclear distant vision due to using the eyes most of the time at only close distances? Nearsighted people have unclear distant vision while often in early stages the close vision is imperfect but clearer than the distant vision. At first they could not adjust their eyes to distant objects. It very soon developed, however, that the danger involved by that so impressed their minds that their eyes learned to see what was necessary. A soldier was such a good marksman that he was detailed as a sharpshooter. This involved an examination of his eyes by a specialist, who fitted him with glasses. Wearing the glasses, his marksmanship became very poor, and he was dropped from the corps. He was taken charge of by a vision school, his glasses were removed, his skill returned, and be was reinstated as a sharpshooter.

England, also, now has the beginning of a similar movement, and gives notice of a School of Eyesight Training in London. It is taking up the work of Dr. Bates in a practical way, on the principles established by him. The children especially are to have the advantage of a training in the scientific and humane use and development of their eyes, instead of being afflicted and obstructed, in their early developing years, with a pair of artificial lenses as an endowment for life.

Commenting on the use of artificial lenses, an ophthalmologist recognized as an international authority, Dr. Sidler-Huguenin of Zurich, Switzerland, writing in 1916, expressed the opinion that lenses and all methods now at our command are of but little avail in preventing either the progress of the error of refraction, or the development of further complications. This commentary was given as the confirmed judgment of a specialist who, during a lifetime of private and clinical practice, was interested especially in finding an answer to the problem of the efficacy of lenses. He reported particularly that with one class of patients, connected with the educational institutions of Zurich, the methods that he prescribed failed to correct the faults in the functioning of their eyes, despite their earnest, faithful, and constant adherence to his instructions.

Those who find it necessary to seek the assistance of glasses seem to take it as a natural thing that their eyes should fail to function in the beginning of life. They rarely have interest enough in the calamity to ask why it happened. If they ask, they are generally told that the cause is what is called eyestrain. No one seems to ask what eyestrain is. No cure is offered for it. So they put on glasses, and generally they seem to feel quite proud about it. It has become so fashionable! As a rule their eyes get weaker, of course, and sooner or later they get a stronger pair of glasses. In many cases the glasses are quite satisfactory, until the eyes get so much worse, and then it is a simple thing to buy another pair in the series of glasses they are going to need. But in many cases the eyes refuse to agree with the glasses, and there is a constant conflict. So what is there to do?

In a recent article describing the very fine course of training, mental and physical, which is given the Naval Academy students during their four years at Annapolis, it is reported that last year the honor man could not be commissioned to the line. He was rejected, after four years of perfect record, because his eyesight had failed slightly in his senior year.

There are those who write that human eyes have not sufficiently evolved, because nature did not intend they should, to meet the situations encountered in the ordinary life of today. If such preposterous assertions were true, consistently all of the naval cadets would suffer the same defeat as that honor man was impaled upon—just because there occurred a temporary faltering of his vision, due plainly to a continued physical and mental stress—which is not necessary. It is a fair question to ask why the eyes of that perfect specimen failed him. It is of vital importance to ask what, if any, deliberate attention is given, in that meticulous curriculum, to the mechanism and the care of the eyes of the cadets.

Dr. W. H. Bates of New York City, many years ago conceived an original idea. Why not cure the abnormal condition of the eye? Why not treat it as the medical profession treats an abnormal condition of any other part of the body? To find the cause and then to devise some means of relief involved research work which led him into fields never explored before. What he discovered will be explained. The system he originated will be described. By following his directions it is possible to correct the faltering function of the eye, and recover normal vision.

CHAPTER II

THE BACKGROUND

THE principles of this new method of treatment, which was discovered by Dr. Bates, are founded upon facts that are plainly in sight, but have heretofore been ignored. It is established that in most of those cases where artificial lenses are being used as a help to seeing, there is no change in the tissue structures of the eye itself. The fault, as diagnosed, is principally an abnormal functioning of the nerve and muscle mechanism. This is a condition quite common in the conduct of other functions of the human body. In every similar condition the expectation of the physician is to correct the fault and develop the normal function.

Nervous indigestion, a condition called nerve tire, the well-known unexplained insomnia, neuralgias for which no cause can be found, various habitual muscular twitchings, are all illustrations of conditions in which the abnormal conduct is owing primarily to some disturbance in the mechanism of the nerve control. Such abnormal functioning can generally be corrected. In many cases the only found cause of the abnormal nerve impulses is an abnormal functioning of the control center in the brain.

Psychologists and psychiatrists have been insisting for years that a large percentage of the above cases should be treated exclusively by mental suggestion. Reports are being made to scientific conventions of cures effected by mental treatment only, after reported failure to cure the given cases by the use of drugs. In what are called spontaneous cures, the patient reports symptoms have ceased, and the patient does not know, and the doctor does not know either, what caused the symptoms or why the disturbances ceased.

A young woman afflicted for years with irregular and distressing twitching of the arms and of the muscles of the face, uncured during some years of medical attention, stopped it all suddenly, and stayed cured. There are many who stutter badly under certain conditions of nerve tension, and do not stutter at all when there is no mental stress. In the offices of nerve specialists are found many varieties of painful or disturbing dysfunction for which no cause can be discovered. It is generally believed by the medical profession that these conditions, classified and treated according to indications, are the results of some abnormal functioning of the centers in the brain which control every part of the mechanism of the human system.

The different kinds of disturbances of vision vary greatly in the degree of trouble that is present at different times. A woman who was deaf for years, and could not secure relief, was shocked mentally by her sensations in a falling airship, and during the emotion her hearing returned. A man who for many years could not manage at all without glasses, broke them while on a trip up in the mountains. He had no others with him, and he got along so well without them that he has never worn them again during the several years that have passed.

Failures in sight, and illusions in sight are so common, that an authority among ophthalmologists coined a phrase "seeing is deceiving." In a large percentage of cases of abnormal vision the principal fault is not a matter of physics or physiology, it is primarily psychology. That fact is really the foundation of the method of treatment originated by Dr. Bates.

A man of twenty years, who always found it impossible to see work or printed matter except at very close range, was permanently cured of the fault in one hour by this method of Dr. Bates. Encouraged by that success, his brother, two years older,

presented his right eye, which had been blind from birth. He had consulted only an optometrist, years before, and had been told that the eye was undeveloped. Before treatment was begun I sent him to get the complete information from a medical specialist in the clinic of a large hospital. He was told there that his only chance was to cover the good eye whenever he could, and thus encourage the undeveloped eye to develop. He was told also that it would be two or three years before he might expect any improvement. Under treatment by the Bates method, however, in a few days he could read the upper lines on the Snellen Chart three feet away, and he continued to improve rapidly.

A young woman of twenty-two years reported that her brother's right eye had been crossed from earliest years; but that it was her left eye which had been crossed from her earliest recollection. About ten years before her visit to my office the strabismus (crossing of the eye) shifted, and the right eye turned outward while the left eye became straight. She had worn glasses for several years, and could not see her work in a large office without them. In two hours her right eye was perfectly straight, and has remained so for three years now; and she has never worn her glasses since. This was not a miracle. In the standard textbooks it is explained that crossed eyes may change spontaneously from one oblique direction to any different oblique position, or the strabismus may transfer itself spontaneously from one eye to the other, just as had happened to this patient while under my treatment for two hours.

A child of eight, thrown down by what is called a police dog, received as the immediate result of the mental shock a pair of crossed eyes. Most histories of crossed eyes originate as a consequence of an attack of measles or scarlet fever or some other acute or chronic disease. Since such a condition may come in an instant, may change spontaneously, often varies greatly, and in some cases disappears spontaneously, why should it be considered unreasonable to expect that the condition can be cured in the same manner that other conditions of the same nature are being cured?

The cases selected from my records are illuminating examples of the effects which can be secured in the treatment of abnormal conduct of the eye by developing an interested attention to the condition on the part of the mind. For years this has been the method used by medical men in the treatment of similar dysfunctions of other parts of the body. These selected cases of mine, and others just as remarkable, are in evidence today, and the given records are correct.

Eyes which develop noticeable abnormal function misbehave in many different ways. The misconduct of such eyes varies constantly in degree and even in kind. In many cases those eyes cease to act abnormally. Where glasses have been worn, they are discarded, and the conduct of the eyes continues to be quite satisfactory without them. In the majority of eyes an abnormal function continues. The wearing of glasses never corrects the abnormal condition. When eyes recover normal sight, in any case, the change is produced through the internal mechanism controlling the eye. That eyes do recover normal function cannot be questioned. This certainly proves that such a power is inherent in the eye. It remains only to discover how best to help those eyes which can regain their natural power.

In many cases it is quite practicable to teach a patient who is having trouble with eyesight how to correct the abnormal function and regain good normal vision. There are different techniques, or procedures, in the method originated by Dr. Bates. They are all very simple, and they are varied so that they are adaptable to every kind of condition, and temperament and opportunity. In this book all of these practices will be described so that it will be possible to learn definitely from the text how to carry them out.

These practices sometimes produce most gratifying results in a few minutes. But in other cases, even with the best of intentions, progress is slow. It is not always possible to discover why a patient cannot secure the same success, even when the difficulty is less in degree. But whenever there is an earnestness of purpose, some proof of dormant power will come in flashes of normal vision. Words or letters will be seen vividly for an instant, and sink back again into the haze, as though a bright light had flashed, and then gone out. I have at times impressed the mind of a patient by bringing back the vividness that came and went, when I threw onto the letters the radiance of a 1000-watt light, or took the patient to a spot where the strong sun shone directly on the page or the test card.

The game is worth the candle. Those who have worked the hardest are generally the best pleased with their success. The mind that has become adjusted to the impairment of vision that is more or less crippled or dependent, is satisfied, if not content. But those who have said "Now is the winter of our discontent turned into glorious summer," are the ones who have realized the happiness of having won back the pleasure by their own efforts.

CHAPTER III

THE CAUSE

SIGHT is the most precious of the senses. In the last ten years of my practice as a physician, during which I have been especially interested in patients with various defects of vision, I have come to realize that very few have any real consciousness of the situation. Most people are distinctly less conscious of the work of their eyes than they are of almost any other of the organs and functions of their bodies. An abnormal functioning of the stomach, causing more or less distress, attracts very prompt attention. The mere consciousness of the beating of the heart arouses immediate concern. But it is possible for their vision gradually to lose its power to a considerable degree before their inattentive observation remarks the failure of their eyes to discern objects with the same acuteness and ease that they formerly had. When they find themselves obliged to seek relief, they realize that the only help they know of is the use of artificial lenses for the remainder of their lives.

From sources which are not only most interesting, but are of the most vital importance, there has been developed and fostered in recent years a new and prevalent psychology. It does not relate primarily to the human eye. The eye itself seems to be like the "forgotten man." This psychology relates to the wearing of artificial lenses. The atmosphere is so pervaded with glasses, with new and changing styles of lenses and frames, that there is plenty of proof of the claims of a large corporation that it is rapidly making the people of the United States what it calls "eye conscious." The condition might certainly be better designated as eye unconscious. People seem to forget, for themselves and for their children, what it means to put on glasses for the remainder of life. They do not seem even to ask why no other help is possible, and do not seem to care. I have known those who have argued against the removal of plainly diseased tonsils, and even a diseased appendix, to use the slightest kind of a fault in vision as an excuse for joining the procession and appearing proudly with a pair of glasses.

My purpose here is to paint in plain words some pictures that are rather obscure to most of those whom doctors call the laity. Even those who do not wear glasses now, or those whose children are not bespectacled yet, may do well to step out of the procession long enough to look at the prospect I am going to describe and ask themselves if they are interested.

Over forty years in the practice of general medicine have given me opportunity to observe the functioning of the organs of the human body, and likewise, opportunity to observe the conduct of the human mind in its relation to these organs. The fact that I was not, until recent years, engaged in treating the eye itself, has made it easier, perhaps, for me to record whatever impressions I gathered about eyes and vision without any prejudices. Moreover, the peculiar experiences I have had with my own eyes have prepared me for the reception of personal impressions with more open-mindedness than if I had never worn glasses. It has some significance, too, that **I have now used my eyes for ten years without glasses after having worn them constantly for thirty-seven years.** The experience I have had with my own eyes is a rather extreme illustration, but it is in kind quite similar to the common course of conduct that is the story of eyes which cause trouble because they do not behave in a normal manner.

My vision was quite good until I was twenty years old. The change came with a crash. A severe and remarkable mental shock introduced a long record of peculiar and variable astigmatism. One summer day I dived into the Hudson River on the water-front of New York City. With a group of strong swimmers I joined in a race to an iron freighter and back. It was a quarter of a mile each way. On the way back my strength gave out and I fell behind. Soon I was alone, in forty feet of water, and unable to swim farther. I can remember, as though it were yesterday, the startling vividness of the picture of the brick barge I must get back to. It was as small as a hat and seemed miles away. The others saw my danger and came back to me. In their company my courage returned and my strength came back. That incident made such an unconscious impression on my inner mind that some hours later **I suddenly found myself blind**. Sometimes I could see nothing, and then there would be a film, and then it was dark again. In an hour my eyes were clear, but they were not normal. It became necessary for me to wear glasses constantly, and I continued to wear them for thirty-seven years.

My father was a physician, and the first eye specialist he took me to was very kind for some weeks, but my eyes were helped very little. I soon realized that my sight was quite variable. There was indistinctness, sometimes less, sometimes more, there was blurring, there was discomfort. The variableness was noticeable whether the glasses were on or off. We tried a second specialist, and finally a third. The last doctor fitted me with glasses that were much more satisfactory, and I wore them for three years before they had to be changed.

It was only after I learned the fundamental meaning of the discovery of Dr. Bates that I came to understand why those lenses suited my eyes so much better one time than they did another. It was so simple after all. The conduct of the eyes was varying constantly, but the pieces of glass never changed. My condition was diagnosed as astigmatism. That word has a bad case of astigmatism itself! The explanations are contradictory. We are told that it is incurable, but many cases of cures are on record, that recovered without any doctor's help. Apparently the cause of the trouble dissolves out of the picture. In some cases the condition varies constantly, and in others it disappears and probably sooner or later returns. I was told that my astigmatism was congenital; that I was born with it; but it came in an instant, and it was caused by the strange mental condition that I crashed into three hours before, when my eyes shocked my mind.

The experience with which my own years of astigmatism and nearsightedness was inaugurated is named in the textbooks a psychic amaurosis. **That means a blindness in which there is no apparent change in the eye tissues. There is a similar condition called amblyopia, in which there is a dimness in any degree up to blindness.** Either of these conditions may be temporary or permanent. Try to realize the significance of such conduct in an eye which shows no cause, in the eye itself, for the terrible calamity. The same conditions are found even when there is no apparent change any place in the body that might be a cause. Both of these conditions therefore, may come without any apparent cause. This means that certainly they must be caused by some condition in the mind; and that is why they are described as psychic. They often disappear as they came, without any warning and without any explanation except that their conduct is determined by the mind. Does this not make it plain that the simpler, common dysfunctions of the mechanism of vision are also caused by abnormal conditions in the visual center in the brain?

CHAPTER IV

THE PSYCHOLOGY OF SPECTACLES

A CUSTOM which evidently originated with the Chinese ages ago when nothing was known of the physiology or the intimate mechanism of the eye, has now grown into a sort of unwritten law. The new law is that no cure is possible for an eye with a faulty function. Such a law ignores the obvious truth that there are always cases in evidence of spontaneous cures of the different conditions for which artificial lenses are prescribed. **Since eyes with faltering vision do recover normal function without any assistance,** why should it be thought unreasonable to expect that other eyes in the same abnormal condition can be assisted successfully into a normal conduct?

When one wanders away from countries which are known as civilized, it is found that the great mass of the race is getting on very well without the help of the glass lenses of ancient China. Uncivilized people need their eyes. In the day and in the night good eyesight is necessary for the preservation of life. They have found no necessity for glasses.

Suppose we consider in a simple direct way, some of the plain and obvious factors in this vital and serious problem. Those of us who are older will have a better realization of the significance of the new conditions which have developed so rapidly. Many are remarking the large percentage of the population of our cities now wearing glasses. The same people remember that some years ago it was quite different. These people, because they are conscious of this feature of public life, are impressed with some of the special aspects of it. The number who are wearing glasses is growing with a rapidly increasing ratio. Like any new style or fad which pleases the popular fancy, the wearing of glasses is rapidly becoming a national habit. Healthy young persons who have fine natural vigor in every other way, suddenly realize that their eyes are helpless, and proceed to secure a pair of becoming spectacles.

Not so many years ago one felt like apologizing for such a confession. There is no thought of that now. The lifelong expense, and the hampering restrictions of glasses are commonly accepted as an unavoidable nuisance. But often, on the other hand, the opportunity to parade them is sought with an apparent eagerness. How far will this new habit lead the American public? What will be the consequences to the nation? Young people used to shrink from the taunt of "four-eyes." Now the only concern seems to be how to select the most ornamental and becoming spectacles that the budget can pay for. Why is this true, and what are the causes, or the influences, or the selfish purposes which are producing and developing this breaking down and degenerating of the priceless necessity of daily life—the power and reliability of the human eye?

What will be the penalty paid for the ultimate success of a program and a campaign which boasts in public print that it made everybody at the Chicago World Fair "eye conscious", and has established a nationwide campaign to make everyone in the United States "eye conscious"? What does "eye conscious" mean? When the organization with such a tremendous program and propaganda represents an industry with a gigantic plant for the manufacture and sale of artificial lenses, it is in evidence that people are to be made eye conscious so that they will protect their eyes from harm by buying the glasses which the organization makes.

In accordance with this ambitious project there is a vast network of commercial agencies and high pressure sales devices. There are more and more optometrists, and there are new and most attractive window displays of dainty frames for exquisite new lenses for which wonderful mechanical improvements are claimed. There is a new line of engraved mottoes in which the public is told that the storekeeper is a vision scientist. Again it is explained that the eye is a work of extreme complexity, and the optometrist must have a complete understanding of its functions and its deficiencies. But he, and you, we are told, must depend upon lenses to carry out precisely the correction that is necessary. There are even gaudy lithographs of eye specialists long dead, who are on dress parade, and are supposed to add their benediction to the purchases.

There are other gorgeously colored pictures with quaintly typed explanations under them telling that in China, five hundred years before the Christian Era, the wise men of that country wore spectacles, and in the picture they have imaginary spectacles on, remarkably like the ones worn here until the new style of the last few years began the series of changes, which now are just like the changes in the style of hats. Again we are shown the fops and "socialites" of Europe, overdressed just as the Mandarins are in the Chinese pictures, with showy spectacles on their faces. There is again an explanatory text. It tells us that from the fourteenth to the seventeenth century many wore spectacles for adornment, as it is written, and as an aid to vision. Are the coming generations of the United States to wear spectacles for adornment because it was a fad some centuries ago, and so wreck their own eyes for life? Are the defective eyes of today to be treated only with glass lenses because no other help was known in what has been called the dark ages?

But in all this the eye itself is absolutely ignored as a living, vital end organ of a human being. It is treated like a hopeless wreck that cannot do its own work, and can never function again except under the orders of a piece of ground glass. The only light rays it is to receive are to be the ones refracted through the precise correction determined by a vision scientist. In medical literature there is constant reference made to lenses that are not correctly fitted. In those cases the eye must labor constantly against an obstruction which never changes. There are many things to say against this system which offers no relief to an eye in distress except the crutch which is called an artificial lens. But there is always one stern challenge to this system. The lenses must be changed again and again, made stronger, we are told, because the eyes are growing weaker. These propagandists warn the public to remember that their eyes are their most precious possession, and plead with them to take good care of them. No doubt they are positive that there is no other care to be given for a faltering eye function except a pair of spectacles.

If there were no known remedy for the relief or cure of defects of vision, one might simply find amusement in the frantic concern which is exhibited by vendors of glass lenses. One might feel that it was really a kindness to spend enormous sums of money in advertising to millions who are unconscious of any difficulty with their vision, the danger of not having their eyes examined so that they will be sure to save them! One might still wonder what is in the minds of campaigners who are determined to make everyone in the United States eye conscious. There are many millions who can see better with their unaided eyes than most of the spectacle wearers with their glasses on. Since the wearing of glasses generally makes the eye progressively more helpless without them, where is the danger of waiting until they are needed? The artificial lenses certainly do not prevent the eyes from growing poorer and poorer in function. The wearers are told that they must buy stronger glasses because their eyes are growing weaker. Suppose we stipulate, as the attorneys say, that the campaign is prompted by the belief that all those who are not wearing glasses are in danger of losing their vision. Let us then, on the other hand, consider the possible effect on the public mind of this vast and intimate network of subtle advertising by window displays and magazine articles and radio broadcasts.

None will question that the millions which have been spent advertising cigarettes, for instance, have been repaid through the psychological effect of the beautiful lithographs. In other words, "it pays to advertise." And also, perhaps, the end justifies the means. But how many are there who will deny that millions of eyes have been fitted with glasses, that could have functioned without them if the owners had not been persuaded that they had better get eye conscious and save their vision from future calamity?

In this field two incidents, quite recent, are most remarkable. In the public press there was a notice of a reported patent, secured for a machine which is to measure the degree of inferiority of an eye in its relation to ordinary sunlight. It is to tell just how defective the given eye is in contact with its best friend, the light of day. The number on the scale which is registered by the new machine will tell the salesman what specific color the particular eye is to wear when it goes out in the daylight, where the rest of the race walk up and down on the earth unconscious of the enemy, the sun. With the colored glasses on, everything the inferior eye looks at will be of the same color, blue, or smoky, or orange, or whatever shade the salesman decides on. As the glasses now are made stronger, probably the glasses of the future will change color each time the eyes go to the store, and the world will change from straw color to blue or mauve. What the brain will be thinking of, and how it will be embarrassed, as it deciphers out the deception—well, that surely takes us into the domain of the psychologist.

The second incident is certainly food for thought. Instead of wearing glasses in front of the eye, it is proposed, as a kindness to a crippled eye, that the artificial lens be fastened to the eyeball, held by suction, between the eye and the eyelid. What an inspiration! Even the crudest conception of the eye itself must surely be impressed by the possibilities involved in such an intimate contact of an enveloping foreign substance clinging constantly to the sensitive covering of the eyeball. (Contact Lenses)

Contact Lenses cause cornea, eye injury, infection, scars, blindness, loss of eye.

The coating of the eye is kept constantly moist as well as clean by a suitable fluid secreted, (tears) and this fluid is spread carefully over the surface of the eye every time the eyelids close automatically, as they wink (blink) all day long. Just what interference with that provided protection would be accomplished by such a remarkable paraphernalia, only experience can reveal. Deprived of its necessary lubrication, a dry eye is a troubled eye. Tiny particles of dust captured between the sensitive covering of the eye and its new underwear might possibly arouse new ideas. Such an unceasing suction on that sensitive membrane might develop complications on the surface which would demand attention. But the deeper effects might be more important. It is established beyond question that the most trivial irritations, even in distant parts of the body, may cause a considerable disturbance in the conduct of the refraction of the eye and of the vision centers. What should one reasonably expect from such a constant impression, made by an unceasing interference with the natural conduct of the eye? It is hard enough for one to try to imagine carrying all the time a piece of foreign tissue stuck to the eyeball so tight that the lens built into it would always match perfectly the margins, and the movements of the lens of the eye. How could the best qualified specialist estimate the serious secondary conditions that almost certainly would complicate such an interference with the mechanism which has been evolved during eons of time by the development of the human eye?

Notwithstanding, however, that the discovery is not generally known, it has now been established for many years that the eye is not different from every other part or function in the human body. It is not a hopeless and helpless wreck just because its marvelous mechanism has faltered in its function. The eye is quite near to the brain which controls it. It is quite responsive to the correcting influence of the vision center in the brain. It is so accessible to conscious effort on the part of an interested attention, that it is easier to constrain the misbehaving eye to act in a normal manner than it is to correct abnormal function in almost every other organ or sense organ in the body.

Whatever may be the belief of those who have glasses to sell; or whatever may be the individual attitude toward the question of wearing or not wearing spectacles, there still remains a problem which has a most vital public interest. Those who are concerned in the future of the United States will do well to analyze the situation. Every thoughtful American should consider the promise there is in this avowed purpose to make every citizen of his country helpless without a pair of artificial lenses on his face. It is certain that the longer glasses are worn the more helpless the wearer becomes if he is obliged to see without them. The vast number who are already in that condition is not so serious a question as is the fact that in recent years this number has been increasing at a rate which multiplies itself each year.

The strange and ironical and dangerous aspect of this subject which has a tremendous national interest, is that if and when the eye is taught to be itself, the salvation of the eye will involve an interference with the merciless greed of commercialism.

CHAPTER V

TO BE OR NOT TO BE

IN THIS chapter I shall undertake, in a simple and deliberate manner, to consider an abstract question. The question is whether an endeavor should be made to recuperate the faltering eye and use it, or whether the eye itself should continue to be neglected, more and more each succeeding generation, and be denied the help which is being given to every other part and function of the body. I ask the reader to lay aside all personal feeling, and follow, without any prejudice or any mental reservation, the lines of thought presented.

In the standard textbooks we are told that sight is a psychic function. In other words, it is in the brain that we actually see, just as it is in the brain that we feel, and hear, and taste and smell. Marvelous as it is in itself, the eye is only an end organ, a receptor. It receives and transmits a physical force to a nerve which carries that force like an electric current up to a special receiving center in the brain.

If we are to have some practical understanding of the issues which are involved in this controversy, it is necessary that we have some knowledge of certain facts, which are being ignored entirely, and are realized by very few of those whose vital interests are at stake. We will need to learn something of the known mechanism of the human eye. **Even a normal eye varies constantly in its efficiency, and an abnormal eye varies considerably.** We must remember that radical changes take place in its conduct, even extreme discrepancies in an abnormal eye, when no least change is found in the tissue of the eye itself.

In the past few decades the record of the work of the medical profession has been the story of a new science and art, entirely different from the old methods of treatment. In the centuries of the past, medicine developed like every other science. Now and again a genius arose out of the ranks that moved slowly along-when they did not remain stationary for a lifetime. These men of vision generally battled with the rest of the army while they lived, because the minds of their colleagues continued to function with the fixed habits which were their mental life. That was the experience of Harvey when he insisted that the blood vessels contained blood, and not air. When Lister offered his theory that infected wounds were caused by bacteria, not even the proof he offered, made any impression on the fixed beliefs of the surgeons with whom he was working. Notwithstanding the fact that their own explanations were negative and empty, they refused to consider his. He cut the infections in his own surgical wards from seventy to seven; but for a long time the only recognition he received was ridicule. Pasteur was not even a doctor of medicine, and so the discoveries he made, instead of being received with reverence, were met with bitter, vicious persecution.

But the practice of medicine is guided now by different principles and different men. New discoveries are frequent, and methods are improving constantly. There are many evidences of this. The legions of death, that moved silently and without any opposition for so long, are now seen and met and conquered. The plagues of the past are guarded against successfully. Cancer killed many in every thousand; its victims are daily numbering less and less. Tuberculosis was a universal scourge, but the ninety per cent of infections in childhood are now a thing of the past. Malaria and typhoid fever now are generally not cured, they are prevented. The early deaths of infants are provided against and increasingly they do not occur. The cause of all these changes can be explained by what the doctors call preventive medicine.

The causes of tuberculosis were searched for and found. Then a defense was organized. The children were protected, and their natural defenses were strengthened. The enemy in cancer is still unseen, but so much has been discovered about his plan of attack, that he is met with a new resistance, and the number of his victories grows smaller by degrees and beautifully less. The mosquitoes of malaria, which were caught in their acts, are killed now in advance of danger. The drainage which carried the typhoid poisoner into the water and into the milk, is prevented now from polluting the liquids that used to carry death. In short, instead of only trying to cure the body which has been attacked, the doctor begins now by meeting the enemy as he comes on. The doctor has learned that the best defensive is an offensive. That is true of the whole field of medicine, except in the care of the precious sense of sight. No effort is being made to prevent the deterioration of the human eye. No effort is being made to find out why it is failing. No effort is being made to cure it. The situation today is just where it was twenty years ago when Dr. Sidler-Huguenin, an acknowledged international authority in this field, wrote that: "Glasses and all methods now at our command are of but little avail in preventing either the progress of the error of refraction, or the development of the very serious complications with which it is often associated."

What is the answer to the conclusion of Dr. Sidler-Huguenin? Is there no answer? The answer is here. The answer has been here. The answer is scientific. The answer was given by a physician who was a genius ranking with the leaders in other fields of medicine. The answer was proved during many years. The answer can be proved now by any who care to repeat the scientific investigation of Dr. Bates, or to test the results by using his method in cases of faltering eyesight. Notwithstanding all these truths, the human eye today seems to be treated like a commodity for barter and sale.

Since artificial lenses are ground to correct an exact degree of refractive error, it is necessary for the eye to produce constantly that exact degree of error in order to see clearly with the glass lenses in front of the eye. But no degree of refractive error in an eye is constantly present. The abnormal conduct of the eye is a fault which varies in degree. Many who wear glasses report that they find more or less difficulty with them, even after they "get used to them." Those who find their eyes adjusted for a period, are obliged to change the lenses because they have gradually become a hindrance instead of a help. It has been demonstrated by many who wear glasses that if they make a test by laying their spectacles aside for an hour, or a longer period, their sight improves, and they can see better without the glasses an hour after removing them than they see when they first take them off.

It is true that a great many who are wearing glasses would not be interested in trying to get along without them. As long as there is either difficulty or discomfort without them, and there is relief while wearing them, their answer will be "spectacles"—and that is their own affair. There are others who would like to be freed from dependence upon spectacles, but would not care to take the trouble, or are afraid the effort would end in failure.

In this short chapter we are not concerned with those. But many of them would still be interested in the question under consideration. They would be glad to know that thousands who are not wearing glasses yet, but are going to wear them, need not put them on. They would be interested, if they could realize it, to know that it is more possible to be saved from weak and unhappy eyes than it is to be saved from other damaging weaknesses which are now anticipated and prevented. The finest, spiritual interest they can have in this vital problem is an enthusiastic desire for the correction of a serious mistake, and the elimination of a menace which involves millions of humans, and endangers the welfare of this country.

"To Be or Not To Be", in this chapter, means just what Shakespeare, not Hamlet, said it always means:

To be, or not to be, that is the question.
Whether 'tis nobler in the mind to suffer
The slings and arrows of outrageous fortune;
Or to take arms against a sea of troubles,
And, by opposing, end them?

The slings and arrows of an outrageous fortune, in this discussion, are artificial lenses—the most domineering and dominating impediments to personal freedom that this particular land of the free is being subjected to in this generation.

Whatever we automatically decide to do about our own lenses, and whatever indifference we may feel about what the remainder of the adults are doing, have we not, every one of us, a battling interest in the sea of troubles that is being launched upon the children, in this deluge of spectacles with which they are being overwhelmed? Do we not want to know whether or not it is possible to give them back their own eyes, free and strong and independent? If it is possible, and that is being proved every day, do we not want to know why the eyes of the children are being denied what every other faculty and function of their minds and bodies are being given—the care and education which is their right?

CHAPTER VI

THE PHYSIOLOGY OF THE EYE

ORDINARILY we think of the eye in very simple terms. We realize a difficulty in seeing things, and we ask ourselves what we must do. The only remedy offered is to get what help we can from a pair of glasses. Very few ask any further questions. If they have heard of the Bates method, and inquire about it, they are informed, in a regular stock phrase that: "Dr. Bates has been discredited." There is a growing rebellion against that reply, which is not an answer. But only a few have access to the answer that is found in the success of those who have carried out the techniques of that method.

In a book by a psychologist of high standing it is pointed out and proved that physicians do not any longer try to make the distinctions that used to be made between organic and functional diseases. Conditions that were thought to be caused by a change in tissue structure, are now known to be caused by a fault in function, consequent upon improper nerve impulses, prompted by a disordered mechanism in the central control.

A famous biologist, in a recent book, writes that the illusions of the mechanists, and the childish physico-chemical conceptions of the human being, in which so many physiologists and physicians still believe, must be definitely abandoned. That the mind, hidden within the living matter, is completely neglected by physiologists, and almost unnoticed by physicians.

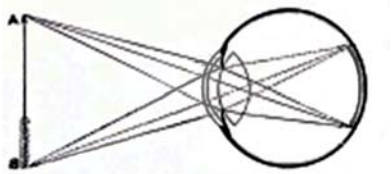
The use of spectacles is often a necessity. But a claim that such a mechanical device has any value as a correcting influence upon the mechanism of vision is surely the theory of a mechanist. There is no claim made that the glass lenses have any influence upon the abnormal conduct of the visual center. The only claim is that they help some to see by using the glass lens instead of using the lens of the eye.

Everyone knows that there is a constant mental activity which is outside the circle of our awareness. This storehouse of endowment and life-long development is the power-house which impels every function of life. It provides the energy for conscious thought and conscious action, and dominates every vital process of the body. The mechanism of vision is part of its dominion. The muscles which change the shape of the eyeball, and the nerves which carry the force sent in by radiant energy, and the impressions which are made upon the brain cells of the visual center, comprise the mechanism of vision. The mind interprets images. The mind includes memory, experience, judgment, imagination. All of these are involved, and are vitally active, and upon them depend the power of vision, and the truth of the impressions and the conceptions of which we are conscious by reason of the images that the eyes receive.

A well known professor of psychology carried out a most ingenious experiment which has a direct bearing on the subject matter of this chapter. His remarkable demonstration illustrates how much of the function of vision is carried out by that part of the brain

which is called the visual center. It shows also, very clearly, the complexity of the question of the value of artificial lenses. It explains how they frequently hinder the effort to see instead of helping the difficulty.

The picture thrown upon the retina of the eye is always reversed perpendicularly and laterally. In order to realize the significance of this statement, it must be remembered that the light rays reflected from the upper part of the object looked at slant downward so that they are delivered onto the lower part of the retina, which is the receiving film of the eye; and the light reflected from the lower part of the object is likewise delivered onto the upper part of the retina. Objects on the right side would be represented as on the left, and vice versa. This is partially realized by looking into a mirror.



It is easy enough to imagine the disturbance and confusion which would be caused by such a complicated misrepresentation of everything, in the complete reversal of the positions of every object seen. But the human visual receiving apparatus corrects this perfectly. In what manner that wonderful transformation is accomplished, the mind of man has not learned how to explain.

This professor of psychology prepared a pair of glass lenses which so refracted the light rays that the image was already inverted before it reached the lens of the eye. The lens of the eye refracted the rays received just as it had always done. This had the effect of delivering the image onto the retina right side up, and laterally also without being inverted. As a result, all objects at first were seen by the mind inverted perpendicularly and laterally. This was because the habit of the mechanism of vision treated the seen objects in the accustomed automatic manner, and re-inverted the images received. Wearing the deceptive lenses all day, the eyes were covered at night. The wearer at first had a unique experience. He would collide, for instance, with objects which seemed to be on the right, but were on the left. But in the course of a week a new mechanism of adjustment had been built up, by changing, somehow, the various reactions of the brain cells in the visual center. Then things seen were again presented as they had been before, despite the complete reversal still presented by the glass lenses.

This necessitated some new functioning of the different parts of the complex higher visual mechanism. Something was done which the brain and the mind had never done before. Something of a nature essentially different from the mere physics or optics of lenses—glass or flesh. The brain, might we say, working for the mind, met the emergency as just another one of the discrepancies which are constantly being imposed upon our different organs, and generally compensated with success.

When the brain—or shall we say, the subconscious mind had fully accomplished the necessary readjustment, and images were again habitually seen correctly, the trick lenses were removed. The mechanism of vision continued for a time to follow the newly devised method or system, and things were again in confusion. This time however, the new condition lasted only a few hours. The old, natural habits promptly dismissed the strange interlude, and went to work again in the inherent, accustomed way.

Suppose we consider for a moment, deliberately, something of the plain import of this most ingenious experiment. It has taken us up into the higher, more vital functioning of the mechanism of vision. But it has also made plain some most important direct considerations. **When rays of light fall upon the retina, they produce chemical changes which alter what is called radiant energy into some different form of energy, some different kind of nerve stimulus.** It is this new force which acts upon the brain cells. When a person is nearsighted—so-called—all light rays do not fall exactly upon the retina, because the eyeball is too long, and the rays reflected from farther objects meet too soon. In a far-sighted person it is just the opposite. The eyeball is too short, and rays focus behind the retina, which acts like a film. When the eye is impaired with astigmatism, the eyeball is more or less out of shape, instead of being a perfect sphere, and that influences in an abnormal manner the direction of the different rays of light. This is the explanation given in the text books.

Now, in the experiment just described, the rays of light received upon-the given retina were not imperfectly focused; they had been so completely changed in their directions that the image received was exactly reversed in detail from what should have been received, and always had been received as a picture of a given object. That part of the mechanism of vision which is beyond the retina interpreted, deciphered, corrected the deception, and acquired the necessary visional information in such manner that the impressions were the same as if the lenses described had not been used at all.

This experiment demonstrated, therefore, that the subconscious mind can accommodate itself perfectly to an experience not only strange, but actually a misrepresentation, compared to the manner in which the information had hitherto been presented.

The pair of eyes used for this demonstration by a famous psychologist were governed by a visual center in the brain which was working normally. Aroused to an alert attention by such a remarkable challenge, the mentality of the subject rallied its trained resources of memory and imagination, and judgment, and learned the answer. The mind knew that things were not upside down. In that experiment the mind knew that the false lenses caused the trouble. It was the mind that taught the mechanism of vision how to change its habit of the ages. The mind ordered that mechanism not to re-invert the strange images received on the retina. The unconscious part of the mind knew how that function was performed, although the conscious part of the mind did not. It was the unconscious part of the mind that accomplished the victory over the false lenses. This was possible because the conscious mind was aware of the interference and willed to overcome it.

That wonderful demonstration is surely worth some consideration on the part of those who offer lenses as the only possible relief for eyes that are troubled with some slight abnormal function on the part of the same mechanism. A doctor who had worn glasses for years on account of astigmatism, asked if I really claimed that the Bates method would cure astigmatism. I am sure he did not accept my explanation, because it did not agree with his own ideas. The explanation will be given fully later. I wondered what he might have said about the report of this psychologist, who has a high standing in this field. I did not ask him, however. I did not think it worth while.

A young man of twenty who had been troubled from early life by a peculiar astigmatism was freed from it in an hour by the Bates method. He could not fuse a single one of the stereoscopic pictures when we began treatment, but he fused all of them before we stopped. The simple technique employed involved the same attentive co-operation of the vision center as was aroused in the experimental case cited above. The stage was set, however, by what I regard as an attitude of mind. His mind had been deeply impressed before he met me, by a close friend of his who had personal knowledge of cures effected by the Bates method. He had no mental reservations, and his mind responded promptly to the suggestions offered in practice during the hour.

Astigmatism is a most interesting subject. We are told that it may be hereditary or acquired. The elaborate explanations regarding its infinity of varieties, its development, its changes in conduct, the different factors which may be involved and so forth, are all very confusing, and are largely theoretical. The array of plain facts, meaning the actual experiences of those who have had it for years, are often contradictory to the imagination and the hypotheses of those who claim that the condition is not curable, and can be helped only by the use of glass lenses.

My own experience is not unusual. During thirty-seven years there was often an extreme variation in the conduct of my eyes. For months they would behave very well. Sometimes they would tire easily, become more nearsighted, receive blurred images. Those periods might last an hour or several days. Occasionally there were brief periods during which I would have astonishing optical illusions. More than once an automobile would appear to be coming toward me on my own side, although I was sure it was not. I have seen distorted images of persons and things, sections of objects missing, impossible motions. These were not delusions or hallucinations. I was perfectly aware that they were misrepresentations. The glass lenses, usually helpful, had no influence over these distortions.

One aspect is certain, and vital in relation to the treatment of such a condition. Many of the illusions were not caused by errors of refraction, and were not influenced by the artificial lenses I was wearing. **The fault was in the conduct of the visual center. The treatment, therefore, must influence the mentality of the patient, and not merely modify the refraction of light rays.** In my own case the proof of this is the absence of those symptoms since I have used the Bates method. There is nothing uncommon in such experiences. Witnesses on the stand, students in psychological tests, report similar aberrations of vision-and not alone those wearing glasses. In auto accidents a driver with a perfect record has declared that he simply did not see the other car, although it was right in front of him. It will not be questioned that **a mental shock momentarily disturbs seriously the ordinary vision,** producing the same results as are found in the condition called astigmatism. We are told in the text books that astigmatism is a common defect. But the explanations offered as causes do not begin to account for the symptoms that are in evidence. Its performances, including its frequent disappearance, temporarily or permanently, can be fully accounted for only when we consider it psychologically. The same explanation applies to most of the functional disturbances complained of by those who seek artificial lenses.

The muscular element in the mechanism of vision is certainly dominated by the nerve center. Modern medicine knows that even where changes have occurred which seem to be permanent, and where symptoms seem to indicate some change in tissue structure, the abnormal condition will sometimes revert to normal. It is a simple thing for nerve controlled muscles to cease acting in an abnormal manner when an abnormal nerve impulse is changed into a normal nerve impulse. The reactions in the nerve headquarters of the eye, the visual center, are still very much of a mystery. When they act normally, perceptions are coherent. Sometimes visual perceptions are quite incoherent. To see an object or a picture which is not present is an illusion, and is due to misconduct in the visual center, and is not to be blamed on the eye. The common, trivial illusions, with which all are familiar, are caused by some degree of dysfunction in the visual center.

When a picture becomes blurred it is probably simply an improper nerve impulse, compelling the muscles to change the shape of the eyeball, so the light rays cannot focus clearly on the retina. When the eye suddenly becomes nearsighted, or a constant nearsightedness becomes more marked or less marked for a period, the changes are caused by a different nerve impulse.
+**When an <u>eye crossed</u> in one direction spontaneously changes the direction of the squint, or the squint leaves one eye and appears in the other, it cannot be denied that the muscles which held it one way have allowed a change in muscle conduct to hold it in a different way, and certainly those muscles obeyed a new nerve impulse.**

All of these specific changes are in evidence, and are to be found recorded in the text books. Every one of them is either a nerve center process, or a nerve current from the center, or a muscle taking an order from a nerve. Is it not clear therefore, and absolute, **that to correct these faults it is necessary to arouse the attention, and influence the conduct of the master mind in control, which is the visual center?** The proof of this theory, or claim, is its success in operation, which is now a story forty years old.

The fascinating interest of these plain established facts is not simply academic. It is strange, surely, that in all the work, and all the knowledge of the specialists, this simple truth has been ignored. It is more remarkable, that in all the wonderings of the psychologists, and the experiments of the psychiatrists, this field has been neglected. What was in the mind of the psychologist who proved with his trick lenses how infinitely more the visual center can accomplish than is required by the simple effort to cure automatically as astigmatic eye? Would he say that an eye troubled with astigmatism must be resigned to the domination of a pair

of glasses? The biologist who has described the intimate physiology and psychology of the body with a vividness never pictured before, puts on his glasses or lays them aside, as he talks, very much like the man with the monocle. He accepts without question the arbitrary, unfounded statements about the eyes, that have been current since first they were proposed. Someday it may occur to him to research the physiology and the psychology of the eye. It is a rich field, and of vital and practical and immediate importance to the race.

CHAPTER VII

THE EYE ITSELF

MY EXPERIENCE has been that the average person has very little interest in a technical and detailed description of the anatomy and physiology of all the parts of the mechanism of the sense of sight.

Everyone knows that the eye is round. Not many have inquired much further. Some could tell us that the round eye lies cushioned in soft tissue which lines the cave-like round hollows of bone that carry the eyes, right under the floor of the skull, which contains the brain. Some know that there are **six muscles attached to the outside covering of the eye**. At one end they are attached to the edge of the round hole in the rear of the cavity through which the optic nerve passes on its way back to the brain. Four muscles pass forward and are imbedded in the outer walls of the eye, near the front: one on top, one on the bottom, and one on each side. The other two are attached to the side-walls of the cavity, and are wrapped around the middle of the eye like belts, one passing over, and the other passing under the eye.

The four muscles called the recti, passing forward on all four aspects of the walls, serve to move the eye in different directions. Working in harmony they change the position of the eye in the socket, and point it, unconsciously, wherever the owner wants to look.
+**When they all contract equally, it is possible for them to change the shape of the eye and make it flatter on each end—that is, make the distance shorter between the front and the rear walls than it properly should be. Such an abnormal condition is present when an eye is what is called farsighted.**
+**The two so-called oblique muscles serve to compress the eye in the middle, and flatten it there, so that it becomes longer horizontally. In this condition the distance is longer between the front and the rear walls of the eye. Such a longer focal distance is necessary when the eye is focused upon nearby objects.**
+If the muscles become tense and make the eye too long, unclear distant vision occurs – nearsighted.
Extreme abnormal eye lengthening results in unclear distant and close vision.

The inside of the eye is divided into two compartments. Immediately behind the anterior wall of the eye is a small chamber, filled with a thin fluid which separates the front of the eye from the lens. The lens is fastened to the inner walls of the eye by a ribbon-like circular band of tendon. Behind the lens, filling the remainder of the eyeball, is a different liquid which resembles a jelly in consistency. The spherical shape of the eye is sustained by the pressure outward of the fluids with which it is filled. The crystalline lens consists of an elastic capsule holding in an oval shape its fluid-like contents.

The walls of the eye are opaque, and light can enter only through the transparent lens in the middle of the front wall. The colored circle just inside the front of the eye is called the iris, and the opening in the center of that circle is called the pupil. This opening constantly varies in diameter. It is furnished with a diaphragm, of which the diaphragm in a camera is something of an imitation. Its function is to control the amount of light which is permitted to enter through the lens. In a poor light it enlarges, and in a strong light it contracts. The outer walls of the eye are composed of a dense, firm tissue, with a lining of opaque pigment, and contain vessels which supply the nutriment required. The inner membrane, lining the eyeball, is called the retina. This membrane, although it is thinner than the finest paper, consists of ten distinct layers. In its surface are spread out the nerve terminations, which are the microscopic endings of the nerves that receive and carry the impressions made upon the surface of the retina by the rays of light. We have some understanding of this when we remember the film in a camera, which also is acted upon, although in a very different way, by rays of light.

The terminations of the nerve tendrils in the retina are of two kinds. They are distinguished as rods and cones, and there is some difference in their exact functions. The most sensitive part of the retina is a small area at the very hack of the eye in the center, which is called the macula. Here form and color and very sharp definition are registered. In this area there are no rods, which are nerve endings plainer and less highly specialized than the cones. Beyond this spot cones and rods mingle, but toward the front edges of the retina no cones are found. The rods seem to be more sensitive to the presence of simple light than are the cones. The rods continue to function in almost complete darkness.

When light rays contact the surface of the retina a chemical transformation takes place. The force called radiant energy is changed into another form of energy. This new force is carried by the nerve fibres which terminate in the cones and rods, back through the collection of fibres called the optic nerve. In order that light rays coming into either eye, from right or from left, may be registered harmoniously, there is a switch in the course of the optic nerves from both eyes. This switch is called the optic commissure. The optic nerve of each side continues on until it ultimately reaches an area in the brain called the visual center, where the fibrils composing the cord are distributed to cells of the brain. This is the beginning of the mechanism of sight: the comparatively simple reception and absorption and assimilation of those rays of light which are reflected from external objects and come into contact with the retina.

Vision is classified as a psychic function. The eye does not see. It is the brain that sees. The force or energy which courses up through the optic nerves to the vision center in the brain creates a transformation in those brain cells. Just how those impressions are registered so that they become conscious conceptions, has not yet been discovered. The process is a brain function, and part of the mind. **Previous similar impressions upon brain cells make it possible for a harmonious co-operation of memories to interpret the newly registered images. This involves memory, imagination, and every element of the intellect.**

Does not this brief description impress the tremendous significance of the prevailing custom of neglecting all this marvelous mechanism? The electric light companies, aroused to their own neglect of an opportunity to sell light, are beginning to give the eye light it has been deprived of, and that help is being gladly received. This however is simply physics. The mechanism of vision quickly leaves the field of organic chemistry, passes from the retina to the optic nerve, on to the cells of the brain, and into the realm of memory and mentality. There, in the higher field of the mind, is waiting the problem which the physician, who is interested in the rapidly failing function of human vision, must solve.

CHAPTER VIII

ACCOMMODATION

WHEN the word "accommodation" is used by an eye specialist he means by it the changes which take place in the eye when it is focusing. That is, the eye is accommodating itself to the distance of the object at which it is looking. Just what muscular changes occur in the eye during the act of accommodation has been a subject of most fascinating interest for centuries. There have been different theories as to how this is accomplished.

+Some supposed a change in the position of the lens.

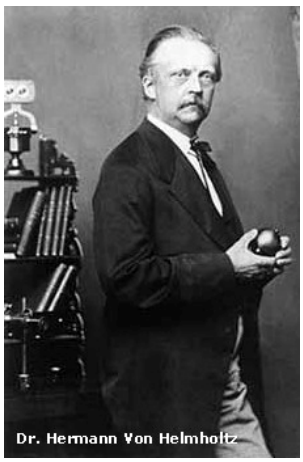
+Another theory was that the eyeball was lengthened. That idea would imply that a change had been made in the horizontal inside length of the eye. Such a change would increase the distance between the lens and the most sensitive part of the retina, at the rear of the eyeball. A change in the horizontal length of the eyeball could be accomplished only by the external muscles of the eye.

+Some believed accommodation was accomplished by the contraction of the pupil.

+There were those who discarded all of these theories, claiming that no change of focus took place.

Accommodation – close vision – about 20 ft. and closer – occurs with convergence.
Un-accommodation- distant vision - 20 ft. and farther into the distance – occurs with divergence.

In 1614 a theory was advanced that a change of focus could be brought about by a change in the shape of the lens, but it was more than a century later before any investigation was begun to find some support for that supposition. The only investigations made were efforts to prove that an image of the flame of a candle seen on the front surface of the lens became smaller when the eye was accommodating. Since an image reflected from a convex surface becomes smaller in proportion to the increased convexity of the surface, if the image on the lens surface really did become smaller, it would imply that the surface of the lens did increase its convexity during accommodation.


Dr. Hermann Von Helmholtz

Although it was never proved that the image did get smaller, this theory gradually came to be accepted in a general way as the solution of the problem. The man whose statements are offered as the most plausible support for this claim was **Dr. Hermann Von Helmholtz**, who died in 1894. But Dr. Helmholtz never did make a positive assertion to that effect. He said, as did others who favored this theory, that they found the said tiny image usually so blurred that the form of the flame could not be definitely distinguished. Different expedients were adopted to assist the human eye in clearing up that obscure picture of the tiny image on the lens, but they all depended on the perception of the observing human eye. Dr. Helmholtz stated that he found nothing but the ciliary muscle to which he believed accommodation could be attributed. This tiny muscle has already been described. He, therefore, concluded that the changes which it seemed to him occurred in the curvature of the lens must be effected by the action of this muscle. He stated explicitly that his suggestion possessed only the character of probability. He offered no single established fact to support his guess. He simply ignored the only other possible factor in the eye which could accomplish accommodation, namely: the external muscles of the eye.

Helmholtz invented instruments to see inside the eye and many other beneficial inventions.
Scientists state that modern instruments have proved that the lens can change shape.
IF this is fact, the Bates Method still works by relaxing, returning to normal function, all the eye muscles; outer muscles - oblique, recti, and muscles for blinking, tears… and the inner muscles – ciliary for lens, iris…resulting in clear vision.

When the eye muscles relax, function correct: eye movement: shifting, central fixation… are normal, accommodation/convergence, un-accommodation/divergence is normal, the lens, iris, tear glands… function correct and fluids flow normally, circulation throughout the eye is normal, the eye is in normal shape and light rays focus correct on the retina, vision is clear.

The theory that accommodation is accomplished entirely by an increase in the convexity of the anterior surface of the lens is supported only by the claim that an image reflected on the surface of the lens seemed to become smaller when the eye is accommodating. Dr. Bates refused to accept this theory, and undertook to make a real test of the truth of it.

To appreciate the significance of the factors in the problem it is necessary to remember what the actual question is. **Rays passing through the lens are refracted. Shorter rays reflected from objects close to the eye, must either be bent in a more abrupt refraction, or must have a long enough focal distance from the front of the lens before they reach the retina, if they are to come to a focal point on the retina.** Suppose that the lens be removed, and it is found that even in its absence the eye can accommodate. Would that not seem to prove that a change in the convexity of the lens is not the factor which determines the accommodating power of the eye?

Eye accommodates without lens

It is established, in the experience of practicing eye specialists, that frequently **when the lens has been removed surgically, as a relief from cataract, the eye learns to accommodate without its lens.** Corroborating proof of the truth of that statement is found in the records of the medical profession. Over a century ago a number of such cases were reported to the British Ophthalmological Society. In 1892 Prof. Forster of Breslau reported a series of twenty-two cases of apparent accommodation in eyes from which the lens had been removed surgically on account of cataracts. The subjects ranged in age from eleven to seventy-four years, and the younger ones had more accommodative power than the older ones. A year later Wainow of Moscow reported eleven similar cases, the subjects being from twelve to sixty years of age. In 1869 and 1870 respectively, Loring reported to the New York Ophthalmological Society and the American Ophthalmological Society the case of a young woman whose lens had been removed, and who, without any change in her glasses, read the twenty-foot line on the Snellen Test Chart at twenty feet, and also read diamond type at from five to twenty inches. The lenses she used would not help her lensless eye to accommodate. On October 8, 1894, a patient of Dr. A. E. Davis who appeared to accommodate perfectly after the lens in his eye had been removed, consented to appear before the New York Ophthalmological Society. Dr. Davis reported that the members of the society were divided in their opinions as to how the patient was able to accommodate for the near point with his distance glasses on; but the fact that he could see at this point without any change in his glasses was not, and could not, be disputed. This report, which gives a review of the whole subject, was printed in Reports of the Manhattan Eye and Ear Hospital, January, 1895, and was entitled, Davis: Accommodation in the Lensless Eye. The patient was forty-two years old. Eight months after his lens had been removed the patient returned because he had a problem. He had discarded the reading glasses given him and read with the glasses given for distance only. This meant that he was accommodating, or focusing, with his lensless eye. The distance glasses would not focus to meet the near print. He wanted to be sure this practice would not strain his eye. Dr. Davis found that with his lensless eye and the distance lens he could read the ten-foot line at twenty feet, and could also read fine print at from fourteen to eighteen inches. As this was his first experience with such a case, Dr. Davis presented it to the Ophthalmological Society. Four months later the patient had improved his near vision—that is, he was accommodating better, and read diamond type at from eight to twenty-two and a half inches. There are other cases on record just as convincing.

Impressed with this specific demonstration, Dr. Davis subjected the patient to various tests, and recorded some most significant observations. He made on that lensless eye, the same tests reported by Dr. Donders long years before, which had satisfied Dr. Donders that the lensless eye could not accommodate. The findings of Dr. Davis were so different from those reported by Dr. Donders that Dr. Davis decided the tests specified by Dr. Donders were wholly inadequate to decide the question at issue.

Shape of the eye and cornea changes to produce accommodation

During his experiments Dr. Davis found that the curve of the cornea, which is the covering on the front end of the eye, was changed and was moved forward a little. This would indicate that the eyeball had been made longer. These changes were demonstrated by the use of an ophthalmometer, which is an instrument for measuring the curvature of the cornea. He therefore felt himself bound to conclude that these changes must have been produced by the action of the external muscles of the eye. No other mechanism in the eyeball could do this.

The above recorded objective proofs are commonly ignored, or some specious explanation is offered for them. It is stated by some that the shape of the eyeball cannot be changed and made longer. But it is admitted in standard text books that the external muscles of the eye may change its shape. It is established that astigmatism involves a change in the shape of the eyeball. In astigmatism the abnormal shape of the eye varies. Cases are on record of the voluntary production of astigmatism. In one case, a house surgeon in the Manhattan Eye and Ear Hospital in New York frequently increased the abnormal curvature of each of his eyes considerably, in the presence of a number of members of the staff of the hospital. Dr. Davis, who knew this house surgeon, concluded that the changes in his case were brought about mainly by the external muscles of the eye.

The findings and tests given above, which are reported by many competent observers of good professional standing, are all independent of any statement by Dr. Bates. Unless they are disproved, they demonstrate that the lens is not the factor in the eye which accomplishes accommodation. These findings, on the other hand, offer no proof that the external muscles of the eye do not change the shape of the eyeball. Those muscles are the only other factor which could accommodate the eye. If those muscles can make the eyeball longer, lengthening the focal distance between the anterior surface of the lens and the surface of the retina, no other answer is possible—the external eye muscles accomplish accommodation. That was the conclusion forced upon Dr. Bates, and instead of simply denying the possibility of such a function, he undertook the only known experiments to find out the truth.

Dr Bates Eye Muscle Experiments

The six external muscles of the eye obviously serve to turn the eye in different directions according to need. Their further function has always been a subject of discussion. Dr. Bates was the first to undertake a scientific examination of their powers and functions on a living eye. Having decided that the lens could not be the accommodating factor, he surmised that the two oblique muscles accomplished it by compressing the round eyeball in the middle and making it longer horizontally. He cut those muscles in the eyes of fishes and rabbits and cats and dogs. When they were cut, the eye could not accommodate; and when he injected them properly with a drug that paralyzed them, the eye could not accommodate. When he sutured the severed muscles so they could contract again, the eye did accommodate. When he washed away the paralyzing drug, the muscles recovered their power, and the eye accommodated. The proof of the accommodation was demonstrated by the retinoscope, an instrument used by ophthalmologists for that purpose. This procedure he repeated several times in the presence of professional specialists, and they verified his findings.

Modern Scientists state that the shape of the eye, cornea and lens may work together, all change shape to produce accommodation. The size of the pupil, iris also affects light rays entering the eye.

This discovery of Dr. Bates explains why eyes can accommodate when the lens of the eye has been removed. It does not conflict with what is known of the structure and function of the tendon and the tiny ciliary muscle that sustain or modify the convexity of the lens. His discovery explains many apparent discrepancies in the theories which are held, or discussed, by eye specialists. It shows why and how it is possible to prevent and to cure the various abnormal function conditions which are such a distressing problem to the men whose work is to care for and to help the increasing number of victims of defective vision.

It is established that the normal eye at rest is adjusted only for rays coming from a distance, (Parallel rays =) not for divergent rays reflected from objects nearby. Rays from nearby objects would come to a focus behind the retina. But the myopic eye, that is the nearsighted eye, does constantly focus the rays reflected from near objects. It is accepted that the myopic eye is always longer horizontally that the normal eye at rest, when it is not focused—that is, accommodated—for nearby objects. When, however, an object is brought nearer to the normal eye, which is not nearsighted, not accommodating, there must be an adjustment made to perfectly meet and focus upon the retina those **nearby rays which are more divergent** as they reach the lens.

Ophthalmologists have noted that a change is felt to take place in the normal eye when the adjustment just described is being made. They accept this as proof that an effort is being made by the eye involving a sufficient muscular contraction to be appreciated as a sensation. Also, it has been noted that when the object is moved farther from the eye, there is a sensation of relaxation, and it is concluded that this denotes a relaxation of the contracted muscle. It is implied that these sensations of contraction and relaxation are produced by the action of the tiny ciliary muscle. The idea that such sensation would be caused by the action of the incomparably larger external eye muscles does not seem to have been considered at all. This seems the more remarkable since it is established that the eye is longer when nearsighted, and such a change in shape would necessitate the contraction of the external muscles. There is a double indication in this muscular feeling. First, such a sensation might reasonably be attributed to the contraction of the two oblique muscles on the outside of the eye. Second, it cannot be questioned that the nearsighted eyes vary in the degree of nearsightedness, and even quite frequently cease to be nearsighted. Dr. Bates claims that this variability is caused by the contraction and relaxation of the oblique muscles.
Contraction of the oblique muscles lengthens the eye for close vision. Relaxation, un-contraction of the muscles returns the eye to a round shape for distant vision. Tension in the recti muscles pulls the eye into a 'too short' shape.
Tense oblique muscles squeeze the eye into a 'too long' shape.
Convergence, divergence can also be felt.

The theory offered by Dr. Helmholtz was that the tiny ciliary muscle served to diminish the tension of the tendon which held the lens in a flattened oval shape. This would result in the lens, by its own elasticity, assuming a more curved shape. That is the explanation attributed to him in a standard textbook. But in the same section of the book it is pointed out that Dr. Tscherning, who agrees that accommodation is accomplished by an increase in the convexity of the anterior surface of the lens, disagrees with Dr. Helmholtz as to how this convexity is produced. He claims, in opposition to Helmholtz, that contraction of the ciliary muscle causes a tightening and not a relaxing, of the tendinous fibres of the zonula of zinn, and that the bulging of the lens in accommodation is produced by an active compression instead of by a passive dilatation. The text book also points out carefully that the theory of the lens being the factor which accommodates does not harmonize with other accepted theories in optics. The book cites the theory of presbyopia as one which does not harmonize. Presbyopia is a supposed condition in which the lens begins to harden when one is forty years or older. A lens too hard to change its shape could not accomplish the exquisite lightning-like changes in shape necessitated by the theory of Dr. Helmholtz.

The statement in the text-book is a reminder that, according to the theory of presbyopia, in later life the lens is hardened, and could not contract and expand. If the lens does so harden, and cannot expand and contract, this would render worthless the theory of Dr. Helmholtz and Dr. Tscherning. The text-book right there apparently points out that the theory of accommodation being accomplished by the changing in shape of the lens cannot be true. That text-book is a standard. Its statement is very plain. **There is sufficient evidence, in plain sight and not to be denied, that many eyes continue to accommodate even when very old.**

In a case of my own, a **man of eighty-five had worn glasses constantly for over forty years, and was both nearsighted and astigmatic. He was able in a short time to read Snellen Test Chart at the proper distances, and to read any ordinary print or writing at the customary distance from his eyes. He did that in the presence of others besides his family, and never wore his glasses during the two years before his death.**

In considering the same mechanism, these two men of genius conceived two contradictory interpretations of the way the mechanism worked. Suppose we try to imagine what is involved. To meet the conditions of their propositions, the curvature of the lens must change quicker than thought itself, constantly, with a perfect infinitesimal precision. It is not easy to imagine a fluid mass doing that. To conform to the theory of Dr. Helmholtz, the ciliary muscle would have to pull on the tension of the tendon and loosen it. This would permit the capsule holding the lens in shape to relax, and the lens could then push itself into a more spherical shape, and present instantly the exact curvature required, and with the moving fluid mass at rest.
According to Dr. Tscherning, instead of a softening capsule, and a released fluid changing its shape, there would be a tightening of the capsule, producing an active compression of the lens, which, however, instead of squeezing its fluid elastic contents flatter, would somehow force the contents into a more spherical shape. Which is the more reasonable of the two guesses? Before one makes his own guess on that question, memory puts on the scales the confusing recollection that the **medical record is full of instances, not to be denied, in which the eye has accommodated after the lens has been removed.**

In a standard medical book on the eye, we are reminded that the eye has been justly likened to the camera. An explanation is then offered to show why the eye is like a camera. In that comparison it is explained that the camera has opaque sides, a diaphragm in the front of the lens to keep out the peripheral rays, and an adjusting mechanism to accomplish the necessary process of focusing the rays of light so they will meet properly on the film. We are told that the eye also has opaque sides, and an adjustable diaphragm, and that the lens of the eye is itself the adjusting mechanism to secure the proper focus for the retina.

In reality the human eye is not like a camera, but a camera is like the human eye inasmuch as its film records images chemically. The mechanism of the camera is governed by the same natural laws as are exemplified in the functions of the eye. But the human eye has a range of vision which is incomparably greater than the powers of the camera.

Those who devised the camera, (as well as the telescope and the microscope,) found that the way to focus the refracted rays of light correctly upon the camera film was to arrange an adjusting mechanism that would move the lens back and forth, so as to place it at the proper distance from the film. In other words, the only changes that take place through the adjusting mechanism of a camera are changes in the focal distance between the lens and the film. **Eons before this was discovered the human eye was focusing the rays of light upon the retina in just that way.**

In the analogy referred to above it is stated that in the eye the lens itself is the adjusting mechanism which focuses, or accommodates. If that were true, it would destroy the analogy. The lens in a camera is not itself an adjusting mechanism. It is a constant factor. It does not accommodate. Its only function is to refract the rays as they are received, and the result depends only upon its position in relation to the recording film. The lens in a camera is a piece of glass, and cannot change its shape.

The changes which take place in a camera accomplish an increase or decrease in the distance between the lens and the film. In that it imitates the human eyeball. The text-books explain that when the human eye is nearsighted, which means that it is focused so as to see nearby objects, it is longer than its normal resting condition, and the retina is farther from the lens. Those who devised the camera found it necessary to arrange for just such a change in its length. **In taking a photograph, when the object is near, the lens is pulled farther from the film. Whenever the human eye accommodates so as to be focused properly for nearby objects, it accomplishes the accommodation by lengthening the eye horizontally, and increasing the distance between the lens and the retina.**

The eyeball, in changing the distance between the lens and the retina, changes its shape. Its walls are curved. When the rear end recedes from the lens, the curvature of the walls changes as the eyeball is made longer horizontally. The lens is placed a short distance back from the inner side of the front end. Its substance is not an unchanging solid. Its capsule, the flexible envelope which holds the contents in shape, is fastened to the curved inner sides of the eyeball by the tendon which controls its shape. Any change in the shape of those walls may modify the convexity of the anterior surface of the lens. This relationship makes it necessary for the exact shape of the lens to perfectly conform to any change made in the curvature of the anterior end of the eyeball. This is necessary because the outer covering there, **the cornea, is also a refracting medium**, and the lens must conform to any changes that may occur in the refraction which takes place in the cornea. It is necessary also for the convexity of the lens to conform perfectly to whatever changes occur in its relationship with the retina consequent upon the changes in the shape of the eyeball. The same impulse or nerve control which issues from the visual center in the brain harmonizes the co-operation of the external muscles and the ciliary muscle of the lens.

The lens serves as an auxiliary adjustment, secondary and compensatory to whatever changes are produced by the action of the two external oblique muscles of the eye.

The explanation offered here accounts for the varying and unsatisfactory findings of Dr. Helmholtz. He reported that the images he saw were varied and blurred and so inconstant that he was puzzled, and was not willing to make a positive statement about them. This illustrates his meticulous honesty. The text-book already quoted, points out that his hypothesis must have been wrong. The explanation offered here also accounts for the scientific findings reported by Dr. Bates. He secured photographs of the tiny images formed on the lens by a powerful electric light delivered by a series of adjustments through a constant aperture. These tiny images varied under external conditions which were exactly the same. The reasons are to be found in the varying slight changes taking place in the convexity of the surface of the lens, consequent upon different degrees of change taking place in the shape of the eyeball.

The import of these facts, in their relation to the Bates method for treatment of difficult and abnormal conduct in the mechanism of vision, is that in most cases of astigmatism and many cases of nearsightedness, the principal fault is the abnormal action of the external eye muscles. In astigmatism the shape of the eye is changed from its natural form of a perfect sphere. The deformity is so different in each case, and so variable from time to time, that, apparently, the changes must be caused by the varying tension of the muscles which are attached to the walls of the eyeball, and bring pressure upon those walls when they contract. Those who are nearsighted experience the same difference in the degree of trouble. Their power of vision varies constantly. In many cases the defect disappears spontaneously, even after being present many years. No other theory has been offered to explain this variable conduct. This explanation of Dr. Bates makes clear why the changes occur. **His claim that the eye sees perfectly when it is perfectly relaxed covers the nerve controlled action of the muscles, and the tension in the visual centers. He insists that in order to have a normal relaxation in the eye muscles there must be first a normal condition, free from tension, in the centers in the brain.** Such a condition returns spontaneously when disturbed vision becomes normal without any outside help. That is the explanation of those cases which get well. Obviously, then, it is possible to influence those factors which control such changes. During forty years of successful work Dr. Bates proved the truth of this simple law.

CHAPTER IX

EYESTRAIN

IN THIS chapter we will leave the field of the technical specialist, and come out among facts that are familiar to people of general intelligence. I hope the reader will deliberately put aside for the moment the vague, thoughtless attitude of mind which is so common on this subject. I ask that the reader remember eyes as they were a few years ago, when most plain people did not think of wearing glasses. It is worth while to let the mind dwell on the fact that, among those we see around us today, the majority live unconscious of their eyes, because they never have any trouble with them. It will make it easier to grasp the meaning of the facts, if one will ponder the description of the man with the three story intellect, which is quoted from Dr. Oliver Wendell Holmes in the August, 1936, Readers Digest, and let a little illumination come in, right through the skylight, and light up the imagination.

A specialist of high standing, at an annual convention of ophthalmologists, made a very interesting official speech. In that speech he declared that the word "eyestrain" is a great asset to eye specialists. He went on to say that to the patient it has a definite and satisfying meaning, but to the doctor employing it, the word—"strain", applied to the eye or any part of the eye, is almost, if not quite, meaningless, so that by its use he does not really commit himself in any way.

Coming from an eye specialist that is a remarkable declaration. Such a statement might easily be misunderstood. Certainly it could not be considered scientific. It is not a fair accusation against the men who specialize in the treatment of the eye, and who are constantly offering that explanation to their patients, as the speaker himself pointed out.

This speaker explained also that a knowledge of psychology is useful to the ophthalmologist in many ways, both in the making of a diagnosis and in the making of an explanation to the patient.

That statement is also interesting, and could form the basis for profitable discussion. If psychology is so important in the diagnosis of the condition, and also of such importance in explaining the condition to the patient, why is it that psychology is allowed no part in the treatment of the abnormal condition the physician finds affecting the eyes of the patient?

The same speaker further gave it as his opinion that the importance of errors of refraction has been, and still is, greatly exaggerated by ophthalmologists. He even pointed out that the opinions of ophthalmologists themselves are responsible for the prevalent belief that incorrectly fitted glasses are a menace to the integrity of the eyes.

That incorrectly fitted glasses are often prescribed for patients is a claim constantly found in articles written by specialists on the eye. They mean that the doctor, or optometrist who fitted them made a faulty computation in estimating the degree of refraction that would suit the defect in the eye. Because such glasses would make functioning even harder for the eye which is already having difficulty in seeing, the ophthalmologists believe that glasses which do not suit those eyes are likely to damage them. The speaker seemed to assert that such a statement is not true.

In a small booklet, one of a series of popular health instructions written by recognized medical specialists, an ophthalmologist makes a very different comment on the affection called eyestrain. He describes the condition as one causing suffering, and claims that other numerous reflex disturbances arise from it. He emphasizes, as an established fact, that the great relief which correctly fitted glasses give to those suffering from eyestrain, and from the numerous reflex disturbances that arise from it, is a matter of daily experience in the work of ophthalmologists. It is his opinion that eyes suffering from eyestrain are physically unfitted for their work, and that properly fitted lenses are the only corrective measure.

One might wonder what would be the outcome of a debate between these two men who are medical specialists in the same field. They express what are apparently two different and contradictory views upon a fundamental principle in their profession. It is probable that between them they each would neutralize the others contentions. Such a solution is often the result when two opinions meet that are at the extreme opposite ends of any subject upon which there is such a wide difference of opinion.

In a book which has perhaps the highest rating as a standard text-book of ophthalmology, the word "asthenopia" is defined as a sense of strain and weariness in the eyes and head, incurred by the use of the eyes. The patient feels that the eyes give out. This may be accompanied by actual pain in the eyes and in the head, and even in various parts of the body, by irritation, redness, or burning of the eyes and lids. In some eases there may be muscular spasms, digestive disturbances, nausea, and interference with general nutrition. The condition, as is explained in the book, may be caused by refractive errors; or the symptoms may be caused by abnormal functioning of the muscles of the eye; or by some specific nervous condition, as neurasthenia, or hysteria; or by unsuitable light; or produced by morbid conditions of other organs, for example, the nose and teeth. Or again, these symptoms may be produced by attendance at a theatre, or a game, in shopping, motoring, train riding, or walking on a street—so occasioned by moving objects. As other symptoms of which the patient may complain, the book mentions blurred vision, which may be temporary or permanent. The object seen may be blurred, or several objects seen, where there is only one. Print may run together and separate again. There may be great inequality of vision in the two eyes. There may be flashes of light, or floating specks before the eyes.

We are told in that article in the text book that asthenopia is the most common of all eye symptoms, and the one that is most readily relieved by proper treatment, which treatment, it is stated, consists essentially in the removal of the cause.

Upon the substance of that accepted statement in the text book, the system of Dr. Bates is founded. The symptoms described in that text book are those which Dr. Bates constantly discussed. His explanation also is that those symptoms are to be relieved by removing the cause.

In the text book some specific conditions in the system are named as the causes, as, for instance, nasal or teeth conditions, or some plain and definite conditions of the general nervous system. The meaning is that these other conditions of the system, through an abnormal nervous reaction, produce the disturbances in the conduct of the eyes. No doubt that is often true. But in many cases, if not in most cases, of abnormal visual function, no other abnormal condition in the system is apparent. Most of those patients who are told by the ophthalmologists that their disturbed vision is due to eyestrain are otherwise in apparently good health.

It is explained in the text-book that the symptoms, the sense of strain and weariness, and so forth, set up by the use of the eyes, may be caused by the errors of refraction, or by abnormal functioning of the muscles of the eye. But both of those abnormal conditions are themselves caused by abnormal nerve reflexes. They are themselves symptoms caused by an abnormal condition. They are absolutely nerve-controlled muscle functions.

The specific contention of Dr. Bates is that these different kinds of abnormal vision, including the described sense of strain and weariness, and the abnormal functioning of the eye muscles and the consequent errors of refraction, are all and several caused primarily by an abnormal condition of unnatural tension in the central nerve control of the brain.

This claim furnishes a reasonable and a satisfactory explanation for all the various aspects and considerations involved in this question. This vital problem has been discussed and disputed as long as the mechanism of the eye has been investigated. That it is still being discussed and disputed, is well illustrated by the opposing views held by ophthalmologists of today, as already quoted.

When a camera film receives a picture which is "out of focus", the rays of light were so directed that they did not meet properly on the film. There was an error in refraction. This was done by the brain of the camera—that is, by the hand of the photographer.

The human eye is not as simple as the camera, but its muscles and its consequent refraction are likewise dominated by a force which determines exactly what those muscles will do. We do not blame the camera when the lens is placed at the wrong spot on the slide. When the eye muscles function so that the rays are improperly refracted, the muscles are not at fault. The impulse that was produced through the current in the nerve gave the muscles a wrong command.

Sometimes such an order simply makes the muscles fix a wrong focus. The difficulty then is that the rays do not meet where they should, and a clear image cannot be perceived. Many who are nearsighted, or farsighted, or astigmatic, have no discomfort. Often, however, there are different kinds of sensations with vision, and there may be pain present even when the power to see is at the same time very good. These different symptoms are caused by varying abnormal impulses from the nerve centers of the brain.

What is called eyestrain, or asthenopia, is the same kind of a condition as the various abnormal conditions of the nervous system, which physicians refer to as nerve tension. We all have experienced some kind of a feeling which could be described as tense. Perhaps a feeling of straining in the mind, or perhaps an actual fixed tension of the muscles of the body.

It is very easy to produce such a condition in the eyes by a deliberate effort. If we do this with a strong enough will it is possible with normal eyes to produce blurring and an indistinctness of objects, and even to develop severe pain.

Thus far it is quite simple. No one knows what tension is, or what relaxation is, or what sleep is. But we all have experienced these different feelings. We all understand that tense muscles do not box well, or play tennis well; and this helps us to realize that when eye muscles behave likewise, they have the same success in refracting rays of light as the muscles of a tennis player have when his mind is in a state of "jitters". Just as tennis players have their goad days and bad days, have brilliant plays and wretched flunks, so the work of the eye varies, too. A nervous, uneven, unreliable athlete can be relaxed and developed into a fine, consistent performer. Even more so, an eye which is poor and unreliable, only because there is an abnormal tension in the visual center in the brain, will function with a new power when the controlling mechanism in the brain has recovered a condition of normal relaxation.

It is difficult to describe a condition which is recognized only as an experience. But it is possible to discuss its presence, and to consider results that are apparently caused by its influence. The offices of specialists in the diseases and dysfunctions of the nervous system are not filled with patients suffering from organic conditions with structure changes. The majority of those they are treating are afflicted with many varieties of abnormal sensations and functions for which no cause can be found except an unusual conduct of the central control of the nerves of the body. As examples, consider those who suffer from nervous indigestion, insomnia, neuralgia, nerve-tire, spasmodic contractions of various muscles, extreme irritability and even remarkable mental attitudes. The majority of those who are wearing artificial lenses are simply examples of the same type of dysfunction, affecting the visual center and disturbing the normal function of the eyes. Their variable symptoms, changeable conduct, sensitiveness to environment, unaccountable occurrence, and frequent spontaneous disappearance, all classify them as only one, and perhaps the most frequent, of the conditions commonly spoken of as nervous disturbances.

When one considers the extremely complicated mechanism of vision, its uninterrupted ceaseless functioning, the very different and constantly changing environment and diversity of its work, one wonders, not that it so often falters, but that the visual center resists so well, and fails so seldom to sustain a perfect equilibrium. This consideration is surely most typically exemplified under the stress the human eye has to meet in the environment of those who live in the places where the multitude of wearers of artificial lenses is found. We know very little about the astigmatism and errors of refraction of those who do not live convenient to the office of the eye specialist. But it is not hard to realize that the great mass of the population of the globe seems to have no difficulty with its eyes. This is true of the uncivilized man, whose life constantly depends upon good vision; and it is true of the civilized man who must have good normal sight for figures, or print, or operating machines, or fine detail discrimination. It is easy to accumulate incidents which apparently support this conception of a tension in the visual center as being the cause of eyestrain. It is just as easy to support the claim that it is possible, in a simple manner to relieve the strain, so that the eyes will again function in a normal manner.

Examining twelve hundred scholars in a large school, Dr. Bates demonstrated normal vision in a boy who was known to be quite nearsighted. The doctor's explanation that he read the ten-foot line at ten feet meant nothing to his teacher, because she knew he had not been able to read the words on the blackboard, nor the figures on the face of the clock. But when the boy presently succeeded in reading the clock and reading whatever she wrote on the board, she was astonished to see such a change in one minute, and she was interested enough to ask for a Snellen Chart to hang in the school room. The change in the power of the boy's vision was accomplished by the influence Dr. Bates had been able to exert upon the tension in the boy's mind. The tension was an abnormal reaction, produced by some stress consequent upon difficulties the boy found in his work. The presence of a new personality, impressing his mind with encouraging information, changed the attitude of apprehension, and permitted the normal function to return. Such mental reactions are seen constantly in children. Why should it seem unreasonable to have them occur where the eyes are concerned?

In my own work, a similar case was a boy of nine whose parents had been told by an optometrist that the reason he had constantly poor vision as well as pain, was because his eyes had not developed, and he was nearly blind. That diagnosis by an optometrist seemed so serious that they took him to a certain eye specialist in San Francisco, and he agreed with the diagnosis of the optometrist. Some weeks later, when I first saw the boy, he read without glasses, at a ten-foot distance, the forty-foot line on the Snellen Chart. This demonstrated that the diagnosis was certainly wrong. His vision was not even very poor, and there was no warrant for the claim that his eyes were undeveloped. He had nearsighted eyes with astigmatism. Having relieved the distress of his mothers mind by this proof that his eyes were not undeveloped, I directed a system of daily practices for the purpose of relaxing the tension which was so seriously disturbing the functions of the muscles of his eyes. The condition was relieved so rapidly that in ten days he was reading, at ten feet, the ten-foot line. He kept on improving and has had fine normal vision ever since. His mother was a great help by interesting his mind constantly in the Bates method of practicing relaxation.

A boy who stuttered was brought to me, and he stuttered badly when we began to talk to each other. I could see he was quite embarrassed by the evident annoyance of his parents. When I found that he was the best basket-ball player in the school, I told him some stories of the days when I played center, many years before he was born, and told him why and how the Y. M. C. A. started the game. It was most gratifying to listen to him talk and question, with flashing eyes, for fifteen minutes, and never a stutter. When presently I asked him why he stuttered when he played basket-ball, he replied, in an astonished voice and without a falter, "I never stutter when I play basket-ball." And I answered, "I knew you didn't," and told him why I knew it. He began right there to shed the tension that had hampered his speech, and his greatest help was to think of his basket-ball game. It was exactly the same mental process which relieved the tension that caused the astigmatism in the case of the younger boy with the defective vision.

A man of forty-two came to me with the explanation that he had had better than average eyes until he was thirty-five. During seven years he had tried three specialists. They agreed that his condition was a compound astigmatism caused by eyestrain, and that nothing could be done but continue to try new lenses. When he came to me he was quite concerned about his condition. I agreed that eyestrain was the cause of the trouble, and he was apparently quite disappointed. But when I followed with the remark, that this itself was really caused by a mental tension, he was surprised and then amused. He said he had nothing to worry about; that everything with him was "hunkydory." He couldn't believe his brain had anything to do with it, and could hardly get the distinction between worry and mental tension. When I asked him what it could be that worried the children who are being suddenly fitted with glasses for the remainder of their lives, because they have eyestrain only, he began to see the light. He was so much concerned about the discouraging condition of his eyes, and so much interested in the entirely different kind of treatment proposed, that he kept the subject in mind all day long, and he reserved three or four hours a day for the practice that was directed. In a few days he had personal evidence of the truth of the explanation he had been given, and in a few weeks his eyes were in a normal condition, with no unpleasant symptoms. He was seeing without glasses, and was quite well pleased with his success.

A young woman of twenty was brought to me by the young man she was engaged to marry, and gave a most interesting history. She was working in a home where there were three young children. Both the parents had been employed for years, leaving the children largely to the care of the young woman.

Some weeks previously a strange trouble had disturbed the vision of her left eye, and had gradually grown worse. I found that she had normal vision with the right eye, and could see just as well with the left eye the letters on the right hand end of the top five lines on the Snellen Chart. But she could not see with the left eye, any of the letters to the left of the last letter on any line, although she could see the large two-hundred-foot letter in the middle of the card at the top. There was no abnormal sensation in either eye, but there were increasing recurrences of vague, unpleasant sensations in her head.

She had gone to an optometrist to learn if glasses would relieve the difficulty, but he had refused to consider lenses, and had urged her to consult an ophthalmologist, explaining that the condition was serious.

The couple agreed to return to my office in the evening, when there would be quiet and time for deliberate inquiry. By careful questioning it was developed that the mother of the children was agreeable enough to contact, but the father was a peculiar type who encouraged and seemed to enjoy open insubordination on the part of the children to the girl's management while he was present. He would then comment cynically, in their presence, upon her handling of the situation. She was an earnest and evidently capable girl, and was very anxious not to lose the position during the next few summer months. There was no apparent abnormal condition of health. The ophthalmoscope showed no apparent abnormality in the left eye.
The presence of abusive, unpleasant people causes mental, emotional, physical strain, tension, eye muscle tension and unclear vision.

Having explained that I believed the condition of her eye was caused entirely by a mental tension, and given some of the reasons which seemed to warrant such a diagnosis, I began an effort to correct the fault. Seating the patient comfortably, I turned out the lights, and for half an hour we three remained in quiet darkness while I endeavored with suitable conversation to impress on her mind such ideas as I felt would influence her own train of thought and produce a condition of mental relaxation to displace the abnormal strained condition of tension.

When I then turned on a strong reflected light, which left the room in darkness except the Snellen Test Chart ten feet from her left eye, with a patch covering the good right eye, and helped her with some encouraging directions, she soon was able to read all the letters on all the lines of the card. The condition which had been developing for some weeks was relieved in one hour, and was a fine demonstration of the usefulness of the method of Dr. Bates in curing imperfect sight by relieving the tension which controls the whole mechanism of the perception of visible objects.

Temporary errors of refraction caused by straining to see are certainly quite common, and are dysfunctions resulting from some temporary condition of the mind. It would be easy to recall illustrations of this. For instance, the well-known classroom experiment with students in psychology, where they are warned to use their eyes well when an incident is suddenly introduced a few moments later. Perhaps a young man, or a young women coming suddenly into the room, goes through a series of startling movements and disappears in some unique way. Generally, no one out of a number of students will see the incident precisely as any other student sees it. Frequently some of them report the same incident differing from any other account, and there will be several divergent statements.

It is a common experience in a court room to have several disinterested and sincere witnesses leave out, or contradict, details which were easily and plainly visible to other witnesses. If it is contended that some of these illustrations are not proved errors of refraction, the answer is: first, we do not know whether they are or not; and further, the fault is in the mechanism of sight perception, and it proves a defective functioning by some eyes which would not have occurred under ordinary conditions of deliberate observation. It is not unusual for a spectator at a football game to miss entirely a movement that was plainly seen by others on the same spot, although the one who missed it had just as good, or even better, eyesight than the others. Some patients report such imperfect perceptions as recurrent experiences, and can even designate certain circumstances under which they will occur.

In those cases where there is fixed and constant error of refraction, the common experience is that a condition of abnormal sight begins imperceptibly, without any cause or influence or sensations of which the patient is conscious, and develops to a degree which necessitates relief.

In children, an unconscious tension is often developed by the false, and almost worthless methods of driving young minds as operators in a line of piece-work machinery are driven to keep the pace mechanically set by the machine. That experience commonly stultifies the other faculties of the workers; and, of course, similar treatment has the same effect on the children, and in some of them it originates the unconscious urge which makes the mental tension that reacts against their eyes. There are mental tensions developed in some children even before they go to school. Possibly there is some inherent nervous tendency. In one case under my observation it was obviously **a thoughtless mother who "got on the child's nerves."** When adults ask me how and why it happened that **some unconscious strain came into their mind and gave them chronic poor eyes,** I answer that it is not necessary to know the cause of the tension. The evidence of it is enough. No thoughtful person questions the common occurrence of some kind of a mental tension. It is reasonable enough to accept this specific and only tangible and positive cause that has ever been given as the background of these cases.

Releasing past/present thoughts, emotions and replacing them with positive, constructive ways of thinking, feeling about a event, situation will relax the mind, body, eyes and bring clear vision. Shifting and other Bates method practices will improve the vision and help to release negative, unhappy thoughts, emotions from the mind.
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See Books ; Rational Recovery and The Small Book by Jack Trimpey – Rational-Emotive Therapy
http://www.rational.org/?gclid=CMrItOie24qCFQQRQQodKQhv

The real question is whether or not the patient is interested in a simple and practicable course of effort to secure the priceless faculty of a pair of fine, happy eyes with which to go on through life.

When one is told that there is no apparent change in the structure of the eye, but that it simply does not work properly now, and the cause of the dysfunction is eyestrain, and there is no further explanation available, one is left with the natural and simple question in his mind: Can this condition be cured, and if so, what must I do to regain a pair of ordinary good eyes that will remain normal and see things the way the eyes of other people around me are seeing?

The answer, the same as the answer given by the nerve specialist in other similar conditions, is that the details of treatment in different cases are as varied as the differences in the details found in each case. Certainly eyes differ in power. But **it is as natural for eyes to work in a normal way as it is for lungs to inhale and exhale air.**

The cause is a strain. The purpose of the Bates method of treatment is to relax the strain. The eye with normal sight never tries to see. Its function is simply to receive the rays of light. At rest, it is adjusted to all but the rays from nearby objects. To meet those it makes a simple adjustment. The light rays do the work. The adjustment is an unconscious automatic function. Any conscious urge serves to disturb and strain that function. When a tension exists unconsciously the effect is the same. To correct that fault, it is necessary, therefore, only to have that tension cease. Practice shifting, central fixation.., then let the eyes alone, let the eyes shift... automatically, on their own.

The method of Dr. Bates will be described. It involves essentially that the subconscious mind be interested and impressed through the medium of ideas in the conscious mind. There are many simple practices which serve to enlist the attention of the visual center in the brain by directed conduct of the eyes. These practices will be fully explained.

CHAPTER X

THE MECHANISM OF VISION

IN THIS chapter I would like to remind the reader again of some of the facts concerning the mechanism of vision. Only a very small part of that function is yet understood. The really important factors are beyond the present range of human knowledge. But many facts and aspects are established which give light enough on the problem to make clear the lines of approach for those who are interested—interested in an endeavor to correct whatever visual dysfunctions with which they may be afflicted.

It is known that a force called radiant energy, contacts the human chemistry in the recording retina of the eye. The transformation which follows that reaction sends on a force which so acts on cells in both of the visual centers in the brain, that a conception is formed in the mind. Without the mind the eyes could not function. The mind gives all the orders, receives the incoming messages, and makes all the decisions.

It is true that the mind must work with the images that are received on the retina. But in the great majority of difficulties with vision, the fault is that the external muscles of the eye act in an abnormal manner and misdirect the rays of light after they enter the eye. This certainly is the fault of the control center in the brain. On the other hand, there is sufficient evidence that the brain can work effectively with retinal images that are impressed on the retina under conditions which are quite abnormal.

Cornea Scar

For instance, **a woman of fifty-eight, with a thin scar on the surface of one eye, which spread in front of the lens, secured a most remarkable improvement in vision in a short time.** The scar was the result of an infection in early life. The first day I saw it, she looked straight into the noon-day sun with that eye, and said it looked light; across the street it was dark. **She had not seen anything with that eye for over thirty years.** Her other eye had very poor sight. In a few weeks she could see three lines on the Snellen Test Chart, right through the scar; and she could not look into the sun. (Scar decreasing, light of the sun is now felt, seen by the eye) The improvement continued and the sight of the other eye, also, was much improved. It would seem that the confirmed habit of the mind was changed, because it became interested in a new way, and in the exercise of its power. Whatever messages it received from the retina were now utilized as they had not been for over thirty years.

Detached Retina

A man of fifty-three came to me with a condition of what is called detached retina, in both eyes. That condition was consequent upon an extreme degree of near-sightedness, which had been growing worse for over thirty years. The retina is held closely against the inner surface of the eyeball walls by the pressure outward of the fluid contained in the eyeball. There are different ways in which that membrane may be pulled or pushed away from the walls, so that it is separated in rolls or patches, as one sees old wallpaper sometimes separated from the wall. **He wore constantly a pair of prisms, and when he wanted to read, he added a second pair of glasses, in front of the first pair.** He had been informed by two specialists that he would ultimately be unable to see, even with artificial lenses. When he tried to see, he had to look below or above the lines he wanted, in order to catch the rays of light on the folds of the displaced retina. That man became able to read without any lenses, and at times he could see with very little change in the direction of his eyes. The measure which helped him most, perhaps, was the use of a Kromayer ultra violet ray lamp directed right through the lens of the eye. When he ceased coming to me he was quite happy with the fine improvement in his vision.

Cataracts

It would be beside the point, and of no value here, to offer any explanation of the conduct of the different factors involved in the detachment of the retinas, the failure of sight, and the wonderful improvement secured by the treatment. It is not a question of veracity—nor need it be. There are those who have opacities in the lens, called cataracts, and the rays of light are so hindered that the patient is capable of very little sight. Such conditions often improve, and the patient may even be blessed with a return of normal vision, without any treatment. A patient of mine, who was afflicted with cataracts for many years, and finally, in her own words, was almost blind, secured a wonderful improvement in two weeks, and soon had very good vision. The opacities continued, easily seen at all times, but variable, however, in size and in density. Although always helped by sunlight and methods of relaxation, there was a **constant undercurrent of a special tension in her mind which would often hamper and disturb the vision, and was relieved, sometimes in a moment, when the morbid attitude of the mind was overcome by some simple expedient which secured relaxation.**

Even a very little deliberation impresses one with the large part the mind has in the process, when a conception is registered from an impression coming into the conscious mind. Very much depends upon custom and familiarity. A technical worker sees constantly, almost automatically, what a stranger to that work can hardly see, and must actually learn to visualize. But that stranger can see quicker and better than the worker, the details in a picture which is familiar to his own mind.

We often seem to see an object as it generally is, when actually a detail is changed—she has had her hair cut, he has no watch chain on, or has a belt he never wore before, the old cover is gone from the spare tire, there is a new rug on the floor-and we must admit, "Oh, yes, I hadn't noticed it." We are familiar with the word "extraordinary," and read it without noticing the letters, but when we come to the word "mechanist," which we never saw before, the mind commands "wait—attention." Women, late in life, can thread a fine needle, even when they cannot read ordinary print, or write without glasses. The previous knowledge, the habit of the mind, its degree of attention at the moment, have much to do with what we see when we are looking. In other words, past impressions, habits of the mind, attention, imagination, all of these even modify the orders of the mind to the eye-muscles that perform the automatic function of accommodation.

Often I have enabled a patient to improve the sight so much in half an hour that the eyes could read three or four lines more (lower) on the Snellen Test Chart. This by simply securing an alert and attentive interest on the part of the mind. There are many ways of doing that, of course. But it is necessary, absolutely, that the mind be freed from constraint or inhibition, either mental habits or any distracting influences. Notwithstanding the difference in minds and their habits, I have learned that eyes which are different in every way respond with a fine increase in the power of vision whenever the conscious effort is strong enough to enlist the co-operation of the part of the mind which commonly takes charge of the automatic functioning of all the factors involved in vision.

It is often difficult to secure that necessary attitude of mind. The subconscious part of the mind does not always yield readily its habit of taking complete charge. Under abnormal conditions it frequently constrains the visual centers, and the subordinate muscles of accommodation, to reflect in their conduct the same state of tension which is present in the mind. Often, when a patient is sure there is an absolute compliance with instructions, it is evident that the will of the patient has made no real impression upon the working part of the mind. Commonly, children respond more readily. That is to be expected. Their minds are more flexible—less confined in fixed attitudes and habits. There must be back of the endeavor, that which I have learned to think of as an emotion. The child I cannot interest is very hard to improve. **On the other hand, when an adult, even an elderly person, is impressed with a conviction which is an emotion, the change will always come, and sometimes it begins instantly.**

Astigmatism

In a case referred to briefly in an earlier chapter, a man of forty-two, with a record of fine eyes for thirty-five years, reported a **serious progressive condition of astigmatism for seven years.** The three different specialists, and the many pairs of glasses he had tried, had failed to restrain the development of the malady. He came to me only because the third specialist had refused even to try a new set of lenses at the moment; and the patient responded, in a perfunctory way, to a friend's suggestion that he try the method which had helped the friend's own similar condition. His consciousness of his extremity prepared his strong, practical mind for a conception new and different from anything he had ever heard before. He only raised his eyebrows when told that his trouble was caused by eyestrain. He had been told that before. He was amused when told that **mental tension was the cause of the eyestrain.** But when it was made clear to him that there certainly was a center in the mind which controlled the automatic conduct of the eyes, just as every other function in the body is likewise controlled, he grasped the significance of the new explanation. His mind had already realized that his vision was even more important to him than his business. When asked how many hours a day he could give to the new endeavor, instead of explaining what a busy man he was, he deliberated a moment and then answered that he could devote four hours each day to the trial. The improvement began at once. The emotion which moved him insisted, through his will, and secured the co-operation of every part of his mind, and the orders to the eyes were changed.

This case is one of those which make it seem so clear to me that every factor in the complicated act of seeing is part of a complex, inseparable mechanism. The brain is the engineer. The mind is the captain. When the captain is mindful of his duty, every part of the mechanism will perform in order, and there will be no conflict.

In a current book, which is now a classic, written by one who has been a life-long physician as well as a biologist, it is emphasized that it is necessary to have an accurate knowledge of the physiological and mental functions of man, and of his adaptive functions. The author asserts that the atrophy of mans adaptive functions, consequent upon the habits of modern life, is a chief cause of the weakness of human beings. But it is the very existence of these functions, he points out, that permits us to intervene victoriously against the declining powers of the race, and put the race back on the road to physical salvation.

That conception is an exact explanation of what is wrong with the human eye today. It is failing to use its adaptive function. There are those who offer the preposterous assertion that the eye is being called on for work nature never intended it should do, and for which it is not adapted, and which it cannot do. Those who make this claim seem to be unconscious of the fact that many millions are meeting today the conditions named specifically as impossible, and are living proofs of the present power, ready for any need, of the adaptive function which that author claims is the salvation of those who want it. Their assertion, and that is all they could claim for such a statement, leaves out of account the adaptive function which is one of the obvious qualities in the history of the eye.
Cave men/women drew pictures in the rock walls of their caves – Beginning form of written language, use of the eyes at the near point.

In all but one of the fields of medicine there is a sustained effort to practice earnestly what the author of that book has so powerfully preached. The eye alone is being neglected. There is no least effort being made to study, and nurture, and develop and save the functions and power of the mechanism of vision. The higher mental elements of the faculty of vision are being deliberately ignored.

The prevailing method of treating visual dysfunctions apparently takes it for granted that the human lens has not the power to use its adaptive function—in other words, that it cannot refract the rays of light properly, and that it cannot recover what power it has lost. The prevailing method ignores the human lens, and gives the eye an artificial glass lens to refract the light rays right through it back to the retina.

Two of my cases, brothers, are most interesting from the point of view of this chapter. The first one, twenty years old, came about a slight injury, but spoke incidentally about his eyesight. He asked about a good "eye doctor". His report was that from his earliest recollection he had been near-sighted. He remembered that when he began to read, he had to "stick his face in the book"; and he kept that up, in spite of the remonstrance of his father. During the years, his trouble had continued, and now he was so near-sighted at his work in the shop, that he had decided to get a pair of glasses.
Is this paragraph a misprint? Nearsighted means unclear distant vision but the person states trouble reading close up. Does he mean to say far-sighted or both nearsight and farsight?

Fusion

My first surprise was when I found he could read the ten-foot line at twelve feet—although he had never seen the Snellen Test Chart before. I then tried his eyes on some stereoscopic pictures which are arranged for testing the focusing power of the eyes. The two pictures on the cards are duplicates, one on each half of the card. The test is for the eyes to fuse both pictures into one—just as the normal eyes fuse into a single image the objects which are seen differently with each eye. When the eyes are at fault, the pictures on the cards will not be seen as one. They may show to the mind different aspects. They may partly merge in different combinations. They may fuse perfectly and then separate. They may change when the picture is moved to different inches away from or nearer to the eyes. One picture may seem to be above the other. It often happens that the eyes being tested will seem to see the picture which is on the left half of the card as though it was on the right half. For instance, on one card the picture on the left half is the two letters ON, and on the right half the two letters NE. When the eyes fuse in a normal manner, the four letters fuse into the word ONE. Often I have had a patient apparently see on the right half the two letters ON, and on the left half the two letters NE. Since the eyes cannot see, with the right eye the letters on the left half of the card, nor with the left eye the letters on the right half of the card, such a transposition cannot be effected by the eyes. The fault in the fusion must be in the section of the vision mechanism which is behind the retina. The fault must be in the fusion center. In those cases fusion is in confusion. I have always succeeded in having the patient correct the fault, and see the pictures as the normal eyes see them.

This patient could not fuse a single picture. His eyes were not noticeably near-sighted. What he saw he could see very clearly at the far end of the slide on which the card moved back and forth. By suitable encouragement I was able to help him relax the tension which was causing the confusion. I succeeded in having his mind stop trying anxiously to see the picture in a normal manner. As he gradually became passive to the idea that his eyes would act in a normal manner if he ceased to have that urge in his mind, the different pictures began to look more like the correct single picture the normal eye would see. He finally saw most of the pictures just as the normal eye would see them. The parrot on one side of a picture went into the cage on the opposite half of the card. If the parrots head or his tail stuck out of the cage, we talked it over, and polly was coaxed back into the cage again. I found with this patient, as I find with most, that he could fuse more easily duplicate photos of landscapes, than he could the puzzle pictures. This probably is because the mind is accustomed to fusing what is seen in daily life, and finds it harder to fuse two pictures it has never seen before, like an empty parrot cage floating in the air, and a parrot standing in the air without any support.

The study of that patient during the hour we worked with the stereoscopic cards demonstrated to me that what he had been troubled with for so many years was a **peculiar type of astigmatism.** The reason he thought he was near-sighted, was because his astigmatism had found its own peculiar way of seeing things coherently when it could not see them in the normal way. The abnormal conduct of the eyes was corrected in that first hour I saw him. There was some remnant of the astigmatism left the first night. The next evening it was cleared up, and the patient saw clearly and fused every stereoscopic picture I showed him. His eyes were normal for his work, and have remained so ever since.

Because of his own success, he asked me if I thought the Bates method would help his brother's right eye. **That eye had been sightless from birth,** as near as was known. Ten years before, when the brother was twelve years old, he had asked an optometrist if he could give him a lens that would enable him to see with the sightless eye. The optometrist had examined the eye, and told him it had never developed, and it never would develop. Whereupon he never made any further inquiry of anyone. He came to me himself. Although I could find nothing abnormal with the eye when I used the ophthalmoscope, I found he could see very little more than light and shadow. I suggested that he have the eye examined by a medical practitioner who was an eye

specialist. He replied that he had no money. I gave him a note to the clinic of a university in San Francisco. They reported to me that he had an Amblyopia Ex Anopsia—which meant that his eye could not see because it had not ever had the habit of seeing. They examined his eye fully, he reported to me, and told him the only treatment of value would be a constant habit of shutting off the good left eye, and making the blind right eye learn to see, whenever he could practice that way. He reported that they informed him it would take two or three years before he would be able to see anything worth while.

The patient was "out of a job" at that time, and occupied himself much of the day with the practices I described to him. He lay for several periods of the day so that the strong sun was shining directly on his closed eyelids. He kept his mind attentive while he looked, without any strain, but with an alert attention, at some specific object, generally the letters on the Snellen Test Chart. He was instructed to confine his mind to the imagination of a small spot on the letter or whatever he was looking at, remembering it as he saw it with his good eye. He relaxed by lying down and listening for periods to some music or suitable program on the radio, his eyes closed, and his mind on the picture he was imagining, never thinking of his eye, always thinking of something objectively, so as to keep all other ideas out of mind. I did not examine his eye for eight days. He had been learning to see the letters on the Snellen Test Chart. I found that he could read the top three lines on that card. He would name any letter I pointed to. He could also see the equivalent of that in other objects—large letters or figures near his eye, a book, an ink well, a watch, a telephone, etc. His eye continued to improve, so that one Sunday evening when I met him on a ferry boat he was able to read, with his good eye closed, large type letters on the back of a small magazine which I am sure he never saw before.

There was nothing miraculous in the result secured in this case. A case which came under my care consequent upon her knowledge of this case, a woman of thirty-five who had been blind from birth, had an experience very similar, and in as short a time. In all of these cases there was no difference in the underlying principles of the practice directed by the eye specialist in the clinic and the specific instructions I gave.

It was not until a few months after the treatment of the two young men that I learned the secret of their very fine success. It developed that a young woman who knew of the success some other cases had secured with the Bates method under my care, was very well acquainted with both of the young men. She had so impressed their minds with the confidence that the astigmatism could be cured in the case of the younger brother, that when he came to my office his mind was already convinced, and ready for action. That is the reason, as I believe, that his eyes were able to record clearly the images of the letters at a distance of twelve feet. The stereoscope was a new and strange experience; but the new attitude of his mind was alert, and the orders from the visual center directed a normal conduct on the part of every element in his mechanism of vision.

There is fine food for thought in the consideration of the conduct of the minds of both of these patients, not only at the time of treatment, but during the previous years. Although the two young men had each a serious trouble with his vision, for the fifteen years that they both were conscious of it, one had sought no relief, and the other had made only one effort about his blind eye, and then accepted from an optometrist, without any review, a statement which condemned him to a sightless eye for life. Why then such a complete reversal of attitude? Why such a wonderful response to treatment? Any effort to explain and describe the mentality and reactions of these patients would be, of course, largely a matter of personal opinion. The aspect of the subject I am trying to call attention to is what seems to me the very plain proof that **it was the mind, and not the eyes, which was responsible for the abnormal vision that troubled all three of these patients, and ceased when their minds became interested in an emotion which was new and earnest.**

CHAPTER XI

THE WARRANT FOR THE WORK

IT IS strange that there should be opposition, on the part of any physician, to the endeavor which is involved in the Bates method for the relief of abnormal function in the mechanism of the faculty of vision. It is easy to realize that anyone whose only calling is to sell lenses will be confirmed in the mental attitude consequent upon the conviction that artificial lenses are the right and the only relief for such conditions.

Physicians, however, are constantly relieving other abnormal conditions which are certainly analogous. The procedure in those similar conditions is to discover the cause and remove it. Cases of nervous indigestion; idiopathic insomnia; nerve-tire in a patient otherwise normal; neuralgic pains where no cause is apparent; a complaint called by the patient "nervous," sometimes extreme and distressing, are part of the cases of every physician engaged in general practice.

In such conditions the physician knows that the cause, or causes, of the trouble is a dysfunction in some part of that complex, interlocking mechanism of organs and nerves and chemistry, which is beyond the consciousness of the patient. Whatever success he may have must be through the influence of the conscious mind upon that mechanism. Commonly that mechanism is the dominating force of the organism. This is a truth by which the medical profession is being more and more influenced in the practice of what is an art as well as a science.

It is worth while to follow this line of thought as far as it may be of help to the mind of the patient who is trying to learn just why, and just how, the method we are discussing can serve to correct difficulties in the function of vision. With that purpose in mind, I will call the attention of the reader to a few most important facts.

There are many functional conditions which are discussed by physicians as "psychic". To designate a condition as such is to say that it is caused by the direct interference of the mind. It may be that such interference of the mind produces an abnormal conduct of some function, or the interference may serve to correct a dysfunction.

Hearing Cured

Authentic cases are of record where an unexplained deafness suddenly disappears. There may be in evidence some specific outside influence. A woman who had been deaf for years, without any perceptible change in the visible mechanism of hearing, was shocked by the fear of death in a falling airplane. Her hearing was normal when the fright was relieved. One could multiply similar incidents.

Amblyopia is a condition in which there is poor vision up to the degree where there is no vision, when it is called amaurosis. These names are given only when no change is apparent in the structure of the tissues of the eye. In many of these cases there is no discoverable cause in any other part of the system. These conditions are sometimes explained by the statement that they are the symptoms of hysteria. But the definitions given for hysteria are only descriptions of abnormal functions—in other words, a recital of symptoms. The abnormal condition comes on usually without any apparent cause. It may even be present from earliest life. Sometimes it is relieved by the specific efforts of a physician. Often it disappears as it came—and it is not apparent why it came, or why it went.

Delving further into the field one finds records of positive results from specific efforts on the part of the patient, either under instructions or acting independently. A young woman, or an older man or woman, disturbed by some extreme emotion, may suffer as a result, most marked and plainly apparent symptoms of mind or of body. The manifestations of hysteria are manifold, and in many cases are quite serious. They may simulate the symptoms that are typical of some specific disease, which is not present. There may be an apparent paralysis of one or more limbs. There may be some phobia—that is, some fear of a condition or a presence which is believed to be real. Such conditions may continue and become chronic and uncured for long periods. They are often cleared up entirely, under the treatment of a physician, or in some unknown manner.

One of my patients had an uncle in France who owned an inn. He was afflicted for months with a condition diagnosed as **arthritis**. He was often in bed, but was sometimes able to get down-stairs and sit in a big chair in front of his inn. It was always necessary, however, that he be assisted by two helpers. One day he was sitting in the sunlight as usual when a neighbor rode up with the information that a vicious bull was loose in the road nearby. Everyone else sought safety in a hurry. When he found himself deserted, he promptly left the chair and bolted up the stairs.

Blondin, a world-famous tight-rope walker, found himself crippled with a similar condition of his **lumbar (back) muscles** a few days previous to a most important public exhibition. He engaged a physician, but the doctor was unable to relieve the condition, and even warned him on the day of the feat that he would risk his life if he attempted to carry out his contract. But Blondin had so much at stake that he dismissed the physician and, with the pain undiminished in his back, determined to carry on. His performance was to **wheel a barrow across a cable stretched over Niagara Falls**. According to Blondin's own statement, he felt the pain until he had actually taken hold of his wheelbarrow and his balancing pole. He did not feel any pain when crossing the turmoil of waters raging below, while he was reversing, or while he was returning. But as soon as he had finished the marvelous stunt the pain returned, and he was again a cripple.

Suppose we consider for a moment the analogy between this most remarkable incident, and the report I have recorded elsewhere of a man fifty-five who broke by chance the glasses he had worn for nearsightedness for many years, and went without his glasses after the accident, and had vision that was perfectly satisfactory without lenses.

Blondin was a strong, self-reliant man. He had none of those sensory inhibitions which restrain most of us from considering the feats he had schooled himself to do. But he was confronted with a dilemma which was unlike any other he had met. The faulty chemistry in the muscles of his back produced an irritation which registered as pain in the specific receiving center in his brain. For help he took his sick muscles to a physician; but he received no relief. It thus became his necessity to make a decision. He knew the physician was right in his remonstrance that such pain might overcome his customary power over those muscles, and might even cost his life. But there was an emotion in Blondin's mind that the concerned physician did not realize. Failure to keep his contract meant so much to Blondin that, like the dying gladiator, who had to consent to death, "but conquered agony," Blondin brushed aside the intruder in his back, and marched straight on to victory. In other words, **the emotion in his conscious mind was strong enough to suppress all other impressions. The pain could not register while his mind was filled with that thought.** But when the triumph was accomplished, and the necessity had passed, the pain registered again, because the new, strong emotion was no longer in charge.

In the case of the man who lost his glasses up in the mountains, the mechanism was similar. He had planned with his friend for two years to spend those weeks together up in the grandeur of the wild hills. The lure of that quest was so strong that it would not be silenced. His emotion was different, but it was similar in kind to Blondin's. They were both "wants". His want was so strong that it likewise suppressed any question about discretion. **His will demanded of his eyes, and that order changed the chronic habit of the visual centers. The power of his vision returned; and once he knew it, the truth was so strong that he held it fast, and his mind gave back to him the natural, normal sight which had been suppressed.**

It is easy to see why these spontaneous cures are illustrations of the same psychological and physiological mechanisms as are exemplified in the method of Dr. Bates. The mind in one case acted spontaneously, outside of the consciousness; and in the other case—the Bates method—it was commanded by the determined wish and conduct of the conscious mind.

Among other reports found in medical books I remember that of a chronic invalid, an old woman who needed the constant help of a nurse because she could not move without assistance. One afternoon when the nurse had left her alone for a time in a country hotel, the building caught fire. When she found herself alone, and realized that she must get out without help or be burned, she walked out unaided.

These cases are illustrations of an emotion causing an impulse from the central control in the brain to take charge of an abnormal condition and correct the fault in the mechanism—and this has been done even where there have been changes in tissue structure, or a nerve or muscle habit for years. There used to be a sharp line drawn between organic conditions and functional conditions. The first involves some change in tissue structure. The second does not. It was written that though a functional derangement could be corrected, tissue which had changed into an abnormal state could not be changed back into its normal structure. The ground is broken there. The leading thinkers in the medical profession began by pointing out that functional derangements sometimes merge into tissue changes. It cannot any longer be denied that tissue changes do reverse, and change back to normal.

A patient, a graduate of a German university, told me that as a boy he had a bunch of warts on his hand, and they disappeared after he followed the instructions of a "Frau" in the village. An aged mother was being buried. The church bell tolled for half an hour, during which time he was to recite to himself, continuously, four lines of doggerel which proclaimed that his warts would accompany the spirit of the departed.

He remembers that he was faithful to her instructions. He did not lose a wart that day, and cannot give an exact report; but he is sure the warts were gone in a few days.

In answer to an inquiry, an official medical journal recently made a statement fully confirming such a claim. The procedure is described as a mental suggestion. The statement reported that men of high standing in the profession had in that way rid their own skin, and that of others, from warts, and that this had been done after medical treatment had failed. The statement explained that in order to be successful, it was necessary for the operator to have a conviction that the effort would succeed, and the patient, also, must have a distinct emotional attitude of mind, which would make him susceptible to the suggestion.

Over two years ago a report was submitted to the annual convention of the American Association for the Advancement of Science which was signed by four physicians who were on the medical staff of a foremost Eastern university. One of their number had been afflicted with a gastric ulcer that seventeen years of medical treatment had failed to cure. They decided to treat the ulcer by mental suggestion. In six weeks there was a complete cure that had, at the time of the report, lasted two years.

Following their success with the chronic condition of their colleague, the four medical men selected thirty cases of ulcers of the stomach, and treated them exclusively with mental suggestion. They reported a complete success in every case.

It is not hard to imagine how such a proceeding operates. In the stomach, meat is digested. The lining of the stomach is meat. That lining is not digested because a physiological function acts to protect it from such a process. That specific function is principally, perhaps, the presence of what are called hormones in the tissue, and is directed by the central control of the brain. When an ulcer is allowed to develop, one or more functions in that field act in an abnormal manner. Stomach ulcers commonly act in the manner called recurrent. They come and go; get worse and then improve; are present for a short time, or a long time. In typical cases the history indicates some internal cause or causes for the onset and the spontaneous recovery. The symptoms, like those of the doctor in this case, are often beyond the control of any medical treatment. But when some change occurs in the conduct of the central control, the effect is an onset of the ulcer, or return of the normal function, and cure of the ulcer. These four physicians gave their thirty selected patients instructive talks, in sessions, on the normal functions of the stomach. They had them relax in periods, with closed eyes, keeping their minds occupied with thoughts which impressed on the central control in the brain their confident expectation that it would correct the abnormal impulses sent out to the stomach walls. Since that central control dominates the mechanism, it is necessary only to command its service. Success in that depends almost entirely upon the strength of the feeling in the conscious mind.

Certainly the beliefs of unusual healing, which have been held in all ages and all countries, are not based only on morbid imagination. There are many authentic records of such cures in our own day. A biologist who is a world authority on cancer reports the cure, by faith alone, of most serious functional and organic conditions. He cites the immediate closing of chronic wounds, the repair of diseased bones, the complete disappearance, in a few days, of lesions caused by tuberculosis, and even the deadly ravages of cancer. What he speaks of as records, are cases he has personally investigated, with the care of a veteran research worker.

Is it necessary to call attention to more illustrations, or more varieties of examples of the cures of abnormal organic as well as of serious functional conditions? At Van Nuys in California, a man with special talent has succeeded in piling up two thousand records of cases of **many kinds of paralysis**. Most of them came to him helpless after a trial of customary methods of treating such cases had ended in failure. He has given them new power, many of them with full normal function. His work is actually mental suggestion, carried out in a simple, direct fashion of personal instructions, which he calls education.

The writer referred to above, in offering his explanation of the cause and mechanism of those cures which are spoken of as miraculous, classes them as extreme cases of natural repair. He claims that the only condition which must be present is prayer. Even the prayer of someone who is present can effect the cure. **"Prayer is the soul's sincere desire, uttered or unexpressed; The essence of a hidden fire that smoulders in the breast."** But he speaks as a scientist when he states that such facts are of profound significance, because they show the reality of certain relations. The nature of those relations are still

unknown, he points out. They are the relations between psychological and organic processes. They prove the objective importance of the spiritual activities. The study of those activities, he believes, has not yet begun. They will open to man a new world.

In this chapter I have tried to show that in the presence of all these established facts, it is a most reasonable procedure to endeavor to influence the visual centers in the brain. They are influenced to act in a normal manner when the mind has a normal attitude toward them. That is what is going on with most of the race—with all those whose eyes are acting is a normal manner. When the eyes act in an abnormal manner, the fault is with the same central control. It is not uncommon for dysfunctions of the faculty of vision to spontaneously recover from the fault. Since it is in evidence that the mind can cure a shriveled, paralyzed muscle, and rout out of the body a tubercular or cancerous condition, what an incomparably simple proceeding it is to so influence that same mind that an order will issue for the mechanism of vision to behave in a normal way.

CHAPTER XII

SOME CASES THAT ILLUSTRATE

Cataract Cured

PICTURES sometimes help more than words to make clear a new and strange subject. The illustrations that follow are chosen because they are representative of different types of cases.

A. P., 15 years old, suffered an attack from poison oak which swelled his face so that both eyes were closed for some days. When the swelling disappeared, and his eyes opened, there was a dense, white opacity filling entirely the lens of the right eye. Four months later his parents brought him to me. His family physician had treated him for several weeks, and then referred him to an eye specialist. Four months of treatment, with drops in the eye and a bandage over it, had made no apparent improvement in the condition.

I was asked to remove the bandage and look at the eye, and say if I could cure it. Having explained that I could not do that while the patient was under the care of another physician, I suggested that they might have some special ophthalmologist give them an expert opinion on the unusual case, and then, if they were not encouraged by his conclusions, they might return and let me endeavor to relieve the condition by treatment with the Bates method. They did consult two eye specialists in San Francisco. Both doctors reported that no treatment would help the lens; and their only suggestion was to have it removed by operation.

Thereupon, we began at once to **treat the cataract**. It was October, and Arthur had not returned to school, so he had the entire day to practice. He was encouraged into an active mental campaign of his own, instead of a helpless, passive state of mind. He was given a **Snellen Letter Test Chart** with instructions to **spend time every day blinking softly at the different letters in accordance with the practice described. He was to lie quietly with the strong sun shining directly on his closed eyelids. He was told how to swing softly in a hammock; how to lie with closed eyes and listen to soft music. He was urged to have always in his mind a confidence that his eye would return to normal, but not to think of his eye. He was to occupy his mind with the techniques he was practicing, and forget himself, just as a violinist loses thought of himself when he gives his mind to his practice.** No doubt his own work had much to do with his success. But it was obvious that the **greatest help in his case was the sun**. The first day he could look directly into the sun and did not even see light. I began at once to use a **convex sun glass on the white of his eye**. **He learned quickly how to protect the lens by covering it with the lower lid. I focused the glass so it showed a small round spot on the white of the eye, and passed it rapidly back and forth for perhaps half a minute at a time. He then closed that eye while I used the same technique on his normal eye. This treatment with the glass I continued for several minutes each day. In a very few days he could not look into the sun at all because the opacity was rapidly becoming less dense. It not only lost the dense appearance, but also began to show spots on the margins of the lens where the opacity had disappeared entirely and the normal lens was plainly seen.**

In three weeks, three-quarters of the lens was clear. The quarter which then remained became quite a study. It varied in density, it had a ragged edge, and it would always disappear entirely when treated with the sun glass—that never failed. It might return in five minutes, or it might not return for a much longer period. But there was another phenomenon which, to me, was even more remarkable. His family knew that often, when he awakened, there was no remnant of the cataract visible. It might be absent for half an hour or longer. But any unusual incident, or least excitement—for instance, the refusal of a permission, an undesirable errand, teasing by his younger sister—would flash it back. We had begun treatment in October. Arthur returned to school in January. There was only a small trace of the cataract left then, which could not be seen without a close inspection. For weeks he had been able to see as well with that eye as with the other. The remnant gradually disappeared entirely. Over six years have passed, now, and the lens is normal.

When I asked a friend of mine, who is an ophthalmologist, for a personal comment on this case, he replied that cataracts do clear up, without treatment, and more especially in children. Because such is an established fact, it seems to me quite reasonable, also, to expect cataracts to clear up under some method of suitable treatment. **There can be no reasonable doubt that the use of the sun glass cured the cataract in Arthur's eye.**

After four months under treatment without any change, the opacity in Arthur's eye began immediately to show an improvement under the method I used. It was not a mere coincidence. There was no bandage over his eye, as there had been before, and his family watched the progress daily. The consistent temporary disappearance of the lingering remnant of the opacity, whenever I used the concentrated sunlight, and its frequent temporary disappearance during the night, sustained the claim of Dr. Bates that **cataracts can be caused by a mental reaction upon the muscles of the eye**. The ultimate and permanent disappearance of the opacity was consequent upon the **complete relief of the mind from such an unconscious tension. The tension itself was produced by the toxemia developed during the invasion of the system by the poison oak.**

Dr. Bates described a demonstration, which he suggested could be carried out as well by any other research worker. He explained that if the eye of a freshly killed steer is held softly between the fingers the clearness of the lens can be seen at a distance of twenty feet. If the eyeball is compressed firmly between the fingers, an opacity will be plainly apparent. The lens will be clear, or opaque, accordingly as the pressure is released or applied.

Personally, I have had the same success in enabling other patients to secure great improvement in vision when their sight has been very much impaired by cataracts. But this case of a young boy was quite unique. It was obviously caused by an attack of poison oak. It showed an immediate change. The remnant would disappear completely, and stay away for half an hour or for a few minutes, and finally stayed away—for over six years now. It must not be forgotten, however, that there are authentic records of cataracts which have disappeared spontaneously.

Nystagmus

V. R., 18 years old, had been troubled for several months with a distressing condition technically known as nystagmus. Her eyes rocked back and forth horizontally, in unison, rapidly and continuously. Her vision was poor. There was no pain, but there was a depressing, general nervous condition. Glasses had been prescribed for her by a well-known eye specialist in San Francisco months before she came to me, but no other suggestion had been offered by him. When the glasses secured no improvement, he protested that at least they freed her from pain. When reminded that she had never had any pain, he replied that if it were not for the glasses she would have had pain. Their family physician knew of the Bates method, and when the ophthalmologist failed entirely, he referred the case to me.

The causes assigned in the text books for such a condition are constant straining of the eyes, use of the eyes in poor light, disease or poison in the system. The theory offered is that there is a perversion of the center controlling parallel or parallel-rotary motion of the eyes; and there is no lesion of the muscles or the nerves controlling them. There is, however, no unanimity of opinion as to the way in which the perversion is produced. The duration of such a condition is uncertain. It is dependent probably upon the continuance of the cause of excitation. The treatment suggested, therefore, is the cure of any known abnormal condition, and more commonly, the use of some kind of lenses. There was no abnormal condition apparent, except the state of her nervous system.

This girl lived out of town, so it was agreed that her mother would bring her to Berkeley for one week as a trial, to see what improvement could be effected in that time. There was such a marked improvement that the case remained in my care.

My first procedure was to remove the spectacles, with the understanding that they would not be worn again. The treatment consisted of various Bates practices. **She was occupied much of the day lying down with closed eyes, listening to suitable radio music, or phonograph records. She lay with her closed eyes directly in the sun, beginning with periods of a few minutes and gradually increasing the time. She was taught how to practice palming, and swinging, and the use of the Snellen Test Chart. It was not easy to change the extremely, abnormal condition of tension in the mind, and the strange habits that had grown on the nerves. But there was a consistent, progressive improvement in her eyes, and her nervous system also relaxed into a very good normal condition.**

For many weeks after this patient's eyes had become habitually quiet, and her nervous system was relaxed and apparently normal, the old habit of the eyes would assert itself, frequently without warning. Sometimes the rocking would be mild and slow, and would soon cease. At another time the reaction would be more noticeable. I had opportunities to study her lapses myself, and also heard the comments of some who were familiar with her case, and with the manifestations of the condition. To me, it seemed quite apparent that the outbreak was always a reaction from a tension in the mind; and sometimes a connection was plain between some trivial shock and the immediate recurrence of the abnormal conduct of the eyes.

For instance, one day when she was in my waiting room, another eye patient came in, who had been quite familiar with the course of her recovery. The two had not met for several weeks, and they had a little visit together for, perhaps, twenty minutes. When I saw the second patient alone, after the eye patient had been in my office and left, she gave me quite a clear description of a slight reaction that had come and gone in the eyes of the young woman with nystagmus, bringing on gradually a slight, but apparent, return of the old abnormal conduct of the eyes. The rocking had continued for ten minutes before ceasing.

This second patient reported that when they met, her friend's eyes were quite normal, and she had been received with a cordial greeting, and for a few minutes there was no change. In a short time there came over the first patient an apparent slight constraint, which was recurrent, being noticeable when the second patient was talking and being lost when the young woman was responding.

The second patient, being an old friend of the young woman, was so well acquainted with her affairs that she was able to interest her in personal matters. This relaxed the tension which had come unconsciously into the mind of the young woman, by arousing

thoughts that brought pleasant memories and interesting ideas. The mind of the young woman had been dominated for a few minutes by a return of the old habit of mind, aroused by the shock caused by the appearance of the second eye patient. The new habit of the mind was strong enough to overcome the lapse, when it was assisted by the conversation of her friend.

A friend of mine, a physician, discussing this case, countered with the statement that there must have been a predisposition in the mind before it could react in such an abnormal manner to any cause of tension. The reply is, that every mind has its own predispositions. A predisposition is an attitude of mind. It is possible to change an attitude of mind. Most attitudes of mind are unconscious. Generally it does not help much to battle with them. In the statement of this case there was no discussion or reference to the cause of the abnormal condition. The mind was interested in a variety of thoughts, always objective and impersonal and pleasant and interesting, and always appropriately and helpfully opposing the abnormal attitude of mind which caused the strange conduct of the eyes.

If one is inclined to think lightly of this explanation of the mechanism of the onset and the course and the cure of this case, my answer is, that a renowned eye specialist failed to make the least change in the condition, and the method which I used corrected it. Whatever his understanding of the mechanism may have been, he did nothing but impose a pair of lenses, which, after a fair trial, proved worthless. It would be interesting to hear his explanation of the mechanism by which the cure was effected.

Cross/Wandering Eyes

A young lady of twenty-two came into my office, for the first time, one day, at four o'clock. **Her left eye had been crossed since her earliest knowledge.** Her older brother had a crossed right eye; she had never seen him otherwise; and there were three other relations with crossed eyes. About ten years before her visit, a change had occurred, and her left eye became straight, while the right eye, instead, turned out in a marked degree. She was employed in the office of a large store in San Francisco, and is employed there now. She had worn glasses for several years, and could not do her work without them. She had recently secured a new pair of lenses, and though they made the figures clearer, there was a constant feeling of discomfort while she wore them, and her eyes seemed to resent them in various ways—for instance, in looking at objects not quite close up. She could not describe exactly how the change from one eye to the other had taken place—it just happened.

During the two hours she was in my office, I was not with her continuously. Sometimes she sat in another room and read some designated chapter, or explanation by Dr. Bates, or some thing I had written. I consulted her occasionally, or had her look at a 1,000 watt light. At six o'clock I saw that her eye was straight. The change had occurred while she was alone in the other room for about half an hour. The eye has remained straight during the intervening three years, and she has never worn her glasses since. Her vision is good, both eyes are about even in power, and she has not paid any attention to them since the first few weeks after she came to me for treatment.

There is nothing miraculous about her case. **In the standard textbooks on the eye it is reported that a crossed eye may change its position without any outside interference, or that just such a change may take place as occurred with this patient—the crossed eye becoming normal while the normal eye becomes crossed. Eyes may be crossed while open and straight when closed, or vice versa.** In the books, just how and why that happens is left to conjecture. Why should it be thought remarkable that an influence can be brought on the mind in a deliberate, reasonable way to secure a result which the mind accomplishes itself, when it so determines, without any order from the conscious mind? That young woman had developed an attitude of mind before I talked to her. A close friend knew of cures effected, and had so impressed her mind that when she came to me there was a perfect confidence, and an actual expectancy, and all that was needed to consummate the change was the specific directions she must carry out.

W. C. S., a boy of 18, had worn glasses for eight years, could not do his high school work without them. With very little practice his glasses were permanently removed in a few weeks. He relaxed by lying with closed eyes and his mind at attention, occupied as continuously as possible with some designated idea, or series of ideas, thus excluding aimless trains of thought. He let the strong sunlight shine on his closed eyelids for an increasing period of time each clear day. He practiced blinking at the Snellen Test Chart, as will be described in a later chapter. During the intervening eight years he has taken his degree at Stanford University, had a scholarship in post graduate work, and for two years has held a position in the research department of a corporation laboratory. His sight is at least as good as the average normal, and he has never thought of wearing glasses since.

A boy came to me for treatment because he had seen the above-mentioned boy for two years with glasses on, and then for one year with them off. This boy was a very different type. I soon demonstrated to him that his eyes could be improved. He was able to see clearly at a distance, objects that could not be seen before, without his spectacles. One day, out in the open sunlight, his sight improved in a half hour, from seeing only the one hundred-foot line at a two-foot distance, to seeing the forty-foot line at a distance of ten feet. He complained, however, that he could not retain this improvement. He reported that when he practiced alone, he was not able to accomplish with his eyes the success he frankly admitted he had whenever he practiced under my supervision. The outcome was that his father refused to pay for my services, claiming that I was not curing the condition. The attitude of his father was a breach of faith, and I resented his statement that I was taking advantage of him, and claiming to be able to accomplish something which it was not possible to do. To my reminder about the cure of the boy that his son had seen daily for a year without glasses, he had only an evasive answer. I determined to see what would happen if I took his father into the small claims court in an effort to collect my fee.

The father appeared, fortified with a letter from an eye specialist who claimed that what I declared could be accomplished was an impossibility. My rejoinder was to submit to the judge seven letters from known, responsible persons, all of whom had been successful in the endeavor to secure good normal vision after having been obliged to wear glasses for years.

Of the writers of those letters, one man had worn glasses on account of nearsightedness for forty-five years. Another, a well-known educator, had worn her glasses for fifteen years, and took them off permanently with very little help. Another well-known teacher had worn glasses for twenty-five years, and like the previous case, began by leaving them off absolutely at once, and was able after three weeks of practice to go without them and without any further practice. The judge knew three of the writers personally, and when he had communicated with them, he concluded that I was warranted in claiming that it was not impossible to secure the improvement I had promised. He decided that my charges should be paid.

My purpose in recounting these two cases is to point out the importance of some effort on the part of the patient. The first boy was interested and faithful in his efforts to carry out the instructions given him. The second boy was the opposite. Just what practicing he did was problematical. His replies to inquiries concerning it were principally excuses. He was not reliable. Having secured his assurance that it was safe for him to go without his glasses generally, even in traffic, I secured also his promise to leave them off on the street. But I saw him more than once on the street with them on. One day when he forgot to take them off before he came into my office, I told him this. He promptly put them into the case, and put the case significantly into his pocket. When he departed it occurred to my nurse to look out of the window and watch him on the street. She saw him take his glasses out and put them on when he left the building. Few persons so deliberately break faith. But I have learned that a number do not give to the endeavor the consistent earnestness which the cause is worth. They are willing to accept a fine normal vision, but they have not a clear and strong conception of the necessity in their minds of an emotion strong enough to dominate their conduct and be an active force.

Mary S., 18 years, a high school girl, came at the close of school. She had been very near-sighted for several years. I saw her five times during seven weeks. There was a fine improvement in her sight from the first lesson. She told me there were several other girls interested, and they would come to me if she was successful. None of them came. Nearly two years later two sisters came to me. The example of Mary had finally impressed them enough to make a try themselves.

They lasted through three lessons. One had worn glasses for some years. The other one had warnings that she would soon need them. The spectacle wearer was a slave to perfect marks, and quickly decided that she would not let a small matter like good eye-sight for life interfere with her ambition to keep her place on the imaginary line in the class. Her sister decided to leave her eyes to their fate—just because her mind never realized the meaning of what she was doing. So they both have their poor eyes for life—and one has, or had, the "credits". But Mary has fine eyes for life. Worth more to her mind, infinitely, through life, than the foolish, and so often worthless, accumulation of dead marks.

A patient of mine, who had been a graduate nurse for years before she was married, had worn glasses for many years continuously. We relieved her of the spectacles between us, and her eyes have given perfect satisfaction without them for several years now. Without any help from me she taught her husband to discard his glasses, after he had worn them for forty-five years. **He had begun to be near-sighted following a severe illness from scarlet fever** when he was sixteen years old. His eyes became progressively worse, and for the previous ten years he had been unable to go safely in any traffic without the glasses on, although he could read the smallest type close to his eyes without the lenses. His relief came in a few days, and he did not practice any further care or method with them, but simply used his eyes freely.

He was a busy man of affairs, with long hours and much work with fine figures, and there was the common concern that most business men were having during the first years of depression, and after one year his eyes faltered again, and he gradually resumed the wearing of artificial lenses. He wore them constantly again for one year. But his mind was never at rest. He could not cease thinking about his eyes. It happened then that we were together at the seashore for one week. He had to relieve his mind of the complex, and I listened for half an hour to a recital of statements which were more or less true, and which he was confusing into arguments against the use of the unaided eye if it had any difficulty in seeing. His principal obsession was the glaring light of the sun. He had never thought of the sun in that way before. He even dragged in accounts of accidents caused by glaring headlights at night.

I refused to argue with him, but secured his promise to spend a few hours daily, during the five days we had left at the shore, in the practice of the simple techniques directed by Dr. Bates. He was an earnest and fair-minded man. From the first hour that he gave himself freely to the purpose of testing again the value of the method, there began a return of his confidence in his eyes. He was like a swimmer in the water again after a lapse of years. Perhaps you have felt that feeling, as I have, and have lost all consciousness of the liquid you were in, and have reveled in the buoyancy of floating on your back, carried by the strong water. In that five days all the power of vision he had lost came back again, and more. It is seven years since those five days, and his vision today is strong and free.

Mrs. W. C., forty-five years, had been afflicted for over a year with a condition known as **Iritis**. It is a serious inflammation of the eye, which generally diminishes the power of vision, as well as being very painful. She had been under the care of a well-known eye specialist in San Francisco. The condition of her eyes had grown steadily worse, so that when she came to my office—because, to use her own words, he had "let me out"—she was so nearly blind that she could not leave her own rooms without being led. In that disease lenses are of no service.

Besides the customary practices of the Bates method, I used on her eyes a treatment that I have used on other eyes, a careful exposure to ultra violet rays. She practiced a great deal of exposure to the sunlight, generally with her eyes closed. I was able to secure such a fine improvement in the condition that in a few weeks she had very good sight, so that she did not need assistance, and could even read fine print.

+Modern teachers use Full Spectrum Sunlight.

+Color treatment – Exposes the eyes to different colors, all colors for balanced light exposure.

+If one area of the brain is not functioning well, certain colors that activate/improve that area of the brain are used more than

other colors to bring that area of the brain into full function with the rest of the brain. Then all colors are again used equally to keep the brain hemispheres… balanced.

She ceased to come to my office, and neglected the other practices which had been of such benefit to her, and was disturbed constantly by serious mental concerns, and this resulted, after a few months, in a return of the symptoms, but in a much milder form. In a few weeks her eyes were normal again. It seemed that the improvement was due to the treatment, because it began at once with the resumption of the same method. She moved to San Francisco, and her eyes were in a perfectly satisfactory condition before she left. I am confident she would have returned for treatment if the symptoms had ever recurred.

Children should have an important place in this chapter, but I will not write about them here, because it is my belief that the salvation of their eyes is so important that I have devoted a chapter to the discussion of what is being done for their eyes, and what is not being done, and what can be done for them.

85 Year Old Man Cures Vision, Sees Clear Close and Distant

There are those at the other end of life, also, who have a claim. Some who are getting along very well with the help of glasses, might still be interested, like the fine old gentleman whose case I will now describe. He was eighty-five when his granddaughter told him what she knew about the work I was doing with the Bates method; and especially about a Mrs. Kinley, who came to me when she was eighty-three, with **cataracts** which hampered her sight so much that she was fast becoming helpless, and spectacles gave her very little assistance. She discarded the glasses at once, and had such fine success with the Bates method that she wrote me more than once, months later, that she could read and write, and could see to do whatever she wanted to, and was quite happy.

The gentleman, Mr. Burns, of Oakland, had **worn glasses constantly for forty years.** He was **near-sighted**, and was also troubled with **astigmatism**. He was getting along well enough, but when he heard of this opportunity he determined to see if he could correct the faults in his eyes. He began in a systematic manner to study the principles of the method, and to carry out instructions for hours every day. It was most interesting to watch him consider deliberately a statement which was new, and then question or comment, and then proceed to carry out the technique. It was his way of working with flowers, and the other interests which occupied his days. He was so absorbed in the mechanism of vision that he was not inhibited at all by a consciousness of his eyes. He very soon discarded the glasses entirely, and relieved himself of the dysfunction which had interfered with his sight for so many years.

This patient lived for two years after the return of normal power to his eyes. He never used his glasses again. His experience was a fine illustration of the control of the mind over the function of vision. His case is a contradiction also, of the theory of **presbyopia**, which claims that the lens of the eye begins to harden and lose its power in middle life, and even claims that for this reason the eye cannot focus on nearby objects when it is old. Mr. Burns could see small type closeup as well as he could see objects at a distance.

There was nothing remarkable in that. Such strong eyes at eighty and at ninety are in constant evidence. Some of the great artists of history accomplished their finest work when they were over eighty.

The different types of visual dysfunction have been offered as proof of the power of the mind to correct abnormal function in the mechanism of vision. The underlying principle of the method of Dr. Bates is the necessity of securing the alert and interested attention of the mind, when the eyes are not doing their work correctly, and the visual centers are at fault, instead of ignoring the mind and simply giving the eyes a pair of artificial lenses to work with.

CHAPTER XIII

FIRST PRINCIPLES OF CURE

DURING the ten years that I have been using this method, as part of my occupation in the routine of a general practitioner, I have found it the most fascinating part of my work. Generally it is gratifying. Sometimes it is quite disappointing. In a number of cases the results have been thrilling. There is nothing mysterious in the method or the techniques of the system. The reactions, like every other human experience, are determined by the different mental responses.

The principal combat is against the universal impression that the eye is a helpless thing—like a tooth, for instance. Skin can heal, an enflamed joint can become normal again, even a broken bone can unite by its own effort. But who ever heard of a tooth doing anything to get well, once the hard covering has softened and the toothache has registered a call for help? So naturally, when the eye begins to fail, and something must be done—well, who ever heard of doing anything to help the eye itself? Just buy it a pair of windows. No other idea registers in the conscious mind. As a sign of progressive, modernistic enterprise, the atmosphere now is full of warnings to beat the eye to it, and get a pair of windows before anything does go wrong—because naturally one ought to take it for granted that ones eyes, which are all right now, will certainly go bad pretty soon—and, besides, one looks more in the vogue these days with the latest model spectacles on display.

As a result of all this, when someone presents the strange and astounding proposition that it is actually possible for the ailing eye to get well, that is, to recover normal vision once it has faltered at all, the natural reaction, as I have found it, is to wonder how

any sensible person could become possessed of such an idea. In other words: "a crank is an expert on a subject we are not interested in." To put it differently, even when the response is cordial enough, one is balked by the well-known human failing called inertia.

If it is possible to convince the patient of the simple truth that the eye, like every other part of the body, can get well—recuperate, recover normal function, get over a bad habit, see just as well as ever or better, under the same kind of treatment as the doctor gives to every other part of the body—beginning with that conviction impressed on the mind, the subject has already made a fine running start.

Next, it is good to develop in the mind a simple and clear idea that vision is a mechanism which consists, in part, of muscles that act on the eye, just like other muscles which control other functions of the body, controlling the heart and the stomach and even the blood vessels. Beyond the muscles is a system of tiny nerves which carry orders to them from the mind. In charge of all is a central control in the brain, which ordinarily acts in a normal manner, but acts sometimes in an abnormal way, just as the central management in any organization may usually act with good judgment, but sometimes acts in a way that creates disorder in the whole system.

With such a foundation, one has an attitude of mind which can realize that it is within one's own power to "comeback" to the old habit of seeing things right, and even to develop a new power of better vision than ever. This understanding helps the patient to think of the mechanism of vision in an objective way. One can lose the mental obstruction which is produced by the consciousness of an eye which is crippled. The attention can become so completely absorbed in the practice of the technique that all self-consciousness will be lost. **One sees that best in the children. They forget themselves as completely as they do in playing house, or cops and robbers.** When the letters they could not see begin to appear, they just thrill with the pleasure of it. One boy who had been to school some months, but did not know the names of the letters—by the modern system of education—could identify them, as he learned to see them one after another, and in three lessons could name the letters as well as see them! I trust I did not interfere with the process of his education; but we just had to name the letters for him, because he was being retarded with his eyesight by the confusion of trying to prove that he really saw the letters. The D was "Daddy", and the M was "Mama", and the C was "Cat"—but the R and the W and the rest were things he could not name.

Practice the Bates Method Relaxed, no Effort

Assuming that there is an active interest, it is necessary to guard against an added tension, caused by the concern to accomplish the unaccustomed endeavor. The techniques directed develop a relaxed state of mind and of muscles, when they are carried out correctly. But the patient must learn to practice them as a game. In learning to swim one must first learn to trust the water. I saw a fine swimming teacher start with forty young girls who had never been in the water, and on the third day I saw all but eight of them jump into the nine-foot end of the tank, four at a time, and ply their way across and back without the least fear. They each had a different technique, but they all reached an arm away forward, and grabbed a lot of water, and pushed it back behind them, and just kept on going. The remainder of eight girls could not get their minds off the fact that the water was water. In working with the eyes, one must succeed in distracting the mind from the acquired abnormal habit, by engaging the attention, and impressing the mind at the same time with the necessity for working objectively-that is, thinking only of the details to be attended to. **Above all, it must be repeated again and again, so that it influences the mind, that every practice in the method has the primary purpose of developing a relaxed mental condition.**

Palming

A very effective way to develop a general feeling of restful relaxation is to have the patient practice a specific, habitual daily custom of lying with closed eyes for half an hour, and keeping the mind constantly occupied with specific selected thoughts that are pleasant and impersonal. One may imagine, make believe, that there is a soft and heavy and liquid feeling in the eyes, or in the muscle on the front of the arm, or in the back of the neck. Or if there is a symphony or organ recital or other relaxing program on the radio, one may imagine the performers or the orchestra leader or whatever the picture may be. That should not be a concentration, the better word is an exclusive contemplation. When carried out with care, this procedure produces a soft restfulness of all the muscles, and a feeling of languor in the mind. Unless it is in a dark room, it may be better to cover the eyes to shut out the light.

It is possible to secure some measure of the same feeling by closing the eyes at any time or in any situation. It requires always a complete exclusion of the customary automatic trains of thought—which dominate and interfere. For whatever period the mind is occupied with any chosen picture or series of pictures, the subconscious mind is kept standing at attention; and it will soon become a help, instead of a hindrance, in securing the relaxation that is sought. A young woman, lying on a couch in the dark, with no music, and no one present but her mother and myself, was kept constantly mindful by the soft repetition of the injunction to keep her mind on the muscle on the front of her arm. She was to make believe it had a soft, heavy liquid feeling. In fifteen minutes there was a silence for five minutes, and then she was asked to tell how she felt. She answered: "I feel just like a jellyfish. I don't know how a jellyfish feels, but that is how I feel." Her eyes felt soft, too. There was an improvement that evening in her near-sightedness which encouraged her so much, that in a few days her vision was normal.

Walking – Body and Eye Muscle Relaxation

It is a very worth while practice to make a habit of commanding a soft, relaxation of the muscles when walking on the street. The softness of the muscles, in ordinary walking, indicates always a relaxation of the mind, and this involves a relaxation of the tension in the eyes. When the mind is relaxed the muscles are relaxed; and when the muscles are relaxed, the mind has been relaxed first. If there is any difficulty in securing a feeling of relaxation in the muscles, it is a good practice to demonstrate on one leg by making believe it feels as though it were a rubber leg filled with water, and has to be swung helplessly in motion. From one limb the same feeling can be passed on to other limbs. These are illustrations of ways in which relaxation can be secured deliberately and specifically. Other expedients will occur to a mind that is interested. Relaxation is an absolute fundamental in this

endeavor. The only further essential requirement is that the central control in the mind be interested, and so impressed, that it is constrained to give the necessary impulse to the visual centers in the brain.
Relax, Positive thinking, practice Correct Vision Habits/Normal Eye Function.

All the treatments used in this ingenious system of methods are based on very simple principles. The simpler the directions, the clearer the mechanism is registered by one who is learning about a subject never heard of before. But if the new ideas are to really make any lasting and effective impression on the inner mind, the details that are necessary must be hammered home. The erudite and the ignorant each have inhibitions and inertias. There is a spot to shoot at in an elephant or a rhinoceros. I have sometimes found I have been aiming at the wrong spot; and even had my game get away, and had to register a lost case, because I had fired with bad judgment at the mental makeup of the patient. It is a unique situation after all, and I am still trying to learn how to estimate what there is in each mind that may be my helper, and what there is that I must battle.

To illustrate, a young woman who had an apparently unconscious aversion to any sunlight treatment, had me puzzled until one day she volunteered the information that the Negroes at the equator have cancer because of the hot sun. This is quite untrue, but her idea acted as a serious inhibition nevertheless. A man just would not try the practice of "swinging", and I found out later, by chance, that he had fallen off a swing when a boy, and went to bed sick for several days. 'The fear of a swing had remained so strong all his life, that he still fears even the word, and connects it even with the soft swinging which is done on the feet.

There are always inhibitions. The customary ones are expected; but the peculiar ones are generally not apparent, and are always more of an obstruction. My training as a physician has taught me that it is difficult, generally, to get an accurate record from a patient. So I ask questions of each eye patient. When the patient, in this procedure, is to be the doctor also, the patient should read the chapters in the book which will teach the mind the questions to ask itself. A deliberate and honest analysis of the existing conception of the subject, as of the past, should be followed by a personal questionnaire on the attitude of the mind, now that the endeavor is about to begin.

Having recorded the above previous record and diagnosis, it is vital for the patient to study carefully the intent and the special details of practice in every specific technique that is undertaken. Commonly, for instance, a patient who is "blinking" at a letter to develop a relaxed condition of the mind, forgets the purpose of the practice, and blinks in such a constrained manner that a new tension is added to the old one; or swings with so much concern that the muscles are hard instead of soft. This will not happen if the patient has read and reread some of the previous chapters, and realized the simple facts under consideration. I am writing this, at great length it may seem, in an effort to anticipate and prevent mistakes I have observed. Working without a teacher, some will fail to remark discrepancies, and come short of, or delay, success.

CHAPTER XIV

THE CASE FOR THE CHILDREN

A FORWARD looking eye doctor, writing in an official magazine, offers a demand which makes a plain man wonder. His proposition, plainly stated, is to the effect that every infant should have its eyes examined. He implies that most of them have defects. He asserts that if these defects are not corrected in the first few years of early life, the eye will degenerate into a chronic incurable condition. His bold, bald finality is that, if glasses should be settled upon the eyes of infants when they are eighteen months old, well, then, it is the thing to do.

That writer protests against what he calls eye exercises as a substitute for glasses. He does not explain what he means by eye exercises. It would seem that his plan would deprive the eye of its inborn right to exercise its own function, and yield itself passively to the domination of the artificial lens. As he offers no corrective treatment for the eye of a child which is acting in an abnormal manner, and condemns the efforts of those who undertake to correct the dysfunction, his pronunciamento has the effect of offering an obstruction to even the thought of some constructive effort for the cure of the condition.

Suppose we consider deliberately some established facts which concern such a remarkable contention. The first fact that suggests itself is the impossibility of proving that any infant's eyes should have artificial lenses, or would be benefited by them. At that time of life there is nothing to be found in the eye that could determine its inability to develop a natural function. The text books offer several different theories as to the varying changes which seem to take place in the growing child's eye. These differing theories are all more or less contradictory. But there are some significant statements. One statement is that the changes in the growing eyes cannot be estimated in advance. These changes are so variable, so uncertain, so irregular, that it is plainly indicated there is no fixed rule as to what will take place, or when it will happen. Apparently the course of the progress, like that of every other human function or faculty, is dependent upon circumstances.

We are told that five per cent of children are born nearsighted. At six years of age there are nine per cent. At sixteen there is a larger number. During the period of rapid body growth, more and more cases develop along the road. Besides that, those who are myopic get more and more so all the time. But the developing myopia, so it is explained, will often change its rate, increase more slowly, or stop increasing for some years, and then start a new rate of increase. Moreover, the progress in one eye may differ from that in the other. That stated fact is most significant. The books explain that the development of myopia in children is the net result of two opposing forces going on simultaneously. The excessively curved infantile lens keeps flattening, and the eyeball continuously grows longer. By the time full growth is reached, so we are told, the eye has a normal optical system, but is absolutely too long. This excess of length is blamed for almost all of the refractive error. In some cases, so one ophthalmologist

claims, the front end of the eye is distended, and not the rear end, as most research workers claim. Such a radical difference of opinion necessitates some explanation of the different theories; but it is not offered. Meanwhile, one cannot help asking an explanation for the development of those eyes, which after all compose the great majority, that certainly do not grow more and more nearsighted, but do develop in a manner which eventuates in a good normal eye. Certainly environment, variable, suitable or the contrary, has to do with the great variations recorded. Is it reasonable to pay no least attention to that proved necessity in the consideration of the "wherefore" in this question of what to do for a developing eye?

The writer of the article referred to offers as a saving grace for his cases of defective eyes, nothing but glass lenses. But what warrant has he for saying that his glasses will persuade the defects in the eyes to reform? How many children who have glasses put on them ever have them taken off? One would not say there are none. But who would say there are more than a very few? That writer says nothing as to when his glasses will have saved the young eyes sufficiently so the artificial lenses can be permanently discarded. That is very discreet on his part. The common experience in those cases is that the glasses are changed periodically for different ones, with the explanation that 'stronger lenses' are required.

Why should one expect glasses to correct any defective functioning of the mechanism of vision? Especially in a developing organ, why should one expect any artificial substitute for the function of the organ to develop the function of the organ itself? Such a proposition is contrary to all the science and art of modern medicine. It is exactly opposite in conception to the basic principles of the modern methods of education. The fact is that no claim is made by the ophthalmologists that glasses do correct the abnormal function of the eyes.

The artificial lenses are put on to assist the eyes. But when the artificial lenses refract the rays of light they do so with an unvarying precision. Meanwhile every dysfunction of vision varies constantly in degree. This means that there must be submission by the lens in the eye to meet the refraction made by the glass lens. Often there is conflict. In some cases it is serious. In any case there is a situation which is unnatural, and there are inevitable secondary effects consequent upon the submission of a human faculty to a constant outside interference. Some children show this plainly in their conduct. Very few of the laity seem to have any consciousness of this most important truth.

Madame Montessori conceived a method of developing the mental deficiencies of subnormal children which surprised the world. In her wonderful work she cured extremely abnormal mental conditions by encouraging the subnormal qualities of the mind to develop along natural lines into normal efficiency. It is by chosen impressions carefully made upon the subnormal minds of mentally defective children that the Montessori system secures such wonderful changes in the working of their minds. The incomparably simpler changes required to correct mere visual dysfunctions are easily accomplished by the same natural method of treatment. Very few would undertake to deny that statement. It is in accordance with the known physiology and psychology of the function of vision. It has been amply proved during many years. It is questioned only by those who have never tried it.

If one has interest enough to consider deliberately the case for those children who are having difficulty with their eyes, it will be necessary to lay aside whatever beliefs or prejudices or predispositions one has, for otherwise one cannot examine the evidence with an open mind. The unquestioning compliance of parents in placing spectacles on their children is sufficient proof of the impressions which have been produced on the public mind in the last few years. This strange new mental attitude is the result of the practice which has developed so rapidly in a short time. It is growing to seem natural to meet every trifling difficulty that children have with their eyes by the simple procedure of fitting them with spectacles.

We have gradually grown accustomed to seeing children with glasses on. As the ranks increased there began to appear very little ones among the small army. The relative number of children wearing glasses is trifling, as compared with those who do not. What about those children's' eyes which refuse, as they develop, to follow the rules laid down in some of the literature on the subject? I mean those eyes which do not grow more and more near-sighted. Why the difference between the few who develop some dysfunction, and the great majority who do not? The theory of an inevitable progressive maladjustment, predicated upon some unexplained distortion of the parts of the eye, takes no notice, and offers no explanation, of the eyes which develop into a normal maturity. Even more than that, the theory is contradicted by any eye which develops into a near-sighted eye, and later ceases to be nearsighted. There are plenty of such eyes in evidence. **In my own practice there was a man who developed myopia at sixteen years, following an attack of scarlet fever**. He wore glasses, stronger and stronger, until he was sixty-one. He then took them off for two years. After that he gradually assumed again the constant use of them. He took them off again, however, after a year, and has not worn them for the last five years. He knows that it is the attitude of his mind which determines the conduct of his eyes.

The problem involves the foundation of the method of Dr. Bates for the correction of abnormal vision and the education of the eye in the normal conduct of the mechanism of sight. This problem is discussed fully in other chapters.

The specific, practical, positive, and vital conception that is the theme of this chapter, and the thought which I hope to leave as an impression on the minds of all who read it, is that the eyes of children should not be left to the management of optometrists. They should be protected from the raw commercialism of any campaign which boasts openly that its purpose is to put lenses on every one of them. It is not true that for the faults of vision which many children have, there is no other known help than a pair of artificial lenses. It is not true that those eyes must develop into a permanently abnormal condition. The eyes of the great mass of children still develop normally. It has been fully proved that the different abnormal conditions are only dysfunctions, and can be corrected easily and permanently. We protect children, naturally and positively, from impositions upon their helplessness: how long will it be before we protect them from this imposition?

The developing eyes of growing children should not be left to any management which offers their eyes no other help than the domination of a pair of artificial lenses. Such lenses displace the natural function of the lens of the eye. That is obvious. The natural effects of such a substitution must be very plain. The eyes are not something apart from the remainder of the body. They should not be examined and diagnosed by the mere testing of what they can see, at the moment, at a certain distance. The foremost standard text book on the eye, the work of a world-famous Viennese eye specialist, explains with great detail that there is a close and absolute cooperation of the sense of vision with the other functions of the body. It explains that the functioning of the eyes is often impaired when the other functions or organs of the body are not conducting themselves normally. It explains that those other dysfunctions are the cause of the abnormal conduct of the eyes, and that when those other dysfunctions are corrected, the abnormal conduct of the eyes will cease. It is obvious that such an examination, and diagnosis, and treatment of the human eye should be carried out by one who is trained in the science and art of medicine. The problem should not be stated and dismissed by the mere routine procedure of having the patient look at some letters on a card, without any consideration of the real cause of the abnormal conduct of the eye, and without any consideration of the visual center in the brain which directs and controls the eye.

Although I realize the danger of repetition on this subject of spectacles on children, I am conscious also of a specific necessity. During ten years of this work I have been deeply impressed by the remarkable lack of attention given to the matter by the parents whose children are sentenced to the handicap of wearing glasses for the remainder of their lives.

My point is the thoughtlessness with which they accept, without the least question, the verdict that because the child now finds some difficulty in seeing things clearly, there is absolutely no other procedure in the premises but the adoption of artificial lenses. They are familiar with classes, private and public, for children who have different kinds of impairment of mental functions, and are familiar with the giving of medical attention to various organic and glandular dysfunctions, like asthma and diabetes and anemia. They are aware of the wonderful advances made in modern scientific medical treatment of every other part of the body. But they seem, in a strange manner, to be unconscious of the part that the eyes play for the brain. They walk into a store and let a man put a pair of glasses on their child, for the remainder of the child's life, and think no more about it, then or later, than when they buy the child a pair of shoes which are to protect his feet for a few months. If the reader thinks that this is not a fair statement, let the reader try to prove, by simple personal deliberation, just what is untrue or unfair about it.

As a typical illustration of the contrasting attitudes of mind on the part of parents when their children are having difficulties with their vision, the following record is worth considering.

A girl from a small town in Oregon, with a relative living in Berkeley who was quite familiar with the success of the Bates method, was brought to my office by her mother two years ago last summer. When she was about four years old her parents discovered that her vision was at fault. Finally she was examined by an eye specialist, and was fitted with glasses for near-sightedness and astigmatism, before she was six years old. She had been wearing the spectacles continuously for eight years when she came to me, because without them she not only had **difficulty in seeing**, but also was subject to symptoms of discomfort, even **nausea** and **headache.** Her mother also had been wearing glasses for several years.

They remained in Berkeley two weeks, and that was the only period during which I had personal supervision of her. She discarded her spectacles at the first treatment, and has never worn them again. Her mother worked with her, and she, also, discarded her glasses immediately and permanently. In several cases I have noticed that a mother wearing glasses, while she was trying to make the child discard her glasses, has realized an embarrassment in the situation. I appreciated the spirit of that mother, and I am sure her attitude was a great help to her daughter.

Dr. Bates felt that it was not a helpful example to a roomful of young children to face constantly a teacher wearing spectacles. In my own work I have been told by a parent, more than once, that the child's teacher, wearing spectacles, was quite impatient with any indications of difficult vision on the part of any child in her class and that this attitude made the children quite self-conscious.

This girl was determined to be free of glasses permanently if possible. She improved from the first hour. Upon returning home, on vacation for some weeks, she practiced a great deal, **exposing her closed eyelids to the direct rays of the sun**. She found that this treatment was very helpful, and feels that this procedure was perhaps the most valuable of the techniques she used. She had been seen so long wearing glasses, that her appearance without them attracted real attention. Her vision was entirely satisfactory.

After she had been in evidence daily without glasses for over two years, a boy of her own age, who had seen her with spectacles for eight years, and was having trouble with his own glasses, finally decided that he also wanted to be free, and asked his father for permission to undertake the same treatment, pleading the example of his friend. His father refused to allow this, and the boy is now carrying on as best he can with the obstructing spectacles. I submit this story without any personal comment. It is just a rather extreme and conspicuous example of a mental attitude which is not uncommon. Instead of being indifferent to the truth that is evident in the success of the method of Dr. Bates, the parents of the girl determined to make the endeavor. They realized that no possible harm could come to the child's eyes, and their minds were open to the opportunity. In the three years that have followed those two weeks, the fruit of the endeavor has ripened.

It is not only that the girl has fine normal eyes, instead of weak eyes, helpless without spectacles. Her keen eyes are a help to her mind. There is no mental inhibition from the certain constraint which dependence upon glasses always causes. Besides this, there is another reward, one which is a source of real happiness to the young lady herself, and to her parents and her friends. There are those who are persuaded, by the blandishments of sales-talk advertisements, to add a pair of modish spectacles to their

adornments. They fancy it must be true that the glasses add to their attractiveness. In the words of the "ad", beauty puts on its glasses. In this particular case, there is a remarkable improvement in the appearance of the eyes themselves, and there is a new charm in the happy face which is not obscured.

Because of my interest in this field, I can hear, in the atmosphere of spectacles, the whisperings of revolt against the propaganda which plans, with open frankness, to fit all children with glasses. These whisperings can be heard in the medical profession. They are also among the voices in the popular magazines. A prominent member of the medical profession made a brief statement recently which is louder and plainer than usual. He said that he did not agree with those who expected the use of glasses to keep on increasing. He said he believed that the practice had reached its climax, and would soon begin to diminish. But such a radical reformation can come only through the efforts of the medical profession. It is not reasonable to expect it to originate with any element which believes that glasses are the only possible relief for all defective vision.

I have had more than one surprise recently, aroused by specific indications of the personal interest of practicing physicians. These men are beginning to realize that this most vital field of the work of the healers of the race has not received the critical, unprejudiced analysis which original workers in the other fields have given to their research work. Research means marching over again, examining the decisions that were made by other men. Strong men they may have been, leaders and pathfinders, but they had less knowledge to work with. They made mistakes, too, some of them vital. In every other field of medical science such mistakes have been discovered, and they are still being discovered. In the field discussed in this book Dr. Bates was a research worker. He made discoveries; he found mistakes; he proved that the eyes of children can be taught to act in a normal manner. He showed that the way to help them to use their eyes in a natural manner is to have them try to use them right, and not to stop them from using their own eyes by making them use glass lenses instead.

It must be remembered that Dr. Bates was not an academician. He was a clinician. His laboratory was the constant procession of human eyes that he studied in a lifetime of daily work, in private practice, and in hospitals and clinics. For years he worked even in special Sunday clinics, to treat those who could not come during their working hours. It was in this work that he discovered the specific causes of the common dysfunctions of the mechanism of sight. He demonstrated the truths of his beliefs daily by saving children from being obliged to wear spectacles. He relieved children who were wearing them, so that they had fine normal vision without them. His patients came even from distant parts of the world. His system is being practiced now in South Africa, and in Australia, and in India as well as in Europe. In Germany there is an organization today which is spreading what is called vision schools. They are practicing the method of Dr. Bates, and give the credit for the discovery to him, and the published success of their efforts is arousing national interest there.

More recently this same work has been organized in England. The published statement, issued by the chief of the movement, from its headquarters in London, announces frankly that the principles of the method they are using are founded on the original discoveries of Dr. Bates. As usual, what originates in our own United States, is again being made use of in other countries, while it is being ignored, in a large way, by our own people. Such things must have happened in those early years. It was written: "A prophet is not without honor, save in his own country."

My acquaintance with Dr. Bates' work began when I read his book and put it into practice by freeing my own eyes from glasses, after wearing them for thirty-seven years. It is ten years now since I have worn them. A large part of my practice with the Bates method is with children. I have found it quite easy, as a rule, to relieve the difficulties children have when they are beginning. Many cases require only a few lessons. Children learn the method quickly when they are interested. If their parents have an active interest it makes the children happy, and it is a pleasure to watch their young eyes sparkle, and their minds thrill, as they find the letters coming out plainly, which they could not see a few minutes before.

Even those children who have worn glasses for years generally respond promptly to instructions, and very soon their eyes give perfect satisfaction without the use of the glasses they were wearing. Young life has a natural tendency to correct any dysfunction. Its tendency is to be normal physically and mentally. It often corrects automatically different kinds of abnormal functioning. Young minds are plastic. Their imaginations are vivid and direct. They have the power to make believe so that things become real. Their receptive and acceptive qualities are not yet burdened with the false conceptions and fixed mental habits which inhibit free will and free mental and physical conduct in their parents. If one can interest their alert minds, it is easy to induce autosuggestions. They are eager, not indifferent. To have watched their response to the new delight of seeing things again with a vision that was lost, is to have an experience which is a perfect proof that the method of Dr. Bates is not a theory, but a reality.

It is untrue that for the faults of vision which many children are now developing, there is no known help but a pair of artificial lenses. It is not true that their eyes cannot be prevented from developing a permanently abnormal condition, dependent upon glasses. The eyes of those unfortunate ones can be taught to develop with the same power as the mass of their playmates. We protect children, naturally and positively, from impositions upon their helplessness. How long will it be before we protect them from such a serious imposition?

In support of the statement I have made, and to show how really simple a proceeding it is to teach most children how to use their eyes so they will behave in a normal manner, I will report here a few typical cases in which that has been accomplished. Each record is a specific report, and every case is in evidence today.

Little Jimmie D., eight years old, was having such trouble seeing the letters on the board, and even seeing the words in the book, that the school nurse finally called in the evening on Jimmie's widowed mother, who was at work all day. She explained that he must have glasses if he was to keep up with his class. His mother had heard of the Bates method, and brought him to me one

evening at eight o'clock, all the way from West Oakland. His bright little mind was interested in the **Snellen Test Card** at once. Even with a 200 watt light, over his head, through a translucent shade and ceiling reflection, he could not see the letters on the fifty-foot line at ten feet. But when I used a 340 watt light in front of a reflector, placed close to the card, the same letters became clear, and smaller letters began to appear.

This discovery aroused him into an animated attention. By questions and suggestions he was led to imagine the letters he was trying to see, and presently one after another new ones took shape and became real. It was a pleasure to see the thrill with which he looked up into his mother's face, as he stood with his back against her knees, when he became possessed of each new letter. In half an hour he owned three new lines. This was accomplished by the simple procedure of giving him a strong light, and getting his own imagination interested.

Specific directions were given for home work. He was to let strong sun shine on his closed eyelids for ten or fifteen minutes daily. There was to be half an hour of soft relaxation in the evening, lying with closed eyes while the radio gave soft music, and mother talked with him about his eye practice. He had a small card for near work, and a large card to be placed ten feet away. He blinked softly at the different letters, in the special way I showed him. He had practices for the school room, blinking at the writing on the board; and he had practices for objects in the street to and from school. Simple techniques, no straining, but a job to perform, like a game, which kept his mind in an attitude of attention to the power of his eyes. His eyes improved so rapidly that he had no further trouble in school; and soon his sight was a very good normal. I saw him in my office only seven times during a period of five weeks.

Albert C., ten years old, a different type, rather nervous. Three months before, because he was blinking and complaining of poor sight for some weeks, his father took him to an optometrist who gave him a pair of glasses. After a month with no relief, his mother went back with her complaint. This seemed to annoy the optometrist, who explained that she must realize the condition of her boy. He then told her that she must be patient for a long time, because her son's eyes had never developed, and he was nearly blind. Frightened, she had her husband take him to an ophthalmologist in San Francisco. That specialist claimed that the discomfort, and the poor sight, had developed because his lower eyelashes turned in, and this condition must be corrected first. He used a cautery on the skin a few times, to produce scars which he promised would contract the skin, and pull down the edge of the lower lid. This scheme was a failure, of course. There was no change after the treatments. The specialist had promised to give the boy more suitable lenses, after correcting the eyelashes; but when his father made a final inquiry about the vision and the glasses, he received the reply that the local optometrist was correct, and there would be no advantage in giving the boy any different lenses.

The parents had been waiting for this final reply before bringing the boy to my office. They had delayed the decision for a month. They felt that the eye specialist should be relied upon until they had his final answer. That is the history given to me.

An examination with the ophthalmoscope showed nothing unusual in his eyes. At his first attempt he read at ten feet the line he should have read at forty feet. He could not distinguish any smaller letters at that distance. In other words, he was really near-sighted. But he was not badly nearsighted. I did not concern myself about the diagnosis of undeveloped eyes. There was no excuse for such a statement. It was simply brutal.

That boy did not show much interest in the effort to cure his eyes. But fortunately his parents did. His mother was a great help. She made him practice daily. It quickly developed that the tragic situation conceived by the optometrist, and indorsed by the ophthalmologist, had no foundation in fact. What they may have thought is their affair. There was an improvement in his vision even during the first lesson. In three weeks he could read the ten-foot line at a distance of more than ten feet.

School closed then, and he went with his mother and his sister to the ranch of his uncle. For more than a month his mother secured a great deal of sunlight treatment, and insisted upon a regular practice daily of the different directed techniques with the Snellen cards, and other methods.

Two weeks after he had returned to school in the Fall his mother came to the office and reported that he could always read the ten foot line at fourteen feet, and he was having no least trouble with his eyes. This result was secured with a very poor interest on the part of the little patient. His intelligent mother demanded his attention, and that secured the result. Such an improvement might be called a development of the eyes. In the Bates treatments we think of it as a simple education of the eyes.

Max S., twelve years old, was told by the school nurse that he must get glasses. He was having some difficulty with the board, but not much. Finally his mother had a talk with the nurse, and she insisted that he must be fitted with glasses. That was when his parents decided to see if such a course could be prevented. After a few treatments, and about three weeks of practice Max was able to read the ten-foot line on the card in the sun at the full length of their front porch, which was fourteen feet. His mother then arranged with the school nurse to have a test of his eyes while she was present. Tested in the school room, at a distance of ten feet, Max was able to read all the letters on the ten-foot line, but one. Grasping at that one straw, the nurse maintained that she had now proved that his eyes certainly needed glasses. She even volunteered the warning that if he persisted in trying to get along without them, he would ruin his eyes.

At the request of his mother I called at the house that afternoon and made our usual test at the distance of fourteen feet. He had no difficulty in reading all the letters. Relieved of the tension caused by the plain opposition of the school nurse, his eyes worked normally. When school opened again in the Fall he had no difficulty with his vision, and I have not heard of him since.

The case of E. M., now a fifteen-year-old girl, is interesting and instructive. When she was about three years old, it was noticed that she was nearsighted. Before she went to school at six years, it was necessary to have her fitted with lenses. The glasses enabled her to see things better, but were so unsatisfactory that a different ophthalmologist was tried. The new glasses proved even less satisfactory, so her parents tried again with the eye specialist who gave her the first pair.

When this first ophthalmologist took charge of her case a second time, he informed her parents that she would have increasing difficulty with her eyes until she was eighteen years old. They understood this to mean that she would require new lenses frequently. In five years she had four new pairs of glasses. The last new pair were to replace a pair broken on her face by a basket-ball.

She never was able to see, with any glasses, the difference between a man and a woman at the distance of a short block. She was uncertain often, even about nearby objects, and was limited in playing, and in school exercises. This developed a noticeable embarrassment in other ways, even in familiar personal contacts, caused by the realization of her difficulties in seeing persons and things.

When she came to me three years ago, she was wearing the glasses prescribed after the ball broke the ones she had on, a short time before. She complained that these glasses always felt heavy, especially the right lens. They were much stronger than the previous lenses, and tired her eyes. She was very cordial to a proposition that she find out whether she could learn to go without them. At the end of a week, during which she alternately wore the lenses and went without them, of her own choice she discarded the spectacles. She soon found that she could read and play with much less difficulty than she had experienced while wearing the lenses. For a few months she was favored with a front seat in the classroom. Her vision steadily improved in every way, and before long she could read everything on the blackboard from any part of the room, without any difficulty.

During the three years she has had the glasses off, her vision has steadily improved. She has no difficulty in seeing everything. Besides this, her mental attitude is quite different. It now has become evident that during the years she was wearing the spectacles her outlook upon everything was cramped and unhappy. From a pessimist she has developed into an optimist. Her relatives, and her friends have all remarked this. Her teacher was quite frankly interested in the novel experiment. She is now quite positive in her statement that her scholar improved in her vision, and in her work, and in her attitude toward social contacts and toward every aspect of her environment.

In this case the efforts of two prominent eye specialists were of little help, even in refracting the rays of light so that the child could see clearly. On the other hand, the glasses, so it seemed, quite disturbed her mental attitude. The promise of the ophthalmologist, that she would have increasing difficulty in seeing until she was eighteen years old was in keeping with some of the explanations recorded in books on that subject. She is now only fifteen years old. The future is still unknown. But in this case it seems fair to quote the words of Patrick Henry: "I can only judge the future by the past."

D. L., twelve years old, daughter of a physician in a town across San Francisco Bay, came to my office with her mother one year ago. Last spring her sight was normal. When she returned to school in the Fall she found difficulty in seeing the letters on the board. After a few weeks it became apparent that she must have some help. Her father sent her to an eye specialist in San Francisco, and she returned with a diagnosis that she was quite near-sighted, and must have glasses.

It happened that her music teacher was the sister of a librarian who had had difficulty with her eyes, and came to me for treatment. The sisters both knew of others who also had tried the Bates method with success. So the music teacher suggested that her young pupil come with her mother, and try the Bates method before she put on glasses.

The girl had an alert mind, and did not want to wear glasses. The first day I tested her eyes on the Snellen card, in a sunny room at ten feet, and found she could read, with either eye or with both eyes, the line that should be read at seventy feet. The line below, which should be read at fifty feet, she could not read at all. There were some other minor unpleasant symptoms.

After some conversation, I began by having the pupil look continuously at a 1000 watt electric light. She blinked softly, most of the time, and the light was placed three feet from her eyes. Following that she closed her eyes for five minutes, while I talked with her about the Bates method. When she opened her eyes she began to see the lower letters, finding them gradually, one at a time. I impressed upon her mind the **necessity for eliminating the urge to see the letters.** By sustaining an alert interest in her mind, with her eyes closed, or while she was looking at a letter she could not see, we managed between us to make her visual center respond to her wishes, and presently a letter which she could have seen perfectly a few months before, but had lost as an acquaintance, became visible again, because she had been encouraged to relax the strain in her mind. In twenty minutes she could read easily the letters on the thirty-foot line, instead of balking at the letters on the seventy-foot line. (Balking = staring, staying on one object, not moving the eyes, mind to other parts, other letters, things…) Her mother, a college woman and a doctor's wife, said: "That is a miracle." I answered: "No, it is simple physiology and psychology."

She did not return for over two weeks. She had been ill, and had not been able to practice. She could read the same letters, but had made no improvement. That day she captured the remaining four lines on the card.

Her home work was to let the strong sun shine directly on her closed eyelids for ten minutes twice a day, the time to be increased gradually, according to her experience and improvement. She was instructed how to practice on the letters of the large and the small Snellen Test Cards she was given. There were specific directions for practices to be

carried out in the school room and on the street. There was a half hour in the evening, lying with closed eyes and listening to soft music. There were other special reminders.

I saw her once again, in a few weeks. She was quite happy, her sight was entirely satisfactory, and she enjoyed the practice. Her mother was grateful. Just another simple case. **Relax the tension, interest the mind, encourage the spirit, show them what the eyes will do**—if you treat them the way any other deliquent function of the system is being treated daily by the medical profession.

The last record I will mention, in this chapter, which is **"The Case for the Children,**" has a vivid significance as an illustration of the menace to their freedom. There is a family of six. One parent and three of the four children, wear spectacles. The children are in their late teens; there is no prospect that they will ever be freed from the "windows". The second parent is disturbed by an apprehension. It is not that there is any want of good vision yet. It is that a fear is forming in the mind—a fear engendered by four spectacle wearers in a family of six. The latter half of that sentence is just my guess, of course. But the fear is acknowledged—the fear that there will soon be a fifth member in the circle. With five in the house wearing glasses, what chance will the youngest child have? Already the sixth vision had become so poor when school closed this summer, that the eyes could not read any letters on the fifty-foot line placed ten feet away. The spectacles were just as near to the eyes as that.

During the first hour in my office a considerable improvement in vision was secured. There were a few more visits, and one day the sight was good enough to read the ten-foot line at ten feet. There is no doubt that this child could have good normal vision, free from spectacles, with very little further effort. But the case has passed out of my charge. All that is left to me is the interest I have, which is to hope for the best, and I shall continue to hope. There is a further hope I cannot refrain from expressing. When I think of the wrong that is being done to these children, I can hear the echo of a plaint wrung out of a spirit that lived in the days of the Prophets: "How long, Oh Lord, how long?"

CHAPTER XV

THE SUN AND THE EYE

Sunglasses – Harmful to the Eyes

THERE is a strange, new public habit which is remarkable as a freak, but is no longer something to smile about. If it fastens itself upon us as a custom peculiar to Americans, it will become another new menace to the American eye. I am referring to the fad which is being indulged in by those who are wearing colored lenses to protect their eyes from the ordinary sunlight, in which they have always lived. Until now they have been unconscious of any painful or damaging effects. It is still the same old sunlight, without which they could not live, and without which their eyes would be useless. Whence comes this epidemic of, shall we say "sun-weakness", which is tagging a rapidly increasing number of victims, and how contagious is it, and what is to be the end? The source of the infection is not far to seek.

We used to see a few dark glasses on the street. They were worn by those who had some temporary or some chronic ailment of the eye. But now there is a flock of many-colored lenses, and not one of the wearers would claim any ailment. They all probably would resent such an imputation. Somehow they have become conscious of a soft voice telling them they must wear the colored spectacles. The plain everyday sunshine never hurt their eyes before. The word photophobia is the technical term for the condition; and that word means fear of light. This apparently is the explanation in most of the cases; because no other cause is to be found. In the standard text books on the eye, warning is given to allow colored lenses to be used only when necessary. **It is further specifically pointed out that the use of colored glasses may easily become a habit, and such a habit would certainly be harmful to the eye.**

Gradually the environment has accumulated a mass of high-powered sales devices. Windows and counters are piled with colored glasses. Everywhere are pictures which apparently are lithographed photographs. Those who are posing are divided into those who are wearing tinted glasses and those who are not. All who wear tinted glasses have soft, happy faces; the unfortunates without them always have a distressed squint, as they try to see things right, in the ordinary sunlight without any colored protection for their eyes. One would like to ask the advertising manager how he explains the conduct of the rest of the race-meaning all those who are not included in his hand-picked posers.

One wonders where the claim originated that the normal eye is no longer able to look at a horse race, or a ball game, or a procession without distress unless it is protected from the sun by some tint of colored glass. Its origin is shrouded in mystery. But those who believe the claim are welcomed with a profuse assistance. The preposterous pretence is contrary to the known truth. The plain contradiction of it is the fact that almost everyone, old or young, is free from the delusion. An eye specialist, writing in an official medical journal, makes an emphatic comment on the **harmful effects of shutting out the rays of sunlight from the eye, except on occasions when there is a rare, extreme glare. Those who use colored glasses commonly wear them in the evening, and wear them indoors. It becomes a mental habit; and, as that writer protests, it lowers the natural receptivity of the eye for sunlight, and injures the mechanism of vision.**

The eye began, we are told, as a piece of specialized tissue which was responsive to light. That may have been millions of years ago. Always under the care of the sun, the eye has evolved into a mechanism which is so wonderful that its secrets are still beyond the knowledge of the human race. The sun is to the eye what air is to the lung. The sun, which is such a life-giving necessity to every other part of the human body, is not really the enemy of the eye.

We know that the race goes today without this new device. Those who fancy that their eyes have a new weakness might ask themselves why they must deny their eyes the privilege which is the life of the other eyes around them. They will be wise to ask themselves if they are resigned to wearing colors over their eyes for the remaining years of their lives. Perhaps a little deliberate thought will make them conscious of the price they are going to pay for the light-hearted modishness they are indulging in as a fad. The strange, new pretense that the human eye must now be protected from ordinary sunlight, is so contrary to the truth, that one must seek for the reason, or the excuse, or the purpose, upon which the astonishing propaganda is founded.

The assortment of cheap, many colored, gaudy rimmed eye protectors rival the varieties of lipstick, and face paint, and cigarettes. The displays of the costlier lines illustrate the art of the commercial producer who knows that there are always victims who will pay ten times a reasonable price for the privilege of feeling that the glasses they are wearing are in the class called exclusive.

We are so accustomed to fresh air that we forget we are breathing it. There are those who do not get as much of the air as they might. Many are paying a tragic price for their neglect of the privilege of breathing all the fresh air they could, during the day and during the night. How many who are following the procession of wearers of colored glasses have ever realized in their lives that their eyes would be worthless without the sun they are keeping out of their eyes now? Soon they will be able to have their eyes tested by a new device which is to decide exactly how unfit to go out into the light of day their own particular eyes are; and to be told by the same machine just which color they must wear, whether that is their favorite color or not.

Suppose we look at some established facts. It is natural to expect, from the history of the race, not only that the eye should live free and unhindered in the daily sunlight, but that when the eye is sick the kindly sun will help it to get well. Dr. Bates proved that this is true.

Those who work among the children in the poorer districts of London, lament the fact that the eyes of the children are suffering because of the many days they have there when very little free and clear sunlight is in their homes or even in the streets. The children of the countries where a real strong sun shines most of the year do not wear colored lenses; and there is no evidence that their eyes have lost any vigor or power because of exposure to the sun. The few that we see around us wearing colored lenses have no more actual need to wear them than those of us who have never thought of doing so. **The specialists who know, and who are interested in the welfare of the eyes, are saying that everyone who goes around daily with colored lenses covering the eyes is injuring, more or less, the health and power of the eye.**

There is a further, and a very fine, value which the sun has, but is not commonly realized. Strangely enough it is recognized in every other field of the healing art. If it is properly used, the sun is a great help to any troubled eye—and absolutely in accordance with the laws that govern the health of the race. Civilized humans are becoming conscious again of a knowledge which seems to have been lost soon after the days of the Greeks and the Romans. They knew the value of the rays of the sun. Special exposures to the sunlight was a constant custom with them. It never occurred to them to protect their eyes from its harmful effects. But then, in their ignorance, they did not even know that it was necessary to conserve their sight by fitting their eyes with artificial lenses. It was only Nero, with his degenerated body and toxic chemistry, that used a little artificial lens to see better the butchery of the unfortunates which was provided for the amusement of the masses of morons who paid his bills. There is no evidence that any of the real men in those days needed any artificial help with their eyes, in their reading, or on the battle field.

Perhaps, to Finsen, more than to anyone else, is due the beginning of the new knowledge of the value of the sun in so many conditions of impaired organic function and specific disease. It was Dr. Bates who directed attention to its very fine value in the care of the eye, and as a help in relieving conditions of eyestrain and dysfunctions.

Sunning

We know that the men who live out in the open, on the land and on the sea, commonly look into the sun freely. It is natural for them, because it is a natural thing to do in a natural habit of life. Sailors and plainsmen and mountaineers, Indians and Africans and Eskimos have not yet been informed that the sun is an enemy of their eyes. The little Indian papoose, riding backward on mama's back, generally finds the sun shining right in its eyes when it opens them to see its new world. In the years I have met over a dozen, right among the common people like myself, who astonished me (that is, the first few) by looking at the sun with the same ease and directness and comfort as they looked at the ground. Those who do that are not freaks. Those who cannot do it, have simply learned—or should we say inherited—bad habits.

Sunning and Sunglass

My own eyes were as sensitive to the sun as any eyes could be. I do not even now look freely into the sun. But I do often look directly at it when it is high and strong, and continue for several seconds, while the glare softens, and the sun gradually shows to me its edges, until it has the same rounded appearance we see when we look at the moon. I have often demonstrated that when I hold up the upper lid of my eye, and keep the lens of the eye covered with the lower lid, and concentrate the sunlight with a convex glass held near the eyeball so that there is a small round spot of strong light showing on the white of the eye, I can flash it back and forth rapidly for a number of seconds at a time, and repeat the process a number of times without the least discomfort.

When I do that exactly right, the shadows of the tiny blood-filled vessels in the walls of the eyeball cast the daintiest interesting shadows on the retina. The terminating fibrils of the last branches of the vessels are the smallest lines the retina can register on the mind. I have demonstrated that following such a treatment my eyes—and the eyes of others so treated—have keener sight—or register better on the visual center. Such a treatment, carefully carried out, if it is repeated daily, very soon demonstrates a fine improvement in the power of vision.

To reply to this report with a blunt assertion that such treatment of the eye must be harmful, is not only an unscientific statement. Consciously or unconsciously, it is an actual obstruction placed on the pathway of progress in a field of research that is of the most vital interest to the race. Personally, I have used this treatment in many different cases for over ten years without a single unpleasant reaction. Dr. Bates reported using it for many years before I heard of it.

Sunglass Directions

It is not difficult to learn how to use the sunglass on the eyeball in a safe and proper way. It must be held so that the concentrated rays from the sun strike at right angle on the surface of the eyeball. The distance of the glass from the eye must be suited to each different case. There should never be any least unpleasant feeling. There will not be, if the glass is moved rapidly back and forth. The time on each eye should be only a few seconds without interruption. But some eyes may be treated for a duration of several minutes several times a day; and it may be found that the gradual increase in the total time of treatment will show an increasing degree of improvement. When held close to the eye, showing a small, dense ball of light, there is, of course, a stronger reaction on the part of the eye. Some eyes seem to take kindlier to a larger and softer circle, produced by holding the glass a few inches farther from the eye. It may be done, in especially sensitive cases, when the sun is not high and strong; but generally there are better results when the sun is strong and the glass is held near the eye.

In my experience a number have learned to use the glass on their own eyes, and this of course is sometimes an advantage, and makes one independent. Most will find it easier to have it done by another. The results seem to be prompter and better when the upper eyelid is held well raised softly while the glass is being used. But it is often more agreeable to the patient, especially in the beginning, to allow the lid to remain closed. Closed or open, always the patient must learn to hold the lens low under the lower lid. When practicing with the lid closed, when the lens is covered, one should see the shadows of the blood vessels, just as when the lids are open, only not so clearly. When one is conscious of a glare, instead of the blood vessels, it indicates that the lens is not in the proper position, and is receiving the light through the upper lid.
Sunlight through the glass must not shine into the pupil. It can be risky to trust anyone to shine the light on the eye. Even if the other person is trust-worthy and experienced, he will not know if the eye becomes irritated and moves unexpectedly. It is best to find a experienced Bates Method Ophthalmologist if you cannot be sure of doing it correct, safely yourself. (When lifting the eyelid and shining the light onto the white of the eye, always do both left and right eyes, one eye at a time.)

Although it is a fine practice, and always satisfactory, it is not necessary to use the sun on the eye through the sun glass. It can always be used with more or less advantage in other ways. Whether with the glass or without it, one must never forget that the purpose of the treatment is always relaxation. There must always be a correct position of the body, and a relaxed condition of all the muscles; so one must never sit so that the neck must be twisted in order to permit the sun-light to strike the eyes at a right-angle. Usually one should lie down, or lie on a chair or a couch with a slant.

One can sun the eyes by simply allowing the rays to strike directly on the softly closed eyelids, for a few minutes at first, and gradually for as much as an hour or longer at a time. This may be done more than once a day. It soon will be found that after a period of exposure with the lids closed, the lids may be opened for an instant, and the eyes allowed to look for a good flash, first into the sky toward the sun, and later on even right into the strong sun. The streak of color seen immediately after the lids are closed is never unpleasant, and the after-effect is an increasing feeling of relaxation, and an improvement in the power of vision.

It is a good plan to test the effects of sunlight in different ways. If one is free of prejudice and apprehension, the proof will be evident very soon. Make a careful trial or test of the eyes on the Snellen Test Card in a light room, measuring the exact distance at which one reads easily and clearly a certain line on the card. Compare immediately by hanging the chart outside in the strong sun, and then test the eyes on the same line at the same distance. Commonly one reads the same line some feet farther away, and a lower line at the same distance. And another time make a similar test, either indoors or out in the sun, before submitting the eyes to a sun treatment, and after the sun treatment lie quietly a few minutes in a quiet, dark spot, and then make the test again, under exactly the same conditions, and with an attitude of mind that is not anxious at all, but is free of inhibitions of any nature. The sun is a

true and kindly friend to the eye. It has been so for eons of time, and those who test it now will find that it is not the sun which has changed.

In a small book which is devoted to the subject of the conservation of vision, some of the methods which those classes are using are carefully described. In that book we are told that the constantly changing light emanating from a southern exposure to the sunlight is most trying to afflicted eyes, and that the light must be as nearly constant as possible. The answer in that book is a picture on the next page. It is a schoolroom with the sunlight carefully shut out. The shutters on one side of the room are closed tightly. There is no constantly changing southern sunlight in that room. But instead there is a positive element in the shadows plainly shown in the picture. The book recommends artificial light, indirect or semi-direct. When the book speaks of afflicted eyes it refers to eyes with nearsightedness or astigmatism. To deprive such eyes of the natural sunlight is contrary to the teaching of the text books on the eye. To oblige them to read with the poor light shown in the picture in that book is certainly making it harder for any eye which already is in difficulty. That book explains that by its system these children, so treated, need a year's special care in what it calls a sight-saving class. I have treated by the Bates method quite a number of children "afflicted" with astigmatism and nearsightedness. The children I have seen were never embarrassed by plenty of sunlight. On the contrary, they always could see better in good light; and if the light is improved by taking them out into the open sunlight, they almost always see the letters more clearly, and generally see two or three lines down the chart, smaller letters, than they were able to see a minute before in a well-lighted room. One would expect that more light would help a troubled eye even more than it helps a normal eye; and there are very few who do not see better in a better light, even with fine eyes. Anyone who will take the trouble to try the effect of better light, sunlight or artificial light, on eyes that have difficulty in seeing, will find that those eyes will find it easier to see, and that the more they use their eyes in good light, the sooner the eyes will develop an improvement in vision. In short, in the face of modern practices, in every human field, it is not likely anyone would undertake to defend the practice of depriving the human eye of good light—and the ordinary sunlight is just the same good light it has always been.

CHAPTER XVI

PALMING

THIS is a practice in which the hands are used to softly cover the eyes. The cheek bones rest on the heels of the hands, and the fingers cross above the eyes, with the eyes resting softly on the palms. The hands shut out all light. It is difficult to carry out this practice with a satisfactory result unless the elbows rest on a table in such a manner that all the muscles of the body are relaxed. The further effect is that such a deliberate and unusual gesture impresses the mind. To complete the procedure it is necessary to engage the mind continuously in some specific line of thought and not let it wander as it usually does.

Even with all light shut out, there will be the appearance of lights and colors and fragments, which seem to be seen by the eyes. These are illusions. They are produced in the visual center of the brain itself. To put it more simply, it is just imagination, since there is no light admitted to the eyes. Sometimes these appearances are persistent. Occasionally they are quite vivid. In other cases they are not pronounced, and they may fade promptly. When there is no least stimulation of the optic nerve by light rays, the visual center of the brain should show no reaction, and there should be a perfect blackness.

When there is no tension in the mind, the field will be black. One can command the mind by keeping it attentive to the field that appears, and expecting the blackness to come, which is proof that the mind is in a normal condition of relaxation. If one has an urge to eliminate the fragments in the field, the effect is to prevent relaxation. But there must be a firm, earnest confidence, and a specific desire which keeps the mind intent.

The more habitual tension there is in the mechanism of vision, the more intense will be the illusions which appear and persist. When there is some unusual disturbance of mind or body at the moment, there is even more difficulty in securing the required relaxation. It is true, however, that some persons, even with extreme abnormal conditions of vision, secure a most satisfactory relaxation quite easily. That is because they occupy the mind so completely with the practice they are carrying out, that all other thoughts are thus prevented from intruding and distracting. Want of success is always caused by the fixed habits of the mind. Consciously or unconsciously the patient is allowing an intrusion of thoughts to distract the attention. This distraction is a direct interference. If the mind is earnest enough in purpose, it will become conscious of the interference and brush it aside.

One sees a perfect black only when the mind is completely at rest. The more at rest the mind is, the deeper the black. When one sees an area of black in the field, it is likely to in crease. With proper technique one may improve the blackness until the field is completely black. There may be floating spots of pure black. There may be dull gray areas. There may appear different colors instead of black—just the fancy of the mind. If one continues to see red, or yellow, or other colors sharply marked, it is better to be satisfied with these colors as they come, instead of combating that picture, and to keep the mind occupied watching the different colors. A good plan is to imagine in the field a small patch of white, such as a piece of white paper. If such a white patch is seen, when secured intentionally, the background of the field will probably show quite black. Proceeding further, one may imagine in the white spot a black letter, for instance, an O. When one can imagine a black letter in a white spot already imagined, the letter will be blacker than the background on which one imagines the white spot.

When there is special difficulty in clearing the field which is seen when the eyes are covered, some other practice will probably be helpful in attaining the degree of relaxation necessary in order to see a black field. For instance, one may use the memory of a black object to assist. Blink softly at some familiar black object placed where the color is most pronounced, then close the eyes and watch for the image to appear. By looking at the object for some minutes, and then keeping the mind on it for some minutes

with the eyes closed, alternately, sooner or later the object will appear clearly when the eyes are closed. This is called an after-image. The successful outcome may take quite a while, or it may develop promptly; the result depends upon the exactness with which the mind carries on the process. When the object is seen, black and clear, with the eyes closed, one may proceed to palm as directed above, and the field will probably appear black.

There are two factors operating in such a practice. There is the impression of black on the mind, and the relaxation which has been secured by the game one has played with the black spot. It will hasten the success if one uses what is called central fixation, and imagines one spot on the black object to be blacker than the rest of the surface, ignoring with the mind the remainder of the object, One can practice changing the spot on the object to another area, or even changing the contemplation from one black object to another black object. To change is sometimes a relief from monotony; but the longer one practices with the same spot, or the same object, without losing an alert interest, the more vivid the reaction, that is, the more perfect the after-image. This is true of any practice in this method. To continue the technique longer, if it is properly carried out, will develop a progressive increase in the degree of the result. Thinking of black is not mandatory. Any pleasant thoughts, objects can be remembered, imagined when palming. See objects in the mind clear, in color, and like a real life movie in the mind. See people, objects move in the scene, grass blowing in the wind, sun sparkling on the water…

This technique, or practice, called **palming**, is one of the clearest and most impressive illustrations of the mechanism and the value of this method for relieving the abnormal condition commonly called eyestrain. One must realize that palming consists essentially of an attitude of mind, and that the details of the procedure are simply expedients which facilitate the shutting out of distractions from the mind. It is ok to let the mind drift from one pleasant thought to another.

It becomes more than a negative procedure as soon as one calls upon the mind to imagine, or make believe, the various conceptions which can be used in the practice. It is a very simple idea to impress upon the mind that one wants to see a small white patch. In the technique of psychologists it is a common practice to persuade a patient to develop in a muscle a sensation of soft languor, and then to have a feeling that the arm is so heavy it cannot be lifted. It is just as easy to have the same mind order the vision center to picture a patch of white, and then to make believe that there is a black O on the white spot. A designer of dresses, an architect, an artist, a leader in any field, is seeing things in his mind, just as literally, as a common habit.

A patient whose eyes were almost useless because of three different types of defects in vision, was distressed by the prospect of inability to retain his position. The **developing cataracts** were the culminating interference with his vision. He had been told there could be no relief until they were what is called "ripe" enough to be removed, and his lenses replaced by glass lenses. Having been instructed how to palm, he practiced it intensively for many hours with little interruption. His earnestness and persistence so influenced the condition of his mind that his sight became a very good normal in twenty-four hours, and continued normal. This case reported by Dr. Bates, was unusual, but I can report many cases of improvement that are equivalent. The commonest difficulty is the want of a vivid conception of the simple mechanism of the process involved, and the next in order, perhaps, is a lack of the fine determination that constrained that man to keep on demanding success, hour after hour, until his courage and patience were rewarded.

The practice of palming was designed by Dr. Bates as an expedient which is simple and easily carried out, and has a direct effect on the vision center in the brain. He believed it to be, perhaps, the most effective of all the techniques he suggested. I have found that even children can understand what it is necessary to do, and they often have fine success in seeing a very black field when their eyes are closed. Dr. Bates even suggested that the measure and the degree of the blackness which is imagined when the eyes are closed may be used as a test of the degree of relaxation secured.

When a sufficient degree of relaxation has been secured, it will be found that the eyesight has been improved accordingly. There may be flashes of clear vision which are replaced by the same old want of sight, or there may be a progressive improvement in the conduct of the eyes. I have personally experienced some fine thrills when lines of letters have appeared with a vivid clearness that was startling. Others have reported being astonished by the same revelations of power in their eyes, which they could not have imagined. Letters and words appeared blacker than the ink, and they stood out with a vividness never realized before.

There is nothing unreal or unnatural or miraculous in such an experience. It is simply the result of interesting the active and sympathetic attention and cooperation of that part of the brain which has charge of the mechanism of vision. There can be no doubt that **millions have a constant power and vividness of eyesight that is unknown to most of us. This is true of the savage, and the plainsman, and the man of the sea, who see plainly what most of us cannot see at all. The same is true of the artist who reads the lines of the face and the form, and the color and beauty of the picture which his sight enables him to reproduce so the rest of us can be helped to imagine something of that which to him, is an open book.**

In the practice of palming, several factors serve to assist the endeavor to secure a special condition of mind. We speak of the condition as a relaxation. It is, however, a positive mental attitude. But it must be impersonal and objective-some pleasant contemplation which enlists the interested attention so completely that one forgets self entirely and becomes absorbed in the subject. This unusual gesture facilitates, as well as the darkness; but the paramount element is the complete domination of the mind by the idea in charge.

Each mind finds its own natural line of thought, and some will try very different imaginary pictures. Since the vital element in the techniques is the degree of exclusive attention which is given to the specific idea that is to occupy the mind, it is imperative that no other thought be allowed to merge into the process. It is easy to think that one is giving complete and undivided attention,

when actually the mind is only half-hearted in its effort, and the greater part of the opportunity is lost.
It is ok to let the mind drift from thought to thought, image to image as long as the thoughts, images are pleasant, happy.

Suppose we undertake to make believe we are swinging in a hammock. I have questioned some who agreed to that expedient, and found they could not tell a detail of the proceeding. They could answer only that they just made believe they were swinging in a hammock. Those who really do it, can describe the hammock, the short rope that held it to the house at one end and the long rope that held it to the tree some feet away. They can describe the pillow, and the cord they pulled on to keep up the slow swinging which produced the soft drowsiness that was so restful. I have even been told how they climbed into the hammock, and how they later woke up and were amused to find that they had fallen asleep.

Suppose we imagine, make believe, we are going to drift down the stream in a canoe. Let us begin at the float by looking the canoe over and deciding just how we will lie. Let us then carry out the proceeding by stepping carefully into the canoe, with the same deliberate care one should always use. No one familiar with the conduct of a canoe would share the close attention necessary to every move, with any other thought. I have seen a few incidents where even one familiar with the requirements of balance and movement have failed to give the attention the canoe demands, and have demonstrated their carelessness by a spill.

Now let us lie quietly and float lightly down the stream. If the mind forgets the canoe, and wanders to some other subject, at that moment it stops carrying out instructions. The conscious part of the mind, I mean, stops obeying instructions and allows itself to be misled; and right then it forfeits the advantage of having the subconscious part of the mind help in the proceeding, instead of hindering, as it commonly does. But if one watches the water, and the shore, and the sky, one keeps the mind intent and active on the side of the endeavor. One imagines the details of the scenery, observing specifically a house, a boat, a rock, a tree, the hill, the sky, the turn in the stream, the opposite end of the canoe. If one answers that it is not possible to do this, I know that one has not really tried. One has not held the idea. One has not been earnest enough in purpose. One has not learned what his own mind will do for him, even in his first efforts. If the feeling is strong enough to persist continuously for thirty minutes, with a quiet determination, the subconscious part of the mind will become interested in the new adventure, and will reveal to the adventurer something of its power. I have explored a little into that new country myself, and others who went farther and found more, have confided in me. As long as one keeps the conscious mired occupied with any impersonal, objective idea, the unconscious mind is at the command of the purpose implied in the idea.

It is a great help to remember the way a little girl plays alone with her dolls. As well as she knows that it is all make-believe, her conversation proves how perfectly the autosuggestion works. Her mind is not hampered with confirmed mental habits. It is simple and direct. With a strong, primitive impulse she gives her whole mind to the idea, and no hampering doubts or reminders interfere with what she is doing. That is the subtle meaning in the sentence: **"Unless ye come as little children, ye cannot enter the kingdom of heaven."** The cures I have seen occur in a few minutes have all been accomplished by a profound and positive conviction acting on the control center in the mind.

It is necessary to forget the eyes entirely, or to think of them objectively, as one thinks, for instance, of a sprained ankle, or a cut finger. There are no mental reservations with those. We think of them as we would of some other person's cut finger, or somebody else's sprained ankle—just do this or do that with it, as one does this or does that with any other predicament.

There are many different lines of thought with which one can interest the mind in an endeavor to secure an abstract condition of mental relaxation. Each mind has its own predispositions and aptitudes. As illustrations, the following practices may encourage original ideas better suited, perhaps, to individual students.

While palming, imagine the soft rolls of water lapping the sand on the seashore. When the water is seen, picture a large rubber ball, black or red, bobbing on the rippling rolls. Always in motion, the ball will slowly recede from the shore. As you see it in your mind, it must recede farther and grow smaller, until finally it is lost in the hollows of the swells, and you do not see it any more. If the mind is given with feeling to this interesting experiment, the ball will seem very real, and all other thoughts will be excluded from the field.

Imagine a dog romping and swerving on a large lawn. See him stand, with head up, facing you, asking you what you think of his speed and grace. Make believe a fly is crawling over a large pane of glass in front of you, reaching a corner and starting over again to find a path with no obstruction. Picture a cat racing up a tree trunk to a low limb, and standing there with back and tail and hair raised, daring the dog to come up and see which eye she will put her claws into. Look from the cat to the fool dog, trying to stand on his hind legs, and yelping "coward" at the cat for not staying on the ground, even if he is four times as big as she is.

If any of these suggested techniques, practices, efforts of the imagination, are to be of value, they must be carried out with a will to win. Beginning with a conscious feeling of soft relaxation in all the muscles, put into them by the will of the mind, the same purpose must pay close attention to each detail in the procedure, and not be satisfied until some specific success rewards the close devotion and enthusiastic expectation which will be aroused if the spirit is right. When one really works that way, the conscious mind is actually demanding, and it will secure, the help of the inner mind. All these simple requests, the ceaseless activity of that inner mind can grant in marvelous fullness, if only the spirit of the worker dominates the mechanism.

CHAPTER XVII

CENTRAL FIXATION

THERE is in the retina, the film of the eye, a spot which is the area of maximum sensitiveness. That spot is right at the center. It is a small circular elevation which is known as the "macula lutea" (yellow spot.) In the center of that spot is the "fovea centralis', a depression of darker color. You will remember the cones, nerve endings which have a much different and more complex function of registering than the rods. The cones occupy this spot to the exclusion of the rods, and they are longer here and closer. When rays of light fall on this spot they are contacting the most acutely receptive area of the retina. When rays contact the retina outside this spot, the objects from which those rays are refracted are not so exactly perceived. The farther from this spot the rays are contacted, the more the sharpness of the visual perception decreases. This means that an eye with normal vision sees best at only one small spot. (Center of the Visual Field) Whatever is outside of that small spot (in the Peripheral Field) is not seen as exactly, and the farther outside that tiny area any spot is, the poorer the impression is on the retina.
This faculty is known as "central fixation."

This habit of the normal eye has several advantages. First, it is easier for the eye to focus on and pay attention to a very small area, instead of trying to see equally well a large surface in the same instant. Second, when the eye gives its undivided attention to a point instead of a large area, it sees the point so perfectly that it is ready instantly to leave for another point. Working that way the eye does not tire. When it does not work that way, and neglects to have a point of central fixation, it is called eccentric fixation. In this abnormal condition, the vision is very poor, and no single spot of the retina is uniformly employed to fix with, so that fixation is uncertain and unreliable. The normal area of most sensitiveness is lost, and the power of vision is impaired, sometimes quite seriously.

It is not easy to realize how infinitely quicker than thought the images are transmitted to the brain through the retina and the optic nerve. To see even a small letter, the eye must see all the outlines of the letter, and likewise all the letters in a word, and so every word on a line, as one reads rapidly down the page. The child begins by making the letters each time into a word. The mechanism of sight soon learns to adjust and save effort. There are those who can see and register so fast that they read a whole page, seeing every word, in a period of seconds. Such eyes have perfect central fixation.

The significance of this is that the loss of central fixation, in any degree, means loss of power of sight, and this loss is present in every condition of abnormal vision. This abnormal conduct of the eye is caused by a tension in the visual center in the brain. By relaxing that central tension, the central fixation of the retina is renewed. The relaxation is secured by the attainment of a condition of central fixation of the mind. This is accomplished by realizing the fault in the mechanism, and enlisting the mind in the effort to correct the dysfunction.

If one would impress on the mind the effects of a marked degree of eccentric fixation, it will be worth while to make a specific effort to see every part of an inch square close to the eye. Such an experiment, if one does it carefully, demonstrates how unnatural it is not to confine the focus of the eye to one tiny spot. If carried out earnestly the experiment will cause actual pain. The endeavor to effect a cure of the abnormal condition is to do just the opposite to the above. Ascertain first how fine, or how poor, a definition your eye makes when you test it for central fixation. When the central spot has lost something of its finer sensitiveness, it will be found that one can look at a point and find that he sees another point just as well, or even better, than he sees the point he is trying to confine his focus to. Some other spot on the retina sees better than the normally most sensitive spot. But this always means, not that the other spot has improved power, but that the retina has lost power in all of its surface, and is disturbed in its functioning.

The remedy is to carry out a series of tests, calling upon the central fixation function of the eye to recover its power. One can select two objects, for instance, two red balls or two black balls, or two lighted candles, or two objects, one round and one square, and make exact comparisons. Confining the glance to one, study how clearly, or not, the other object is apparent. Test also with a letter of good size at reading distance, and with a large letter at ten feet. Confine the focus to one side of the letter, and study the appearance of the other side. One will probably be surprised to find, if the vision is imperfect, when looking at the top of the big C on the Snellen Test Card at ten feet, that the bottom is actually clearer than the top of the letter.
+This is seen if the vision is unclear; the area of the letter the eyes are not looking directly at appears clearer than the part the eyes are looking directly at =peripheral field is clearer than central field when the vision is imperfect.
+When the vision is clear, perfect: the part of the letter the eyes are looking directly at, center of the visual field, is clearest. The other parts not looking directly at, peripheral field are less clear.

If the vision is unclear: It can happen that one will look at the top of a capital C on the page, and find that the bottom is certainly clearer, and reverse so as to look at the bottom of the C and find the top clearer.

If one will keep the mind attentive, and continue the practice as a game, it will gradually develop that the point focused at will displace the other point more and more until the conditions are reversed, and the eye is working normally. (Seeing the point, part the eyes are looking directly at, center of the visual field, clearest. Example; look at the top of the C and see the top clearest. Look at the bottom, then the bottom is clearest.)This may occur in a few minutes, or it may require considerable attention. The result depends entirely on the conduct of the mind. Central fixation of the mind means an attention which is so close and exclusive that no other thought is allowed to distract. Emerson understood such a conduct clearly when he said: "The hero is the man who is immovably centered." He meant that the man's mind was so impressed with the conception he had of the endeavor he was about to make, that not even the most intimate emotions of his heart could find a place beside that consciousness. With

the proper degree of purpose, and an alert attention to the demonstration, one develops an auto suggestion in the mind, the mechanism involved in the function of central fixation is stimulated back to its normal conduct, and the vision is improved.

Eccentric fixation is a symptom caused by strain. It is only a symptom. Whatever procedure relieves the strain will correct the fault. Naturally the most direct method is to work with the function concerned. **Having first demonstrated that one can look a certain distance away from a spot and see it better than when the attention is focused on it, one can gradually reduce that distance, until finally the eye will see the spot best when looking right at it. Beginning with the different sides of a large letter, the practice should be directed at a smaller letter, and finally a period can be selected, and it can be demonstrated that whichever side of the period is focused on, the opposite side will be less clear. When that is accomplished it always can be demonstrated that the vision has improved.** Such an improvement may be only temporary at first; but with interest and patience, it will be found that an improvement in the function of central fixation is a most necessary and a most satisfactory procedure in the recovery of good normal vision. Above all, the faculty of central fixation protects the eye from abnormal fatigue, and from other sensations which develop when the eye is in use, even when there is sufficient power to work successfully without the use of glasses. Central fixation is fundamental and the most important quality of vision. When the eye has perfect central fixation, it has perfect sight.

Notice that a child can be so deeply into their thoughts, mind, completely relaxed deep or dynamic/active that a adult must repeat their name a few times before gaining their attention. Learning to relax in this way is healthy, can detach the mind from worry, unpleasant situations.

CHAPTER XVIII

SHIFTING THE CENTRAL FIXATION

Shifting and Central Fixation are Combined

SHIFTING is the name given to a technique which is of great value in the effort to relieve any unnatural tension in the mechanism of vision. The practice is based on the habit of the eyes. When acting normally the eyes are shifting, (moving) constantly and instantaneously, the point of central fixation. That means that the eyeball itself is in constant motion. The attention of the visual center likewise is shifting to meet each change in the focus of the eyes.

To visualize even a small letter, the eyes must receive rays of light refracted from all the parts of the letter. It is plain that one cannot know the shape of any object, its angles, and curves, and colors until one has focused on its outlines. This necessitates the constant motion of the eyeball in vertical and horizontal directions. That motion is so slight, as a rule, that one is entirely unconscious of it. Generally it can be demonstrated by the ophthalmoscope, because that instrument covers the eye being observed, and the other eye is moving, and the ophthalmoscope shows that the covered eye is moving in unison with it.

A letter, or a word, or any point, may appear to move in different directions; and with a normal eye this can be observed sometimes, with just a little attention. That is because the eye is moving in the opposite direction from that in which the point seems to move. It is worth while to fix the eyes on a letter, and then shift the focus abruptly to the left or the right side, or to the top or the bottom. The letter will seem to move in the opposite direction. This can be demonstrated with a word, or with a line, or with any small object. In a dark room with a soft light on a small object, it is easier to prove the truth of this. Sometimes the demonstration is facilitated by moving the head back and forth in a short range, while looking straight ahead, and finding that very soon the object seems to be moving, and not the head. Conversely, if one selects a point and demands of the eye that it continue to hold the focus unmoving, there develops what is called a stare. A strain is quickly felt, and if the focus is not shifted, the point will blur or even disappear. If the conduct of the eye is not normal, it may not move so rapidly. With the ophthalmoscope, the movements are seen to be slower and more noticeable.

On the bottom line of a Snellen Test Card there are fourteen letters. At a distance of ten feet, one seems to see the fourteen letters at one glance. But it is necessary for the eye to make four shifts to each letter. In a mere fragment of a second there are seventy shifts, and the eye and mind are unconscious of them. When one looks at a moving picture for instance, to encompass the flashing changes over the area of the screen involves a number of movements on the part of the eye, which it is not possible for the mind to realize. When the mind and the eye are functioning normally, all of this is accomplished with ease.

Eye Muscle Function

To consider for a moment, in passing, the constant motion of the eye muscles which is involved in this necessary changing of the position of the eyes, is to realize the falseness of any method, or claim, which involves practices designed to strengthen the eye muscles. From birth, those muscles have been in constant action and do not need any extra work. Further, the eye muscles act automatically, under specific impulses from the mind. What is called imbalance of the eye muscles, meaning a want of coordinated contractions, can have only one explanation—it must mean disordered nerve impulses. Whatever the procedure, to correct abnormal impulses sent to muscles, it is necessary to exert an influence on the control center in the brain.

Shifting/Eye Movement Verses Staring/Eye Immobility

Constant, minute, instantaneous shifting of the eyeball is a necessity for normal sight. The visual center must likewise function, outside of our knowledge, quicker than thought. The received impressions must be considered, thousands of them—in a moment of time. Each conception must be interpreted, sometimes deciphered and an adjustment made. When the eye, or the mind, does not match the necessary speed, the function of vision falters. The eye "stalls"—we might say—it hesitates, and instead

of shifting, it stares, continues to look at the same spot. That causes more or less blurring of the image, or failure to see. But the fault, in these cases of eyestrain, is not in the eye. The eye is only an end organ, and the eye muscles likewise, are only automatic instruments taking orders. It is the orders which are wrong. It is the central control in the visual center which is at fault. When one realizes that established fact clearly, it helps very much as a beginning of the endeavor to correct the dysfunction. The process of correction is essentially very simple. It is necessary, however, to enlist the earnest and undivided attention of the central control of the whole mechanism. In other words, one must get the mind to give the practice at least as much undivided attention, for instance, as is given by sixty or eighty thousand football fans watching the twenty-two demi-gods who, for three months, are having their "place in the sun."

To make the conscious mind aware of the presence and the value of this habit of the mind, different practices are offered, and individual patients may find some more helpful, in their particular case, than others. A simple procedure is to draw a small circle on a large square of white paper, and fill it in with black ink, except one tiny spot where the white paper is not covered and stands out in contrast as a white period. Throw a good light on the period, and keep the mind occupied exclusively with that period. Blink softly at the period for half a minute, then close the eyes for half a minute and keep the mind on the white spot. Soon an after-image will appear when the eyes are closed. If one can do this in a dark room, with a 300 watt light backed with a reflector ten inches in diameter throwing a spot light, while the eyes are behind in the dark, it will facilitate the result in many ways.

When the visual center has become familiarized with the white period, it will be well to make a circle three inches in diameter, and have two such white periods in it, two inches apart. Focus on one of the periods, and ascertain whether the other period is less clear, or just as clearly seen, or seen more clearly. Close the eyes for a minute and then focus on the other period. If the period focused on is always seen better than the other, the central fixation is normal. With proper care, it is possible to demonstrate whether such is, or is not, the case.

Whether the above be demonstrated or not, **it will improve the sight to imitate consciously the unconscious shifting that the normal eye performs.** (This is the basic method of Natural Eyesight Improvement.) Such a practice rests the eye, and encourages a normal function. If the period shifted from is seen better than the period shifted to, it will be necessary to practice with two periods more widely separated. Ink periods on white paper will serve for this. When the distance is found at which one of the periods is lost when focusing on the other, it is a good practice to flash the glance back and forth rapidly until the eyes feel rested, and one gets the illusion of a swinging on the part of the periods. The distance between the periods can then be reduced gradually. One guide for this is the fact that the illusion of a swinging on the part of the periods is still in evidence. As the improvement in sight continues, the test can be used finally between the sides of even a small letter. It will be in order then, to see a swinging or pulsating movement of the letter when there is no conscious shifting of the eyes.
(The eyes will be shifting subconsciously, automatically, on their own just as the lungs and heart function without conscious direction.)

In difficult cases, it may be necessary to use two lights for the practice, or two different objects, a sufficient distance apart. In some cases, it facilitates the improvement to practice on points close to the eye, and gradually increase the distance from the eye. It is always helpful to palm the eyes for a few minutes or longer at first, and then palm a short time frequently during the practice. It is not well to shift the focus too rapidly at first, and the shift should never be more rapid than two or three times in one second.

It is a good practice to select two letters on a line and shift the focus back and forth between them. When the eyes have demonstrated, for a few minutes, that the letter being focused is always clearer than the other letter, it will be found that the letter focused will be clearer than it was at first, and the letters will each seem to move, as the eyes change, in the direction opposite to the movement of the eyes. Following that practice, one can work on a single letter, and demonstrate that when focusing at the top of the letter, the bottom is not as clear, and vice versa. If one looks at a spot above the top, or below the bottom, the whole letter will appear less clear, because it is out of focus, thus impressing that a correct focus is normal. When the eye becomes accustomed to such a practice, the letter will appear to swing in the opposite direction, as continuously as the movement of the eye, and the letter will be seen clearly during the movements. The ink of the letter will soon appear to be blacker, and to stand out more boldly.

When any letter, perhaps a larger and heavier one, is easier seen than some other one, rest the eyes and encourage them, by focusing the plainer letter, and then shift to the letter which is not so clear. Alternating for a few minutes, the obscure letter will generally become clearer. When a large letter at a distance is not clear, it will help to focus on a clear letter nearer the eye, and then look at the distant one. Such an alternation will soon enable the eye to see clearly the obscure distant letter.

The eye is relaxed at infinity, meaning that it stops straining often when it simply looks at some object at a great distance, and does not try to distinguish. It is possible to do this, and still focus on some point. The corner of a building, the top of a hill, the large letters of a sign, a distant automobile in motion, all will serve to rest the eye, and at the same time hold an attitude of central fixation in the mind. But there is to be shifting, between distant objects or from distant points to close points.
When looking at any object, distant or close, the eye shifts part to part (point to point) on it. When looking at a small part of a object, the eyes still shift from point to point.

The object of shifting is to imitate the habit of a normal eye, and secure rest by changing from point to point, instead of staring at one spot. When any particular practice does not produce rest and improvement, it is because the strain is not being relieved, and some other practice should be tried. In addition to the rest secured, the action involved calls for a positive attitude on the part of the visual center.

Shift, Central Fixation on a Period

When one has proceeded successfully from a comparison of larger letters, or objects, or lights, and from distant to nearby points, the mind has become interested and aroused, and it will begin to assert itself on the positive side. The imagination will be quickened by the memories that is, the deep impressions secured by the alert attention of the mind itself. It is possible to develop an improvement which will enable the visual center to demonstrate that focusing on one side of an ordinary period will make it appear clearer than the other side of the period, and even shifting from one side to the other will make the period appear to move in the opposite direction each time the glance is changed. Even if such results are not secured, or before they are secured, any deliberate and thoughtful effort to follow the instructions given for various practices will promptly demonstrate an improvement in vision. Improvement may be immediate, or come more slowly. It may be permanent at once, but it is more likely to attain that condition after repeated efforts.

CHAPTER XIX

SWINGING TO RELAX

The Long Swing

WHEN I explain to patients that swinging the body gently in a half-circle, with the eyes closed, is generally a very effective way to relax, they almost always are surprised at the idea that such a practice will help the eyes to see better. Some find it a great help, and always begin any period of practice with ten or fifteen minutes of swinging.

The first requirement of any successful technique is that the attention be completely occupied with the thought of what is being done. The very act of swinging, when it is correctly performed, involves that specific objective attitude of mind. The tension in the eyes and the mind is relieved because a condition of relaxation is produced in all the muscles of the body.

Standing with the heels well apart, and the toes turned out, and the eyes closed softly, the body is rotated with an easy rhythm in semi-circles from right to left and back from left to right. It must be a soft, even roll, with the idea in the mind that all the muscles are as soft as cloth. The position of the feet insures an easy and perfect balance of the body, and the curve in the swing keeps the weight poised over the feet, so no effort is required to correct the balance. The head and neck work in perfect unison with the body, so that the head may swing only a few inches in each direction, or may swing so far to each side that the face will point fully to the right and then fully to the left, and the body will time its motion to meet the movements of the head.

When the head goes to the right, if the muscles are to remain relaxed, the left heel must be allowed to leave the floor, because the left line from floor to neck will be longer; and when the head turns to the left, the right heel leaves the floor to match the position of the head. It is a further help to allow the arms to swing around while hanging limply at the sides. **There must be a soft feeling in the muscles of the neck, and the head must roll as if limp on the body.** The eyes are to take an intimate part in the movement by rolling softly to the outer limits of the orbit in each direction. This free roll of the eyes is easier to acquire if they are kept open at first, until a consciousness is established, and the sensation registered and remembered, so one will know that the eyes are in action and are relaxed.

To secure the full effects of this practice, the whole body must be dominated and coordinated by an attitude of mind. This can be accomplished by giving undivided attention to the conduct of all the muscles, including the muscles of the eyes. But it must be an objective attitude. A concern about correctness induces a tension instead of a soft relaxation. A violinist, or an organist, or any expert performer, is not any more concerned with observation of the muscles than the runner or the gymnast. The whole body of those experts is dominated and stimulated and educated by the enthusiasm of the mind. If one is walking leisurely toward a point, and suddenly remembers that the car is due at the corner, there comes to the conscious mind no thought of the feet, but the muscles all change their conduct, and instantly the limbs are propelling the body in a run.

I once saw a picture of an operator showing a cripple with a paralyzed limb how he was to try to move the limb. He demonstrated with his own limb. He was communicating a conception to the mind of the cripple. The perfect unison with which two partners in a waltz move in rhythm, is controlled by the thoughts of each. All very simple. But I have found that most of those who begin to practice a swing for relaxation, are obstructed by their bewilderment of mind, which causes a stiffness of their muscles. I found this reaction in myself, and conceived the idea of humming softly, as one dances to music. The melody that suited me best was a few bars of the "Merry Widow Waltz" tune. Gradually, I learned to soften the timbre of my voice until it was almost imperceptible, and I found that this relaxed the vocal cords, so that with a few minutes of practice, I was frequently able to carry a note an octave higher than I could reach when I began.

Swinging with the eyes closed, slowly and in perfect balance, for fifteen or twenty minutes, will develop a feeling of softness, and is found by some to be their best method of relaxing the eyes. It is possible to add to the swinging the very helpful addition of shifting. Facing a corner of the room, with small objects or pictures along each side, blinking the eyes slowly, and looking always straight ahead, the eyes will shift in passing from one object to another. There must be a fixed idea that the mind is not paying attention to the objects as they pass the eyes, but that the eyes are looking softly into the distance. Another method, when there is a long distance outlook from a window, is to look softly at the scenery while swinging and blinking, and let the eyes shift constantly from the different points in view.

There is a method of swinging the head, while seated comfortably, and blinking the eyes softly. One may hold the first finger of the right hand six inches in front of the face and six inches to the right of the eye. Close the left eye (Do not close the eye. Modern teachers state to cover it with a patch and keep it open under the patch) and blink the right eye, and rock the head back and forth, looking always straight ahead. After one or two minutes, close the eye and hold the head still. Repeat, alternating, until an afterimage appears, of the finger and the hand swinging back and forth in the opposite direction to the rocking of the head. Practice the same way with the left hand and the left eye, the right eye closed (Not closed. Yes covered). Continue for fifteen or twenty minutes. Then practice with both eyes together, uncovered, finger between left and right eyes. This sometimes gives a better result if one is facing a window, or sits facing a good light in the evening. Strong contrasts are more impressive on the eyes. A method that has a similar effect, is to look softly ahead, blinking the eyes and holding the head still, while the elbows rest on the body, and the hands, closed except the first finger straight up, are rocked back and forth in front of the face, so that they cross each other and return.

In that procedure, the fingers are shifting across the line of vision, and the effect is to relax the eyes by the passive change of central fixation. The eyes in that procedure are shifting with the moving fingers. One can use any small object the same way, a pen handle or a ring, by passing it across the line of vision rhythmically, while the eyes blink softly and look directly ahead. A helpful practice is to roll the head back and forth across the partitions of a window, especially the small panes of a leaded window, while blinking the eyes. A good test of the success of any of these practices is the appearance of the after-images when the eyes are closed after a few minutes with them open.

It is helpful to remember that swinging or swaying, when the eyes are open, is another way of shifting, that is, moving the central fixation from one spot to another, with an added value in the relaxing effect of the soft swaying movement. There are different techniques which can be practiced, to secure these two effects. One can devise individual efforts. A piece of chain, or rope, or cord, or ribbon, hanging at a given distance, less or more, in front of the eyes, with a background of light, or a background selected—a Snellen Test Card, a picture, a window frame, a white sheet or a black cloth, likewise placed at any given distance back of the hanging cord, or what not, or back of a tall thin object placed on a table half way between.

One can place three Snellen Test Cards, three, six and nine feet in front of the eyes, or use home-made cards say twelve by sixteen inches, and paint on black letters of similar sizes. **They should be suspended on upright strips or hung on strings stretched across the room, and placed so that they almost overlap.** Stand so that when the head is swayed with slow rhythm back and forth, the eyes softly blinking, the cards will seem to overlap and to show the clear between them, according to the direction the head moves in. Pick the same letter on each of the cards, and watch for it, and ignore the other letters. That will facilitate the **apparent movements of the letters in the direction opposite to the way the head is moving.** Close the eyes in periods, but continue to sway, and watch for the letters to appear as after-images. (Use the Memory and Imagination) Practice with either eye closed, or with both open. Practice while sitting, and using a pen or pencil with a book for a background, holding it still while the head moves, or moving it while the head is still. Whatever the details of these practices involving swinging or swaying, the effort is to have the object under observation move back and forth across the line of vision so that it is alternately seen and then not seen, as it goes in a direction toward the right and then back toward the left and out of sight. If, with the eyes closed, an after-image is not produced, there is some fault in the technique.

CHAPTER XX

HOW MEMORY HELPS VISION

MEMORY is an aid to vision. There are many reasons for this. An impression on the retina is interpreted when it reaches the brain. The correctness of the interpretation depends very much on memory. Trained inspectors, in any field, are skilled largely out of their experience, which is their memory. It is important to keep this in mind always. For one reason, such a habit will develop an attitude of attention, and lack of alert attention is responsible for a great deal of impairment of vision.

It will be instructive to make a personal test of this statement. For one week make a continual effort to look, with care and thought, at every object of interest. Study for a moment some one of the features on any face you select—just an eyebrow, or a chin, or the point of the nose—or go over the different lines on the face and search for some revealing characteristic. Select a small spot on the garment. Always pay attention to a small spot only. Follow the observation with a minute of deliberate consideration of what you saw. In looking at a large letter, let the eye follow the lines of the letter, instead of looking at the mere bulk of the letter. (Trace on/along the edges of the letter with the eyes, center of the visual field.) Upon occasion do the same with a small letter. If you are near-sighted, select spots just within your easy vision; if you see easier at a distance, work at that limit. Forget your eyes—just as you forget your ears when you listen. Use your mind. Be attentive, and fair minded, and ponder the results. "You'll be surprised."

But there is a further consideration which is specific and most important. **When the memory is able to recall impressions of any kind, it indicates a certain degree of mental relaxation. The more perfect the recollection, the more perfect the relaxation.** That this relationship exists, can be positively demonstrated. If the eyes are closed and covered, so that all light is excluded, (Palming) and one can recall perfectly a melody, or a fragrance, or a taste, or a sensation of touch, it will be found that in the visual center there is a picture of perfect blackness. When no light rays enter the eye, the visual field should be black, because it is empty; that is because no stimulus is coming in through the optic nerve. If, however, the field is occupied with fragments of coloring, it will be found that the memory does not recall past impressions. The mind must be perfectly relaxed if it

is to have a perfect memory—one of these conditions is a test of the other.
Modern teachers state it is not necessary to see black. Just relax and think, imagine pleasant things.

The memory is not dependable as a test, except for the degree of blackness. This is why memory of black can be used as a test, and as a method for improving the vision. There is what is called muscle memory. It is a nerve habit, by which a muscle is given a suitable impulse or order at exactly the right moment for some special co-coordinated movement. This is absolutely a mental reaction. Muscle memory is what enables dancers, and acrobats, trapeze performers and others to develop the ability to accomplish their marvelous performances; and enables the various technicians to become so skillful.

Developed mental habits are kindred psychological reactions. Likewise, a developed memory for black, when called upon, can produce specific reactions, in the mechanism of vision. One can learn how to recall, with closed eyes, a memory of black in the visual center. When this becomes a habit, it is possible to estimate the degree of mental relaxation, by considering the blackness which becomes apparent when the eyes are closed. One can improve the judgment as to the actual blackness seen when the eyes are closed, by comparing that blackness with the blackness of a small spot as seen on something black. A large black letter is a good model, but any real black object, or a soft real black cloth, or a black shoe will serve for comparison.

One can learn to carry the memory, for instance, of an ordinary period. The smaller the area the better. But it may be easier to begin by using for practice a larger circular black spot, and proceed systematically, by sewing a piece of a black letter, half an inch in diameter, onto a large square piece of soft white sheeting, and blinking at it as practice, in a soft light. For half an hour, less or more, one should blink softly at the mark for twenty or thirty seconds, then close the eyes for thirty seconds, and simply expect to see the period, while the eyes are closed; so continuing the alternating practice.

The significance of black, when the mind has learned to see it as a small period, is mainly as a help to relaxation. Thought of in the way the eye sees black, such a developed habit becomes an attitude of the mind which has a favorable effect on the mechanism of vision. In the chapter on palming, the value of the black field is described. If one practices intensively the technique of palming, it will facilitate the accomplishment of learning how to see a period in the mind while the eyes are open. Such a thought is so new that it is hard to realize. It is all very simple however, and of a kind exactly with mental processes which are of common practice. The black period is seen in the mind. The simple technician, and the finest expert are doing just the same thing in their field. The typist who is reading her notes while she touches the different keys quicker than thought, is carrying in her mind the exact motion that is necessary to make the particular letter strike the paper. The diagnostician that I saw demonstrate to a group of physicians his power of passing his hands softly over the chest walls of a new patient and then describing the changes that had taken place in the tissues, was carrying vividly in his mind several mental images that were just as real, and just the same in kind, as the image of a small period. All of these mental habits represent impressions made on the brain cells, and recalled, just like a name or a date or a fact, whenever the mind needs them.

In any system of memory some such expedient is always involved. One of the practices suggested as a help to remembering names, is a habit of visualizing, when the name is given, some imaginary peculiar appearance of the person named. If one at the moment the name is heard will attach some mental image to the person, if the effort is earnest enough, that unusual and peculiar memory will serve as what is called a reminder; but the main advantage will be the better impression made at the time because of the alert attention of the mind. To recall the name by remembering the special mental picture utilized at the moment, is a process similar to recalling a mental picture of a period when one wants to produce a relaxed condition of the visual center in the mind. We are all familiar with association of ideas. But it takes a little deliberate thought to realize and remember that we see in our brain, and that seeing a period is a mental process, just the same as seeing any of those mental images we are so familiar with.

Flashes of Clarity

This developed memory of a period sometimes leads to a trifling confusion in the beginning. There are cases where the relaxation secured improves the sight so unexpectedly that the surprise instantly disturbs the new relaxation, and the letter which came vividly into view is lost again in a flash. One must be reassured promptly by the proof received that the eye can learn to see the letter always, because it has given evidence that it has the power to see it clearly once. A little deliberate thought will prevent such an incident from interfering with a progressive improvement. I have never found any difficulty in convincing a patient that such a flash is a warrant, and a promise given the eye. I mention it here, because it has been the cause of confusion until the unusual phenomena was explained. It is not easy for one not familiar with the mechanism of vision to realize how or why an eye can have a flash of unaccustomed fine vision, and slip right back again into the old condition. I have had a fine surgeon, who prides himself on his physiology, ask me in astonishment why he suddenly saw several words at a time, on a test card with very small type, and then his customary poor vision took charge again, and he could hardly see the lines of type. He had never really thought of the subject, except in the perfunctory way that most doctors do. A year before, in his early forties, his eyes had begun to falter, and he followed without question the beaten path. It was just another case of that condition called presbyopia. The statements in the books about such cases contradict themselves; and I made him admit it. He was very much interested in the new idea of **coaxing his eyes back to a normal conduct.** That state of mind lasted for about three weeks. But he was a busy surgeon, and he never found the time to spend on his eyes, and so he soon decided that he would rather use glasses, and save himself that time. The point here is not that the doctor decided to wear spectacles for the remainder of his life. That is his own affair. My point is his attitude toward the subject. Although he accepted every explanation concerning the problem, his mind was not really aroused out of the remarkable, but customary mental inertia which is typical of most physicians in regard to the condition and the outlook today of the human eye. The outlook is the failure of the eye specialists to even consider any effort to save their patients from the consequences of an absolute neglect of the simple rules of health which are being used in every other branch of the medical profession.

Imagine a black dot (period) is a small part (point) of a black letter

Another way to learn to connect the image of a period with improved vision, is to blink softly and rhythmically at a large black letter, and make believe there is a spot on the bottom roll of the letter (O or C or G) which is only as big as a period and is blacker than the remainder of the letter. Generally, even when the letter is not clearly seen at the beginning of the practice, it soon becomes very clear. The reason is that the eye stops straining, because the letter is placed near enough to see it easily, and all tension in the eye, and all concern in the mind is gone as the interest is centered in the game of **making believe that there is a period blacker than the black roll of the letter.**

In this practice the letter is a part of the picture from the first, and is always imprinting itself on the mind. It is quite common for an eye to begin in a few minutes to see a letter which in the beginning was almost invisible. The letter does not always continue to remain clear. The improvement in vision may be only temporary. But the memory of that success is not lost, and coming easier each time, and lasting longer, the improvement for that letter, becomes permanent. This always means improvement in vision for every purpose. In this practice, as in every technique of the Bates method, the essential requirement is that the mind be given without reserve. **The conception of what is commonly called "concentration should be left out of the work. Instead of tension, there is to be a whole-hearted, enthusiastic attention, a pleasurable emotion, which is so strong and alert that no other distracting thought can intrude to interfere.**

A German specialist replying to a letter of inquiry from me, explains in his personal letter a conception of the mechanism of vision that illustrates the different ways in which different minds interpret the same facts. That same writer has an open minded attitude, and is very careful in his observations, and very fair in his conclusions. Helmholtz and Tscherning agreed about the function of the ciliary muscle in the eye, but Helmholtz believed that the muscle acted to relax the tension of the capsule containing the lens, and Tscherning believed that when it contracted it increased that tension. In his meticulous interpretations of the meaning of established phenomena, my correspondent seems to forget, at times, the psychologic element. Sometimes he leaves out of his considerations the evident functioning of that part of the mechanism of vision which is beyond the knowledge of the conscious mind.

My correspondent reminds me, however, that our entire life is a sight school. He points out that one born in the country can see and describe the differences in the conduct of different birds. Looking at them in the air, the country boy recognizes instantly a difference between the sizes and the flying habits of the dove, for instance, and the woodpecker, et cetera. It is such a simple affair to him, that he is puzzled by the failure of the city boy to follow his descriptions; but the city boy had not yet **stored up mental/visual pictures of birds, and registered impressions.** The writer explains that the picture on the retina of the city boy is the same as the one on the retina of the country boy. In other words, the writer accentuates the part that memory plays in vision; in this illustration, a memory which is simply an exercise of vision in a field to which it is habituated.

The same writer tells of **the newly enlisted soldiers whose vision had been habituated to book figures, and were "nearsighted" at first to distant objects in their new surroundings. Whose recruits soon stored up a new register of those distant objects; and because their picture memory of the camp and the fields aroused their visual centers to an unaccustomed necessity, they perceived the objects which at first were not apparent to the conscious mind. That writer calls attention also to the spontaneous manner in which a veteran of a camp or garrison recognizes and identifies instantly the different marks of troops and of rank—simply because his memory prompts the visual center.** In a like manner, the writer reminds me, we disregard much of the detail in customary pictures on the retina, as for instance, when we ignore the figures on the face of a clock and simply look at the position of the hands. That writer recalls that Cuvier was able to draw a complete picture of the skeleton of a prehistoric animal after seeing only one bone. His memory recalled the visual images he had registered during the years of research, and enabled him to actually see the picture of the skeleton, in his brain, just as clearly or more so, as a person without that memory would see the skeleton when looking at it.

Just the conception of these facts, if they are carried in the memory, and taken out habitually, and looked at, with the mind's eye, is a fine help and a most reliable expedient or technique in practicing the Bates method. The memory is such a large part of vision, that the neglect of it is a main factor in the faltering of normal sight. On the other hand, an alert attention to the picture in view, and a deliberate purpose to occupy the mind entirely with the performance of looking at it, will reveal to the consciousness of the adventurer an unexpected power in the mechanism of his own vision.

CHAPTER XXI

HOW IMAGINATION HELPS VISION

THE idea of this chapter is to call attention to the part imagination plays in the mechanism of vision, an idea which has no place in a system that ignores the mental part of the perception and interpretation of objects.

From my conception of this work, gained in ten years' experience, it is not possible for me to draw any line separating imagination from memory, in their relation to the mechanism of vision. There can be no imagination in the visual center without memory, and no memory without imagination. In other words, there is a real sense in which these two faculties act to supplement each other. It is helpful to keep this fact in mind always, as this will encourage both factors to enlist with a new power, because of the notice that is given to them.

Whatever impression is made upon the retina is of no value until it has been interpreted by the mind. That interpretation depends upon memory, which is knowledge, which, in turn, is previous experience of other impressions. It depends very much, also, upon imagination. In the medical dictionary an image is defined as a picture or a conception with more or less likeness to an objective reality. An illusion is defined as a false or misinterpreted sensory image; a false interpretation of a sensory image. In Webster, the word imagination is defined as "… That power or function of the mind whereby we have ideal experience; primarily the power or process of having mental images; broadly the power or process of forming ideal constructions from images, concepts, and feelings with relative freedom from objective restraint... mental images, especially visual images... mental images of things suggested, but not previously seen."

In simple language, **memory then is what the mind has to work with, and imagination is what the mind can produce**. What conception of the power of the eye and of the mind is in the consciousness of a treatment of an eye which is simply faltering in its function, when the treatment neglects entirely all that is involved in the statements quoted above, from the medical dictionary and Webster's Dictionary? Without referring to the damage glasses do, as explained in previous chapters, it is plain that the treatment with artificial lenses begins by forfeiting much of the constructive power there is in a given mechanism of vision, as shown in the quotations given from the two dictionaries. That is the negative side. For the positive side, even the beginning that Dr. Bates proved, makes it plain that the possibilities, available to any ordinary mind that is interested, are beyond the imagination.

In normal vision, the memory and the imagination are always involved. That is the reason why two pairs of eyes, with apparently equal power of sight, will give the mind different visual impressions. This is constantly true, and depends upon the interpretation, as described above. The same pair of eyes, even when an average normal, will vary in the impressions received, because the mind varies in its conduct, and this influences the whole mechanism of vision. Even a want of attention will result in failure to see an important detail, just as a want of attention is the cause of a failure to remark an important detail in some project under consideration.

In discussing the power of a personality, when his imagination is realized, one says that he has "vision". Often it is quite plain that **the difference between vision and lack of vision, in mental power, is an alert and discriminating attention.** We unconsciously use the word vision in that relation. But when we think of the eye itself, the foundation of the figure of speech—well, is it not a fair statement to say that when the eye itself is specifically the subject, the imagination remains dormant and we do not actually think at all, not even enough to ask a few simple questions? How many parents, when they have mechanically put a pair of spectacles on their pretty, bright little girl for life, or their healthy, manly boy, have allowed their imagination to call their attention to the plain considerations involved?

In this method, it is necessary to take advantage of the imagination. **In those cases where a remarkable cure takes place in a few lessons, or in a single hour, it is the imagination which accomplishes the "miracle".** When someone who has automatically accepted some visual dysfunction as a natural occurrence, gets a normal eye back in an hour, something has happened—much like the report given to me as a wisecrack by a patient describing a feeling in his heart. He said "You know, Doc, my heart just stopped beating and began to beat the other way."

When one makes a decision which positively determines some conduct, the emotion which controlled the will is often so far in the background that the person is not conscious of its presence. The patient I reported, who had been blind in his right eye from birth, was told by a well-known eye specialist that if the directions he gave, taught the eye to begin to function, it would be two or three years before there would be any improvement, but the patient was seeing three lines of letters on the Snellen Chart in eight days. That was not because of his memory. His memory had held him back as long as he had had one. The continual consciousness of the blind eye was a continual reminder and a constant inhibition. It was a strange, new truth that aroused his imagination. The vision that came into his mind through his ears was a mental picture. The shock aroused dormant functions.

A famous Italian artist was taken into an art gallery when he was a boy. Something within him made him say: "I, too, am an artist." Without that imagination which was aroused suddenly in that patient at twenty-two years, the dormant mechanism of his visual center would have remained inactive.

There is no imagination without interest. It is because children have an open-minded interest in seeing letters and pictures that their eager attention creates imagination. There is always an immediate improvement in their vision. It is only when a child lacks this universal child's interest, that there is difficulty in arousing the imagination. An adult without a real desire to recover normal vision is naturally without any imagination on the subject, and there is no mental reaction to overcome the acquired inertia regarding the disability. But, on the other hand, when an adult is interested, there is a power in the adult imagination which is entirely stronger than the simple impulsiveness of the child.

Two young women, strangers, came to me on the same evening, and took their first lesson together. They both were quite near-sighted. One, whom we will call A, had heard of the Bates method only indirectly. The other, whom we will call B, had learned of it from an acquaintance who, herself, had received a remarkable and lasting cure in one hour, came several times, and had some interesting experiences. But her mind was never really interested. She had been impressed by the easy success of her friend, and probably thought it was necessary only to visit the office a few times in order to discard her spectacles. She always had a new alibi, and her evenings were full of other things, and soon she decided she was no longer interested. A was a different type. Her earnest mind was full of questions about the work. She reported different ways in which she put into practice the ideas she was gathering about the mechanism of her vision. The third evening she was so enthusiastic about her experiences, that I suggested she make a contract with herself. She had already discarded her glasses except at her work. She was to continue without them for the first fifteen minutes in the office the next morning—regardless of whether she could see her work or not. She was to put them on at the end of a quarter of an hour, even though she was seeing her work easily. She saw everything without difficulty,

and she kept faith by putting on the glasses. But the glasses had lost the fight, as she discovered that she saw better without them. When she returned in a week, she had not worn her glasses for three days. That was some months ago. Since then, she has not worn her glasses at all, has not thought of doing so, and for months has not even given any special attention to her eyes—they are taking such good care of themselves that she does not have to think of them. Her mind, from the first evening, was continually imagining, and carrying out the new ideas; and she says now that she cannot imagine ever wearing glasses again.

That case illustrates the manner in which imagination carries on in the Bates method. A little incident in my own experience illustrates a different aspect of it. Recently, while waiting for a delayed appointment, I placed a 300 watt light with an aluminum reflector about three feet from my eyes, and began blinking at a spot on the bulb for half a minute, then closing my eyes for a minute or so and watching the afterimages which followed each other in the visual center. There would be a crimson moon, which changed its size, back and forth, and then would be replaced by a green moon which might lose its outline and develop an irregular margin of gold or crimson or pink. The image would fade and be replaced by some vague patches of color, or by no specific picture. Sometimes, when the eyes were closed, the images would remain half a minute only, and not return. Again, when I persisted in silently coaxing them to come back from some place, they would respond. They might be quite vivid, or quite faint. Several times, instead of the variable after-image of the light itself, there would be a perfect ring, which was the edge of the reflector, sharp and bright as though it were itself a light, and the circular field inside was a softer and less bright mass of varying color. In about ten minutes, I changed the practice, and placed a large Snellen Test Card three feet in front of my eyes, with the large 200 foot C on the same level, and threw the reflected light on the large C. I put a spot of black ink, as big as a large period, in the middle of the lower roll of the letter. Blinking at that period for thirty seconds, or sometimes longer, I kept my mind occupied with the thought that the period could be distinguished even on the inky blackness of the letter. The third or fourth time that I closed my ' eyes, the large C stood out vividly, with rolled edges like a big doughnut, and curved ends where the lines broke sharply on the right hand side. The letter was as white as a glazed electric bulb, and the white card was a bold black, and the three-inch flat post that carried the card, and was painted white, was also black. At first there appeared no spot where the ink period was. But in later images there was sometimes an empty space where that period was, which was much larger than the period.

When I had seen, as an after-image, several letters and the card and the post quite clearly many times, appearing a few seconds after I closed my eyes, remaining a few seconds, disappearing and returning, sometimes just as clear and sometimes fainter, and sometimes returning three or four times, a remarkable thing occurred. While I was seeing the vivid white C and seeing also, more or less clearly, about three lines of letters below it, the moon that previously had appeared as either crimson or green when I was practicing with the 300 watt light shining on my eyes, now inserted itself into the picture as white, and covered up the images of the letters I was seeing. I reasoned with the moon, during some seconds, and it disappeared. But it had damaged the clear images of the letters, although they did try to reappear. While I waited and watched, the moon came back, as one picture is substituted for another sometimes in the moving pictures. This behavior was repeated, in varying ways, several times, as I continued the practice of blinking at the spot on the large C, with the reflector throwing a spot-light on the letter. I have had various experiences of the same nature with the light and the card, but this vision was different, and more vivid, and more specific, and more significant than any other.

That particular incident, characteristic of the kind of reactions which are experienced in this work, is to me a sort of parable. The later after-image of the light was the recurring memory of the recent impression made on the visual center by the strong light. It was a kindly impression, but it was evidently a bold impression. My later effort, with the letter, was working likewise with the visual center—the mental part of the mechanism of vision. The stimulus given by the letter, acting as an association of ideas, aroused the memory of the deep impression made by the light, and it automatically came back into the effort to help the visual center. To me it all seems so clear. That is the way every function in the body tries automatically—outside of our consciousness—to help every other function, when the functions are working normally. In this case there was no conflict. I saw the letters vividly, before and after the vision of light. It was the visual center itself, responding to my wish, and the memory (the after-image of the light), and the imagination, aroused into action, all working in harmony. I have proved the relaxing effect of the practice by picking up the telephone book and reading easily any name I put my finger on.

In other chapters, I have described in detail, procedures and practices which give the imagination an opportunity to "Carry On." We all have in our imagination, a power that we scarcely know. The revelations in these simple techniques comprise experiences which open a door that all may enter.

CHAPTER XXII

THE SNELLEN TEST CARD

THE Snellen Test Card was devised by Dr. Herman Snellen, a Dutch ophthalmologist, who died in 1908. It was designed as a routine test of visual acuity. The largest letter should be easily read at two hundred feet by a normal eye, and the smallest letters at ten feet. Many can read the small letters at even twenty feet. There are those who do not feel the need of spectacles and yet cannot read even the forty-foot line at ten feet. The explanation of this, perhaps, is that their eyes falter when called upon to do something which is unusual. I have seen cards, offered as test cards, which would almost make one believe they were arranged with a deliberate purpose of making it harder to read the letters. The combinations are remarkable, but more unfair, the letters are so closely packed that there is not enough white space around them to give the eyes a necessary contrast.

Dr. Bates found a new use for the Snellen Card. When the letters are properly arranged, it is a great help and encouragement to the eye in an effort to recover the normal power of vision. Care is required in the approach that is made. Dr. Bates tells of a boy who could not see the large figures on a clock in the classroom, nor even see large writing on the board, who promptly read the ten-foot line at ten feet, and then was able to see the clock and the board which he could not see a few minutes before. A patient of his, a physician who had worn glasses for near-sightedness for many years, and had improved by the method Dr. Bates had taught him, until he had **telescopic vision**, **retained and improved his power of sight by the simple practice of reviewing the letters on the Snellen Card every day.**

Snellen Test Card Improves Children's Vision – Optical Industry, Doctors Force Schools to Stop Use of the Test Card.
Doctors Prefer to Sell Eyeglasses, Surgery.

Consequent upon a protracted discussion between Dr. Bates and some skeptical ophthalmologists in a meeting of a New York society, which was followed by another such discussion before a different New York City society of ophthalmologists, the Board of Education of New York City asked Dr. Bates to consult with them. The outcome of that consultation was that Snellen Cards were hung in the class rooms of the public schools. It was found, **during the several years that the cards were in use, there was a great general improvement in the eyes of the children.** Dr. Bates gives the figures. There was a constant undercurrent of opposition however, to the use of the card, and Dr. Bates writes that finally on the insistence of some physicians, the card was removed from the school rooms. Of course no doctor would admit responsibility for such a proceeding. How could the presence of the standard test card, in plain sight, have any unfavorable effect on the eyes of growing children? It is a matter of record however, that it was there for several years, and ultimately it was eliminated. During ten years, I have learned the value of it, as a special opportunity, and as a routine practice. I have taken many children who had been unable, during an examination, to read the fifty-foot line at ten feet, and enabled them in half an hour to read three or four lines which at first they could not see.

Although all reading involves seeing letters, the mind very soon learns to see in terms of words. The letters are not consciously scanned. The words are recognized so much quicker than thought, that the conscious mind pays little attention to the letters. But the memory of all the letters is the foundation of the consciousness of the words. **This familiarity is the foundation of the value of the Snellen Test Card in practicing to improve the vision.** The interested attention arouses the co-operation of the mind. I have demonstrated this many times. A patient looks at a letter but cannot see it. **I direct the drawing, mentally with the eyes closed, of the lines of the letter.** Make believe that you are drawing a perpendicular line; across the top draw a horizontal line, shorter, with a small part to the left and the remainder to the right; at the right hand end drop a very short perpendicular. Draw a shorter line to the right from the middle of the first perpendicular. Draw a short line across the bottom of the perpendicular. Repeat the drawing six or ten times, still with the eyes closed. Now open the eyes and look at the F. Often it is plain at once. Always it becomes clear very soon. Knowing the letter you are looking at, but do not see, draw the letter mentally, several times and very deliberately, then open the eyes. Repeat this procedure until you see the letter when you look at it. If the mind really is interested, the consciousness of any first failure is lost in the objective attitude that absorbs the mind, the tension is relaxed, and the visual center recovers its normal function. The straining ceases, the rays of light are properly received, and sight becomes normal. Whether or not my explanation is correct, it is true that many times I have watched the above expedient enable a patient to see clearly, one letter after another, which a few minutes before, the patient could not see.

Often enough, when the letter in the mind becomes clear, the whole line of letters flashes vividly on the sight. It may happen that the picture will fade, and the dimness of sight will return; or the clearness of that line may be permanent at once. Sooner or later, the power of the eyes returns and the patient can read all the letters on the card at the given distance. That normal vision almost always remains permanently. Sometimes it falters again, because of neglect of the learned habit of using the eyes correctly, or because of mental stress depressing the mechanism of vision. Any such recurrence can always be relieved, if the patient is willing to take charge of the situation.

To one who has no other idea about the mechanism of vision than the current attitude toward it, such conduct of the eyes seems incredible. One who has never given the subject any deliberate thought, but has simply accepted the carefully nurtured representation that any abnormal conduct of the eye implies an absolute loss of its power, has no foundation in the mind for the imagination to work with. There is commonly an incredulity. One does not believe something which is different from what one seems to see as natural behavior. The prevalent attitude of mind is that there is nothing to do for a faltering eye but ignore its own power, and put on spectacles. But why not remember that the great mass, still and yet, continues to get along without glasses, under the same environment and conditions? Why not ask why and how so many experience some difficulties, but get over them without outside help, and numbers of others, young and old, wear glasses for a time, and then discard them permanently?+

When one has seen many cases of impaired vision, in adults as well as in children, recover normal sight, and retain it, by simply giving to the eye itself an earnest attention, one gradually learns to realize the causes for the condition, and the reasons for the cure. These eyes of ours have been developing so long, under environment which has meant necessity for power and adaptation, that they have inherent qualities and versatility to which we are thoughtlessly and stupidly indifferent. When life and happiness depend upon good vision, and there is no knowledge of such an artificial help as a piece of glass, the vision remains as strong and reliable as is necessary—**it adapts itself to the burning sands of the Sahara, or the ice fields of the Arctic, or the far distances of the ocean or the plains.** The claim that vision has not evolved to meet the requirements of modern complexities is preposterous. Many millions of eyes are cheerfully and satisfactorily contradicting such a pronunciamento by doing all the things that such a claim would have us believe it is not possible or natural to do. In most of the cases where the eye is failing, its natural power is very near the surface, ready for normal action. Half an hour will rouse its dormant functions, and the marvelous mechanism of vision will give a startling demonstration of how easy it is to have as good sight as those around us, if only we care to take the trouble to use what is born in us, and still is ready, if only we command it.

Snellen Test Cards can be secured through a bookseller. Optical supply houses used to sell them, but several I know of have refused to do so, under the excuse that they should be used only under orders from a physician or optometrist, and can be had from them.

There are a number of different techniques or practices, and some are more satisfactory with a given patient than others. The simplest practice is always good, either for a beginning, or to use as a daily routine for a longer period of time. It is called **FLASHING**, because one looks at each letter only once, and practices on all or most of the letters on the card one after the other, during each period. Seated comfortably, with the card in a good light and about ten feet from the eyes, blink softly and with a regular rhythm at a tiny spot on the letter being used, quietly ignoring every other spot on the card. Having blinked automatically for twenty or thirty seconds, close the eyes for twenty or thirty seconds, but do not allow the mind to think of anything other than the specific spot on that letter. When the eyes are opened, select a spot on the next letter, and repeat the same procedure, letter after letter. Do not forget that the purpose is to relax the mind, and the eyes, and all the muscles of the body, and if this condition is not produced, analyze the situation deliberately, and ascertain what it is in your technique that is preventing, instead of helping you relax. Let the eyes shift on the spot, avoid staring. Looking at only one spot, limits eye movement/shifting. It can be more relaxing to shift from small part to small part, spot to spot on the letter. Blink. If looking at one spot, shift on it, point to point. Blink. Avoid staring, eye immobility.

Sometimes during the first period of practice one will get a proof of relaxation in the appearance, while the eyes are closed, of the letter one was blinking at. Generally, that vision does not appear until one has repeated the practice a few times, either at one sitting, or at some other time. When the letter is seen, it will be in white, not black, and if the card is seen, it will be black, not white. In later practice, when more relaxed, the real colors will be seen at first, but they will gradually fade into the reverse. In further practice, it will generally happen that the letter will be present a few seconds and fade, and then return, while the mind waits in confidence, perhaps two or three times. As the practice is perfected, it will develop that four or five lines will appear, as vivid as a fine Neon light. These are after-images, and indicate an impression made on the mind so strongly that it remains intense enough to prevent other impressions from being perceived. This is because the mind is alert and interested, and free from any abnormal tension. When these results have been secured, it will always be found that the vision has been improved. The daily practice of flashing the card is a very fine help in securing and retaining good normal vision.
Use the memory and imagination to remember, imagine the letters the correct color and clear when the eyes are open and when closed. Shift on the letters when the eyes are open and in the imagination when the eyes are closed.

It is a good practice to select some large letter, and to blink at a tiny angle on it for half a minute, and then close the eyes and keep in mind the spot that was blinked at. Continue that specific practice of blinking and then closing the eyes, for fifteen or thirty minutes. Remember to shift point to point on the small part. No staring. Blinking helps the eyes to shift automatically. Modern Teachers prefer the student to shift point to point on the part and about the letter, and from letter to letter. Eye movement produces relaxation and clear vision.

There are several practices which encourage particularly the imagination. Sitting so that the letter O on the fourth line of the Snellen Card is seen clearly, blink rhythmically at a small spot in the white circle inside the letter, and make believe the tiny spot seems whiter than the white card. Close the eyes, and keep the mind thinking of the make-believe tiny white period. After this alternating practice has continued for twenty minutes, the white circle will appear to be a raised disk, whiter than the card itself. After a few such practices, that white circle will appear whiter, and raised above the rest of the card, whenever it is looked at, and whenever it is seen in that way, the vision will be good.

Using the lower curve of the big C in the same way, make believe there is a tiny period at some spot on the curve, which is blacker than the rest of the letter. If it is found difficult to make such a spot appear, put one on with black ink, and work with it. The blackness of the new ink will soon be lost, but the memory of it will have the effect of continuing the appearance, and it will be found that such a tiny spot can always be seen when the letter is looked at—just as we can recall the memory of any other impression made strongly enough on the mind. It may serve as an even better introduction, to put a tiny black period on the white card, just under the center of the lower curve of the C, and blink at it in the same way. When properly done, the proof of relaxation will soon appear in a vivid picture of the letter C, seen when the eyes are closed. It will be found then, that the other letters looked at will be clearer in outline.
Imagine the C is composed of many tiny black dots and shift from dot to dot on the black ink. Use Central Fixation; seeing one small dot clearest at a time as the eyes, center of the visual field move from dot to dot.

It is a good practice to blink consistently at the card, just under a letter, and pay no attention to the letter itself. It is not possible to strain to see a white card, and when the mind is kept attentive to a spot on the card, it ceases to try to see. The letter above the spot will soon appear and become clearer to the sight, even though the eye is not paying attention to it. The relaxation produced has again made the mind more receptive, and more conscious of the impression made by the rays reflected from the letter. When the mind, eyes are relaxed: then look directly at the letter to see it clear – Central Fixation.

A very good technique, more especially, perhaps, for near-sightedness, is to place the card near enough to the eyes, so that a line of letters which cannot be seen at the distance set for normal eyes is easily seen, and then blink at the letters, or under them, one after another, for twenty or thirty minutes. Because is it not necessary to try to see them, the continued attention to them quiets and relaxes the eye, and the vision improves. It will be found that soon the card can be moved progressively farther from the eyes, and the letters will still be seen clearly at a distance where, at first, they could not be seen at all. If the large card is placed ten feet from the eyes, and the duplicate card with smaller letters is placed near the eyes, it is a good practice to blink at the C on the small card, which is marked to be seen at fifty feet, and then blink at the large C which is ten feet away. Each letter is easy to see. The eyes relax, the vision improves, the mind is confident, and the smaller letters on the large card, which could not be seen previously, will gradually show clearly.

During the deliberate, confident and earnest practice of an hour, it has frequently happened that eyes which could not read the seventy-foot line at ten feet, will improve sufficiently to read the thirty- or twenty-foot line without any difficulty. This is not an idle theory-it is a fact demonstrated repeatedly.

As a unique technique which is sometimes very gratifying, one may put a heavy black ink period on the thumbnail, and place the large C ten feet from the eyes. Blink softly at the ink period while holding it as near the eyes as it can be seen clearly. Alternate by blinking with the same rhythm at a small spot on the big C ten feet away. Soon it will be found that the thumb can be brought nearer to the eyes, and the period seen just as clearly. Occupied continuously with the interesting game, which consists of a practice in accommodating the eyes from the nearest possible distance, to the card at ten feet, one will find that the eyes gradually can be lowered on the card, and see clearly, letters which, at first, could not be seen at all. If the interest is sustained by an earnest desire, an hour will pass quickly at this practice. If the light is good, and one is careful not to try to see any letters which are not clear, in an hour a degree of relaxation will develop that will show a most gratifying improvement in vision.

Another method is to close the eyes for fifteen or twenty minutes, and **imagine that there is a specific feeling of restfulness and lethargy in the different muscles of the body—putting the mind on the muscles of the neck, and then on the muscle on the front of each arm, and then on the muscles of the legs.** Then open the eyes and look at a small section of some large letter on the Snellen Card, and make believe that section is blacker than the rest of the letter. Continue to look at it, blinking softly occasionally, for thirty or forty seconds; then close the eyes and keep the mind on that portion of the letter, remembering the idea that it was blacker than the rest of the letter. After practicing in such fashion for a few minutes on that particular spot, select a different spot, and repeat the procedure. Although this is only a game, it involves the keen attention of the mind; there must not be the least concern or tension. The visual center is being called upon, in a normal way, to function as the mind directs. When the eyes again are closed the deeper impressions, made because of the alert attention of the faculties, are brought to the attention of the mind in what are called afterimages. The effect of such a practice is to stimulate the mechanism of vision into a better function. The vision is improved. All the letters on the card are seen more clearly.
When looking at one spot (part) continue to shift the eyes, visual attention from small point to small point on that spot.

If someone will swing the card back and forth in a short range, while the patient looks straight ahead and pays attention to only one small letter as it crosses the line of vision, it will be easy to learn to imagine that letter moving, as it was seen, when the eyes are closed. When one can imagine a small letter, moving back and forth in a short range, it will be found that the eyes are relaxed and the sight is improved. Half an hour devoted to that practice will be sure to give most satisfactory results.

A good practice, previously described, is to swing the head in a short range back and forth, across a small letter near the eyes, which then appears to be moving in a direction opposite to the motion of the head. (Oppositional Movement) Soon it will be possible to imagine that the letter is moving, while the head is still, and the eyes are open and looking at, shifting on it. (This movement occurs due to the eyes shifting, moving.) It will also be possible to hold the head still, and keep the eyes closed, and imagine the letter moving in the same direction that it seemed to be moving when the eyes were open. (Eyes shifting on the letter in the mind/imagination.) One must lose all thought of the eyes, and occupy the mind with the technique, in the same objective way that one gives an impersonal attention to any piece of work, or pleasure, or technique in which one is actively interested.

When one is interested, and has comprehended the mechanism which is involved in these practices, other techniques may be devised that are helpful to their own way of thinking.
It must be remembered however, that any effort to imagine a picture which is unnatural, will produce an abnormal reaction in the automatic functioning of the mechanism of vision.

There are many objects which will serve as the subject of such practices as I have described. Some of these will be suggested in another chapter. But the life-long familiarity of the mind with letters, and the fact that the mind is working with them, and dependent upon them all day long, are reasons why they facilitate, better perhaps than any other objective opportunity, whatever effort is being made to encourage the mechanism of vision to correct the dysfunctions which may be present, and to insist upon the recovery of normal sight.

CHAPTER XXIII

RELAXATION

THE word "Relaxation" is much in evidence in these later days. Often it is used in earnest, but more commonly as a by word or a jest. Even a very little reading produces the consciousness that different writers have varying concepts of what it is, and how it may be produced. A medical dictionary says that relaxation is "a lessening of tension." The same book defines tension as "The condition of being stretched or strained." Again it speaks of "intra-ocular tension," for instance, as a normal condition. It defines the word Tense, as "Drawn tight; rigid." There is a difference therefore, between tense and tension, in that book. Commonly when a layman speaks of "tension", as it applies to the human body, he means a tenseness which is of the nature of the "Drawn tight; rigid" condition—not the "tension" which may be a normal condition. But dealing with such terse and technical definitions does not explain even as much as we ourselves know about the condition called "tension" because all of us have experienced the feeling of tension, as we also have experienced the feeling of relaxation. In Webster's Dictionary, tension is defined as "… straining or tensing; stretched to stiffness." And "Figuratively: extreme strain of mind;-as, the tension of suspense." It is easy to explain the condition of a tense muscle. How can a tense condition of the mind be explained? Relaxation is defined as "… abatement or remission, as of, tension …"

In short, the tension we are discussing is an improper or abnormal condition; the relaxation we are discussing is not an abnormal weakness, but is the proper condition, or what the doctors call normal. To remember this is vital to a comprehension of the purpose of this endeavor, and a clear understanding of the mechanism of the technique. It is necessary only to release a function from the domination of an unnatural constraint; to encourage it to act in the manner which is in its power, ready at command. Much has been written about the process of relaxation, and the different ways in which it can be carried out. This book is concerned only with the method and the special techniques discovered and taught by Dr. Bates. To make it clear, I will cite some established facts which support the explanations he has given of his own work.

Relaxation does not necessarily mean rest, which is physiological; but it certainly does involve psychological reactions. To correct abnormal function, it is necessary to utilize the **power of autosuggestion**. Those who succeed in this endeavor, do so because their minds accept and act upon the given suggestion. This means that in the conscious mind there is a feeling which acts as an order to the "unconscious" mechanism, of which the conscious mind is unaware. This is the process, referred to before, which has been described by a famous biologist as the relationship which exists between psychological and physiological processes. These relations are real, but their exact nature is unknown. They are of profound significance. They prove the objective importance of the spiritual activities which that biologist believes the research workers have failed to study. It is his belief that a knowledge of these processes will open a new world to the race.

The method of Dr. Bates is founded upon this established principle of conduct. It is of the same nature as procedures long used by psychologists and now being used by psychiatrists. It is an endeavor to divert some central control function from the abnormal habit which it has developed, and occupy itself in performing in its inherent normal manner. Such Procedures are in principle very simple. They are in common use in daily life by thoughtful people, consciously or unconsciously. One often sees some interested party trying to meet and offset the various kinds of abnormal central control reactions.

Perhaps it will help, in some measure, to make clear the factors involved in the Bates method, if we consider the theories underlying the ideas and the methods of approach of other workers in this field. One writer on the subject of relaxation, has analyzed and commented so frankly upon his own conception of the knowledge of other medical men concerning it, and their methods in treatment, that his exposition may be taken as an illustration of the possible explanation of the mechanism involved.

Dr. Weir-Mitchell was one of the leaders in medical practice in the latter part of the last century. He developed a system of rest, and relaxation, and special diet, which resulted in the recovery of normal health by debilitated patients who could not be cured in any other way. The before-mentioned writer's criticism of the work of Dr. Weir-Mitchell, and those medical men who followed his successful method, is that in their work there was a strange neglect of the underlying physiology. He makes a further comment, which is a truth well known to medical men, although he apparently thinks that it is not. That truth is, that a patient may be "relaxed" in the popular sense, or in what the above writer calls the sense of Dr. Weir-Mitchell, and may still remain tense in certain parts. The condition called eye-strain is a typical and quite prevalent illustration of what he refers to. That writer also asserts that laymen, and even neurologists, mistakenly believe that rest, change of scene, physical culture or various pleasures, may mean the same thing as relaxation.

That writer further maintains that in his own specific method of securing what he calls progressive relaxation, no suggestion is used. He claims that he trains the patient to use his own initiative. He calls his system a nervous re-education. His work involves the patient in an intricate and complicated experience and training, requiring a great deal of time and instruction. There must be developed a consciousness of the conditions of the various muscles of the body, and a trained judgment, able to estimate and control tension and relaxation. He claims that this education of the patient will ultimately develop into a trained condition of the muscles, in which they will automatically be kept in a correct state of relaxation. They will be managed by an automatic supervision of the central control, but there will be what is called an unconsciousness, or unawareness, of the process. He is confident that the condition which he describes may become permanent, and the patient can sustain a continual condition of normal relaxation. I believe that this is a fair description of that system, and full enough to make it clear. I offer it as a contrast to the method of Dr. Bates. I believe that a deliberate consideration of the technique and practice of such a method will help a patient to understand the mechanism of the method of Dr. Bates, which method is simple and direct, and free from such an intensive multiplication of intricate detail. It deals directly with the central control, by suggestion and autosuggestion, and is readily available, at any time and in an instant. It is in keeping with the principles of the work of medical men who are correcting and curing the different abnormal nerve tension conditions.

The special aim of this chapter is to make as clear as possible the meaning of the word "relaxation" as it applies to the mechanism of vision, and how the method of Dr. Bates functions in securing that specific condition.

The writer quoted above describes one of the effects which his method produces as a certain toneless appearance of the eyelids, in which they do not wink during a prolonged period, and there is no motion of the eyeball. Such a condition, artificially secured, is a direct interference with the normal automatic function of both the eyelid and the eyeball. Both of them, when normal, are in constant, automatic motion, of which there is no awareness in a normal individual. He describes a technique by which he teaches what he calls partial ocular relaxation. The patient is taught to stare, with open eyes, and let the eyes go so that they are not looking in any direction, but develop what that writer calls an extreme degree of relaxation. This extreme relaxation of the eyes, he writes, is soon terminated by a burning sensation, due to absence of normal winking, lack of eye movement and an unnatural dryness of the eyes. The patient is then directed to permit his eyes to wander about to a slight degree, and not to relax them so extremely. Winking (blinking and shifting) follows, discomfort disappears and a relative rest is secured. The conclusion of that writer's description of this specific relaxation of the eyes, is a warning, which he thinks may be necessary, that this proceeding of his represents no attempt to help the patient to throw away his glasses. He then proceeds to put Dr. Bates in his "dog house", along with Dr. Weir-Mitchell and the psychologists who apparently do not understand his conception of the physiology and the psychology of relaxation-and probably could not understand why the procedure he has just described is not what most

psychologists would call technical psychological suggestion. The above method of relaxation that resulted in eye discomfort is not the normal, perfect relaxation as Dr. Bates describes. Normal, perfect relaxation allows the eyes to move, blink, and is very comfortable.

The method described by the writer quoted above, involves an elaborate and difficult and extended course of nervous re-education. The patient must learn to localize tensions, when they occur during nervous irritability and excitement, and to relax them away. He must be trained to use his own initiative in this intricate and involved process.

The method of Dr. Bates is not an unproved theory, open to a mere academic discussion, or to be condemned as unwarranted and incorrect, and dismissed by the simple say-so of somebody's personal opinion. During twenty-five years of practical use, the value and power of this theory has been demonstrated. It is a simple method, which is founded on established principles in daily use by psychologists and psychiatrists. It has never been challenged, except by such unwarranted assertions as the one quoted above—merely unsupported, incredulous personal opinion.

By the method of Dr. Bates, relaxation is secured by directly influencing the central control which gives orders to every function in the body, and determines whether the conduct of those functions is to be normal or abnormal. It does not involve an argument with that central control. It is an initiative of the patient which constrains abnormal tension at its source, and diverts the attention of the controlling force, so that the organism is absorbed in some specific contemplation. This has the effect of displacing the improper functioning. The tension is thus removed, and the normal function asserts itself—that is relaxation.

Suggestion is defined as - "The presentation of an idea, especially indirectly, as through association of ideas; a bringing before the mind for consideration, action, solution, or the like."

Psychological suggestion is defined as: "The action of one idea upon another, resulting in the connected appearance in consciousness, as in the processes of association. The entrance into the mind of an idea or intimation, originated by some external fact or word, which tends to produce an automatic response or reaction."

In the medical dictionary, autosuggestion is defined as: "The spontaneous occurrence to the mind of ideas derived from impressions received in the hypnotic state. Also the peculiar mental state often occurring after accidents, in which suggestions are easily received, so that the slightest injury to a part induces an hysterical paralysis or other disability. The latter state is also called traumatic suggestion."

In Webster's dictionary, autosuggestion is defined as: "Self-suggestion, as distinguished from suggestion coming from another. Autosuggestion is characteristic of certain mental conditions in which expectant belief tends to produce disturbances of function of one or more organs."

It will be noted that the medical dictionary confines its explanation to a hypnotic autosuggestion. It states specifically however, that the spontaneous occurrence in the mind of the idea is derived from impressions received. **It also states that suggestions can influence the mind when it is in the peculiar mental state often occurring after accidents, and can produce an hysterical paralysis or other disabilities. (Unclear Vision, Wandering eye...)**

Webster's dictionary makes the distinction that an autosuggestion does not come from another. It then goes on to say that the autosuggestion may be a characteristic of certain mental conditions.

Both of the dictionaries explain that an autosuggestion has the power "to produce disturbances of function of one or more organs, hysterical paralysis or other disability." It does not seem to have occurred to either of them that the same influence might he used to correct the said "functional disturbances, hysterical paralysis or other disability." But the medical profession knows that the mental conditions which both of the dictionaries describe, have been deliberately produced, and have been used by medical men for long years. They are being used to counteract and correct the described "disturbances of function of one or more organs, hysterical paralysis and other disability." It is well known in the medical profession that in certain cases there is an actual hysterical paralysis, and an actual disturbance of function, which disappears when a damage suit is decided. Some of those cases could not be cured in any other way. Some of them are cured when the suspense is ended, even when the decision is a disappointment. The mental condition which produced the dysfunction, is displaced by the new mental attitude, and the result is a different reaction, which permits the return of normal function.

May I diverge for a specific purpose? **Westinghouse**, whose genius devised the airbrake which is used on trains all over the world, was prompted by an autosuggestion when a boy. The train he was traveling on was stopped. Two freight trains had had a head-on collision on the track. It was explained to him that both engineers had seen the impending collision, but there had not been time for the brakemen to climb from car to car and put on by hand, the separate brakes on each car. The idea which was aroused in his mind, was that the engineer should have at his control an automatic brake which would act on all the cars at the same instant. His efforts to devise an automatic mechanical brake, or a brake worked by steam, proved to him that he must find something else. One day he read that the drills used to burrow the tunnels in the Swiss Alps were operated by the power of compressed air.

His genius told him that this would suit his purpose. His father was an inventor. But nothing that young Westinghouse said, to his father, or to anyone else, aroused an autosuggestion kindred to the one that was dominating his own mind. Commodore

Vanderbilt, himself an executive genius, declared: "Young man, I have no time for fools." Westinghouse finally secured the money to equip one train with brakes operated by compressed air. The first time they were used on a passenger train, the train stopped so suddenly that the people were thrown from their seats.

Besides the illustration here of the operation of an autosuggestion, there occurs to me what seems like a fair analogy. The great mass of those who are wearing spectacles, are analogous to the trains that had to get along with hand brakes. Most of them would be helpless without the artificial device which they are using instead of using their own eyes—just as the engineer was helplessly dependent upon the separate brakes on each different car in the train.

Autosuggestion is a mental reaction which is in constant operation. Generally the process goes on entirely outside of our own awareness. It is "Why We Behave Like Human Beings." It has been expressed differently in the words, "The highest intellectual function is simply a response to stimuli." Unconsciously we react to something in our environment, and the result is a decision formulated in our consciousness. When that happens, it is called autosuggestion. Coué explained clearly that most of the suggestions constantly being received from our environment are simply merged into our mentality, and produce no apparent specific reaction. In order to influence the current automatic mental conduct, it is necessary to make a specific impression on the mind, strong enough to modify its behavior.

This is accomplished by the method of Dr. Bates, when the condition of eyestrain is relieved. The dysfunction has been replaced by a normal function, because a strong enough impression has been made on the mind to prevent the continuance of the wrong *habit* that was present. The whole includes the parts. When the mind has been relaxed, in relieving eyestrain, every other part and function of the body is relaxed also.

In a previous chapter, there is a reference to a report presented to a scientific association, signed by four medical practitioners of high standing. They had cured one of their number of a gastric ulcer, uncured by seventeen years of medical treatment. The cure was accomplished by suggestion. They had then cured thirty-two other cases by the same means. The treatment used was similar to the practices of the Bates method.

In my own practice, I have records of the cure of two cases of epilepsy, each of over five years' standing, and both have been free from attacks for over a year now. They were both using luminal continuously, when they came, and having constant attacks. The luminal was discontinued, at once and permanently. The treatment was principally relaxation with the use of phonograph music and directed mental attitudes in the office, with similar practices regularly at home. The same success was secured in several cases of extreme nervous disturbances, and one case of extreme chronic **stuttering**. The point here is, that these different abnormal conditions of the nervous system were cured by relaxing the tension which was present in the mind, and by the methods used for the cure of eyestrain.

It is not possible to correct any abnormal function by individual effort without enlisting the co-operation of the control center in the brain. We cannot direct the functions of our organisms. We do not even understand their mechanisms. **We can secure results only by influencing the conduct of the control center through the impulses of our emotions.** For the purpose of securing relaxation of the tension commonly called eyestrain, the emotion necessary is an earnest desire for normal vision, and a confidence in the method suggested. With that conviction in the mind, we have begun the autosuggestion which will effect the realization of our desire.

Relaxation is not to be secured by demanding it. In other words, it is not possible to make an astigmatic eye see clearly by simply ordering it to do so. In practice, such an effort increases the dysfunction. By trying to force the eye to see, a conflict is introduced between the will and the automatic mechanism which the will does not even understand. One does not expect to slow the fast beating of the heart by giving it an order. A thoughtful person does not try to relax and quiet an excited individual by simply commanding silence. We endeavor to divert and persuade these abnormal reactions. The practices which have been described in previous chapters serve to relax the mind in just the same manner—by securing the compliance, and the spontaneous support, of the mechanism which has been at fault.

Emile Coué had success beyond all others in teaching those who were troubled by functional disturbances to cure themselves. His work was founded on the realization that our thoughts control our will. He may have learned it from Proverbs, where it is written: "As he thinketh in his heart, so is he." Wherefore, if the thought in our mind is that we cannot see, our will cannot overcome that domination. **Coué taught his patients to replace wrong thoughts with right thoughts.** Instead of being sure that the ailment could not get well, he persuaded their minds to believe that there was power in their bodies to correct the fault. From various sources the knowledge is accumulating, that disordered functions are consequent upon some lack in the mind of that normal conduct which is what Dr. Bates meant, and what psychologists mean, when they use the word relaxation.

There is in psychology and in physiology, just as truly as there is in the spiritual life, a state of mind which has been called "the peace that passeth all understanding." We can possess this peace, even though our conscious minds do not know how our subconscious minds can give it to us. If we want it earnestly, we can surely have it. **With that perfect relaxation, there is always perfect vision.** The millions around us who have constantly fine sight, owe it to their relaxation. In previous chapters I have described specific practices which will enable those who are interested, to learn how to relax their minds, and relieve the eyestrain that is disturbing their vision. They must have the individual initiative, and having put their hand to the plow, they must work with that faith, without which man accomplishes nothing. Those who carry on that way, always succeed. I know this, because I have been over that road myself; and I have seen in my work many wonderful cases, which were not miracles, but were manifestations of the power of the nature that is in us, and is ready to work.

CHAPTER XXIV

ILLUSIONS OF VISION

EYES with normal sight have different illusions, as well as eyes with abnormal sight. An illusion is not caused by the same strain that causes an error of refraction. To imagine that one is looking at something which has no existence is different essentially from a distortion of the rays of light received on the lens. To be unable, at any time, to distinguish between two colors, differs from a reaction which makes a black letter seem some other color, and perhaps a color that is quite variable. There are illusions as to size and form; and these may relate only to the object when it is at various distances from the eye. These illusions may be influenced by environment, or by circumstances. There are illusions as to numbers, two or several objects being seen when only one is present; and the relative arrangements may be different. The illusions may vary when only one eye is used; and differ with one eye from the illusion seen with the other. Letters in words may change places, and the changes may vary. These actual illusions are not errors in refraction, but are caused by some abnormal function in the visual center in the brain—in other words, they are conceived by the mind.

An unique illustration of these illusions is the experience of some persons when practicing the eyes on the special cards made for use with the stereoscope. There is one card with the letters **O N** on the left half of the card, and the letters **N E** on the right half. It has happened with several patients that with both eyes open, they have imagined that they saw the letters **N E** with the left eye, and the letters **O N** with the right eye. They could not possibly have seen the letters that way. The transposition therefore must have been made in the mind.

It must have been imagined. It was distinctly an illusion. That is not hard to realize; although, of course, it cannot be explained. In every case the patient has succeeded in fusing the letters, so that **one letter N forms a perfect union with the other N**, so there appears to be only one **N**, and when thus fused they see the word **ONE.** This is accomplished by relaxing the abnormal tension in the mind, so that the fusion function works normally. (Same as the 'Three Cups' Exercise on the Internet)

ON **NE**

This fusion is done by placing the index finger upright, between the left and right eyes, eye level, just below the letters and looking at the finger, moving it closer and farther from the eyes until the two **N**'s merge into one **N** and the word **ONE** appears. Then, remove the finger and hold the fusion/maintain the word **ONE**.
This exercise must not be overdone. It can strain the mind, eyes and eye muscles. Notice that the eyes are not truly looking at the N's or the word ONE. The eyes are focusing between the letters on the white page and at a distance closer to the eyes than the page. This is not normal eye function to see clear. It is not central fixation and normal eye movement is disrupted. The eyes, vision are not merged, fused directly on the object of visual attention and are not fused, converged on/at the correct distance where the object is.
Bates teachers prefer to have the student practice plain old shifting, central fixation directly on the object: practicing on objects at close, middle, far distances as the normal eyes do and allow fusion, merging to occur normally when looking at a object.

Floating Specks

There is an interesting variety of illusion which is quite common. Many explanations are given for it. The technical Latin name for the condition means **"flying flies."** There seem to be floating specks which are generally dark or black, but may look like air bubbles, or have different colors, and often are connected in chains. They generally appear to be in motion, but do not change their positions. They seem to be going, but do not go. They are present more or less constantly in the different kinds of abnormal vision; but may be present at times when the eyes have normal sight.

These strange things are only illusions, and are caused by some tension in the mind. I can speak personally on this subject, because I was troubled with them for years. They were quite variable, in their presence and absence, and in their conduct. Sometimes I have studied them, with my eyes closed, and it has happened often that in the midst of my observations they would simply disappear. I soon observed that they were not accompanied by any symptoms except the interference with vision, and I realized early that they must be some kind of a nervous disturbance.

Patients have described the same experience. I asked one patient, a woman of forty, who came with a chronic inflammation of the iris—a condition which was very painful and made her almost blind—if she had such specks in her eyes. She said: "Yes, I have flocks of them in both eyes, and there are some big grandfathers among them that seem to shut out the light." The iritis was cured by the Bates Treatments, and the specks disappeared also. My own specks still appear sometimes, for short periods only, but are never annoying, as they used to be.

There are many differing illusions of color. Looking at a black or white or colored surface, or at a strong light, as a 300 watt or a 1000 watt electric light, and then closing the eyes, one will see various colored after-images, and generally these images will change colors. I have looked into the noonday sun and seen most interesting after-images—streaks of brilliant colors, generally perpendicular, followed by vague blocks of varying colors. I have found that my sight is always improved in a few minutes, after the effects of the stimulation have subsided, so that I can see small letters at a greater distance. Looking at the sun, until one becomes accustomed to it, may cause an unpleasant reaction, and even lower the vision for a time. These after-effects are all illusions. They are not seen by the eyes, because the eyes are closed. They are caused by some tension in the mind—the same as abnormal reactions in other parts of the nervous system, which are quite common, are known to be caused by tension. Since most of these illusions are apparent when the eyes are closed, it is obvious that they are produced in the mind, in the same way

that an illusion appears when the eye is open, and seems to see an object which is not present. Various illusions can be produced by deliberate efforts of straining the eyes. It is worth while to make such an experiment, simply staring hard, for instance, at a short line of heavy large letters. The distinct benefit in such a procedure is that it impresses on the mind a new knowledge of the mechanism of one's function of vision, and is helpful in working out the cure.

CHAPTER XXV

TECHNIQUES

IN the different special chapters various techniques have been described. This chapter is intended as a summary, or review. It is first, a reminder that all of the practices are only expedients to secure the relaxation which will not come unless the mind is wholly interested in some objective mental occupation. This very simple explanation is not easy to realize at first. I have seen this difficulty many times in the conduct of patients quite in earnest. They believe they are carrying out the directions perfectly, when actually their mechanical obedience is leaving out the spirit and the mental co-operation without which the visual center will not respond. Much can be accomplished by simply blinking at an ink spot on the thumbnail, with a soft feeling in the muscles, if the mind is completely occupied with that proceeding. In my own beginning, I blinked at the big C on the Snellen Card very earnestly, for as much as an hour, for several days, before I was favored with any after-image. I was conscious of my eyes, and full of questions and expectations. It was only when I finally lost all self-consciousness in the contemplation of a darker spot on the C, which I made believe was there, that the C stayed with me when I closed my eyes, and my mind showed me the most vivid letter I had ever seen. I afterward realized that I had been thinking of statements in Dr. Bates' book, and considering personal questions, when I thought my mind was entirely occupied with the technique I was practicing. There must be a loss of all personal feeling just as one has no self consciousness when one is intensely absorbed in any consideration which is strong enough to keep out of the mind any other thought. Bates teachers state to never stare at an object, do not keep the eyes immobile on one point. The eyes must move, shift to function normally, for clear vision. The normal eye will continue to shift point to point even when looking at a small object or one small part of an object. Let the eyes shift. When the eyes blinks, it causes the eyes to move, shift automatically. This is beneficial.

Having chosen a practice which seems attractive, if it is properly carried out, the longer one can continue it without its becoming tiresome, the more one will find that the degree of improvement increases as the time of practice is extended. This is true of every practice. **The man Dr. Bates wrote about, who practiced for hours continuously, and only stopped to sleep, was permanently relieved in thirty-six hours of several abnormal conditions of vision, including cataracts in both eyes.** If one continues to deliberate thoughtfully upon any proposition, the mind finds itself being assisted by new ideas on the subject. The unconscious part of the mind is joining the endeavor, and giving aid from its storehouse of accumulated impressions. One who blinks long enough, in such an impersonal and objective way, at a small black period underneath the big C, will find the vividness of the after-images increasing and lasting longer in accordance with the time spent on the period.
Blink and shift on the period.

If the interest in such an endeavor is sufficient to eliminate the consciousness of the eyes themselves, keeping the mind absorbed in the objective procedure of carrying out the practice, an hour spent on any attractive technique will pass unnoticed. A business man of standing came to me because the glasses he had been given did not suit his eyes, and the only encouragement he was offered was the reply that he must be patient until his eyes became accustomed to them. When I asked him how much time he could spare each day for practice, he did not tell me what a busy man he was. He realized that the glasses were not helping him, and was determined to give this entirely different treatment a fair trial. He said he would give an hour before leaving home in the morning, an hour at eleven, another at four in his office, and an hour every evening.

He began by discarding his artificial lenses at once. The attitude of his conscious mind pushed aside things he considered of less importance to him than the helpless condition of his eyes, and he secured a prompt recovery.

There are few who cannot give one or two hours daily to the proper practice of some techniques that seem the most attractive to them. The positive idea of denying some amusement for an evening, and getting up early after a good night's sleep, in order to use that time for the recovery of fine normal vision, of itself creates new reactions in that part of the brain which has charge of the conduct of the eyes. Mental reactions are a dominating influence over the functions of the body. That established realization is a guiding factor today in the treatment of every other functional and organic disorder in the body. Why is it ignored and neglected in the treatment of the faltering functions of the eyes?
Modern Bates Teachers have the student practice Correct Vision Habits (normal eye function): shifting, central fixation, blinking, correct breathing…all the time as a easy, automatic habit. With practice normal eye functions occur on their own, without practicing.

The more often an extended period of time is given in exclusive attention to the care of the eyes, the more prompt and more surprising will be the response that the mechanism of vision will give to that attention. We are being told now, from every kind of loud speaker, that our eyes are our most precious possession, and we should take good care of them. That is true. Can anyone imagine what the result would be if the conditions were reversed? Suppose the public was being reminded, from every direction, that when artificial lenses are fitted to the eyes, it rarely happens that the eyes are ever relieved of them. Being reminded, also, that the general experience is a progressive weakening of vision, with the imposition of stronger glasses, and an increasing helplessness of the eyes without the assistance of spectacles. It is being too optimistic to imagine that the public would gradually

come to realize that taking good care of the eyes would be to treat them as we are treating the other functions of the body; and that doing nothing to correct the faltering in the mechanism of vision is not taking good care of them?

It is not necessary, however, to give long periods to practice. Even short periods are effective. Many of the cases that I have treated with success have been so occupied that they were obliged to take time out, from their work, in short periods. Personally, I found that an hour in the morning was always possible, and that period made such a lasting impression on my mind, that the subject was constantly recalled to my attention during the day. The mere conscious mindfulness, recurring at intervals, was an indication of an under-current in my visual center which was attentive and interested, and so **I was really doing Bates work all day long.** It is possible so to be mindful of the endeavor, and even to use the incidents of daily occupation as expedients in the practice of the Bates method.

Children readily grasp the idea of looking at the letters and figures on the black-board in the proper way. They make a game of not trying to see them—as I have shown them how to look at the letters on the **Snellen Test Card** in my office. **They have found that a letter which they could not see at first, suddenly pops into view after they have practiced for a few minutes the technique of looking directly at it for only an instant, and closing their eyes when they do not see it. Sometimes I tell them the letter and have them draw it mentally with the eyes closed.** They often see a letter in a few minutes of the above practice even when they do not know which letter it is. One boy of seven found letters that way, without being told the letter—in school he had not been taught the names of letters. When he pulled a D out of the atmosphere, he called it "Daddy", because that was the only name he knew for it. So I drew a big M and S and B for him, because he knew Mama and Sister and Boy. Then we taught him the names of the letters on the Snellen Card, just so that we could use them.

Children have practiced that way with the letters on the board, and have blinked at other points in the room—a pupil's ear, a corner of the window pane, a spot on the wall. But above all, they learn quickly, when they are interested, to look softly at everything, never trying to see, and it helps them to do this when they have learned to be conscious of a feeling of soft relaxation in the muscles on the body. They are instructed to practice looking at distant objects when out of doors. It is explained that their eyes are resting when looking at any object in the distance, even better, perhaps, when quite far away, if they just look at it and pay attention to it, but have no idea of trying to distinguish it. They are taught to develop the habit of occupying the mind, when walking on the street or when at leisure indoors, with the practice of **looking deliberately from one specific small spot to another and ignoring every other point, and observing each spot for only an instant.** (Shifting and Central Fixation) **They are reminded to blink softly, without any timed regularity, whenever they think of it, especially when walking on the street. Such habits help to relax the mind and the eyes while they are being practiced.** They also serve to sustain an undercurrent of association of ideas which keeps the consciousness of the purpose and the method in mind, more or less constantly.
Blinked – Blink and shift on the object.

With adults the same practices can be used, in the office as well as at home. The time on the way to work, and on the way home, can also be used for these practices. The relaxation produced in this way adds to mental efficiency, and is a fine preparation for the work of the day, and the best kind of a rest after the day's work. This is not merely a theory. I could refer to different cases in which exactly those effects were secured. In a case of **severe nervous indigestion**, a business man used the morning and evening hours in that way and this served to relieve him, for two years now, of a condition uncured during eighteen months while he was under the care of three physicians. Where diet and medicine and hospitalization failed to relieve the subconscious tension which disturbed the stomach function, the use of his own mind on the subject effected a cure. A badly near-sighted girl, who had very little time except on her way to and from work, not only was enabled to discard her spectacles, but improved in general health from a condition of nervous unrest to a quiet, normal, and enthusiastic mental attitude.

Some are impatient about such use of the common incidents of daily life. They feel that only strange and mysterious procedures can be of any value in treating abnormal conditions. In several previous chapters, I have described specific practices that are directed by Dr. Bates, and that I have learned and used myself. I will add more such practices in this chapter. But my own experience has been, that in most cases those specific practices serve only as a beginning of improvement. Like any other mental or physical mechanism, the improvement in vision must be increased and developed, by constant repetition and consciously continuing until it becomes automatic. The suggestions above are offered with this idea in mind. I have found that the patients who carry them out are the ones who succeed; and those who simply interrupt the customary mechanical conduct of the day for an occasional period, and forget the Bates work entirely when they are not actually practicing, secure improvement very slowly, or even lose patience and interest and so fail to succeed.

In the chapters on **Palming, the Sun and the Eye, Shifting and Swinging, The Snellen Card,** and elsewhere in the book, I have already described specific practices suggested. It may be well to refer again to some of those suggestions. I trust it will not arouse any impatient reaction, on the part of any readers, when I continue to remind them of the purpose and the mechanism involved. In any field of mental effort, repetition is an acknowledged essential of acquisition.

Palming is perhaps the simplest and most effective of the techniques suggested. It rarely gives results at first. How many correct a bad habit at once? The developed misconduct of the visual center is much more inaccessible than the habit of talking when one should listen, or arguing on a subject upon which one is not informed, and such trivial misbehaviors. But how many are cured at once of such a habit when they realize it and decide to desist? Success in such an endeavor depends upon the degree of earnestness in the conscious mind. The proofs demonstrated as the result of Palming generally begin to appear very soon in any earnest effort. But if one will be fair enough to read the chapter twice before undertaking any effort, the first half hour, or hour, of practice will give more satisfying results; and if one will take the trouble to read it again before starting the next several practices with the techniques, that reader will very soon have most gratifying proofs of improved vision, and will develop relaxation, and have a warm appreciation of the labor and gift of Dr. Bates.

The sun is perhaps second in importance. The eye belongs to the sun. It has developed under the kindly benefits of the sun. It would be worthless without the sun. All life depends upon the sun. Why then is it not to be expected that the sun will help the eye, when the eye needs help, since its help is sought by physicians in every other functional or organic abnormal condition of the human system?

Not to repeat what is already written, I feel that it is worth while to remind the reader that plenty of light is like plenty of fresh air. Many must depend most of the time upon artificial light. A number who have discarded their glasses, always read now with a 300-watt light. Some have the idea that such a practice would make it harder to read with a poor light. On the contrary, **those who do use the 300-watt light have found that their vision has improved so much that they can see better with poor light than they could before**; just as the man who has fresh outdoor air all day, is better prepared to withstand poor air than the man who spends his days in a poorly-ventilated office, and has very little fresh air during his sleep. It is a good practice to blink into a 300-watt light and watch the interesting after-images that come when the eyes are closed for a few seconds after blinking for half a minute. If one will occupy the mind entirely in contemplating deliberately the different tiny spots on the wires in the bulb, and then in considering carefully the varying after-images with an active interest, there will develop an immediate temporary improvement in vision. This is an excellent half-hour practice for general use.
Shift, move the eyes when looking at the light.

Although there is much discussion now about stronger bulbs, it is difficult to get shades that do not direct the light rays so that one is obliged to sit directly under the lamp in order to get the full value of the light. When a lamp is placed in the middle of a table, or behind a davenport, with the slant of most shades, the rays of light are directed into so nearly a perpendicular angle, that unless the book is placed on the table, or one sits sidewise close to the back of the davenport, the book will be outside the margin of the shade.

For the purposes of Dr. Bates' work I am in the habit of suggesting that one use a **300-watt light**, with a good opaque reflector, so hinged that the rays can be directed, like a spot light, onto the object being observed. This gives a diffused light where it is needed, when it is needed, for the special purpose of the method. The light which is thrown up on the ceiling and reflected, may serve the purpose for which it is intended. In many tests I have demonstrated that the 200-watt ceiling light in my office, which is a clear bulb with a dull white reflector, does not suit my purpose of specific illumination. When a patient tests the sight on a Snellen Card at ten feet, using the office ceiling light, and then makes the same test with my 300-watt lamp, thrown on the card from an opaque reflector, the patient is almost always able to read, for instance, the 30—or the 20-foot line, quite easily, when with the office ceiling light the patient could hardly read the 50-foot line.

The use of the Snellen Test Card has proved to be a very helpful practice for patients of all ages. In the public schools of New York City and other cities, during the years in which the Snellen Card was allowed to hang in the classrooms, the pupils were always interested in it, and their vision was improved, according to periodic tests, and the testimony of teachers. Some of the teachers, by the use of the Snellen Card, discarded their own spectacles. This is according to the published specific testimony of Dr. Bates.

The Snellen Card should always be used according to the established principles of central fixation and shifting. The attention must be restricted to selected small spots, as described in detail in this book. The spot being observed must be easy to see, and all tension, or trying to see, must be deliberately eliminated from the practice.

The specific directions given in the chapter on the Snellen card will serve as suggestions for other practices of the same nature, which will occur to the imagination of the patient. It is a worth-while plan to practice with the card every day, even if only to blink as directed at every letter once a day—perhaps half the lines at one time, and the remainder at another sitting.

A patient of mine in Berkeley, a well-known woman, who discarded her own glasses with only a little help from me, talked with a Vassar graduate who went to Dr. Bates because her near-sighted eyes were getting worse. After one hour in his office in New York City, that Vassar girl went out and walked up and down Sixth Avenue for two hours. When she began she could not read one of the signs on the opposite side of the street. At the end of the two hours she was reading all of them. She had what I have learned to think of as an attitude of mind—an abiding confidence had been developed by that one hour of instruction. When I read the book of Dr. Bates I realized the simple, proved truth of his claim. Anything and everything in it confirmed my experience with my own eyes. It was the first reasonable explanation I had found for the variable conduct of my own eyes. My eyes would behave or misbehave regardless of whether or not I was wearing glasses. They had done that for many years. I did not accomplish my own cure in two hours, nor in two weeks. But I had a foundation of absolute confidence, based on experience and demonstrated facts. That young college woman began by wanting her own eyes. She had a responsive mind. She had confidence in herself, she knew that one learns to swim in the water, and learns to dance by dancing, and learns to play a violin by playing it, and she was a woman of action, so she promptly tested out her new discovery, and she won. The technique which cured her high degree of myopia was simply looking at signs which she could not see, one after another, with an attitude of mind which was confident, and determined to succeed, and persisted until the visual center responded to the demand she made upon it.

A patient of mine made a habit of looking for numbers on every house. She would walk half an hour, and not overlook a house. She never made an effort to see a number. That thought which she carried in her mind aroused her visual center, so that very soon she was able to read any number without the least effort. In carrying out that practice, she learned the sensation, mentally, of having her eyes "relaxed at infinity"—just as the shopper is relaxed mentally when she also is "just looking"—and has no least feeling of constraint. If it is possible to look out over the housetops, that is an especially good opportunity—looking softly at the many distant points in the picture. I have spent half an hour looking and blinking at the evening star, on a clear dark night, and kept my mind on the star by wondering about the power that keeps those light waves flashing through the ether for a period of time that we cannot comprehend.

For nearer work there are many opportunities. A type writer keyboard is often at hand. With a spotlight on it, the eyes behind any opaque reflector, one can select a spot on any letter, and in a short period of alternate blinking and closing the eyes there will appear some interesting after-images. There are highly-colored pictures in magazines, and different colored letters. There are lead pencils and penholders of different colors, plain or with periods made on them with black ink—single periods or rows of periods. There are figures on wall paper, and on picture frames—large frames or small frames. There are the angles or the dots of squares or diamond shapes, of various colors, on linoleum. Even in daylight these spots are good to practice with, and with a strong light at night, especially a spot-light, they make excellent opportunities for interesting after-images, and are very effective in securing relaxation, and a certain improvement in vision.

It is not in a multiplicity of techniques nor in working with strange figures that one must look for the best results. The familiar objects of daily life have a value due to the advantage of long acquaintance. Results are dependent upon the degree of interest and confidence, and the thoughtfulness with which the practices are carried out. The power is in the eyes. It is only necessary to have an earnest purpose, and a deliberate comprehension of the meaning of the directions, and a faithful devotion to the purpose. This has been proved for many years, and in thousands of cases. If these qualities are not in the endeavor, it is not reasonable to expect success, and it is wiser not to undertake it. It has been my experience, however, that almost all of those who have sufficient interest to undertake this work are rewarded with success.

CHAPTER XXVI

ASTIGMATISM

ASTIGMATISM is the commonest of the dysfunctions of vision. Probably almost everyone has more or less of this fault. The symptoms are often very different. It generally accompanies some other abnormal condition of the eyes. Of itself it will produce blurring of the image, even to extremeness of failure to see. It produces the sense of straining in the eyes, with perhaps pain in the eyes, and in the head, and may be the cause of reflex nervous disturbances. The symptoms may be quite variable in the same individual. Sometimes, in mild cases, it is not always present; and it may be that certain specific situations apparently cause the onset of the condition; or conversely, they may serve to relieve it.

Astigmatism is defined as a refractive condition of the eye in which the parallel rays falling upon it are not at any spot brought to a common focus. Instead of a single point, they are spread into a diffused area on the retina. There are a number of types of this condition, which is referred to as an aberration. They are classified as latitudinal or longitudinal, regular or irregular, direct or inverse or oblique, simple or compound or mixed, myopic or hyperopic, and these classes are again compounded. These classifications are based upon an elaborate and meticulous study of the many various and complicated ways in which an astigmatic eye may, or may not, conduct itself. The variegated combinations of abnormal refraction which are described are all ascribed to one or two causes. The lens may be too near to, or too far from, the receiving screen, the retina; or the refracting surfaces of the eye, (that is, the covering of the anterior end of the eyeball, and the lens) are curved too much or curved too little. The surface covering also may have the correct curvature, but may be too dense or not dense enough. Astigmatism, it is stated, may be congenital or acquired. Modern Scientists state that astigmatism is caused by an abnormal, irregular shape of the eye, cornea, lens. Outer and inner eye muscle tension can cause this.

The vision of an astigmatic eye is not simply indistinct; it often presents different and remarkable peculiarities. Shapes may be changed, the parts of an object seen are not equally indistinct, the image seen may be multiplied, or distorted, or take forms which are actually illusions—inasmuch as they are misrepresentations. In short, impressions are registered on the conscious mind which can be accounted for only by the realization that the visual center itself is acting in an abnormal manner. The text books explain that the visual center may enter into the abnormal situation, when an object is not seen clearly, but often with the result that a further confusion is added. The imagination may try to correct a distorted image, and sometimes, in this way, a new dilemma is produced in the conflict between the insistence of the incorrectly refracted rays and the efforts of the memory and the imagination to register what those faculties believe to be the true image.

The above is perhaps a sufficient explanation, and enough of a technical description, of what occurs in astigmatism. To put the picture simply, it means that the eyeball normally should be perfectly round, and when it is not, a condition is present which is the cause of unequal refractive areas. The uneven external surface of the eyeball sends the light rays in wrong directions, and the result is very much like a photograph taken while the camera was moving.

Why does this happen? After reading many pages of erudite discussion, one finds his mind very much like his hand when he tries to hold water in it. The voluminous and exquisitely perfect descriptions of the manifold findings do not give any conclusive evidence of the cause, and do not offer any method for the correction of the abnormal condition. Such an abnormal condition is inherited, or it is acquired, early in life or late in life. The relief offered, consists in artificial lenses, with the frank admission that where the conditions are extreme, no relief need be expected from the lenses. Two strange ideas have been offered by named specialists, which propose to press the eyeball back into a round shape by devices for subjecting it to periodical external pressure. Very harmful treatment. Causes cornea, eye injury.

Out of the fog of confusion, it can be gathered that the round eyeball has changed its shape. The changes in shape are not constant, and the irregularity is itself irregular. In many cases the condition grows worse, in many cases it does not. In many severe cases the condition improves, even after many years. There are many cases where it varies, some to a remarkable extent,

better and worse. There are many cases in which it disappears—simply ceases from troubling—which, in medicine, is called a spontaneous cure.

The explanation of the cause which is given by Dr. Bates, accounts for all of these varieties and variations. There are six muscles fastened into the walls of the eyeball. When these muscles move with the perfect co-ordination which is their normal function, there is no astigmatism. **When they impose an abnormal, irregular, and uncoordinated pressure upon the eyeball, some parts of the surface are subjected to a greater or to a lesser compression than is normal. That causes the flatness in one meridian, and permits a fuller curve in another meridian. When the abnormal pressure is released the fault is corrected.** That seems so simple that in the text books it has been entirely overlooked. So was Newton's law, for a long time. When Dr. Bates conceived this explanation, and realized how it solved all the unanswered questions, he undertook the very simple procedure of testing out his theory by stimulating the external muscles of the eye in different animals, and cutting them, and reuniting them. His research experiments proved the truth of the new proposition which his wonderful mind had conceived. It is very easy to confirm his findings. Strangely enough, no other worker has yet tried to do this. That is often the history of a discovery. Some independent spirit is going to do it. The mills of the gods grind slowly. **The eye muscles in those cases act in an abnormal way, because they receive abnormal nerve impulses. There is an abnormal tension in the visual center.** It is possible to create, or to increase, an astigmatism, by voluntary effort. It has been done, and is a matter of record. It is a very simple matter to stare so hard at a point that the image of the object becomes blurred and distorted. Anyone can do this, and thereby demonstrate tension and astigmatism.

The remedy which Dr. Bates pointed out in his method, is just as simple as his explanation of the cause. Relax the abnormal tension in the control center in the brain. That occurs spontaneously when there is a spontaneous improvement or cure of the condition. There is a natural law involved. The same law controls tension reactions in other functions of the body. Psychologists and psychiatrists have for years been treating in that manner, conditions which are analogous. Why deprive the eyes of the same benefit? The method of Dr. Bates uses the same kind of treatment, with techniques that are especially suited to the mechanism of vision.

A patient of mine, when he came to me at twenty years of age, had been troubled from early childhood with a condition which he said was near-sightedness. Having satisfied myself that it really was astigmatism, principally because he could not fuse the simplest of the stereoscopic photographs, I showed him how to relax. He responded so promptly, that with one hour's treatment, he was fusing most of the stereoscopic pictures. He was confident, and in earnest, and I had him so thoroughly interested in the technique, that he forgot his eyes. He just kept looking softly at the pictures, with an absolute expectation, and his visual center was roused into an interest in the procedure, and a normal conduct of the eyes and the mind was the result. The normal conduct of the factors involved, which developed in one hour, after years of abnormal behavior, has continued now, without faltering, for six years. The young man is in evidence here in Berkeley. There are others on my record with corrections just as remarkable.

The set of stereoscopic pictures is made for the purpose of encouraging eyes which do not focus in a normal manner, to become interested in an objective way. The proper way to practice with them is to use only the plain glasses furnished with the stereoscope. There should be no effort to make the eyes fuse the two pictures into one. With the eyes blinking softly at the pictures as they are seen, the card should be moved slowly back and forth on the slide. The pictures will endeavor to fuse, no matter how imperfect the fusing powers of the eyes are, if the mind is attentive and not concerned. If necessary, it is helpful for the mind to be made to visualize what the picture is when correctly fused. Seeing a parrot perched quietly on nothing but air is not startling; nor looking at a cage hanging without any support. But when they are seen on the same card, the memory and the imagination soon become so conscious of "what is wrong with the picture" that the fusion center receives an impulse. If the mind strains, consciously, it hinders the automatic readjustment. If it waits confidently, and prevents any other thought from distracting a perfect attention, the co-operation of the powers of the mind and the fusion center will result in a perfect conception. This may occur promptly, or only after a series of trials. It is quite common for eyes with good vision to fail to fuse some pictures and succeed with others. The parrot, for instance, may go into the cage perfectly, and then move in and out, and possibly conclude by staying out.

The first essential in the effort to cure astigmatism is to impress the mind with the conviction that the misconduct of the eyes is due fundamentally to a disturbed mechanism. The muscles are getting improper orders. Because they are not working with normal co-ordination, the shape of the eyeball is more or less slightly altered. The conscious mind cannot give specific orders to these muscles. That mechanism is automatic,—and outside the awareness of the conscious mind. To combat the abnormal condition by seeking the help of an artificial device is to ignore the inherent functions of the mind. Education is a training of the physical, as well as the mental functions. **Madame Montessori developed a similar system of education for children with abnormal mental reactions. The practice of medicine has been using such systems constantly for years. Such a system is being used successfully to educate shriveled and helpless paralyzed muscles, so that in many cases the muscles recover their normal power.** In order to correct the dysfunction called astigmatism, one must take advantage of the same laws. It is no impediment to success that Dr. Bates was an original and independent pioneer in this work.

He was successful, and others are successful today. To simply deny this truth is not a scientific gesture. If one dares not undertake to test out the method, one should not obstruct, nor suppress knowledge of the facts.

If one will put out of the mind for a moment any actual experiences of failures, and proceed to carry out some of the expedients described in previous chapters, one will soon demonstrate the success which generally rewards the effort. **Palming**, thoughtfully and earnestly, but with the same impersonal alert interest that one gives to a favorite game, the mental relaxation which is the objective purpose of this practice, will impress a normal relaxed attitude upon the visual center, and there will be a distinct improvement in vision. This is not a theory any more than similar successes, in analogous fields of medical work, that are now established and constantly in evidence.

Proper following of the directions in the chapter on "The Sun and the Eye", will have an almost immediate effect that sometimes is astonishing. I have found, in several cases, that the treatment of the trunk or even a limb, with an infra-red ray lamp, has produced a fine specific improvement in vision, and relieved a blurring, because of the general relaxation produced.

Different techniques suit the various specific symptoms of individuals. Often it is sufficient to rely upon simple mental relaxation. The chapters upon "Memory" and "Imagination" describe suitable practices. There is often some degree of myopia, and special methods for treating that element are found in the chapter on "Near-sightedness".

My own custom is to demonstrate the specific difficulties apparent in the case under consideration. The commonest trouble is more or less blurring of letters or pictures. This always varies, and may occur only after considerable reading, or under unfavorable conditions of light or print.

It is a good practice to begin by closing the eyes and impressing the mind, for a few minutes, with the idea that there is a soft feeling in the muscles. It is easier to secure this feeling in separate muscles, one after the other. There is no difficulty in securing such a sensation, if the mind is controlled so that distracting ideas are not allowed to interfere. It is often better to keep all thoughts of the eyes out of the mind. But it may be helpful to think of the eyes, in a specific and positive way, as having a soft and heavy and restful feeling. If one has read the preceding chapters in this book, the knowledge of the method will be of the same value in the effort, as is any knowledge on any subject. The chapters should be read more than once.

Flashing Letters

An excellent general practice is with the Snellen Test Card of letters. The different ways of using the card have been described in a special chapter. To practice reading, when there has been blurring, or indistinctness, allow the eyes to flash open just long enough to see the first word, or perhaps only the first letter of a word at the beginning of a line. Do not allow the eyes to pay attention to more than that, and close the eyes instantly and note what was seen. If it was clear, flash the eyes at the next word the same way, and close them instantly. It often helps if the eyes are kept closed long enough between the flashes to recall some color that comes easily and rests the eyes. If the first word, or the first letter, is not clear, continue to practice on the first letter until it shows clearly. If not successful with this practice, instead of looking at the letter, look under the letter, at the spot of white paper. It is not necessary to stare to see a spot of white paper, and the eyes will relax. Keep recalling the fact that in order to see, it is only necessary for the eyes to remain passive, and allow the rays of light to do the work. That consciousness is very helpful in relaxing the tension which is causing the trouble. By looking at a letter, or a small word, for an instant only, and then closing the eyes for a few seconds, while the mind keeps all other thoughts out, it will very soon develop that the letters will be sharp and clear, and appear blacker than the other letters in that area. When one word has been cleared up so that it remains sharp and black, even when looked at for a good part of a second, it will be found that other words will readily be seen the same way. That is because the eyes are working better. It is worth while to be patient and insistent with one letter, or one word, until a satisfactory result is secured. A confident attitude of mind almost always accomplishes this in a few minutes.

Thin White Line

Another good practice is to begin at the left end of a line and allow the eye to travel across while looking only at the paper immediately underneath the print, blinking the eyes softly, and not trying to read the words. The value of this is the schooled effort of the mind not to try to see. The rays of light, at the same time, are reflected into the eyes, while they are relaxed. A more advanced practice of this technique is easily learned, and is generally very gratifying in results. While blinking softly, and directing the eyes from left to right, imagine, **make-believe, there is the finest thread of a line, whiter than the white of the paper, running across close under the printed line of letters.** Pay no attention to the print. Keep the mind on the white line. Then close the eyes for a few seconds, and continue to think of the white line only. Repeat by blinking across under the line of letters, and making believe the white line is there, and closing the eyes and waiting for it to appear. Very soon, some letters or some words, will stand out, here and there, apparently plainer and blacker and more widely spaced, than the words around them. This is because they have been more deeply impressed on the visual center, while it was relaxed and attentive; and it will be found that the vision has improved. Much depends upon the degree in which the mind is absorbed in the technique, and all thought of any difficulty in vision is forgotten in carrying out the practice. Each flash of new power in the eye is a proof of what can be accomplished, and the proofs come very soon.
When the print flashes clear, look directly at the print to read it - Central Fixation.

It is surprising, to one not familiar with the conduct of the eyes, to find the marked effects that are sometimes produced by the simplest kind of practices. One cannot realize, in a moment, the factors at work in a mechanism of which one has had no previous knowledge. To blink softly at a blank wall, of any color, or at a white sheet, or at a large dull black cloth, seems to some, a strange and trivial procedure. But when the trouble with the eyes is nothing more than a tension in the muscles, caused by a tension in the visual center, that very simple technique, when it is done carefully as directed, has a very relaxing effect. It is very easy for one to demonstrate that.

Let the strong sun shine on the closed eyelids for a period, with the body comfortable, and the mind entirely engaged with some pleasant prospect, and find how all the muscles feel soft and liquid. Then open the eyes and notice how much clearer everything appears. But do not demand, just expect, and do not let other thoughts intrude and distract.

Close the eyes and make believe that there is a familiar hill-top in sight, or a tree, or some other picture that comes readily into the mind. Float down the stream in a canoe. Swing in a hammock. Picture a new hat or pretty dress, or better, some most familiar face. Imagine a perfect pair of eyes—not your own eyes—just a pair of eyes that are normal and fine that can see the tiny spots, and carry colors in the mind, and distinguish things in the distance and never get tired.

Do not treat the matter like a strange and ominous and incurable disease. Think of astigmatism as the established facts prove it to be—a dysfunction, a misbehavior on the part of the eyes, a condition which constantly varies in its degree, as everyone who has it knows, and often disappears, one might say, without any help. There is so much accumulated evidence of the power of the mind over abnormal conditions of the body, even in the tissue changes of disease—authentic records accepted by the medical profession as proved cures, that it is no longer possible to disprove the reports of cured cases of astigmatism by merely dismissing them as a matter of personal opinion.

Those who have only slight disturbances of vision will be wise to remember that generally the different varieties of those disturbances begin that way. Severe conditions are found in eyes that had fine vision for many years. It is a simple matter to correct slight dysfunctions. When the habit is confirmed and one has become accustomed to dependence on spectacles, it still is often an accomplishment easily possible. Your vision is a very precious possession, take good care of it, but do not desert it, by enslaving it to a pair of glasses, and probably paying a life penalty for the neglect of a little simple care.

CHAPTER XXVII

PRESBYOPIA

WHAT is Presbyopia? That is a hard question to answer. The Medical Dictionary explains that it is not a disease, but that it is the physiology of vision due to advancing years, or to old age. It is also stated that the condition is dependent on diminution of the power of accommodation from loss of elasticity of the crystalline lens, causing the near-point of distant vision to be removed farther from the eye. Loss of elasticity of the crystalline lens means a hardening of the fluid content of which the lens is composed. This condition of old age of the lens is supposed to begin at about forty years. It is explained that it may begin prematurely, that is before forty years, and it is stated that in those cases the cause is unknown. These statements are very simple, but there are many questions which they do not answer. Although this is not an uncommon condition, it cannot be questioned that the great mass of people is not afflicted with presbyopia. **All those that have no difficulty with their eyes, at sixty, and seventy, and eighty, and ninety years of age constitute very plain exceptions to that which is offered as a sort of law.**

Those who have had the symptoms of presbyopia for a number of years, and then had a return of good normal vision, would seem to constitute some kind of a contradiction to the explanation that their lenses had degenerated into a hardened condition. There is no doubt that there are many such cases in evidence. In "The Autocrat of the Breakfast Table," Dr. Oliver Wendell Holmes refers to such a case in the following words:—"There is now living in New York State an old gentleman who, perceiving his sight to fail, immediately took to exercising it on the finest print, and in this way fairly bullied nature out of her foolish habit of taking liberties at five-and-forty, or thereabout. And now the old gentleman performs the most extraordinary feats with his pen, showing that his eyes must be a pair of microscopes. I should be afraid to say how much he writes in the compass of a half-dime—whether the Psalms or the Gospels, or the Psalms and the Gospels, I won't be positive."

Dr. Holmes had a fine sense of humor in his writings, but always a subtle keenness which was never trivial. Above all, he was a practicing physician, and it is unthinkable that he would publish a statement as full of vital human interest as that, and mean it only as a cheap and misleading joke.

In my own practice, Mr. Burns, previously referred to, for forty years had all the symptoms of what is called presbyopia—in brief, poor vision; he also had the symptoms of astigmatism, which are often indistinguishable; and certainly a positive near-sightedness. His sight was poor for distance, and he could not see to read without glasses. In a few weeks, his sight improved for distant vision, and he could accommodate to read quite small print a few inches from his eyes. This vision, which he recovered at eighty-five, he retained until his death at eighty-seven. Whatever was the condition of his lens, a wonderful improvement was secured by his own alert and enthusiastic attention. Mind over matter, if you like. But mind certainly—his eighty-five-year-old mind; and **eighty-five-year-old eyes.**

The common experience is that eyes gradually lose power in the later years of life. This is true of eyes as it is true of every human function. But there are those who retain their organic vitality until they have exceeded by many years, the "three score and ten" which was allowed them by that self-constituted authority in the Old Testament. We are told in the text books that some develop what is called presbyopia, prematurely, and the reason cannot be explained. Likewise, for those who advance to the end of a long life without developing any presbyopia, no explanation is offered in the text books.

"Presbyopia", according to the text books, is a condition of physiology, but it omits to remark that it must be an abnormal physiology. It may develop "prematurely", in early life. It may develop with the onset of "old age", at forty. It may develop forty years later. **It generally does not develop at all—according to accepted authorities, thousands of millions never have had it.** It may be present for many years, and then disappear as it came, without any apparent reason. There are many who have very poor vision for reading, for example, but who take off their glasses, and accommodate perfectly even in threading a needle. If it was caused by a physiological and inevitable hardening of the lens, Helmholtz must have been wrong, because every aged lens which accommodates disproves his theory. That is what a standard international text book means when it says that the Helmholtz Theory does not explain all the phenomena of presbyopia. The text book first approves of the theory of Helmholtz—which was that the lens accommodated by changing its shape, and which he offered only as a theory—and then points out that either he was wrong, or the theory of presbyopia is wrong. The conduct of the eye, in these cases under discussion, is physiological, as is claimed. But the physiology is dominated by the psychology. That is why the records are so different and so

variable. For the same reason, the condition is not a hopeless prospect. The correction of presbyopia involves the same treatment as is indicated in the cure of other physiological dysfunctions.

Eyes grow old, as do hearts and livers. But when vision begins to falter before the body is twenty years old and every other function is normal, it is not "a normal result of growing old." It is a manifestation of the infinite variety of the moods of astigmatism. When the old gentleman whom Dr. Holmes reported, cured his presbyopia at an advanced age, he responded to some impulses which aroused his conscious mind into action, and that which he demanded of his eyes, the visual center granted. There is a change in the power of vision which is spoken of as second sight. That old gentleman secured it. Who can say that the possibility of such an accomplishment was not aroused in his mind by some positive knowledge of the occurrence of what he demanded for himself? A simple denial that this happens, is not an answer to the question, when it is known that it does. To offer a contradictory explanation of the situation is not a scientific reaction. The practical interest in the discussion is the answer to the question as to the possibility of the cure of presbyopia and the procedure to employ. The same laws apply as are concerned in other abnormal visual functions. Correct the physiological dysfunction. Order the mind to constrain the mechanism of vision to function in a normal manner. This book contains all the directions that are necessary. For different cases, various practices are suitable. The results will not always be the same. It was the spirit of the old gentleman, not the method, that produced the result in his case. **Any case of presbyopia can be improved or cured.** That is the law.

CHAPTER XXVIII

MYOPIA AND HYPEROPIA

MYOPIA—near-sightedness—is described in the text books as the condition in which the retina is beyond the principal focus of the eye, so that the refracted rays emanating from a distant object, come together before they reach the retina. It is explained that this may be caused by an increase in the convexity of the cornea (the membrane covering the front of the eye), or of the lens, or by the pushing forward of the lens in a diseased condition. Or it may be caused by the rear end of the eye being pushed back, either as a result of a diseased condition, or by what is called an overacting developmental process. It is explained that the lens of an infant is excessively curved, and gradually flattens, and that the eyeball naturally grows longer to match the lesser curvature in the lens. In other words, in order to focus nearby objects, either the lens must be round enough, or the eye must be longer. The text books explain that in an eye which is near-sighted, generally the fault is that the lens has a proper curvature, but the eye is absolutely too long. The text books state that this excess of length, in fact, accounts for all, or nearly all, of the refractive errors, so that from the refracted error found, the length of the eye may be computed. The text books also state that this length is a variable factor. It may be extreme, even in youth, and continue to increase; or it may show only a very moderate degree. In advanced myopia this excessive length may diminish or disappear, or it may increase.

The books explain further that myopia occurs in school life, and among those who use their eyes on fine print or close work. On the other hand, it is not found in savages. Hence the inference is drawn that myopia is caused, essentially, by overstraining the eyes for near work. There are other facts offered, however, in the text books, for which further explanations were considered necessary. For instance, it is pointed out that only a fraction of those who are subjected to the strains mentioned become near-sighted. Various possible factors or influences are discussed as the causes of a predisposition in that fraction so affected. Hereditary tendencies are assumed—of various kinds and different degrees.

Some very interesting findings are recorded. Moderately near-sighted eyes, we are told, do not need glasses. In myopia of high degree, on the other hand, it is explained, satisfactory distant vision is not attained even by glasses. Also, in this class, even closeup vision is frequently defective. Further, those eyes with a high degree of myopia tire rapidly, are sensitive to light, and prone to see the specks called "**flying flies**". Changes in tissue structure, and changes in the fluids of the eye, are found. In eyes with the higher degrees of myopia, changes in shape may be found; then, again, they are not found. We are told, also, that an astigmatic, in trying to see, accommodates so that he can see objects clearly and, by so doing, often makes himself temporarily myopic; and by continuing such efforts he may make himself permanently myopic. But the books point out that in these cases, it is not possible to say that the myopia would not have developed anyhow, for the various suggested reasons. Besides the use of glasses, the books direct good light, always having objects as far removed as they can be seen, and strict limitation of the use of the eyes, even to the dropping of all studies, et cetera, for a long time, or a change of occupation. It is significant that resting the eyes frequently by looking at a distance, is pointed out as very advantageous treatment.

It is frankly declared in the book that the work with which many students have to struggle should be reduced to the proper standard. The way they are taxed, both in school and at home, is detrimental, not only to their eyes, but certainly to the mental and physical development of unfolding powers. Suitable physical exercises should be made part of the curriculum, and should constitute an intermission between hours of mental application. Work should be done under favorable conditions. Proper ventilation is very important. Seats suitable to each individual child should be provided. Children should be taught correct posture. These precautions are to prevent the occurrence of any abnormal tension. It is stressed that illumination should be of sufficient intensity—generally in the past the light has not been sufficient. There should be no glare, and no contrasting shadows. The light should be diffused, as the sunlight is diffused; and it should not be directed into the face. The above suggestions are contained in text books on the eye. I have referred before to a book which directs the use of very poor light. It proposes to shut out the sunlight, and pictures a room with shadows on everything, and a dim light from semi-indirect illumination by poor lamps on the ceiling.

"Truth is like the spokes in the hub of a wheel." There are many spokes. Who would think of building a wheel and leaving out one spoke? Crécy wrote that the fate of a battle might depend upon a cotter-pin (meaning that one wheel coming off a cannon carriage might turn the victory into defeat). Oliver Wendell Holmes reminded his hearers that when a discussion had been decided, it had happened that a member who then threw a fact into the ring like a bomb, changed the minds of the other members. Columbus believed, from known facts, that the world must be round, and on the way to India he found America. In the text books on the eye many specific facts are recorded with meticulous exactness. But one does not find that any scientific research has been made to enlist the power of the visual center in correcting an abnormal function on the part of this mechanism described as psychic.

The doctor who called Dr. Bates a quack, because Dr. Bates had already enabled medical men to discard their spectacles after that doctor had fitted them, deliberately ignored the known fact that many have discarded their spectacles because they had discovered that their eyes had ceased to be near-sighted, and they could see better without the spectacles. Spectacles are being discarded today for the same reason. The text books record data which plainly implies that patients under observation could also discard their spectacles. But it does not seem to have occurred to these students of the eye to follow the path taken by research workers in the other fields of medical science, and investigate the cause and the significance of the phenomena which are strewn all along the pathway of their own field.

Dr. Bates made his discoveries because he had a mind which could not help investigating those phenomena. It was not hard after that. Compared to some other fields it was very simple. The facts are spread out in plain view. All his work was right in the clinic—his problems, his discoveries, and his success.

The principal treatment for near-sightedness recommended in the text books is artificial lenses. Best there is no promise that the spectacles will correct the fault in vision which causes the near-sightedness. Sidler-Huguenin, a recognized international authority in this field, stated frankly that glasses are "of but little avail to prevent either the progress of the error of refraction (near-sightedness), or the development of the very serious complications with which it is often associated." He wrote that of the thousands of myopes treated by him the majority grew progressively worse, despite his skill in fitting their glasses. He disagreed too, with some conventional suggestions. For instance, he believed that using the near-sighted eye was better than sparing it, and recommended that it be used.

Artificial glasses, therefore, are never a remedy; they are only an expedient, and are, in fact, an assertion that there is no treatment which will cure, instead of increasing, the defective function of vision. The near-sighted eye, under the care of the best men who are fitting glasses, commonly becomes more and more near-sighted, and needs to have new, stronger glasses constantly. There is no apparent effort, or even consideration of any investigation looking toward the correction of the abnormal functioning of the mechanism that is involved. This sounds like an extreme statement, but the situation is obvious. All the preventive measures cited in the books have been in use, and at the same time the artificial lenses are rapidly increasing, and are still being given the first place as the relief suggestion. In Germany, they were tried for years in vain. They were used by Sidler-Huguenin for a life-time and pronounced of no avail. The men in this field claim that near-sightedness is caused, primarily and principally by inherited tendencies. They consider that the various unfavorable influences, such as faulty lighting, extreme or prolonged use of the eyes at near work or minute detail, improper postures, et cetera, are secondary influences; and the record seems to support such a contention.

The implied verdict that myopia is incurable is untenable. Allowing for all the possible inherited tendencies, and the aggravating influences in the environment, such an attitude is still out of step with the march of progress in the science and art of the practice of medicine. Alone, the work of Madame Montessori is an answer which silences it.

The German professor previously referred to, in his letter to me, claims that in what he calls a true case of near-sightedness, which he says is always inherited, the condition cannot be cured. But he also writes that so-called near-sightedness can disappear. He refers to a case with which he is familiar—a man who had been near-sighted until he was twenty. His condition varied considerably. **He found his sight very much improved when he was at sea**; but always quite poor when he was in Munich. When that specialist examined his eyes, at the age of thirty-three, he found him far-sighted instead of nearsighted. The Professor accounts for the history of those eyes by explaining that the near-sightedness had been caused by an accommodation muscle tension of increasing severity and exceptionally long duration. The far-sightedness which had displaced the near-sightedness, he would probably account for as a new and different muscle tension. The significance of his explanation is that it explains the myopia and the hyperopia in the same way as Dr. Bates does. The professor classifies the record of this case as a psychological disturbance. If any condition is due to an inherited tendency and an unfavorable environment, insanity is a specific example. It likewise was treated as a hopeless and incurable misfortune. It now is being cured, and the methods and the success in this work, are both increasing. Strange to say—or is it really strange?—the methods are actually very simple—just as simple as the method of Columbus. Like Newton's discovery of the law of gravitation, the cause and the cure of myopia, likewise are to be revealed by a study of the apparent phenomena. In this field they are in plain sight, and their significance is clear.

It is not necessary to discuss the complicated cases of myopia, in which there may be tissue changes, that probably were produced by continued abnormal function, and which might possibly be changed back to normal by proper treatment. Such tissue changes, cured by corrected function, are in evidence. Ulcer of the stomach is a specific and a common illustration—it comes and it disappears, spontaneously, and may be habitually recurrent. Cures of that condition have been reported by competent specialists who used, in one series of thirty cases, nothing but mental treatment. The majority of myopes have no tissue changes in their eyes. The degree of myopia varies considerably in most cases. Often the condition disappears spontaneously, in young and in old—after it has been present a few weeks, or after it has been present for many years. That has happened without the conscious knowledge of the owner of the eyes. It is being relieved too, in young and old, sometimes very promptly, by influencing the subconscious mind to do deliberately, upon an order, what it often does spontaneously, or without any conscious order.

It may be that too much is being written here, about the background and the psychology and the mechanism involved in this question of curing myopia. Often I have been asked, impatiently, "but what do you do?" Some "first visit cures" have occurred with very little explanation or effort. The attitude of the mind of such patients is already set, or changes in a moment to a receptive attention, which is not hindered by the conscious or unconscious impression that nothing else but glasses can help their eyes. This book is intended as a teacher, and must meet in advance the questions that naturally arise under the conditions. I have tried to anticipate the difficulties that the patients may meet, by giving their minds assurance in the substance of things hoped for, the evidence of things not seen.

Everyone is familiar with the mental experience of having held a belief, about a person or a subject, which seemed to be warranted by apparent facts, and discovering, sometimes, that the facts were misinformation, or that their judgment and conclusions were unwarranted. The prevalent conception about myopia is a hardened-in-cement mental attitude that the only answer is spectacles. The first step toward a cure must be to become conscious of that conception, reason it out, and then obliterate it, and forget it.

Professor Herrmann of Breslau, reporting upon his observations of over ten thousand children in German schools, found in the village schools one per cent of myopia, twenty to forty per cent in the higher schools, thirty to thirty-five per cent in the gymnasia, and fifty-three to sixty-four per cent in the professional schools. Similar investigations in other countries confirm his findings. Only a few of these cases were obliged to wear glasses. The strain of near work was blamed for the conditions. The explanations offered are contradictory. Tscherning, a noted authority, wrote that: "A satisfactory explanation of the mechanism by which near work produces myopia, has not yet been given." Everbusch wrote: "It is not yet determined how near work changes the longitudinal structure of the eye." But it is established that myopia is found in those who never went through the stress of near work. Myopes are therefore divided into two classes, one caused by near work, and one not caused by it. But a comparative analysis of the statistics reveals that often the higher percentage of myopia is found under most favorable conditions. Also, the heredity factor is not sustained by some findings. For instance, **the Indians at Carlisle are quite subject to myopia, although their heredity would not warrant that expectation. The constant near work of ancient needle women, and the marvelous gem carving of artisans who spent their lives at it in the early centuries, as their fathers had done, did not develop myopia, or pass it on as a heritage.**

If one will accept the explanation that myopia is caused by a tension in the visual center in the brain, that law can be taken as an interpretation of every situation found in the discussion. The savage can become tense, as well as the student. The child favored with every mechanical advantage, may still have a mental concern, conscious or unconscious. The myopia may appear in adult life because of a new situation. The increase, or decrease, or disappearance, or reappearance, or any variation, will also be explained by the condition in the control center. That is the answer of Dr. Bates.

In the endeavor to cure **myopia**, the purpose is the same as with every other dysfunction. It is never an effort to teach the eye how to function correctly. That mechanism knows how to function, and no man knows how it is accomplished. The only purpose is to relax the abnormal tension in the visual center. This simple conception should be fully realized. I have often found that a patient is unconsciously oppressed with vague idea that it is necessary to teach the eye all over again, how to perform in the right way. **When the visual center has been relaxed—relieved from the stress that is constraining it, the normal function returns to the mechanism, and sight is normal.** Those who have success in a short time, are not inhibited by disturbing impressions that are founded on misinformation. So let us begin with the encouraging confidence that the eye knows what to do, and it will help very much toward a better understanding of how the practices operate.

It is helpful to remember that many have ceased to be near-sighted. This experience is so common that it cannot be questioned. Often this happens late in life, the patients finding that they have secured what is called second sight. Oliver Wendell Holmes wrote of such a man. Again, many women in later life are near-sighted for reading and other purposes, but can thread the eye of a fine needle without difficulty. In previous chapters I have reported some typical cases in which myopes have recovered good normal sight after being nearsighted for years. These cases are in evidence, and were secured by the method of Dr. Bates. In special chapters the details of practices are given.

When relaxation is secured, whatever special technique is used, myopia is relieved just as other tension conditions are. There are some practices however, which are more suited to this particular variety of abnormal vision. The specific fault is a failure to adjust the focus to objects that are not near to the eye. Dr. Bates claimed that the myopes cannot see objects that are not nearby because the eye is straining to see them. When the eye stops straining, the light rays reflected from those objects are permitted to focus on the retina. It is helpful to remember, and to remind the eyes constantly, that when the rays of light are permitted to register properly, the difficulty disappears. This means that the rays produce the impulse, and the normal eye acts automatically, outside of the consciousness. The process is essentially different from a voluntary muscular effort. The trouble is caused when the eye tries to see—instead of allowing the rays of light to enter the eye like the sound waves enter the ear, and the fragrance of a rose impresses the sense of smell. Therefore, the first idea to impress and retain, is that **one must stop trying,** and adopt an objective attitude of mind which occupies the undivided attention with the practice one is carrying out. Such an attitude of mind engenders relaxation in the visual center and that is all the practice is intended to accomplish. When a myopic eye improves in vision, as it does to some degree constantly during the day, some measure of relaxation has been produced spontaneously. When the abnormal tension recurs, it hinders the eye again. When one ceases to be near-sighted, spontaneously or under treatment, the tension has been eliminated. It is idle to ask, quizzically, how such a serious condition of eyesight can be produced so easily, and cured in such a simple manner. The facts are in evidence, outside of any knowledge of the method of Dr. Bates. The explanation is in accord with other similar recorded reactions in other fields of psychologic research.

The condition called **hyperopia** is essentially similar to myopia. The effect on the eyesight is just the opposite from the effect of myopia. It is called far-sightedness, because there is less difficulty in seeing objects at a distance than in seeing when they are nearby. But actually, sight is poorer at any distance than with the normal eye. Although the effects on eyesight are so different, the causes of the condition, as given in the text books are the same as the causes given for myopia, and the dysfunction of vision is of the same nature.

Hyperopia, commonly spoken of as far-sightedness, is described in the text books as a condition in which the retina lies in front of the principal focus. The ordinary hyperopia of young persons and adults is an axial hyperopia, due to the fact that the eye, which was primarily too short, has not, in the process of growth, elongated to the point of producing emmetropia (an eyeball of proper normal length). It is stated that a very large proportion of adults have a hyperopia of this sort, which may, therefore, be regarded as a normal condition. Other forms of hyperopia are described. For instance, when the eyeball is not too short, but there are changes in the curvature, density, or position of the lens, or in the curvature of the cornea, or there are abnormalities of development, or even conditions of tissue change. Different irregularities in the condition and the conduct of these eyes are described. In this chapter a case report has been quoted, from a German specialist who found a patient far-sighted at thirty-three, who gave a history of having been near-sighted until twenty. The degree of the near-sightedness was variable. **At sea he was not near-sighted, but in town the near-sightedness returned. At thirty-three, examined in town, instead of being near-sighted, he was far-sighted—just the opposite condition. In other words, that young man's eyes must have been longer, changed their shape back and forth, according to circumstances, and at thirty-three were found to have an entirely different shape.** The German professor did not report any tissue changes in the eyes, he said that the conditions were caused by an extreme and long continued muscle tension, and the changing shapes were due to psychological disturbances. In the text books it is explained that so-called far-sighted persons do not necessarily see better at a distance than others, and may not see even as well. The difficulty is in seeing objects at a close range, and this sometimes is quite marked.

If the four muscles which pass forward on the four sides of the eyeball, contract sufficiently and in unison the eyeball is made shorter in a horizontal direction, producing the condition described in text books as an axial hyperopia. Considering the case reported by the German specialist, and his explanation that the changing lengths of the patient's eyes were caused by abnormal muscle tension, the situation can be interpreted by the explanation of Dr. Bates that **the two muscles wrapped around the middle of the eye sometimes made the eyeball too long, and later the four muscles on the sides made, it too short.** For that reason, the treatment for hyperopia would be the same as for myopia.

CHAPTER XXIX

STRABISMUS

SQUINT, which technically is called strabismus, is an abnormal condition in which one eye deviates, or both eyes deviate, instead of pointing directly toward an object being looked at. The customary observation of such conditions is so casual that very few have any knowledge of the different forms in which squint is recorded. The abnormal deviation may be toward the nose, or outward, up or down, or in some oblique direction. When both eyes squint, they may assume similar abnormal directions, or may deviate in directions that are dissimilar. In some cases both eyes may look straight at the same object when both are uncovered, but when covered, either eye may deviate in any direction. That specific type of abnormal action is spoken of as insufficiency.

Deviations may be constant, always present; or intermittent, not always present. They may be continuous—when the degree of deviation is the same during distant and near vision; or they may be periodic—when the degree is greater for near objects than for distant ones, or the reverse. They may be concomitant—when the amount of deviation is constant; or non-comitant when the degree changes, as the eyes move in different directions. These different conditions are often mixed, and the various combinations have specific names. Deviations always confined to one eye, when eyes are open, are known as monocular (one eye), right or left; and are called alternating, if sometimes one eye deviates, when both eyes are open, and sometimes the other eye deviates. There are other details described, some of them very intricate. There may be good vision in both eyes, but the refraction may be unequal. This inequality of vision may vary, one eye or the other having the better vision, and that variation may be irregular. When only one eye deviates, it may have very little vision.

The reasons given in the text books for the development of squint involve so much intricate description and explanation that they would have no place in a book like this, which makes no pretense of being a text book. The predominating fundamental cause is an inherited predisposition. Inequalities in the two eyes, involving their refracting powers, and excesses or deficiencies in functioning, are discussed at great length. The poorer sight of one eye, because of some of these abnormal factors, is sometimes an apparent causative influence. It is explained that through different kinds and degrees of faltering co-ordination, there is a lack of development in the fusion-faculty. The fusion-faculty is a function of the mind. It acts, so it is explained, by means of a cerebral nerve center, called the fusion center, the site of which is undetermined. When both eyes are normal, and both look, there is solid or stereoscopic vision. That faculty of the mind fuses the two retinal images, so that an object appears single and clear. When a clear single image is not seen, different abnormal reactions are produced. These reactions have different effects on the mechanism of vision as a whole, and specifically on the variable conduct of the eyeball.

In standard text books some of these abnormal functions are attributed to hysteria, traumatic neuroses, neurasthenia, anemia, and debilitated conditions however caused; and it is stated that they occur even in those who are apparently healthy. It is common knowledge that the **beginning of a squint is often noted following some sickness, generally in childhood. It may follow a mental shock. A girl of seven was thrown down by a big dog, and the result was an instantaneous**

squint involving both eyes. The text books state that certain causative factors are not located in the muscles that move and may hold the eyes in abnormal positions. The books point out that until very late in the development of most cases of squint, the rotations of the eyes are normal, indicating that the power of the muscles is neither impaired nor excessive. The books conclude therefore, that the changes which take place are doubtless central, due to excessive stimulation of the center for one movement producing inhibitions for the center of the opposing movement, and vice versa. It is only late in the course of the condition, so it is explained, that there is developed an hypertrophy, or contracture, of one muscle, and atrophy or stretching of its opponents. The effects of such unequal developments are the causes assigned for the various abnormal positions found in cases of squint. We are told that a moderate proportion of cases of squint do, however, develop from a true muscular defect. Sometimes abnormal conditions of the tissues of the eye interfere with the fusion-faculty, and a complicated mechanism forces the affected eye to conduct itself in an abnormal manner. The accumulation of findings which have been recorded with infinite care has not yet enabled the text books to offer any specific course of treatment that is aimed at the admitted fundamental central cause of the disorder.

We are told that the many abnormal functions, on the part of the different factors involved, are only secondary conditions. In the ultimate analysis, the books explain, the primary fault is in the conduct of the central control. That central control is responsible for the various and complicated interlocking abnormal stimulations and inhibitions. The earlier practice of cutting the muscles attached to the outside of the eyeball proved so unsatisfactory that it is not being offered as the remedy to be used at first. It is stated specifically that whether an operative procedure does, or does not, make the eyeball stop pointing in the wrong direction, the operation has no curative effect on the sight of that eye. Often any correction secured in the position of the eyeball is lost, sooner or later, or it is replaced by some other abnormal position. The hope for the relief of this specific disorder in the mechanism of vision is based primarily and principally upon whatever correction may be secured by treatment with artificial lenses. It is stated that when there is an "out-growing" of the squint, the defective vision of the formerly squinting eye remains, and real vision, with normal co-operation by that eye, is rarely restored. That word rarely, in the standard text book, is a pregnant word. It is not explained. Why not try to account for those admittedly rare cases? Some of the grandest discoveries in the field of medicine have been made, and relief from epidemics has been secured, on phenomena less obvious and more obscure.

Thus far, I have described briefly, the explanations one finds in a standard text book regarding the many different forms of squint, and the theories which are offered to account for the abnormal conduct of the different factors involved. I will now present the conception of Dr. Bates which recognizes that the fault in the mechanism of vision originates in the center in the brain, and endeavors to correct that fault by influencing the conduct of that center. Since it is established that some eyes afflicted with squint, as reported in the text books, not only become straight, but recover normal vision, there is, then, a way to actually cure them. That way is the way by which they cure themselves. The laws of that way are not known. But the symptoms are quite evident, and the causes are indicated in what is known of the mechanism. The established facts would seem to point out the line of endeavor. It is that line of endeavor which is the foundation of the successful methods of Dr. Bates.

Suppose we consider some plain facts by recalling for examination some examples of what occurs. For instance, that girl of seven years, who was knocked down by a big dog. In that moment, both of her eyes became crossed—she had a typical case of strabismus. This was not the result of a continued straining at nearby, or at far-off objects (which is given as the commonest cause of strabismus). It was an instantaneous result caused by an extreme mental shock.

A case of my own illustrates a different aspect of the subject. A boy of six who was bright and reliable mentally, had a peculiar, alert, tense, mental attitude. Both of his eyes were constantly crossed, pointing inward. The degree of squint varied, and any excitement would so stimulate the convergent obliquities of the two eyes, that they would jerk around without any order. I have frequently stopped that turmoil of his eyeballs in a moment by distracting his mind from some disturbing thought, and interesting it in some pleasant idea. Several times I had only to say quietly, with a friendly smile: "Put on the brakes little man, your front wheels are shimmying." By different practices of the Bates method his eyes gradually became straight. The vision of both of his eyes also is normal. If it is objected that the practices used did not influence the cure of the condition, there are two answers. First: an unsupported contradiction like that is not a scientific statement. Second: if he is one of those cases which secure a spontaneous correction of the squint and also recover good normal vision, what explanation is offered by the objector for the recovery to normal, or rather, why is some explanation not sought?

A young woman of twenty-two came with the following record. Her left eye had been crossed from earliest childhood. At twelve years of age the left eye became straight, and the squint was transferred to the right eye. She had worn glasses for ten years. During two hours of treatment in my office the squint in the right eye disappeared entirely. She discarded her glasses at once. It is two years now since that treatment. Her eyes have remained straight, and she has good normal vision. That record is correct to date. The patient is employed as an accountant with a well known San Francisco firm.

Her brother had a right eye crossed for a lifetime, and it is so crossed now. There are three other cases of squint in near relatives, so an obviously hereditary tendency is a factor in this case. Her cure was a plain illustration of an autosuggestion. She was convinced and confident, and ready for action before she came to me, through the reports she heard from an intimate friend, and her own mind cured her.

An illustration of the opposite influence of mind was a case of mine in which a girl of ten had first one eye crossed before the age of two, and the transfer of the squint to the other eye during the next year, while wearing spectacles under the direction of an eye specialist. The years of treatment, and the attitude of her parents, constrained by fears of arousing an inferiority complex in the child's mind, had gradually developed an antagonistic feeling toward any further effort, and she was not in the least degree responsive. Any effort she made was either under protest, or without any confident and interested attention, and the part of her mind which could have cured the condition never entered into the endeavor. There was no success, and the undertaking was discontinued.

A similar case was a boy of ten, stupid and cantankerous, and blocked by a natural mental inertia. A considerable improvement was secured in his near-sighted and astigmatic vision. But he would relapse, and lose entirely some of the lines on the Snellen Card, which he had seen clearly a few days before. In response to enthusiastic encouragement in practice, he would show a deliberate indifference, or even resentment. He demonstrated, unconsciously, by his own personal feeling, the antagonistic part that the mind can play in a correction of the abnormal function.

Squint Treatment

A girl of eight, whose father and mother each had a squint in one eye, had an inward squint in her left eye since earliest childhood. They were patients of mine before I knew of the method of Dr. Bates. The girl's mother brought her to my office to see if any improvement could be accomplished in the position of her eye. The crossed eye could see as well as the normal eye when the normal eye was closed. After interesting the child in general conversation so that she was amused, and had no thought of her eye, I suggested a new game. She was to keep her eyes closed until I asked her to open them, and expect to see things I would tell her were in front of her. At first I suggested some grotesque objects, for instance, a tame bear on roller skates, a very red dog with a very black tail, and a chair that had a kettle of boiling water on it, with red steam corning out of the spout. We had some good laughs, and I kept warning her that if she opened her eyes, the game would be off. Soon I asked her to draw a line in front of her face, about six inches long, from left to right. When we had succeeded in that, I called for a line starting at the right end of the horizontal line and slanting downward toward the left, so that when it was finished it would be directly under the left end of the horizontal line. It did not take long to teach her to draw the two lines in the air promptly when asked. Then she was encouraged to tell us what the two lines made her think of. When she was asked to make believe that she was in school, she instantly replied that it was a seven. After some persistent assertions that if she would keep looking she would see something to the left of where she had drawn the seven, there finally came a joyful exclamation that she saw a six. By the same method, and making her point to the seven, and point to the six, and then point to the right of the seven, she was encouraged until she exclaimed triumphantly that she saw an eight. I kept reminding her that she must not open her eyes.

Leaving the figures, I told her there was something black in front of her eyes. She insisted there was not. But suddenly she said: "Yes, there it is—it is my dog." When I asked for something red, it was harder, but I promised her a twenty-five cent piece if she saw something red, and finally she replied gladly that it was there. This time it was a camp fire, and her dog was there, and some people. Her mother sat facing her, and I warned the girl I would ask her to, open her eyes in a moment, and directed her to look first at her mothers face. When she opened her eyes, the crossed eye was perfectly straight. Her mother looked at the straightened eye for almost a minute and the eye remained straight, in the laughing face of the child. But then the mother faltered, and looked at me with a smothered exclamation. Instantly the eye popped back to its old abnormal position.

There have been some skeptical comments on the possibility of the child actually seeing the figures, and the dog and the fire. Those critics have not realized that all sight is some thing which happens in the brain. They have not realized either, the flashing of fresh young minds, which are not yet hardened into the automatic habits of later life. They have not tried to imagine the mind of a young girl telling her doll about the new baby, and carrying on a conversation which shows that her mind distinguishes between the live baby, and the make-believe doll, but still, somehow, makes the doll a thing which understands and responds, and makes of herself a little mother. That is why a wise man once said that a little child can teach us, if we try to read what is in the picture. The parents of that child had their last quarrel soon after that first lesson, and separated, and the mother took the girl away from Berkeley. I have told this story because it illustrates how the visual center controls the squint in an eye. The boy I reported, who still lives here, showed in a graphic way what an added mental tension can do to an eye that is squinting. This girl demonstrated how a condition of mental relaxation can relax the tension and correct the abnormal position of the eye.

Few have not experienced the rigid tension in the body muscles caused by some shock or some fear, and the soft relaxation which followed when the cause disappeared. Why refuse to admit that the eye muscles can likewise be stiffened by a mental tension, and likewise be relaxed when the mental tension is relieved—especially when there is abundant proof that it is frequently happening? **Such a shock caused a psychic blindness in my own eyes, two hours after I felt myself drowning.** It was an hour before my sight was clear again. But that fearful shock left such a tension in my visual center that for thirty-seven years one pair of glasses after another did not restore my sight so that I could do my work without the lenses: I have had better vision without them now for ten years—even after the prolonged subjection to an artificial control—because my mind learned the cause and the cure for the condition. In the text books the same disorder in the mechanism of vision is assigned for astigmatism as that assigned for strabismus.

Produce Squint to Learn how to Avoid it, to Cure it.

Many can produce a strabismus in one eye, or both eyes, at will. I saw a man make his eyes roll in unison like a moving figure eight; and he could hold them wherever he wished. A famous German movie star, in Hollywood, acted realistic parts in some very tragic scenes. Several times in the performance, at a very tense moment, his eyes showed an extreme strabismus which disappeared instantly when he had finished that specific portrayal. Such well-established facts are the warrant for a technique in the Bates method that is to be used in the treatment of strabismus. **In some cases, when a patient demonstrates that it is possible to make the eyes squint more, or squint differently, the realization is forced on the conscious mind that the abnormal condition is not unchangeable, and is even within the control of the mind. When such a new state of mind is secured, a fine beginning is already established**. The new mental attitude not only develops a new hope, but soon finds new experiences with the eye through the co-operation of the visual center in the brain. Dr. Bates reported one case of a woman brought to him by an ophthalmologist, because her squint was so complicated that the other specialist was puzzled concerning treatment. She was taught to change the degree of the squinting eyes, and with that beginning the fault was soon corrected.

In the text book it is explained that all the different forms of strabismus are caused by some specific strain or strains, and that the strains all originate in the control center in the brain. This explanation warrants a claim that relaxation—which is a release from abnormal tension—removes the cause of the disorder in the function. **If the squint is caused by poor vision in one or both eyes—which poor vision itself is caused by some abnormal tension—relaxation improves the poor vision, and the squint is relieved.**

Another technique requires the patient to learn how to see two lights when looking at one. This is not hard to learn. It is sufficient to stare hard with the eyes, while looking at the light, and imagine there are two lights. It is easier to accomplish this when the light is a candle, as the flickering flame facilitates the illusion. If the sight of one eye is better, it will help if a blue glass is placed before it, so as to interfere with the vision of that eye. When such an illusion has been produced, the eyes should be gradually relaxed in the manner directed before, by alternate palming or swinging, and the mind will have been instructed by a helpful new experience. **A variation of this technique is to imagine the two lights when the eyes are closed**. This requires a closer attention, but is a proof, when accomplished, that the visual center is giving more co-operation.

With quite young children a most effective method is to swing them around so their whole body leaves the floor, holding them by the arms, and having them look into the face of the adult swinging them. The exhilaration produced has a most relaxing effect. Another excellent practice with children is to use a number of small objects of different colors and sizes. They can be taught the names of the objects, and the names of the colors, as they see them nearby. The objects should then be gradually removed farther from their eyes, as they are able still to see them clearly. If care for all the details is observed, and a daily practice is continued, the mind will be interested, the vision improved, and the squint gradually corrected.

These specific suggestions are illustrations of practices especially adapted to the treatment of squint. Each case, naturally, has to be studied individually, and the practices selected which seem to suit the specific condition present, and the individual mind and temperament. In the several chapters devoted to detailed descriptions of techniques, there will be found practices suitable for every type of strabismus.
Modern Bates Teachers apply left and right brain hemisphere activation, integration, body movement, color treatment and additional methods to cure Squint.

CHAPTER XXX

CATARACTS

CATARACT is the name given to an abnormal condition of the eye in which there is some opacity in the lens. This happens so frequently in later life that many are familiar with the story of the affliction. Very few however, have any knowledge of the many diverse manifestations of changes in the lens which produce different kinds and degrees of opacities, in young as well as in old. There are so many different types of cataracts that one ophthalmologist jokingly remarked that he thought there were fifty-seven varieties.

The opacity may be found in the capsule covering the lens, as well as in the lens itself. It may consist of a hard, dense tissue, or be of a softer and less opaque consistency. It is found in widely different shapes and sizes. The spots may be sharply defined, or diffused over a large area of the lens. A small, hard spot, in the middle of the lens impairs vision much less than does a soft and thin opacity which is spread through the width of the lens. Some spots on the margins of the lens are hardly discernible, and do not interfere with vision. The various types are subject to a difference in the nature of the changes which take place in the character of the tissues. Some are described as partial-stationary, because they are permanently limited to the same dimensions. Others are called progressive, because they spread progressively over a larger area of the lens.

Cataracts are spoken of as congenital when they are found at birth, or discovered later when they attract attention. Those are supposed to be due to some fault in the development during foetal (fetal) life. The form which is acquired generally appears in later life, but may appear at any age. A cataract may develop so quickly that the lens may be completely opaque in a few hours. It may develop so slowly that its progress continues during many years. The opacity may develop in most irregular stages—increasing for a time, remaining stationary for a variable period, and then increasing for another period only, or progressing continuously until the lens is completely occupied. That is one reason why, sometimes, it is not possible to estimate the probable outcome and the time the process will take. Cataracts may be hard or soft. They may fill the lens with an excess of fluid until it swells. This excess of fluid ultimately is lost. The lens is then spoken of as being "ripe". Often it is difficult to estimate when a cataract is going to become ripe.

In the text books many conditions are given as possible causes of the development of cataracts. General diseases is a term that is used, and diabetes is mentioned specifically, and toxic conditions, and epilepsy, and hysterical convulsions, poison and injuries.

The treatment described in text books includes the correction of any apparent abnormal condition when it is possible. It is explained, for instance, that when the system is relieved of the excess of sugar present in diabetes, there may be a relief from the cataract. Therefore disturbed chemistry, or the presence in the system of a poison, or some toxic condition, may cause a cataract. Also cataract may be caused by whatever abnormal conditions may be developed by hysterical convulsions. But in many cases where cataracts are present it is not possible to find any indications of the presence of any of these conditions.

There are many facts relating to cataracts which I have not been able to find in text books. A patient of mine who had been treated for developing cataracts during several years, by a well known ophthalmologist, came to me finally with the hope that the Bates method would relieve the condition. She had been taking medicine and visiting her eye specialist regularly until some months before she came to me. She stopped the medicine and all treatment because the cataracts were growing steadily, and she was afraid she would lose all her vision. The ophthalmologist had found no indications of any abnormal condition of the system; and as her family physician, during some years, I had never found any abnormal condition, except a mental tension which showed itself only in her conversation. Heart and blood pressure were always normal, and every examination and analysis indicated was carefully carried out to assure her there was no apparent underlying abnormal condition of organs or chemistry. Although she knew of my work with the Bates method, and discussed it with me and with the eye specialist, she never considered trying it until the increasingly serious difficulty with her vision made her determine to try it as a last resort. Her ophthalmologist had told her the cataracts were not in a condition to be operated upon.

During two weeks of almost constant practice of the various techniques of the Bates method, she secured such an improvement that her eyes were almost normal for near and far vision, and were satisfactory for continued reading, and every other use of daily life. This case was under my care for several years. Her vision continued to be satisfactory, and was better than average for small print and sewing. It was quite variable, however, because her nerve tension became more apparent. Her blood pressure was an average normal when I last took it, at eighty-two years of age, and her heart was in good condition, and there was no evidence of any other organic or functional disorder. Sometimes she came with complaint about some dimness of vision, or change in her power of vision from hour to hour; but even then she would demonstrate by reading fine print readily, and reading the ten-foot line on the Snellen Card at ten feet, that her vision was fine for a woman over eighty years old. She had no difficulty in seeing her way clearly in the midst of street traffic. Nevertheless there remained in her mind the memory of the very poor sight she once had, and these recollections would sometimes impress her mind so vividly that she would have spells of poor vision as a result.

Another case of my own, recorded in the chapter on children, illustrates just the opposite type of cataract, relieved by the same treatment. During an attack of poison oak, with both eyes closed by the swelling of the face, a boy of fifteen developed a cataract which filled his right eye, and was there when his eyes opened. The cataract must have been produced by the toxic condition. During four months of treatment by an ophthalmologist, no least improvement had been secured. Three weeks after I first treated him, three-quarters of the cataract had disappeared, and in a few months there remained no trace.

A different aspect of the subject is illustrated by the case of a woman over eighty, who had very poor vision due to cataracts in both eyes. She discarded her glasses at once, and for the remaining two years of her life she did not use them again, and she could read and write and had satisfactory vision for all purposes. The most significant thing about this case, was that there was very little difference in the appearance of the cataracts. It seemed that the change took place in her visual center. An improvement was apparent at once. Her eyes began almost immediately to respond differently to the same rays of light which before had not registered any conscious impression on her mind. This may seem strange to one who has never deliberated over the many explanations in standard text books on the eye, which point out that better impressions are made on the conscious mind, even with the same rays of light reflected from the same objects, when the visual center is aroused by the attention and desire of the will. This is true in every other field of the work of the mind, and we are all familiar with that fact. It is only because we are not accustomed to giving any attention to the ceaseless functioning of the marvelous mechanism of our eyes, that we are surprised when we are told that they, too, function poorly at times, because our mind is paying no attention to them, and they will respond with more power when we ask them to do so.

Dr. Bates reported a demonstration made by a professor of anatomy before a group of observers. When the professor held the eye of a dead cow loosely between his fingers, the observers could see that the pupil was perfectly clear. But whenever he compressed the eyeball so as to flatten it in the middle, the pupil became completely opaque, and it became clear again as soon as the pressure was released and the eyeball resumed its natural round shape. The opacity was a cataract. Dr. Bates suggested that this experiment can be demonstrated by anyone who is interested. Dr. Bates claimed that patients have increased the density of a cataract by a voluntary effort to harden the eyeball. This was done through the compression of the external eye muscles by means of a tension produced deliberately.

Conversely Dr. Bates claimed, that by relieving an abnormal tension, through the practice of techniques which he described, patients have improved the condition of different forms of cataracts temporarily, and made the improvement permanent by continuing practicing. **The various practices suitable for this relief from the tension causing cataracts are given in preceding chapters Palming, and Sunning, and Shifting the Central Fixation, et cetera.**

CHAPTER XXXI

SOME OTHER CONDITIONS

IN THIS chapter I shall report some cases in my own practice which illustrate the value of the Bates method in abnormal conditions of the eye which are rare, as compared with the conditions of the eye that have been discussed in previous chapters. The causes of these conditions are often obscure. In the text books certain causative predisposing diseases are mentioned, but often none of those mentioned abnormal conditions of the body are present. The purpose of reporting the following cases is to show that the abnormal conditions of the eye discussed were relieved and normal sight recovered. In these several cases, the treatment was undertaken either after treatment by a specialist had proved to be of no value, or after a specialist of recognized standing had assured the patient that no cure could be promised.

Iritis is an affliction in which the iris is inflamed. This almost always causes severe pain; and generally the vision is badly impaired or entirely lost. Often it is a so-called recurrent condition, disappearing entirely and reappearing sooner or later. In other cases the condition is constant.

A colored man, mentioned in a previous chapter, who gave a record of having been treated during seventeen years of recurrent iritis, by several eye specialists that he named, came to my office one Saturday with a statement that he had been home three weeks with a new attack, was suffering great pain and could not see all his fingers even with his hand held very near that eye. A friend drove him from Oakland. During that first hour in the office he was enabled to see with that eye, at a distance of three feet, the top two lines on the Snellen Test Card. Later, I was told by the patient who persuaded him to come and talk with me, that he had made an appointment the day before, to have that eye removed on Monday. It was only because of the novel treatment, and the result which astonished him, that he decided to go on with further treatment. He returned to work in ten days. It was over a year from that time that I heard from him last, and he then wrote me that his eye was in a satisfactory condition.

That patient had been through every examination used to detect a focus of toxemia in the body, and had his tonsils removed and teeth inspected. He knew every sort of customary treatment as used by the several specialists who had cared for him. However, his eye had never been treated with an **ultraviolet ray** until I used that ray on it. It was plain that the ultraviolet ray helped his eye very much. I have seen its value in treating other abnormal conditions of the eye. I have used the **Kromayer ultraviolet ray lamp** on my own eyes many times to note its effects. I have never seen any ill effects although I have used the Kromayer light several inches from the eyes, for a period up to three minutes. But the principal factor in his cure was the grand help he received from his visual center, in response to the demand in his mind, and the confidence developed from that first morning, when the pain stopped, and the sight began to come back to his blind eye. Modern teachers use full spectrum lamps and full spectrum sunlight, all rays of the sun's light spectrum that normally reach the planet. Exposing the eyes to only one ray or only certain rays can harm the eyes, unbalance the brain, visual system, health. UV Rays are included in the sun's healthy light spectrum.

Another case of iritis, constant for one year, has also been mentioned before. When that patient came to me, she could not see at all. For a year, a well known specialist treated her eyes. He promised he would help one eye, but said the other was "out of luck". The patient discontinued his treatments because her eyes were steadily growing worse. She then tried for three months to get some help from Christian Science teachings, but without any relief. **By exposure to ultraviolet rays, and prolonged exposures to sunlight, and other practices, her eyes became normal.** A significant feature of this case was that her eyes faltered again some months after, because of continued nerve tension, and failure to observe the rules she had been given. She secured relief when she followed the same treatment that had cured the condition before. During the two years following, her sight was normal. I have never heard that it did not continue to remain so. The cause for that iritis was not found by the eye specialist, during a year of treatment. The patient was under a constant mental strain, caused by economic conditions, and the dark outlook for a family of growing children. The same outlook continued at the time of the second attack. No medicine was used. She was cured twice with treatment by the practices of the method of Dr. Bates. The ultraviolet ray is an intensive sunlight treatment, approved by Dr. Bates when I wrote him that I was using it.

A case of **detached retinas, consequent upon forty years of nearsightedness**, and stronger and stronger eyeglass lenses has been mentioned before. That man was enabled to discard his two pairs of glasses by treatment according to the method directed by Dr. Bates, with the addition of the ultraviolet ray. The ultraviolet treatment helped him most, according to his own close observation.

The case of the young woman with **hemianopsia**, (blindness or reduction of vision in one half of the visual field) also reported in a previous chapter, was remarkable. Such cases are described in the textbooks. Sometimes a small spot on the retina is blind—no perception is registered in the visual center from the rays received on that spot. **Such spots are called scotomata**. This young woman had a large blind area on her left eye. In looking at the Snellen Test Card she could see only the last letter on each line with that eye. Among the conditions mentioned in text books as possible causes for failures of this nature on the part of the mechanism of vision, one finds **neurasthenia** (a nerve fatigue condition) and hysteria. Hysteria is not a condition called hysterics, which is often seen. Hysteria demonstrates many various forms of abnormal functions, of different parts of the body, and always involves some abnormal condition of the control center of the brain. Since some of that type of cases are classed in the text books as being caused by different kinds of nerve dysfunctions, why is it not reasonable to expect a suitable treatment of the nervous system to correct the dysfunction? In every other branch of medicine similar conditions are being cured in that way. The hemianopsia of that young woman was cured in that way in one hour. In previous chapters, I have mentioned two cases of **amblyopia** (vision poor up to the point of blindness), and my own case of **amaurosis** (blindness when no physical or chemical change is apparent). The cases of amblyopia in adults each involved practical blindness in one eye from birth. One patient was twenty-two, and the other thirty-five years of age. Both eyes, practically blind, were able in a few days to see distinctly such objects as fingers, large letters, et cetera. The older patient had been offered no hope or treatment by the eye specialists

consulted. The younger one was told to keep the good eye closed whenever possible, and make the nearly blind eye gradually learn to function. He was told that it would be two or three years before he would find any improvement, but he secured a fine improvement in a few days. My own experience, occurring when I was twenty, developed in an instant, began to lessen in half an hour, and had entirely disappeared in one hour. I was in normal health, had no other sensations, and was not conscious of any reason for its occurrence.

In standard text books, where the discussion treats of disturbances of vision when no changes in tissues are found, many real or supposed causes are specified. The type mentioned last on the list may be **psychic blindness**. But when one searches the large text books, with reams of pages recording the most minute findings about every other aspect of this tremendous subject of vision, one will find almost nothing about this psychic element of a function which in the same book is spoken of as ultimately a psychic function. Suppositions are offered to account for psychic blindness. But no explanation is found for that failure in vision when the supposed causes certainly are not present. For instance, it is stated that if a psychic blindness is caused by some destruction of an area in the visual center, objects are seen but are not recognized. But in cases where the psychic blindness suddenly changes into normal sight after it has been present for many years, that specific supposition is invalid. When no other explanation is offered for psychic blindness, one is left to wonder what causes it when it comes suddenly and disappears as quickly. To say simply that it is a phenomenon of hysteria is not a fair explanation, when many facts are in full view that are offered no consideration—or at least no comment.

It is not the intention of this chapter to wander into the field of psychology. What is written here is not an effort at some kind of erudite criticism. But the mechanism is under consideration in this book, and some plain facts are offered, in the form of a question. The underlying principle or factor in the type of faltering vision called psychic blindness, is the foundation of the method of Dr. Bates. When the answer is written to the question: "What then is psychic blindness?", it will be realized that the same answer will explain the cause which underlies those simpler failures in visual function that are troubling such a large part of the population which spends its daily life in a mental atmosphere full of unnatural, and unnecessary, and disturbing tensions.

The answer given by Dr. Bates was that **the eye which is perfectly relaxed sees perfectly; and in order to relax the eye it is necessary to relax the mind.** It is all very simple. Omar Khayyam found it, in the midst of his mathematics and astronomy and the intrigues of an Eastern Court. Abraham Lincoln had it. President Roosevelt has it—ever: though sometimes he does put on glasses. The simple, practical importance of it, to those who are having trouble with their vision, or whose children are ordered to put on spectacles for life, is that the **necessary mental relaxation—simply normal, deliberate, effective functioning of the visual center, is within the easy and certain reach of all who are interested.** It is a false answer to say that artificial lenses cure the abnormal mechanism of vision, when those artificial lenses must be changed again and again for stronger ones, because, as the wearers are told, their eyes are getting weaker and weaker.

CHAPTER XXXII

CONCLUSION

IN THIS closing chapter, I hope to make plain the meaning of what has been written. It is only a hope, but growing in the years, it has become a faith. There is a significance in that meaning, which has reference to the future of this country. The needless subjection of the eyes of the coming generations to the domination of glass lenses must have an absolute and malevolent influence on the mentality of any weak-eyed nation.

It has been written, again and again, that the race is losing its virility. Losing it through the artificial and unnatural environment which has developed in this modern civilization. We are told that because we live in air conditioned offices, and steam heated apartments that are not homes, but only places to sleep, and spend our days in purposeless, feverish excitement, we have lost the faculty of adaptation which raised the race as it evolved, and without which it is sinking back from the place it had attained. We are told that we are mechanicists mentally as well as physically.

In the United States the habit of wearing artificial lenses is increasing at such an astonishing rate, that it is fast becoming a remarkable national trait. A young woman from Australia, who came to me because she had heard of the Bates method there, told me that for the last three or four days on the ship, she was impatient, above every other thought, to get on the street in San Francisco, to see if it was really true that almost everyone wore spectacles. She said she had tried to imagine how the people would look, and that in spite of her preparation, she never-the-less was astonished when she saw the procession of glasses. The shock made her more than ever determined to have the beginning trouble with her own eyes corrected, so she would not be compelled to wear spectacles for the remainder of her life. Such a feeling would have been quite common when I was her age in New York City, in the early eighties. But the environment in our large cities has silenced such a feeling with millions of the people of the United States.

The new psychology has served to obscure whatever consciousness there might have been of the meaning of such a condition, if the change had come over the inhabitants in a few months. The difference, in a moment as it were, would have startled the public mind into an apprehension which would have aroused questions, and questions are dangerous, if you like, but always the incentive to action. There is beginning to be heard, from different quarters, comments on this subject which sound very much like actual questions.

Suppose we try to imagine the questions, and the answers, if it should happen that an epidemic came upon this nation of a similar condition in the legs of the population. Suppose that millions were finding their legs beginning to falter, so that they could not be relied upon—without damage, and without pain or apparent cause. Suppose they sought help, and were told that the cause was only a strain, and the cause of the strain was not apparent, and no cure was possible, and they must all wear braces. Would such a situation be accepted with what a famous Englishman called the docility of the American Public?

Suppose, further, that a famous orthopedist published a book which explained that a strain is an unnatural tension, in the leg muscles, the same as in any other body function, and curable in the same way. Can it be imagined that the public would say: "Never mind, we prefer to put on artificial braces; and besides we think it is a most attractive fashion." There is a difference, certainly, in the two situations, but the analogy is perfect. It is only that it may seem different. A little deliberate thought will demonstrate that the factors involved are the same. It sounds frightful to think of a nation with helpless lame legs. But what of a nation with helpless eyes? Suppose that all the spectacles in the United States were lost over-night? It is no answer to say that it will not happen. Because it will never happen is not a reason for refusing to question why a nation with just the same eyes as other nations, should be putting on spectacles so fast that it seems to be responding to an ambition which has been expressed, that all should be wearing them. Suppose we remember that a book has been in print for sixteen years, following a public knowledge for another sixteen years. Is it then a question as to why the public has decided against the cure for the eye—or is it a question as to why the public does not know the established facts?

From certain sources there is positive and persistent opposition to the spread of this knowledge. It is combated and suppressed. There are living examples of the vital power of this truth in several different countries. The book of Dr. Bates has been in this country and in England and Australia since 1920. There are schools teaching the system in Germany and in England.

Truths that are new generally must keep themselves alive, until time wears a way into the consciousness of a public which thinks that an original man is a fool or a prodigy—and is likely to dismiss him as not a prodigy. When there is added to this inertia, a positive, active, and persistent influence of tremendous interests, any new conception meets an atmosphere in which it is hard to live and develop power. It was into such an environment that the discovery of Dr. Bates was born.

It has lived. Truth always, lives. This truth belongs to the race. It cannot be permanently stifled or suppressed. The people of this country have the right to know the truth. It is still their privilege to make their own decisions. Some day, some way, it will become known, as other great truths have become known. When the people of the United States realize that they can have, and their children can have, the same fine natural eyesight that the mass of the race is enjoying today—who would say that they will not decide to use their own eyes, instead of being slaves, helpless without their pieces of glass?

Dr. Bates published scientific reports of his discoveries in conventional medical journals. Discussed them in medical societies. At one annual convention of the American Medical Association, so he has written, he was one of those allowed five minutes to comment on a paper read. The reader of the paper accused Dr. Bates of being a quack—because of the claims he had published and was supporting. **The same man had removed him from the staff of a post-graduate medical school in New York City, because Dr. Bates had enabled medical men in the school to discard their glasses, after that specialist had fitted them.** His complaint was that nearsightedness could not be cured. Dr. Bates had answered that he could examine the eyes of the doctors under discussion as to their nearsightedness. The complaining specialist's only reply was, that if they were not nearsighted at that time, he had made a mistake when he examined them. So many whom I have met have discarded their own glasses, after wearing them for years, because they found they were not nearsighted any longer—I speak of those who never heard of Dr. Bates. The five-minute talk of Dr. Bates interested those specialists of the American Medical Association so much that they insisted upon his talking to them for an hour. The paper of the doctor who had called him a quack took only fifteen minutes.

During more than thirty years of private practice and clinical work, Dr. Bates cured those afflicted with various dysfunctions of vision, removing their glasses permanently, and teaching them how to have normal vision. Many physicians have been interested in the work of Dr. Bates. Patients who were cured are in evidence and the work of Dr. Bates is known all over the world. Although he demonstrated his experiments in the presence of specialists, and his proofs were accepted, no public acknowledgment of his discovery has ever been made. I have often been asked why this is the case. Certainly it is not my part to offer any explanation.

Three years after the death of Dr. Bates, a personal friend, who was a trained newspaper man, persuaded me to submit an article on the subject of this book, to a popular weekly. The reply was a courteous refusal, on the ground that it was "too far from their trail." Later, I submitted the same article to a classical monthly magazine, which publishes both sides of interesting controversial subjects. It was again met with a courteous refusal.

Last spring, a widely read magazine announced a prize competition for unpublished articles of human interest. The intention was to secure articles from those who, thanks to unusual experience or observation or reflection, might well contribute magazine articles having a high standard of lasting interest and significance. Except that it must be the first contributed article from the writer, there were to be no restrictions. A special knowledge of some phase of American life that can be given general importance and appeal; an illuminating human experience; the desire to recognize a fine accomplishment—these were the qualities the judges were to consider in making their decisions. There was to be no fiction. They must be accurate in fact and genuine in feeling. They must be the product of unusual thought or unusual knowledge. They must deal with a subject either not treated before, or presented in a fresh light. They must have a significance and interest as broad as possible. They must combine these qualities in such a way as to produce an article whose value would survive long after the month in which it was printed.

The conditions seemed to me to fit so perfectly the subject discussed in this book, that I submitted an article entitled "The Marvelous Work of Dr. Bates." The article was returned, so I was informed, with especial regret. I was told that my article was

one of those which received most serious consideration. In the final selection it was left off the list because, in the opinion of the judges, it either dealt with material covered fairly recently by the magazine, or to which the magazine was already committed; or because in competition with other articles on the same subject, another had slightly the better of it; or because either the subject, or the treatment of it, did not seem quite within the scope of the magazine.

That my article was rejected is of no moment. If some other writer covered the subject in a better manner, that writer will receive my most sincere congratulations, and my gratitude. If the accuracy of my facts was questioned, it would have been a simple matter to verify or disprove them. If, otherwise, all the ten articles selected were considered to be of greater lasting interest and significance, and to have more general importance and appeal for the American public, I believe that most of the readers of this book will share with me an intense curiosity to read every one of the articles when they appear. Until that time, I can only wonder "why".

We all remember that exquisite little poem of Dr. Oliver Wendell Holmes, "The Last Leaf." It was the quaint philosophy of a grand intellect put into a parable. The picture of the old man, with the thin nose, that rested on his chin, and the crook in his back, who had not been welcomed by the new life in which he wandered around as a stranger, impressed that lover of the race, and he put the innermost thoughts of his own heart into those lines that will never grow old.

With his keen insight, The Autocrat of the Breakfast Table sensed the melancholy crack in the laugh of the man in the old three-cornered hat; he pictured him when not a better man was found by the crier on his round through the town. Now the Old Timer, who had outlasted all the other leaves upon the tree, was still hanging, an old leaf in a new spring, among fresh flowers. He was in a new world of different things; and now he walks the streets, and he looks at all he meets sad and wan.

Is it a strange fantasy for me to think of the human eye, today, as Oliver Wendell Holmes thought of the neglected man of a by-gone generation, who made the pavement stones resound as he tottered o'er the ground with his cane? The eye itself, is the last leaf upon the tree. It is a stranger in a new generation. Every other part of the body is living in a different world. Every other part is cared for when it is sick. The life, and mechanism, and needs and nurture of every other part of the body have been searched and studied, and are being helped and renewed with a science and an art born of new interest and new hope. But the eye has been deserted to its fate. There are volumes—of literature reporting newly discovered knowledge about almost every other organ of the body; and there are campaigns to protect, and to refresh, and to prolong the life of every other organ and function. But when the function of the eye falters, there is no help offered. Like the old man, it is given a cane. Even when it is quite young, still the faltering eye is given a cane for life. In early life even a little sympathetic interest and care would be sufficient to save it, with all its power; and it could even develop a finer power out of the new knowledge of its functions, as the other organs are being improved in their power by the same modern methods as Dr. Bates used in the treatment of the eye.

If this book succeeds only in arousing the attention of those who are interested in the welfare of children, I will feel that it has fulfilled a purpose sufficient for the effort. They are being wronged when their eyes are made the slaves of glass lenses for life. Sight is a psychic function. Who can say what it means to children when the natural freedom of their eyes is dominated by spectacles in those early formative years?

The subject of this book is not an abstract exposition. It is not an academic discussion of public policies or class interests. It is not offering a theory. The issue is simple and clear, and of the most vital interest. It has been established, during a period of over twenty-five years, that most of those who are wearing spectacles can use their natural eyesight, without any artificial assistance, and with perfect satisfaction. There is a question that concerns a great part of humanity at the moment, and which we hope will not harass us in this country—the question of what price glory? This book is concerned with the price the American people are paying for discarding the natural use of their eyes, so they may have the privilege of wearing spectacles. This book is an effort to interest them sufficiently, if possible, to arouse an inquiry that will disclose and consider the danger which is already a disaster, and threatens to become a catastrophe.

Simply to deny that an eye which is finding some difficulty in seeing, cannot be given any curative assistance—to reply merely that "Bates has been discredited"—is not an answer worthy the medical profession. Digitalis is the best life-saving drug in heart disease. It was found by a young physician, in the days before there were schools of medicine. He thought enough of some folk stories to search out and discover the valuable ingredient in an herb mixture used by an old hag who could help faltering hearts, but refused to tell what she put in her concoctions. Because a strange, obscure gleam was noticed by a research worker in a laboratory, and was not "discredited", the medical profession today has the marvelous advantages of the X-Ray. Quinine was found among the ignorant savages of the Andes Mountains. Because it cured their fever, the medical profession investigated and used it. The vaccination, which prevents the contagion of smallpox, was brought to the attention of Jenner, by the stories of what some ignorant farmers of southern England were doing to render themselves immune. He heard that they cut their skin and inserted some of the discharge from an infection on the udder of a cow, and it was called cowpox. Jenner sent one of his young assistants to investigate. Then he went himself, and when he returned he vaccinated his own family. He did not dismiss such a vital matter without investigation. Pasteur could not be silenced by the stupid incredulity of medical men who would not believe their ears; and out of his discoveries has developed the modern system of protecting the race from infection. It was thirty years before the medical world was finally persuaded by the proofs that Dr. Wagner-Jauregg continually gave them, although during all those years he was curing mental diseases, and other serious conditions, by producing a high fever in the bodies of his patients. The doctors had always believed that fever was a disaster for the body, and the claim of Dr. Wagner-Jauregg had to break down another entrenched conviction.

In the current number of a popular magazine, which is small in size, but large in circulation, and broadminded in conception, there is a report of the story of Dr Charles Henry Duncan, a practicing physician in New York City, who has given the medical profession a new method of curing infectious diseases. The method is called autotherapy, and in curing patients in that way, Dr. Duncan

utilizes the inherent resources of the system to protect the body by its own natural method. His treatment is described in standard medical dictionaries. His work has been fully investigated and approved by medical societies, and endorsed over the signatures of many prominent men in the medical profession. He has been recommended by men of standing for a Nobel Prize. Nevertheless, the majority of the medical profession in the United States have never heard of Dr. Duncan or his discovery. Of those who have heard of his work, some have been interested enough to investigate his findings, and have practiced them with success. Other medical then, incredulous, have condemned his theory. The experience of Dr. Duncan, like that of so many other men in the field of medicine, has been similar to that of Dr. Bates. He has met with the same old incredulity, skepticism, controversies, and opposition.

In the press this morning I find an account of a Dr. G. W. Day. of Texas, reporting in The Texas State Journal of Medicine his own successful treatment of several mental diseases, by the simple procedure of producing long continuous sleep—the longest lasting for seventy-eight days, and the average about twenty days. Such treatment may seem to be revolutionary. But such a conception certainly is original and magnificent. But in the final analysis it is a higher degree of "relaxation", prolonged, and prolonged further and further, until the terrific mental tension has finally been relieved. For a long time, continued treatment with music, and other methods of suggestion, have been used with gratifying results, in the care and cure of diseases of the mind.

The analogy of the experiences recorded above, to the different aspects of the discovery and the work and the experience of Dr. Bates, seems very plain to me. He was met with incredulity, and the resistance which meets any new conception that conflicts with a fixed conviction in the minds of men. There is a similarity between the story of Dr. Bates and the stories above, in the portrayal of the manner in which truth forces itself upon the attention of those who happen to have a mind that is open to its evidence. They all comprise a record of one blessing after another becoming the possession of the race.

An editorial in an official medical journal, commenting upon the eightieth birthday of a leader in the field of psychology, compiles the different aspects of the experience his discoveries met with when he offered them to the medical profession. That editorial states that. The inevitable phases of reaction and consternation always provoked by new discoveries have not yet been passed. The concept of the unconscious has deeply modified the subjective attitude of human beings toward life. Human beings seem instinctively to resent the acknowledgment forced on them by Freud, that even their own personalities are removed from the sovereign influence of their conscious selves, and that they are not even complete masters of their own actions. The discovery of the unconscious has led to a striving to bring the unconscious under the domination of consciousness. The editorial explains that Freud discovered the unconscious mind as an entirely new territory of research.

Referring to Charcot, the greatest authority in neurology of his own time, the editorial points out that he was an empiricist and a clinician in the best sense (meaning that his conclusions were founded on the symptoms apparent in patients). It states that: His great reverence for facts enabled him to emancipate himself from the current theories and dogmas in medicine, and to recognize the psychologic element in hysterical phenomena. In commenting on the life work of Freud, the editorial points out that the thirty-year period of his isolated work is not remarkable. It reminds the medical profession that the fight for the scientific study of the human body by dissection lasted for centuries, and the unbiased objective study of the human personality must prevail even over greater emotional obstacles.

In his remark that the inevitable phases of reaction and consternation always provoked by new discoveries have not yet been passed, that editor pictured the situation regarding the discovery of Dr. Bates, and the reasons why his wonderful gift to mankind is not yet being used to meet the necessities of the multitude asking for help for its eyes, and being offered, instead, only the crutch of a pair of spectacles. That erudite editorial pictures frankly the causes which prevented the benefits of the work of Dr. Freud from being used by physicians for thirty years. The same reasons are preventing the benefits of thirty years. The unconscious mind, the editorial explains, is still an unexplored region. Like the biologist who recently wrote that the medical profession has not yet begun to study the human mind, the writer tells the same men that they have not yet realized how dependent they are themselves, as well as their patients, upon the mechanism that is taking care of them—the mechanism called the unconscious mind. The doctor, who knows that sight is a psychic function, and that we see in our brain, makes no effort to influence the visual center, which controls the mechanism of vision.

The findings of Harvey and Lister and Pasteur and Charcot and Freud, were challenged; but they were investigated, and now they belong to humanity. The finding of Dr. Bates are as important as any other discovery, but they have never been investigated, nor weighed, nor tested. They are simply ignored. And will this always be so? I am neither a prophet nor the son of a prophet, but I am not afraid to hazard a challenge that in due time the discovery of Dr. Bates will, likewise, come into its own. The others all had to wait until their time came. It is not yet the thirty years that Freud had to wait, and Wagner-Jauregg. The decision as to the value of the method of Dr. Bates will come from the men whose life work is the same as that of Dr. Bates. Instead of delivering the troubled eyes over to the men who grind the glass lenses, the physicians of tomorrow will treat them as the physicians of today have already learned to treat and correct the disorders of the other functions of the body.

"In Flanders Field the poppies blow, Between the crosses, row on row, That mark our place; Take up our quarrel with the foe. To you from failing hands we throw the torch; Be yours to hold it high."

As surely as any soldier ever died on the field, Dr. Bates gave his life for a cause, battling against fate, during many years of magnificent struggle, when the unending disappointment finally broke in hopeless despair. His torch is still burning. There will come some other battler, who is fit, and will hold it high until the people who are sitting in darkness have seen its great light.

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This document assembled by Clark Night – www.cleareyesight.info
September 26, 2008, Jan 28, 2010

NORMAL SIGHT WITHOUT GLASSES

by

W. B. MacCracken, M.D.

PUBLISHED BY THE AUTHOR
BERKELEY, CALIFORNIA
1945

Dr. MacCracken, a Medical Doctor, trained in Natural Eyesight Improvement by Ophthalmologist William H. Bates.
Dr. MacCracken cured his patients of unclear vision and other abnormal eye conditions.
This is Dr. MacCracken's 2nd book, an addition to his first book 'Use your own eyes'.

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by
W. B. MACCRACKEN, M.D.

Printed by
GAZETTE PRESS
BERKELEY, CALIFORNIA



This book is dedicated to the memory of W. H. Bates, M. D. It was his discovery and his lifework that founded and established the system which can prevent the impending degeneration of the eyes of civilized humans. His genius and his fine courage made it possible for him to bequeath this magnificent gift to the race.

Our lives are modified, more than we know, by constant, active influences. Not only are our minds molded, obeying unconsciously many silent orders; but also our bodies and organs. There are serious chronic nervous diseases which have no found cause in any change of tissue structure, and which are increased or cured by emotions and impulses. Emotions and impulses are actually only automatic reactions to impressions which are often not even possible to discover. It is established that emotions may cause specific changes in many of the body functions: the action of the heart and lungs, the tension of the blood vessels, the conduct of muscles and even tendons. In normal healthy bodies muscular tremors have been demonstrated, registered by laboratory instruments, produced by arousing mental conditions such as curiosity, or fear, or anger. And it is common to find tendon reflexes modified by similar emotions, or even by ordinary excitement. And just such mental conditions are present as the cause of many abnormal physical conditions such as nervous indigestion, insomnia, nervous depression, constant eyestrain, and even distinct diseases with muscle spasms and mental disturbances. And above all, the brain itself with all its nerves, is dominated by the same impressions from the world it lives in, and is molded like the softest clay.

Suppressions, conscious or unconscious, increase these abnormal conditions of tension, and we are constantly suppressing. And worst of all, we are thoughtlessly allowing abnormal and harmful influences to suppress the natural normal functions of our subconscious mind, and mislead us into complexes that are the causes of many diseased conditions.

It is possible to relieve these abnormal conditions by the simple expedient of securing a state of relaxation of the muscles of the body. Without muscular relaxation there never is mental relaxation. And when the muscles are relaxed mental relaxation is always present. There are different methods and varieties of technique by which this muscular relaxation may be secured. But they all must depend upon the same laws of psychology and physiology. It is necessary to enlist the cooperation of the subconscious mind. This can be accomplished by occupying the conscious mind so completely with some carefully chosen impression that the subconscious mind is also influenced by that voluntary control for a period of time. This method has been proved. It is scientific and successful. It requires, however, that the patient be receptive, earnest, and confident.

The story in this book is founded on these truths. Vision is the most precious of the senses which feed the life and the happiness of the human. That vision should be allowed to degenerate into a crippled dependent upon a mechanical device is an ominous threat to the future of the race. If the mind can be roused into a consciousness of its loss, the recovery of the natural power of the eye will be the smallest of the glorious achievements that will come with the new life.

It has been interesting to try to imagine the mighty spirits of the past contemplating the modern hosts that are helpless without their pieces of glass. How could those independent souls understand this new habit. How long will it be before the minds of children, who are beginning their lives, will be taught to use their own eyes, with the freedom and the power which belongs to them, and which will give them a new fullness of life.

W. B. M.

Berkeley, California
March 1945

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Normal Sight Without Glasses

By

William B. MacCracken, M. D.

Dedication
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Chapter II - The Background
Chapter III - The Answer
Chapter IV - The Eye
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Hyperopia
Presbyopia
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Strabismus
Other Conditions
Chapter VIII - Practices
The Snellen Card
Central Fixation
The Sun and the Eye
Swinging to Relax
Palming
The Period
Attention
Memory
Imagination

This book is dedicated to the memory of W. H. Bates, M. D. It was his discovery and his lifework that founded and established the system which can prevent the impending degeneration of the eyes of civilized humans. His genius and his fine courage made it possible for him to bequeath this magnificent gift to the race.

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CHAPTER I

THE PROBLEM

There is a great new American disease (dis-ease). The malady is accumulating in victims so fast that already they have grown into a vast procession.

If one tries to adopt a simile for the picture, one may think of it as built upon the model of the torrent of children that thronged after the Pied Piper of Hamlin.

This is not a joke. It is a challenge.

The Pied Piper led that procession of young spirits into the open sunlight. To fetter the eyes of young children with a pair of artificial lenses is to rob them of the birthright of freedom to use their eyes without that unnatural interference.

The condition under consideration is not a disease, in the common understanding of the meaning of that word. In the great majority of those so afflicted, there is no change in tissue structure. There is no infirmity, as that word is properly understood. The specific mechanism which is involved, the mechanism of vision, has retained all of its inherent power. But we are told, nevertheless, that the condition is incurable.

Notwithstanding that assertion, multitudes are in evidence who have suffered disturbances of normal vision, of the several different types, and have experienced the spontaneous recovery of normal function.

This national malady is identified under the ambiguous, strangely remarkable designation of "eyestrain". It is accepted casually, with a preposterous, absent-minded attitude of "O. K.", which is equivalent to a welcome. The habit, custom, performance itself, might fairly be classified with the fashion dictum "What is being done".

This might all provoke a smile, just as some other fashions do, if it were not for the unconsidered consequences of such a national obsession. It is another illustration of the light-hearted mental attitude which is so aptly expressed in the quip: "I don't know where I'm going, but I'm on my way".

The popular acceptance with which this strange propaganda has been received is some measure of the success of the publicity announced campaign to make every one in the United States what is called "eyeconscious". "Your eye is your most precious possession, take good care of it" Do that, you are directed, by ignoring the endowed marvelous power of accommodation (focus) which the mechanism of vision has. Introduce an outside interference, we are told, a pair of glass lenses.

Thus we are to compel the mechanism which has been evolving since life began, to live in an artificial manner, obliged to work with the altered light rays that are allowed it by the ground glass of the spectacles.

What is this "eyestrain"? Who ever asks what that word means? Try to find that word in the technical exposition of the text books. In the medical dictionary, strain is defined: "To overexercise: To use in an extreme and harmful degree." Eyestrain is defined as: "A weariness of the eye from overuse or from uncorrected defect in focus of the eye."

In any other field of the science and art of the practice of medicine, there would be an endeavor to prevent said "overuse", whatever that vague term might mean, and to correct the "uncorrected defect in focus".

The prevailing method of treatment offers no cure. The defect remains. Further, the defect progressively increases in degree. We are told that it is expected so to do.

It is explained that those eyes, with those glasses, will become weaker, even in healthy children and young people. The glass lenses are periodically made stronger. One is warned to report regularly. It is a positive defeatist program.

For many years it has been known publicly, and demonstrated plentifully, in the United States and in other countries, that in most of these cases of abnormal vision it is possible to secure deliberately the recovery of normal vision, even as so frequently it recovers spontaneously.

This is being accomplished, methodically, by the use of a series of techniques, practices, which are designed to influence, and to secure the co-operation of, the central control in the brain, which has charge of the whole mechanism of vision.

This method, or system, is scientific, and simple, and practicable. The underlying principles are exactly similar to those of practices in common use by medical men. Those principles are in constant successful use for the cure of analogous abnormal functioning of other units of mechanism in the human system. This specific method is in accord with the established findings and teachings of the science and art of the practice of medicine.

The correct answer to this controversial medical problem was discovered by a genius named William H. Bates, M. D. of New York City. He was an ophthalmologist of perfectly ethical standing in the medical societies. He was a member on the staffs of different hospitals. His writings were accepted by the medical journals. He was called upon to discuss the claims he expounded, in the medical societies, and in annual medical conventions.

There was controversy, of course. He had to contend with the same "static" that confronts every pioneer scientist.

The experience of Dr. Bates was quite of a kind, for instance, to that of Columbus. His genius realized that the world must be round. He sailed around it. There were many obvious facts to support his explanation. But the "wise men" simply ignored those truths and put him in jail.

Certainly there were those among the colleagues of Dr. Bates who frankly accepted the truths that he presented. But his claims were never investigated. Generally his demonstrations were ignored. Instead, the replies he received in the controversy were trite reminders of the unsupported opinion of medical men long dead.

That need not seem strange. There are many records in the history of the life and growth of the medical profession, where "The moving finger" wrote in vain discovered truths that were infinitely more necessary than this truth is to the life of the race. There have been many findings, vital in the tragic battle for life and health, which also have been made, sometimes for many years, to stand and wait.

Surely millions of young men would gladly discard spectacles, if only they had it forced into a conviction in their minds that a little earnest endeavor on their part would correct their abnormal vision to normal satisfactory sight permanently.

With women the considerations are somewhat different. As women, they are learning, in many aspects now being presented, that there are vital interests involved in those frameworks on their faces.

The heart interest of this whole subject is the case for the helpless children. Perhaps we need not wonder that most parents do not wonder why no answer is being given, or no protest is being offered, by the medical profession, to those few members of it who are babbling, commercially, that many children, as young as one year old, should have their developing mechanism of vision interfered with for life by the restriction of glass lenses.

It is timely here perhaps for me to say that I know this subject from the inside as well as from the outside. I have been over that trail myself, and know the road.

For thirty years I wore spectacles. It began with a psychic blindness lasting an hour, from a mental shock when all but drowned. There was inaugurated then a continuing astigmatism. Through the years there developed a growing myopia. My lenses were satisfactory, generally for periods of years. They were renewed when my eyes finally rebelled and demanded a new pair. But there were occasions, nevertheless, without any apparent exciting cause, when my astigmatism indulged in most unpleasant outbursts, lasting perhaps an hour, perchance a day or two.

One day, by merest chance, I read a casual reference to the method of Dr. Bates. I found his book PERFECT SIGHT WITHOUT GLASSES. It was most convincing. It was not hard, nor did it take long, for me to discard my glasses. That was over twenty years ago and I have never considered resuming them, and my vision is very satisfactory.

It will be helpful, I believe, to those who may be interested in this book, to submit here a brief resume of the background to the claims Dr. Bates made for the system he developed.

In the private and clinical practice of an ophthalmologist, in New York City, he was impressed with the obvious discrepancies apparent in the explanations offered for the different types of abnormal vision.

That was the beginning of a bitter controversy. He began a search for the real explanation, and the cause of the abnormal functioning which was being allowed to pass unchallenged, with an interpretation that obviously could not be true. He was not discouraged by the disapproval of his years of successful treatment. Time has amply demonstrated the truth of what he proclaimed. No attempt has ever been made to prove that his story was not true.

It would be interesting surely, to know something of the personal experience of this genius, in his years of battle for such a great cause.

It was no chance discovery of some secret that was received presently with acclaim. But he was a true scientist. He kept his hand on the plow, and nothing could make him turn back.

In all that I have read of his writings he maintained consistently the objective attitude of a scientific research worker. Only once the record required, and he tersely reported, how it happened, in a simple way, that the secret he sought was revealed to him in a single minute.

Dr. Bates Cures His Presbyopia

His own remarkable affliction was diagnosed as presbyopia, the eye of old age. But the strange difficulty he did have was that **when he wanted to see close up, his eyes might persist in focusing at a distance; and when he wanted to see at a distance, probably they would refuse to change from a focus close up.** These demonstrations proved that he did not have presbyopia.

Working alone for months, as he reported, because none of his colleagues in eye work had any sympathy with his new ideas, Dr. Bates was being helped by a clergyman who learned to be of assistance. He knew that he must cure his own eyes to prove his revolutionary claims.

One day he was looking at a picture of the Rock of Gibraltar. He noted some black spots on the face of the rock. He imagined that these spots were the openings of caves, and that there were figures of men moving in them. But the retinoscope showed that at the moment his eyes were focused at the reading distance—not suitable for his distance from the picture.

Then he looked at the picture from the correct reading distance, still imagining that the spots were caves with people in them. The retinoscope showed then, that his eyes were accommodating, that is, focused correctly for close-up vision, and he was able, at the moment, to read the close-up lettering under the picture.

He realized at once that the faulty functioning of his eyes had been cured, temporarily, by the use of his imagination.

He demonstrated after that how it was possible for him to secure normal accommodation by the specific use of his deliberate imagination, practiced in different techniques which he devised. That was the beginning of a tedious course of endeavor before he secured, permanently, very good normal vision.

If one is inclined to question the consistency of this explanation of Dr. Bates, one has only to remember that, working independently, Emile Coue of France, by a proceeding exactly similar, cured multitudes suffering from afflictions quite analagous, after the efforts of other medical men had failed.

Coúe had a high ethical standing in his own field. He was a psychologist who took his laboratory findings out into the world, and proved the value of them, just as Dr. Bates proved his claim in the same way.

There is much in medical literature which supports the interpretation that Dr. Bates offered for his findings, and that he sustained, during many years of successful demonstration of their practical value, before he died in 1931.

Gradually, in the years, the seeds which were planted by Dr. Bates have been bearing fruit. Like the sower in the parable, his work found much ground that was barren. But in these recent present days there is being gathered a most remarkable harvest, which he would have considered "even an hundred fold".

Not to tire the reader with a long recital of the many presentations now in evidence of a new interest in this vital subject, it may be sufficient here to report that: the **military** authorities of the United States have already inaugurated a tremendous specific program, in an undertaking to accomplish a satisfactory improvement in the vision of enlisted men who need it in the special work for which they are detailed.

Several stations have been established, in different states, where men are being trained to go out as instructors to teach enlisted men until their vision has been corrected to a good normal. That normal can be a vision much superior to the degree which is a common general average.

Any method being used is founded, certainly, on the principles of the method of Dr. Bates, which is founded on the laws of psychology and physiology, as involved in the mechanism of vision.

In closing this first chapter, permit me to offer, as a foundation of your own faith and confidence, the reminder that seeing is not an "art".

The human mechanism of vision is an endowment. It was given to you at birth. You did not educate it. You cannot re-educate it. Multitudes have recovered their normal vision in a moment, by an unconscious mental reaction. I have watched a number recover it during one hour, by obeying the simple directions given by Dr. Bates. Those cures were accomplished by the visual centers in the mind.

It will be my endeavor throughout the book to impress; the reader with the great importance of continually reminding the mind that the endeavor is not to acquire an art. Success depends on the degree in which one is dominated by the idea that **the defect in vision is caused by a habit, acquired unconsciously, of interfering with the normal function of the mechanism of vision.**

That habit can be recovered from only by the specific co-operation of the mechanism itself. A conscious voluntary endeavor to rely on the visual centers to respond to such a respectful understanding is the foundation of the practices of the method.

This statement is supported by accepted findings recorded in the standard books. It is very simple. But it will be of little value to the beginner until it has been impressed, by earnest, voluntary, continued attention, in that way sending a message to the part of the mind which Coue called the engineer, the factor that gives the orders to all the units of mechanism in the system. That factor, like the engineer on the train, sometimes illustrates the comment of the philosopher who said: "To err is human."

We must establish a conscious friendship, born of knowledge, with that part of the mind which is designated as the center of vision.

That sentence is very simple. But it involves the arousing of some serious thought. But what is thought? Who knows? "How many think they think, who never do." Personally, I am guilty. In later years I often remind myself that, being of the race, I am constantly dominated by my own unconscious "reactions".

Such mental functioning is illustrated by the reply of the co-ed who defended herself against the charge that she had allowed him to kiss her, by countering with the rebuttal that "Yes, but he thought that I thought that he thought I was asleep".

To establish a friendship with our center of vision is to become acquainted, by a deliberate endeavor, with "a stranger in the house". The central control in the mind, which dominates our mechanism of vision, is a factor most of us have never been conscious of. What about yourself?

CHAPTER II

THE BACKGROUND

What is the real explanation of the vernacular word "Eyestrain", which is not found in technical books? The specific word that does describe the condition referred to is Asthenopia. It is a made word, from weak and sight. Asthenopia has many manifestations, that is, complications.

This condition ("weak sight") is described as a sense of strain or weariness in the eyes and head, set up by the use of the eyes. It may be simple, that is, alone, or it may be associated with blurred vision, which may be continuous or only transient. Print may run together, and then become clear again. There may be double, or multiple images. Flashes of light, or floating specks may be seen. It is stated that the condition may be caused by refractive errors, in accommodation (focusing), by anomalous conduct of the six muscles surrounding the eyeball, or by hysteria or neurasthenia, by improper illumination, or by morbid conditions of other organs.

Those predisposed to the condition find that it readily occurs, so we are told, in any concentrated use of the eyes, or when motoring, or train riding ("panoramic asthenopia"), or in public crowds, at games, moving pictures, et cetera...

But we are told also, presently, that reflex disturbances may be caused in the system by the presence of the condition itself; for example, remote pains, nausea, tics (twitchings), et cetera.

We are told, finally, that asthenopia is the commonest of all eye symptoms, and the one that is most readily relieved by proper treatment. The treatment is the removal of the cause.

The discussion in the books thus becomes confusing.

We know that most of those who are wearing lenses have been told that their abnormal vision has been caused by eyestrain. No morbid conditions have been found in other organs. They are apparently in normal health. More confusion.

There are several types of these prevalent disturbances of vision. There is a tragic condition which is the ultimate extreme of such abnormal functioning. It is called psychic blindness. This catastrophe is not common but it is well known. Also, quite frequently, it likewise is recovered from spontaneously. Such spontaneous recoveries generally occur after all deliberate efforts to relieve it have failed. In those cases of record where it has been relieved by deliberate effort, the cure has been effected by endeavors to influence the mind.

The cause of **psychic blindness** is always a mental shock. Its occurrence may crash instantaneously, or may take months to develop; and likewise the recovery may occur in a moment, or may take years.

A woman's husband threw a cup of hot coffee in her face. In that instant she became blind. Fortunately, the doctor consulted was a clever fellow. He told the patient that the coffee had caused a film to form over her eyes. He said he could clear it off by painting the eyeballs with a solution, and covering the eyes for an hour with a heavy surgical dressing. The solution, he said, would dissolve the film. When finally be took the dressing off, the patient's sight was normal. Of course there was no film on the eyeballs. The film was in her mind.

A man who had spent his life building up a large enterprise, found himself finally promoted into the honorary office of Chairman of the Board of Directors. His unhappy discontent caused gradually a complete loss of vision.

Finally his physician persuaded him that mental depression had caused this remarkable condition of his sight, suppressing the normal reaction of the central control of vision in the brain.

The physician explained that one hour of unconsciousness, under the effects of ether, would quiet this extreme reaction because it would silence the haunting humiliation he felt, being thus deprived of direct control of the enterprise which constantly filled his thoughts.

His troubled mind accepted the promise. When he recovered consciousness, the physician held out his watch, and the patient told him the time.

Even a very little deliberate consideration of the import and the indication of records such as those, makes one realize their significance.

Those who are troubled with nearsightedness, or farsightedness, or astigmatism, or other symptoms of eyestrain, report that the degree, and even the nature of the affliction, varies with an irregular irregularity.

The standard books explain that eyes which are crossed make changes often, temporary or permanent, in the direction of the squint. Such changes may occur in one eye, or in both eyes. They occur without the consciousness of the owner of the eyes.

This marvelous, exquisite mechanism of human vision, this faculty which is next to thought, is, so much of it, so beyond our conception that the most erudite descriptions cease to describe it. Their explanations terminate in crude speculation, very little beyond the border where "radiant energy is transformed into another form of energy", which cannot be described, when it "contacts the retina", the lining membrane of the eye, and as a strange new force, carries a message to the brain.

Did you ever deliberate over the process by which the size of a sky scraper building is taken into your eyes, and you can "see" how big it is? Can you explain at all how a glance at another human face may give you some specific conception of the thoughts in the mind of the owner of that face?

The eyeball itself is only the beginning of the mechanism of vision. Wonderful as it is, the eyeball, with the muscles which encircle it and change its shape, comprises only the comparatively trivial end organ. That end organ receives and directs the waves of light, determining their distribution and contact with the retina. In the retina biological chemistry accomplishes the transformation which is known, but cannot be described.

The refracted light rays, which comprise the stimulant to the ultimate tendrils of the optic nerve, become the determining factor which conveys to the mind the presentation that makes possible the conception impressed on the consciousness.

Psychic blindness is a disturbance which suppresses the ultimate function of the mechanism of vision. That part of the process which normally so impresses the microscopic brain cells in the visual center, that the mind itself becomes conscious of the message coming in from the world outside.

This central control has demonstrated its ability to correct, spontaneously, such lapses into helplessness. There is official record, sufficient, that deliberate scientific effort has accomplished the same recovery. That is done by securing what Emile Coue' described as autosuggestion. For years he secured analagous results, in that same way, that are recorded today as fine scientific achievements.

Is it not clear that the recovery of normal function, in those subordinate factors in this mechanism of vision, that is, the correcting of abnormal conduct of muscles which are receiving improper nerve impulses, is a trifling matter, when compared with the recovery from collapse of the control center itself?

In other words, since no one would, or could deny the recovery from psychic total blindness, upon what grounds can anyone persist in claiming that there will never be any cure found for the simple, almost fashionable, variety of eyestrains with which our people are being supplied?

In the civilizations that had appeared, and had been lost again, in the mists of time, long ages before the Egyptians and the Chaldeans, man had learned how to make telescopes, and how to study the stars, billions of light years away in the vast firmament. But the art of making telescopes had been lost.

Since that long ago age, the mechanics have learned how to make great improvements on the glass that was made eons before the records, or the imagination, of present day man had any conception of them.

Since that time, too, anatomists and physiologists and psychologists have uncovered for eye specialists of the medical profession today many mysteries of which the wise men of old China had no knowledge.

But in their treatment of the varieties of abnormal vision designated as eyestrain, those specialists, the world over, are found to be still congealed in the same footprints on the sands of time as Marco Polo found in the civilization of ancient China.

During the fifty years of my own personal experiences concerning abnormal vision, like Omar Khayyam, I have heard great argument

About it and about: but evermore
Came out by the same door where in I went.
Back to the same door. Astigmatism is not curable.

But Coue cured many thousands with much more serious afflictions.
(Bates Method cures astigmatism.)

Milton H. Berry, a plain kind of a genius in Los Angeles, left a medical record of three thousand cases of various kinds of paralysis which recovered the power of their muscles, all of them after their various medical advisors had informed them they were incurable.

If we would deliberately consider circumstances which are common knowledge, it would clarify many vague, almost unconscious mental impressions concerning this most important personal subject.

Multitudes who never heard of Dr. Bates have discarded their spectacles, often after wearing them continuously for years. That the majority of wearers have not discarded them proves only that they are still wearing them. Their experience confirms the habitual promise of the specialist that their eyes, with the spectacles on, will become more and more helpless, without the "stronger" and stronger glasses. The current explanation of the condition is the coined word "Eyestrain". The simple practices of the Bates Method teach the patient how to correct said strain. The mental discipline learned in that endeavor is illuminating. The freedom from the spectacles, and the eyestrain, is not the only value discovered.

How often one hears a direct, or a covert sneer at the possibility of "disciplining our thoughts". Those who have that mental attitude are ignoring not only the priceless privilege endowed in their inheritance, but as well the cost of that "thoughtless" surrender.

Not a few of those seeking relief from glass lenses are obstructed by the unconscious build-up in their minds, accomplished by the current propaganda against the possibility of securing a correction of the abnormal condition of their vision. Suppose you consider your own conception.

CHAPTER III

THE ANSWER

It was his own distress that gave birth in his mind to the burning urge which drove Dr. Bates to find the true answer, the real reply to the universal belief that eyes behaving like his were helpless, and hopelessly lost.

His lenses were hard as stone he had been told. But it was true, however, that his eyes did accommodate. Dr. Bates published this record in his book, in which he tells the story of his own experience. Generally, however, **his eyes accommodated (focused) in the reverse, that is, at the wrong time. His was a strange remarkable case.**

According to the commonly accepted explanation today of how the eye accomplishes accommodation, a hard lens cannot accommodate at all.

The diagnosis was that Dr. Bates had presbyopia, that is, a lens which had hardened. Presbyopia (the eye of old age) is expected to begin at forty. The books state, however, today, that cases are on record in which presbyopia began at eight. On the other hand we know, Oliver Wendell Holmes, a distinguished medical intellect, reminded us, in his Autocrat of the Breakfast Table, that in millions it never does begin.

Those who are interested can find evidence, in current events, that a new, and a different, and an imperative demand is becoming organized, for the truth to be told them about this misinformation. They want to know why a trifling abnormal function developing in the mechanism of vision, condemns that whole mechanism as helpless, permanently, without the assistance of a pair of glass lenses.

Most of the varieties of abnormal vision are being explained casually, under the designation of asthenopia, the vernacular eyestrain.

Like the miner who traces the tiny particles of gold back up the stream to where they originate, the genius of Dr. Bates told him to trace this effect (eyestrain) back to its source.

There are a number of factors in that problem. They will be described in this book as we come to them.

Dr. Bates began by studying the six muscles which are attached to the outside of the eyeball, the muscles which the great philosopher Helmholtz looked at, but did not "See".

The standard books allow to the muscles the power to do just what Dr. Bates explained that they do. But, like Dr. Helmholtz, those standard books do not realize the import and significance of what they themselves describe.

Dr. Bates worked on: Muscles carry out orders. Orders are delivered to them by nerves. Nerves receive directions from the central control, where all nerve impulses originate.

When it is ascertained that the muscles, and the nerves, are in good working order, the fault in the mechanism must originate in the central control. That is comparatively easy to understand.

But to comprehend the functioning of that secret mental organism is not yet possible. Fortunately, such knowledge was not necessary for the purpose in the mind of Dr. Bates.

In those cases where a spontaneous recovery has occurred, the control center has ceased to give out abnormal impulses. It again is giving to the muscles the correct orders which it gave originally, when the muscles performed their function without the disturbances caused by "eyestrain".

At this point, someone who is conscious of an awakening interest in the subject interjects a challenge. "But that is psychology". Dr. Bates admits that it is such. So we remind our interrogator that sight is a psychic function, so termed in the text books. From that hitherto unmarked margin on his trail Dr. Bates had to be guided by his own "psychology".

This book will not presume to discuss at all the working of the mind of Dr. Bates. It will simply follow the trail of his endeavors, as marked by his footprints; the sequence of his proceedings, as described in his writings.

Having arrived at the source, past the dissection of muscles, and the tracing of nerves, he laid down his tools, including his remarkable original work in photography. He was on firm ground. He must learn now how to approach the "master mind" of the biological organization.

Alexis Carrel, in his MAN THE UNKNOWN, raises the curtain that conceals from the casual attention of most of us the forces that are working out the salvation of the race.

Dr. Carrel reminds us that a few are born endowed with rare and marvelous powers. These men have intuition of things not known, imagination that discovers and creates. They have the faculty of discerning the hidden within the living matter, which he says is ignored by physiologists, as well as by economists, and left almost unnoticed by physicians.

In his frank dissection of the dangers in the trail of the medical specialists, Dr. Carrel expresses the opinion that harm is caused by extreme specialization. He believes that a specialist who confines himself, from the beginning of his career, to a minute part of the body, has so rudimentary a knowledge of the rest of the system that be is incapable of thoroughly understanding even that part in which he specializes.

As an illustration of the consequences involved in this point of view of a leader of medical thought, we find the eye specialist physicians delivering the mind, where the said mind is concerned with the mechanism of vision, over to the large commercial interests that supply the glass lenses, and that even advertise lenses which are so made as to prevent the eyes from receiving the natural light of the sun.

In the discourses and the accomplishments of this vast field of psychology, normal and abnormal, the foundation and the determination of the course of treatment is predicated on the conception that thought is the power in our lives that determines our course. The will is only the factor which carries out the purpose of the thought. As Coue' puts it so simply, it is the IDEA which dominates the conduct, and the idea comes from the imagination, and the imagination is the unconscious when it makes its conception conscious as a thought.

When a thought is held that artificial lenses are the only possible relief to help difficulties with abnormal vision, the will determines to accept that opportunity.

When deliberate thought accepts the proof that a natural way has been discovered by which the fault in the function can be corrected, the picture is changed, and the decision then remains with ourselves.

Every direction, and every practice described by Dr. Bates, is based upon this conception. Interpreted simply, he endeavors to imitate the normal, unconscious conduct of a mechanism of vision that is not disturbed by any abnormal strain.

He requires that the beginner forget his eyes, and have his ATTENTION absorbed entirely in carrying out the details of the proceeding involved. That is the habitual conduct of one whose eyes are normal, who never does think of his eyes.

Some are so responsive that they are cured at the first sitting-the same as those who recover normal vision spontaneously.

The spontaneous recoveries revert unconsciously to the correct habit. The pupils under instruction in the method of Dr. Bates must accomplish the same transition deliberately by following the specific directions given.

In this book the directions are based on those given by Dr. Bates. No claim is made for any improvement on the techniques he devised. Like all geniuses his work was simple and direct.

In plain language, simple but fully warranted by the accepted findings reported in technical books on the subject, these acquired abnormal functioning's of the mechanism of vision, fundamentally are habits.

Unconsciously they come. Unconsciously they cease. Spontaneously, meaning without any voluntary effort, multitudes have ceased to be so afflicted. Their normal sight has returned.

Even though many have not known of such cases, certainly those recoveries are not uncommon. This was one of the impressive considerations which aroused in the mind of Dr. Bates the determination to search for the truth. He undertook to find the foundation of the principles and the factors involved in the medical specialty which he had chosen as his life work.

The obvious contradictions urged on him as the explanation for his own most peculiar affliction intensified his conviction. The necessity for relief was a constant urge which drove him through fields of research entirely new. In order to overcome obstacles which had never before been considered, he was obliged to invent new methods.

When he had discovered causes, and the way the mechanism of vision effected its own cures, without the help of the conscious mind, he had to devise practicable techniques, easily learned and carried out. The conscious mind had to learn to undertake the endeavor to recover normal vision by securing the co-operation of the visual centers which are known to control the mechanism of vision.

This search culminated in the practices which are known to the world as the Bates Method.

In the several books that I have bought and read, which offer what are often called "exercises" for correcting abnormal vision, I find the specific presentation of the writers' own interpretations of the suggestions of Dr. Bates.

As I understand Dr. Bates, we are not to order the mechanism of vision. When we are instructed to make said mechanism perform a series of complicated proceedings, the effort is expended in training the mind. One may accomplish a cure by such a complicated method. But a deliberate consideration of the instantaneous, or even the gradual spontaneous (not consciously) cures that are recorded and accepted will impress the realization of the value of the method which the mechanism uses. Doctor Bates reported a number of cures accomplished in less than an hour, when he could secure the simple and direct response of his patient.

Such a simple and direct response is not common. This means that one does not really accomplish a deliberate consideration. There is generally an automatic, unconscious inhibition. The only thoughts a beginner has had on the subject of the troubled vision have been the register of the prevailing propaganda, which states positively that the condition is not curable.

To eliminate that confirmed mental attitude is a necessity, as a beginning in the endeavor. Such a new and different conception will be produced by a study of those established and accented records printed in the standard books, and found, each in their place, in the chapters of this book.

CHAPTER IV

THE EYE

Everyone knows that the eye is round. Not many have inquired much further. Some could tell us that the round eye lies cushioned in the soft tissue which lines the cave-like round hollows of bone that carry the eyes; right under the floor of the skull, beneath the brain. There are six muscles attached to the outside covering of the eye. At one end they are attached to the edge of the round hole in the rear of the cavity through which the optic nerve passes on its way back to the brain. Four muscles pass forward and are imbedded in the outer walls of the eye, near the front; one on top, one on the bottom, and one on each side. The other two are attached to the sidewalls of the cavity, and are wrapped around the middle of the eye like belts, one passing over, and the other passing under the eye.

The four muscles called the recti, passing forward on all four aspects of the walls, move the eye in different directions. Working in harmony, they change the position of the eye in the socket, and point it, unconsciously, wherever the mind wants to look. When they are contracted together and sufficiently they change the shape of the eye and make it flatter on each end. That is, they make the distance shorter between the front and the rear walls than it properly should be. Such an abnormal condition is present when an eye is what is called farsighted. The two so-called oblique muscles serve to compress the eye in the middle and flatten it there so that it becomes longer horizontally. In this condition the distance is longer between the front and rear walls of the eye, called the focal distance. Such a longer focal distance is necessary when the eye is focused on nearby objects.

The inside of the eye is divided into two compartments.
Immediately behind the anterior wall of the eye is a small chamber, filled with a thin fluid, which separates the front of the eye from the lens. The lens is fastened to the inner walls of the eye by a ribbon-like circular band of tendon, attached edgewise. Behind the lens, filling the remainder of the eyeball, is a different liquid which resembles a jellyft (jelly, fish, fit, gelatin like?) in

consistency. The spherical shape of the eye is sustained by the pressure outward of the fluids with which it is filled. The crystalline lens consists of an elastic capsule holding in an oval shape its fluid-like contents.

The walls of the eye are opaque, and light can enter only through the transparent lens in the middle of the front wall. The colored circle just inside the front of the eye is called the iris, and the opening in the center of that circle is called the pupil. This opening constantly varies in diameter. It is furnished with a diaphragm, of which the diaphragm in a camera is something of an imitation. Its function is to control the amount of light which is permitted to enter through the lens. In a poor light, it enlarges, and in a strong light it contracts. The outer walls of the eye are composed of a dense, firm tissue, with a lining of opaque pigment, and contain vessels which supply the nutriment required. The inner membrane, lining the eyeball, is called the retina. **This membrane, although it is thinner than the finest paper, consists of ten distinct layers.** In its surface are spread out the nerve terminations, which are the microscopic endings of the nerves that receive and carry the impressions made upon the surface of the retina by the rays of light. We have some understanding of this when we remember the film in a camera, which also is acted upon, although in a way infinitely simpler, by rays of light.

The terminations of the nerve tendrils in the retina are of two kinds. They are distinguished as rods and cones, and there is much difference in their exact functions. The most sensitive part of the retina is a small area at the very back of the eye in the center, which is called the macula. Here form and color and very sharp definition are registered. In this area there are no rods, which are nerve endings plainer and less highly specialized than the cones. Beyond this spot cones and rods mingle, but toward the front edges of the retina no cones are found. The rods seem to be more sensitive to the presence of simple light than are the cones.

When light rays contact the surface of the retina a chemical transformation takes place. The force called radiant energy is changed into "another form of energy". This new force is carried by the nerve fibres which terminate in the cones and rods, back through the collection of fibres called the optic nerve. In order that light rays coming into either eye, from right or from left may be registered simultaneously in the visual centers of both sides of the brain, there is a switch in the course of the optic nerves from both eyes. This is the beginning of the mechanism of sight: The comparatively simple reception and absorption and assimilation of those rays of light which are reflected from external objects and come into contact with the retina.

Vision is classified as a psychic function. The eye does not see. It is the brain that sees. The force or energy which courses up through the optic nerves to the vision center in the brain creates a transformation in those brain cells. Just how those impressions are registered so that they become conscious conceptions, has not yet been discovered. The process is a brain function, and part of the mind. **Previous similar impressions upon brain cells make it possible for a harmonious cooperation of memories to interpret the newly registered images. This involves memory, imagination, and every element of the intellect.**

Does not this brief description impress the tremendous significance of the prevailing custom of neglecting all this marvelous mechanism?

Reminding the reader that this is exactly what is being done by the eye specialists who allege that the different, common types of abnormal vision are not curable, should help the patient realize the factors and their conduct which are involved in the mechanism of vision.

This theory on the part of those specialists is founded on statements formulated by medical men long dead.

Under the present stress of necessity as much has been discovered in the field of medicine as in any other branch of science. **The military authorities of the United States have learned that it is possible to cure or to sufficiently improve the defective vision of the men they needed in the service.**

Is it not obvious that anyone who continues to maintain that an abnormal function in the mechanism of vision is not curable, is ignoring this record of accomplishments.

The import of what I am trying to impress on the patients, in calling attention to this field of thought, is the influence of unconscious inhibitions, in any effort to accept an entirely new conception, the more especially concerning a subject which is unfamiliar.

I am not concerned here with the belief or the practice of a specialist who is prescribing glasses for those who want them. My purpose is to constrain the patient against his own unconscious reluctance. That is, the failure to discard the teaching which has been, may I say incorporated in his mind, during the years, as a part of what I think of as the mechanism of vision.

CHAPTER V

ACCOMMODATION

When the word "accommodation" is used by an eye specialist, he means by it the changes which take place in the eye when it is focusing. That is, the eye is accommodating itself to the distance of the object at which it is looking. Just what muscular changes occur in the eye during the act of accommodation has been a subject of most fascinating interest for centuries.

There have been different theories as to how this is accomplished. Some supposed a change in the position of the lens. Another theory was that the eyeball was lengthened. That would amount to the same thing; it would change the relative position of the lens. Such a change would increase the distance between the lens and the most sensitive part of the retina, at the rear of the eyeball. A change in the horizontal length of the eyeball can be accomplished only by the external muscles of the eye.

We must remember that rays of light, while passing through the front of the eye, are so refracted as to present the image of an object upside down on the retina. This is because the rays reflected from the top of the object are directed downward, so as to contact the floor of the retina; and rays reflected from the bottom of the object are directed upward and contact the upper surface of the retina.

In some way, before the "new form of energy" so called in the text books, registers in the cells of the visual center, that inverted image is reinverted.

Dr. Helmholtz, who died in 1894, was the authority for the present prevailing belief that accommodation is accomplished by an increase in the convexity of the anterior surface of the lens. He said, however, that his guess was only a theory, and his findings not satisfactory. He simply ignored the transverse muscles, saying that besides the lens, he did not "see" anything else which could accomplish accommodation. That certainly was a great man's lapse.

For a century those external muscles had been discussed, and some leaders of thought had believed they did accomplish accommodation. It had been fully proved, too, for many years, that an eye could, and many eyes did, accommodate after the lens was removed. Dr. Helmholtz offered no reply to those records.

The discoveries of Dr. Bates explain why eyes can accommodate when the lens of the eye has been removed. They do not conflict with what is known of the structure and functions of the tendon and the tiny ciliary muscles that sustain or modify the convexity of the lens. His discoveries explain many apparent discrepancies in the theories which are held, or discussed, by eye specialists. They show why and how it is possible to prevent and to cure the various abnormal function conditions which are such a distressing problem to the men whose work it is to care for and to help the increasing number of cases of defective vision.

It is established that the normal eye at rest is adjusted only for rays coming from a distance, not for rays reflected from objects nearby. Rays from nearby objects will come to a focus behind the retina. But the myopic eye, that is the nearsighted eye, does constantly focus the rays reflected from near objects. It is accepted that the myopic eye is always longer horizontally than the normal eye at rest, when it is not focused-that is, accommodated-for nearby objects.

Dr. Bates discovered and proved how this change is accomplished. But he too had a lapse. Perhaps he was "made mad" by the Gods, bitter finally from the contumely heaped on him by the specialists, he wrote that "the lens has no part in accommodation". But that is not true.

The eyeball, in changing the distance between the lens and the near end of the retina, changes its shape. Its walls are curved. When the rear end recedes from the lens, the curvature of the walls changes as the ball is made longer horizontally. The lens is placed a short distance back from the inner side of the front end. Its substance is not an unchanging solid. Its capsule, the flexible envelope which holds the contents in shape, is fastened to the curved inner sides of the eyeball by the tendon which controls its shape. Any change in the shape of those walls could modify the convexity of the anterior surface of the lens. This relationship makes it necessary for the exact shape of the lens to perfectly conform to any change made in the curvature of the anterior of the eyeball. This is necessary because the outer covering there, the cornea, is also a refracting medium, and the lens must conform to any changes that may occur in the refraction which takes place in the cornea. It is necessary also for the convexity of the lens to conform perfectly to whatever changes occur in the relationship with the retina consequent upon the changes in the shape of the eyeball.

At that moment the lens must not become less convex. Perhaps, it is kept from so changing; or even it may be made a trifle more convex. This could be done by the ciliary muscle. Dr. Bates ignored that muscle, even as Dr. Helmholtz ignored the comparatively big oblique muscles.

If that theory is correct, it will harmonize the findings of Dr. Helmholtz and Dr. Bates. I have not found it written before. But that is my guess.

It is apparent that the same impulse or nerve control which issues from the visual center in the brain harmonizes the cooperation of the external muscles and the ciliary muscle of the lens.

The highest standard text book writes specifically that the theory of Dr. Helmholtz does not accord with some accepted findings. The explanation offered here would agree with what he offered, and with the discovery of Dr. Bates. **The lens serves as an**

auxiliary adjustment, secondary and compensatory to whatever changes are produced by the action of the two external oblique muscles of the eye.

This is not a text book. This chapter gives a sufficient description of the factor of accommodation, based on factual records in standard text books. You have also the statement of Dr. Helmholtz, and that of Dr. Bates. I believe you will see the reasonableness of my explanation, which apparently harmonizes the two conflicting claims.

It will probably help you to succeed if you get a clear understanding of the mechanism, and realize that there was no real conflict; because they both were right in their positive claims, and wrong only in their denials, one against the other.

That however, is not of fundamental import to you. **The lens is a factor in accommodation, and the oblique muscles are also a factor. The records in the standard books support that statement.**

What you should emphasize, and impress on your mind, is that the same central control activates both muscles, and when the functioning is normal, the mental conception is correct.
Bates method relaxes, corrects the function of all the eye muscles, inner and outer.

CHAPTER VI

RELAXATION

We often hear the word Relaxation. With most it is little more than a joke. To the thoughtful, it is something they are trying to learn about. They have realized that it is of vital importance. They know that it must be mental. Tersely (Brief, to the point, simply) it means: Be yourself, at your own best, deliberate but alert, confident and expectant, but without abnormal tension, conscious that you are relying on the marvelous inherent power of the organism which is your endowment.

Such a state of mind some of us have, in some measure, sometimes. Today there are many, in humble stations as well as among the great, demonstrating that what they are giving is born of a magnificent endowment, working well.

Relaxation does not necessarily mean rest. It has been described as change of motion. An artist painted it as a bird, perched on a swaying thin branch, waving over a rushing turbulent stream.

The term relaxation applies to all the parts and functions of the system. **The foundation of the method of Dr. Bates is: "The eye which is perfectly relaxed sees perfectly. In order to relax the eye, we must relax the mind."**

His method is a simple and a scientific and direct approach to the dominating subconscious mind. In its practices we center the imagination on the specific idea that it is necessary only to stop trying to see. Such trying comprises an abnormal tension, called EYESTRAIN. When we cease such straining, we allow the waves of light, described as radiant energy, to contact the retina unhampered, allowed to convey a normal correct impulse to the fibres of the optic nerve.

We need not know why or how incorrect orders distract the harmony of the functions composing the mechanism of vision; why eyes become crossed, or nearsighted, or astigmatic; nor how many eyes have accommodated after the lens of the eye has been removed, just as other minor disturbances, have recovered normal function without any consciousness on the part of the owner. But it cannot honestly be denied that there is ample record of those facts.

The correct practice of a technique which imitates the normal function of the mechanism of vision, relying on the cooperation of the mind, with an earnest attitude of expectancy, actually serves to discipline, in a slight but effective measure, the faculty, the endowment of attention, by the conscious or unconscious exercise of which the visual centers in the brain register a conception of the object being observed.

That such a mental reaction is possible in this field, as in many other fields of mental conduct, is supported amply by the research and the records of accepted psychological findings.

Personally I can report many cures I have watched, recovering under my care, during the twenty years of experience I have had in the use of this method of Doctor Bates.

Shakespeare wrote that: "Our doubts are traitors, and make us lose the good we oft might win, by fearing to attempt".

It is my experience that those who come with only a hope, which is next to despair, are often hampered by an unconscious doubt. They wish, yes. But the fable says that if wishes were horses, beggars would ride. Not a few are like the beggar. They wish they could get on without glasses; but unconsciously they are almost convinced that they have the same chance as the beggar.

Those must stop looking back. Discard the mental impressions planted in their minds, and accept instead the uncovered truth that the visual center has restored multitudes to normal, and will do that for them too, if they will make the correct attempt.

CHAPTER VII

TYPES OF ABNORMAL VISION

Myopia

Myopia, the technical name for nearsightedness, is described as a condition in which the eyeball is longer than normal. For that reason the rays of light reflected from distant objects are brought to a focus before they contact the rear end of the retina. The effect is that those distant objects either are not seen or are not seen clearly.

Stating that the eyeball certainly is longer, the books indulge in a long further discussion, much of it erudite suppositions, sometimes contradictory. Considering here this type of abnormal vision, it is agreed that the eyeball is longer. But we remind the reader that the eyeball always is longer, and that will not be denied, whenever it is focused on nearby objects. In short, a habitually nearsighted eye is an eye habitually focused for nearby objects.

All myopes will agree that their nearsightedness is so variable that it might be called an irregular irregularity. It may be thought of as an acquired habit which is more or less constant.

Dr. Bates claims that such an eye has developed a difficulty in an effort to see distant objects, and seeks relief from that strain by confining the function of vision to objects close up.

Many suggestions are made concerning general hygienic environment, and personal conduct, which plainly indicate that the acquired habit can be cured and may be prevented. Its beginning, and type of misconduct, variable rate of increase, and sensitiveness to circumstance, as described in the books, all support the explanation here offered, and warrant the claim that it is not incurable, even as the books point out that it is preventable.

Hyperopia

This condition, like myopia, is produced by an improper action of external eye muscles. When the two oblique muscles contract at the wrong time, it is myopia. When the four recti muscles contract uniformly and equally, instead of moving the eyeball in some specific direction, they shorten it, so that the focal distance between the front of the lens and the rear end of the eye is too short, and the light rays from nearby objects would come to a focus behind the retina. One does not see any object with a perfect register, but the far off objects are clearer than those nearby. Commonly a farsighted person, so-called, sees clearly very little farther than a person with average vision.

Presbyopia

"The eye of old age" begins to appear about the time one passes the meridian in the forties. The supposition is that the lens is getting harder, and cannot change its shape. Cases of this condition, it is recorded, have been diagnosed at nine years of age. It would be idle to discuss the correctness of that diagnosis. Surely it might be wrong.

It is not reasonable to expect the eye to maintain a youthful vigor different from any other unit of the system. Accommodation is a function that involves muscles as well as mentality. But some maintain their general physiological vigor far beyond the average normal. Many lose it earlier. Dr. Holmes, a leader of medical thought, reminds us pointedly that **some retain at eighty years a power of vision exceeding the average of youth.** To say simply that a hardening of the lens is the only cause of presbyopia is an assumption not only unscientific, but also inconsistent with findings accepted by the medical profession.

Astigmatism

Astigmatism is defined as a refractive condition of the eye in which the parallel rays falling upon it are not focused to a single point. Instead of a single point, they are spread into a diffused area on the retina. There are a number of types of this condition, which is referred to as an aberration. They are classified as latitudinal or longitudinal, regular or irregular, direct or inverse or oblique, simple or compound or mixed, myopic or hyperopic, and these classes are again compounded. These classifications are based upon an elaborate and meticulous study of the many various and complicated ways in which an astigmatic eye may, or may not, conduct itself. The variegated combinations of abnormal refraction which are described are all ascribed to one or two causes. The lens may be too near to, or too far from, the receiving screen, the retina; or the refracting surfaces of the eye (that is, the covering of the anterior end of the eyeball, and the lens) are curved too much or curved too little. The surface covering also may have the correct curvature, but may be too dense or not dense enough. Astigmatism, it is stated, may be congenital or acquired.

The above is perhaps a sufficient explanation, and enough of a technical description, of what occurs in astigmatism. To put the picture simply, it means that the eyeball normally should be perfectly round, and when it is not, a condition is present which is the cause of unequal refractive areas. The uneven external surface of the eyeball sends the light rays in wrong directions, and the result is very much like a photograph taken while the camera is moving.

The explanation of the cause which is given by Dr. Bates accounts for all of these varieties and variations.

There are six muscles fastened into the walls of the eyeball. When these muscles move with the perfect coordination which is their normal function, there is no astigmatism. When they impose an abnormal, irregular, and uncoordinated pressure upon the eyeball, some parts of the surface are subjected to a greater or to a lesser compression than is normal. That causes the flatness in one meridian, and permits a fuller curve in another meridian. When the abnormal pressure is released the fault is corrected. That seems so simple that in the text books it has been entirely overlooked. So was Newton's law, for a long time.

In the text books there are many pages about this famous, or infamous, intruder, astigmatism. But it all amounts to a most erudite, meticulous recording of research findings which we are told constitute a pathological condition that is incurable. But that is not a fair statement. It is possible to modify and even to diminish the said symptoms, so that they become, in the words of Shakespeare, "smaller by degrees and beautifully less," even until at least the condition is not at all disagreeable.

Cataracts

Cataracts are commonly thought of as different in nature from the functional conditions above. But it is true that many of these specific abnormal conditions also recover, even without any treatment. There are many different types of cataracts but it would not be of interest here to discuss them with the general reader.

Years ago, I discussed with an ophthalmologist friend of mine a white cataract filling the lens of a fifteen-year-old boy, who acquired it from a severe attack of oak poisoning. Before his eyes were closed by the swelling in his face, the lens was clear. I saw him first four months later, after treatment by his family doctor, and then an ophthalmologist, and there was no improvement. After a few weeks of treatment, especially including a carefully directed exposure to sunlight, the lens became normal. When I urged my friend for an explanation, he replied that we know cataracts, even severe cases, recover spontaneously.

I have treated a number, generally elderly adults, and have been able to secure a considerable relief in all the cases, sometimes quite satisfactory.

A different kind of an opacity was a **heavy scar on the cornea**, covering the anterior end of the eyeball, the result of a severe infection of the eye thirty years before. The first time I saw it, the woman looked up at the sun, and said it was light; looked across the street, and said it was dark. There was a great improvement in a few weeks, and now, for fifteen years, the vision right through the unchanged scar has been as good a normal as most sixty-year-old eyes. The main treatment was a careful, graduated exposure to the sun, which stimulated the dormant visual center, helped very much by the hope, which was developed into an expectancy by the improvement which began in a very few days.

Strabismus

Squint, which technically is called strabismus, is an abnormal condition in which one eye deviates, or both eyes deviate, instead of pointing directly toward an object being looked at. The customary observation of such conditions is so casual that very few have any knowledge of the different forms in which squint is recorded. The abnormal deviation may be toward the nose, or outward, up or down, or in some oblique direction. When both eyes squint, they may assume similar abnormal directions, or may deviate in directions that are dissimilar. In some cases both eyes may look straight at the same object when both are uncovered, but when covered, either eye, or both, may deviate in any direction. That specific type of abnormal action is spoken of as insufficiency.

Deviations may be constant, always present; or intermittent, not always present. They may be continuous-the same during distant and near vision; or periodic-when the degree is greater for near objects than for distant ones, or the reverse. They may be concomitant (existing or occurring with something else)-when the amount of deviation is constant; or non-concomitant-when the degree changes, as the eyes move in different directions. These different conditions are often mixed, and the various combinations have specific names.

The reasons given in the text books for the development of squint involve so much intricate description and explanation that they would have no place in a book like this, which makes no pretense of being a text book. The predominating fundamental cause is an inherited predisposition.

It is common knowledge that the beginning of a squint is often noted following some sickness, generally in childhood. It may follow a mental shock. A girl of seven was thrown down by a big dog, and the result was an instantaneous squint involving both eyes. The text books state that certain causative factors are not located in the muscles that move and may hold the eyes in abnormal positions. The books point out that until very late in the development of most cases of squint, the rotations of the eyes are normal, indicating that the power of the muscles is neither impaired nor excessive. The books conclude therefore, that the changes which take place are doubtless central, due to the excessive stimulation of the center for one movement producing inhibitions for the center of the opposing movement, and vice versa.

Thus far, I have described briefly the explanations one finds in a standard text book regarding the many different forms of squint, and the theories which are offered to account for the abnormal conduct of the different factors involved. I will now present the conception of Dr. Bates, which recognizes that the fault in the mechanism of vision originates in the center in the brain, and endeavors to correct that fault by influencing the conduct of that center. Since it is established that some eyes afflicted with a squint, as reported in the text books, not only become straight, but recover normal vision, there is, then, a way to actually cure them. That is the way by which they cure themselves. The laws of that way are not known. But the symptoms are quite evident,

and the causes are indicated in what is known of the mechanisms. The established facts would seem to point out the line of endeavor. It is that line of endeavor which is the foundation of the successful methods of Dr. Bates.

Many can produce a strabismus in one eye, or both eyes, at will. I saw a man make his eyes roll in unison like a moving figure eight; and he could hold them wherever he wished. A famous German movie star, in Hollywood, acted realistic parts in some very tragic scenes. Several times in the performance, at a very tense moment, his eyes showed an extreme strabismus which disappeared instantly when he had finished that specific portrayal. Such well-established facts are the warrant for the technique in the Bates method that is to be used in the treatment of strabismus.

Other Conditions

I might mention here many other abnormal functions, and some actually diseased conditions, reported by Dr. Bates as cured by his method of treatment; but I do not feel that to be necessary for the purpose of this book.

There is one remarkable case which supports amply the truth of that claim of Dr. Bates.

Aldous Huxley, an author famous over the civilized world as a writer of books, published by Harper, on different scientific subjects, has written a book entitled **THE ART OF SEEING**.
Margaret Corbett Bates Teacher greatly improved Huxley's eyesight.

He reports that for many years he consulted eye specialists here and abroad about a specific disease of his eyes. He was becoming totally blind. The specialists all informed him there was no possible cure for the condition. Finally he was cured, and his eyes are normal, by the method of Dr. Bates.

But SEEING is not an art. It is an endowment. Huxley was cured because his scientific mind developed a conviction that there was a power born in him which could correct the abnormal process that was destroying his sight. As Alexis Carrel has worded it, he demonstrated another case in which "Psychology contacted physiology and effected a quick repair".

Finally, however, I must call attention, as a most vital concern, to a statement in a much read journal published by the American Medical Association. An ophthalmologist proclaimed that every infant's eyes should be examined by a specialist, because it is possible they are already abnormal. He then asserted that if the said specialist decided the infant should be made to wear glass lenses at one year of age, the spectacles should be attached to the infant at once. Remember that the eye specialist contends that defects of vision are not curable, and lenses must be made strong as the eyes become more defective.

Certainly that statement, in that paper, does not represent, and is not consistent with the attitude, or even the consciousness of the medical profession in general. It is a fact that the mass of general practitioners of medicine, and even many eye specialists I believe, have not even heard of Dr. Bates, or his method, and surely would not approve of imposing glasses on a year old infant.

CHAPTER VIII

PRACTICES

"Each Faculty acquires fitness for its function by performing its function; and if its function is performed for it by a substituted agency, none of the required adjustment of nature takes place; but the nature becomes deformed to fit the artificial arrangements instead of the natural arrangements."

HERBERT SPENCER

The Snellen Card

Dr. Herman Snellen, a celebrated Dutch ophthalmologist, who died in 1908, offered a standard test for visual acuity by designating the size of letters that are to be read at different distances from the card.

Because the common average of those being tested, young as well as old, have so much poorer vision than a great many have, Dr. Snellen was obliged to set a standard low enough to accommodate those with the poorer vision.

But the Snellen Card had been used only as a test to diagnose and designate the degree of visual acuity.

It was Dr. Bates who discovered and demonstrated the value of Dr. Snellen's test card as perhaps the most helpful among the different practices he described for the correction of abnormal function in the mechanism of vision.

Central Fixation

Naturally the principles involved in the method have to be adjusted to meet the specific conduct of each mentality. The different types of abnormal functioning may be caused by different types of reactions in the central control of the mechanism.

Having considered the contents of the previous text, suppose we allow the imagination to be dominated by the idea that we are going to imitate the conduct of the normal eye. We therefore will stop trying to see. We will be governed by the realization that our endeavor is to carry out a simple proceeding. We look at a letter on the Snellen card, or at some other letter, or figure, or object. Not seeing it, we close the eyes softly for a moment, then look the same way again. Properly, easily carried out, the "strain" is eliminated by the conscious expectation that the rays of light, not being interfered with by the acquired bad habit, contact the retina in a normal reception, and the image is perceived.

More than many times I have watched patients succeed during the first hour, in reading two, three and even four lines on the Snellen card, that at first they could not decipher.

There are details in this practice, and perhaps the most important is the factor designated as central fixation, which is the same in optics as in any other mental procedure.

Seeing consists of paying attention. Normally we see an object because the visual center pays attention to it. Confining the attention to a tiny spot is easier. It gets a sharper image, and it moves instantly to another. One imitates by likewise regarding a tiny spot, and then closing the eyes. A racing horse blinks, closes his eyes for a flash-otherwise he would "stare". To get advantage from this practice, one must do it with these ideas in mind. Remember that when we read a page of letters, we must have seen every spot on every letter of every word on the page-how else could we know what we have read? We must realize that we had to see every little spot.

Suppose one does not see at ten feet the line expected to be seen at fifty feet. A practice which generally helps very much to relieve the strain is to sit so close to the card that those letters appear very clear. Beginning with the first character on the fifty foot line, one pays attention to one small spot for just a moment. While the eyes are then closed for a moment, one keeps the mind intent by thinking of the letter. This procedure is repeated, on the same letter, say ten or even fifteen times. One after another, each letter on four or five lines is considered in the same way. Carefully reasoned out as explained, and consistently carried out, during a period of say thirty minutes or more, the habitual mental urge is automatically minimized, and many times so much diminished, even perhaps permanently in a degree, that one can go further, and perhaps still further from the letters, until reading them clearly six, or eight, and even ten feet away. Those who have experienced this improvement in thirty or forty minutes, have a new conviction, which becomes an expectation, and they are well started on the trail.

There is another type, of which Johnnie, age fourteen, is an example, that cannot figure out central fixation. Johnnie came to my office alone. Weeks after he had regained normal vision, in six lessons, I learned that a patient of mine had convinced his mother he need not put on glasses for life. She had a mind independent enough to make a decision, and she phoned me, and deliberately sent him alone, that she might watch the experiment without bossing it.

Before school closed, Johnnie had good normal vision. When he returned to school, six weeks before I saw him, it was quite poor. From the teacher, he bounced to the nurse. She knew only what she was told, and that spelled glasses pronto. "Come back in a week." That week made his vision more strained, of course. When he came to me, he could not read the fifty foot line at ten feet.

I explained that his eyes were just as good actually as last Spring. That the only trouble was his trying harder and harder to see, making things worse and worse, as he admitted. I explained deliberately that I did not want him to see those letters; I wanted him only to look at them the right way. Looking, he did not see, because he was staring.

He was told to close his eyes softly for a moment and keep thinking of a particular letter, which I told him was an O. Each time he looked and failed to see, he was to close his eyes and think of an O and then look again. He was to keep his mind intent, but his only concern was to practice the right way.

Of course he just stared hard at first. Adults do not "stare" as he did; but they have the same habitual urge in their minds, although like Johnnie, they think not.

The next effort is to distract, side-track the mind from the urge which is the obstruction. I told Johnnie some little stories. There was a cat climbed into a barrel. Three women saw it go in. They were sure it did not come out. But when they looked in the barrel, the cat wasn't there! Johnnie wanted to know where the cat went. I had to answer that they did not know.

There was a two hundred pound woman who fell out of a two story window and landed on a man's derby hat. The man argued that she ought to pay for the hat; she argued that he had no business to be there. By that time, Johnnie had forgotten about his eyes. Softly I slid him back to the letter. Presently Johnnie looked at me with a thrill, and told me that he had seen all the letters on the line at once. He did not know that he saw each letter separately, one after the other. He looked back at the line, and it was gone again. By reminding him that he had seen those letters on the card with his own eyes, I was gradually able to help him see clearly two more lines of letters.

There is a practice which will be more successful if one has realized the factors involved in what has preceded. Sitting close to a black letter O, one blinks at this softly, confining the attention to one small spot on the white surface inside the O. While blinking, one makes believe that the white space inside of the O is whiter than the white outside of the O. Then closing the eyes for a short

period, one watches expectantly to see if some after image appears while the eyes are closed. When this practice is carried out properly, and the mind is dominated by the idea, sooner or later the effect is an after image, when the eyes are closed, of a very black O; and when the eyes are open, the area inside the O actually seems to be whiter than the white outside of the O. This involves the mechanism of vision, which is being dominated by the idea, and cooperates with the intent of the mind.

Sometimes I have patients who are quite confused mentally by the simplicity of such practices as I have described. They have been so fully impressed by the current misinformation, that, almost unconsciously, their minds refuse to accept the proposition that their mechanism of vision, which they never heard of before, is not a helpless, sort of foreign part of them, and can be persuaded to act in a normal way.

Some types are willing to believe, and when led carefully, soon have evidence, like Johnnie in thirty minutes, which enables them to gradually forget what they have thought was the plain "truth and nothing but the truth".

Others are combative. Surely, they vaguely wonder, there must be some mysterious ritual, some ceremonious interference from the outside to combat and overcome the rebellious conduct of a pair of eyes which look at simple things and do not see them.

Almost always there is a new mental attitude aroused when they read the story in the first part of my book. It is hardly reasonable to expect them to accept such a new truth simply because Dr. Bates said so. I have opened with the series of practices as above because I have found that commonly it makes a better impression, and secures a prompter response if I present some such unique and unaccustomed procedure. In my own work I have found that Dr. Bates was right in considering a practice with the Snellen test card the most effective technique to secure a recovery to normal vision, and to maintain an increasing improvement.

He directed that a patient should continue a daily, or a frequent use of it, by what he called **flashing the card**. Placing the large letter card at a distance of ten feet or even much more, on a level with the eye, and holding the duplicate in small letters at two feet or less from the eye, the patient is to look from the small to the large letters and back again. That is actual accommodating; and it affords a fine test because one ascertains the success of the effort by being able to note the degree of clearness of the letters under observation. One practicing any technique becomes more and more proficient, and gradually the practice becomes automatic and unconscious.
Switching, shifting back and forth on objects '3 identical eyecharts, familiar objects'… at close, middle, far distances. Practice with both eyes together, one eye at a time, then both eyes together again.

Dr. Bates proved, by the records, that the placing of a Snellen card in a school room, attracting the attention of the scholars, showed an improvement in vision among the scholars, and even a correction of abnormal vision. This was done in the public schools of New York City, and of other cities. The card was removed from the schools of New York City, by some influence, after it had proved its value during eight consecutive years. It was placed at the request of the Board of Education, after their personal investigation under the direction of Dr. Bates.

It would not be expedient to continue describing other practices which may be of value in the use of the Snellen card. I have even had patients discover some original technique which seemed of special value to them. My endeavor is to have the patient learn the reasons, and carry on because they "know how".
Remember to combine shifting with central fixation. The vision is clear when the eye moves point to point.

The Sun and the Eye

There is a strange, new public habit which is remarkable as a freak. I am referring to the fad which is being indulged in by those who are wearing colored lenses to protect their eyes from the same sunlight in which they have always lived. Most of them would resent any assumption that their eyes are not normal. Some years ago this passing fashion got to be quite popular. We saw some lenses embellished to show how expensive they were. In two or three years that "new one" wore out. But a few are in evidence off and on, even yet.

The eye specialists condemned the practice, protesting that is deprived the eyes of the sunlight, and led to eyestrain, because objects were not seen as clearly and as easily as without the unnatural light rays.
Sunglasses cause unnatural, partial spectrum, unbalanced light to enter the eyes, brain, body. Plain glass also does this.

The eye began, we are told, as a piece of specialized tissue which was responsive to light. Always under the care of the sun, the eye has evolved into a mechanism which is so wonderful that its secrets are still beyond the knowledge of the human race. The sun is to the eye what air is to the lung. The sun, which is such a life-giving necessity to every other part of the human body, is above all an absolute necessity to the eye.

Civilized humans are becoming conscious again of a knowledge which seems to have been lost soon after the days of the Greeks and the Romans. They knew the value of the rays of the sun. Special exposure to the sunlight was a constant custom with them.

Perhaps, to Finsen, more than to anyone else, is due the beginning of the new knowledge of the value of the sun in so many conditions of impaired organic function and specific disease. It was Dr. Bates who directed attention to its very fine value in the care of the eye, and as a help in relieving conditions of eyestrain and dysfunctions.

We know that the men who live out in the open, on the land and on the sea, commonly look into the sun freely. It is natural for them, because it is a natural thing to do in a natural habit of life. Sailors and plainsmen and mountaineers, Indians and Africans and Eskimos have not yet been informed that the sun is an enemy of their eyes. The little Indian papoose, riding backward on mama's back, generally finds the sun shining right in its eyes when it opens them to see its new world. In the years, I have met over a dozen, right among the common people like myself, who astonished me (that is, the first few) by looking at the sun with the same ease and directness and comfort as they looked at the ground. Those who do that are not freaks. Those who cannot do it have simply learned-or should we say inherited bad habits.

One can use the sun on the eyes by simply allowing the rays to strike directly on the softly closed eyelids, for a few minutes at first, and gradually for as much as an hour or longer at a time. This may be done more than once a day. It will soon be found that after a period of exposure with the lids closed, the lids may be opened for an instant, and the eyes allowed to look for a good flash, first into the sky toward the sun, and later on even right into the strong sun. The streak of color seen immediately after the lids are closed is never unpleasant, and the after-effect is an increasing feeling of relaxation, and an improvement in the power of vision.

I early learned (1924), from directions of Dr. Bates, to know the great value of sunning the eyes. Beginning with the softer sun, in the forenoon or late afternoon, and gradually using the noon sun. One must not bend the neck, but assume some relaxed and comfortable position. It may be better to move the head leisurely from side to side. Some prefer to cover the head. Thus the skin gets the rays more kindly than with a motionless exposure. I have, when I had the opportunity, lain on the grass or the sand, and allowed the direct rays of the sun to fall on my full face; and several times slept that way for some part of an hour. The effect has always been gratifying.

It is worth while, as a demonstration, to test the effect of the sunlight, as an immediate result. Having found the letters that can be seen ten feet from the Snellen card, or any set of letters, in a well-lighted room, take the card out into the noon sunlight, and test again. One will almost surely find that either the letters will be just as clear at some feet farther from the eyes, or better still, one can see clearly much smaller letters at the same distance from the card.

There is a more specialized use of sunlight recommended by Dr. Bates. It is to concentrate the rays directly on the eyeball. Until well accustomed, that should be done through the closed eyelids. It is better to have a friend hold the glass, but many have learned to use it with their own hand.

Use a small magnifying glass, one or two inches in diameter. Learn on the back of the hand the exact distance, some inches, at which the refracted rays show a bright spot about a quarter of an inch in diameter. If held still, the heat would be severe. But by continuing to move it back and forth slowly, no discomfort is produced. After fully acquainted with its use on the skin of the hand, it can be carefully tried on the closed eyelid. There the back and forth movement must be very carefully continued, on one eye for not more than a half a minute, then on the other eye the same way. Only a few seconds is safer: 1-3 seconds. Light must not shine through the glass into the eyes pupil. Only on the white of the eye or on closed eyelids. Keep the light moving on the white of the eye.

Such practice may be continued for ten minutes, and may be repeated more than once in a day. If these directions are carefully read, and exactly carried out, there will be no unpleasant results. If a glare is felt on and off, perhaps it means that the lens has slipped out from under the lower lid.
Just return it. The practice should not be done at all unless under the necessary conditions here explained.
Only an experienced Bates Method Ophthalmologist should apply the use of the Sun-Glass.

I have treated many eyes that way. Before using the treatment on others, I practiced it fully on my own eyes It has always been helpful. Later, when thoroughly familiar the glass can be used on the eye with the lid held open. Closed or open, the lens of the eye being treated must be held down under the lower lid. That is done unconsciously, with a little practice, by keeping one eye open while watching the other eye in a mirror, thus insuring that the lens is shielded, hidden under the lower lid.

When done exactly as directed, the shadows of the tiny blood-filled vessels in the walls of the eyeball cast the daintiest interesting shadows back on the retina. The terminating fibrils of the smallest last branches are the smallest lines perceived by the conscious mind.

While I use this practice constantly, when the sun is available through my office window, I repeat that it is not a necessary proceeding, and should not be undertaken unless in competent hands under favorable conditions.

Constantly in my office I use with patients two powerful electric lights. I have a three hundred watt and a one thousand watt light, both with clear glass. The three hundred watt is placed in a reflector, lined with white or aluminum paint. The one thousand watt light has no reflector to intensify it. Almost always the improvement of vision is so apparent to the patient, in a few minutes, that I generally use it at the first lesson. Most of my patients are so impressed by its effects, that they volunteer to buy an outfit, generally the three hundred watt, and use it at home. I rarely approve of the one thousand watt light for home use, because the three hundred watt is sufficient.

The benefit, I believe, is accomplished by the great stimulation the strong light produces in the mechanism of vision. This is demonstrated, sometimes in a few minutes, by the patients seeing letters not deciphered at the same distance before, and the greater clearness of the images.

The books explain that we interpret color in our conscious minds according to the wave length of the light producing it. Looking at the light, at a distance of two or three feet, the patient at first sees simply the golden glow of the filament. The directions are to blink softly at the light, and confine the attention to one designated spot on the filament. After blinking from ten to twenty times, softly, they are to close the eyes. While the eyes are closed, for the same length of time as spent blinking at the light, they are to keep the mind occupied with the memory of what they saw when blinking at the filament.

This alternate routine is continued, generally for fifteen or twenty minutes. In the course of a few minutes the visual center begins to register pictures not seen at first. With the eyes open, colors begin to appear, one or two, coming and going, separately or simultaneously. Blue or pink or green or crimson. Solid or in pattern. There may be more of a picture seen when the eyes are closed, or more when the eyes are open. In later practices, often several colors are seen, and the image of the filament, with the eyes open or when closed, will assume different shapes, and change colors frequently.

In the very complicated, and often disputed theories offered for the conduct of the color sense, we are told incidentally that the functioning of the color sense is more or less dependent upon the illumination. My interest here is in the well proven fact that even as the color sense is accentuated and remarkably improved, the function of general vision is also improved in a most gratifying way.

Swinging to Relax

The Long Swing

When I explain to patients that swinging the body gently in a half-circle, with the eyes closed, is generally a very effective way to relax, they almost always are surprised at the idea that such a practice will help the eyes to see better. Some find it a great help, and always begin any period of practice with ten or fifteen minutes of swinging.

The first requirement of any successful technique is that the attention be completely occupied with the thought of what is being done. The very act of swinging, when it is correctly performed, involves that specific objective attitude of mind. The tension in the eyes and the mind is relieved because a condition of relaxation is produced in all the muscles of the body.

Standing with the heels well apart, and the toes turned out, and the eyes closed softly, the body is rotated with an easy rhythm in semi-circles from right to left and back from left to right. It must be a soft, even roll, with the idea in mind that all the muscles are as soft as cloth. The position of the feet insures an easy and perfect balance of the body, and the curve in the swing shifts the weight easily from one foot to the other, so that no effort is required to maintain balance. The head and neck work in perfect unison with the body, so that the head may swing only a few inches in each direction, or may swing so far to each side that the face will point fully to the right and then fully to the left, and the body will time its motion to meet the movements of the head.

When the head goes to the right, if the muscles are to remain relaxed, the left heel must be allowed to leave the floor, because the left line from floor to neck will be longer; and when the head turns to the left, the right heel leaves the floor, to match the position of the head. It is a further help to allow the arms to swing around while hanging limply at the sides. There must be a soft feeling in the muscles of the neck, and the head must roll as if limp on the body. The eyes are to take an intimate part in the movement by rolling softly to the outer limits of the orbit in each direction. This free roll of the eyes is easier to acquire if they are kept open at first, until a consciousness is established, and the sensation registered and remembered, so one will know that the eyes are in action and are relaxed.

To secure the full effects of this practice, the whole body must be dominated and coordinated by an attitude of mind. This can be accomplished by giving undivided attention to the conduct of all the muscles, including the muscles of the eyes. But it must be an objective attitude. A concern about correctness induces a tension instead of a soft relaxation. A violinist, or an organist, or any expert performer, is not any more concerned with observation of the muscles than the runner or the gymnast. The whole body of those experts is dominated and stimulated and educated by the enthusiasm of the mind. If one is walking leisurely toward a point, and suddenly remembers that the car is due at the corner, there comes to the conscious mind no thought of the feet, but the muscles all change their conduct, and instantly the limbs are propelling the body in a run.

I once saw a picture of an operator showing a cripple with a paralyzed limb how he was to try to move the limb. He demonstrated with his own limb. He was communicating a conception to the mind of the cripple. The perfect unison with which two partners in a waltz move in rhythm, is controlled by the thoughts of each. All very simple. But I have found that most of those who begin to practice a swing for relaxation, are obstructed by their bewilderment of mind, which causes a stiffness of their muscles. I found this reaction in myself and conceived the idea of humming softly, as one dances to music. The melody which suited me best was a few bars o£ the "Merry Widow Waltz" tune. Gradually, I learned to soften the timbre of my voice until it was almost imperceptible, and I found that this relaxed the vocal cords, so that with a few minutes of practice, I was frequently able to carry a note an octave higher that I could reach when I began.

Swinging with the eyes closed, slowly and in perfect balance, for fifteen or twenty minutes, will develop a feeling of softness, and is found by some to be their best method of relaxing the eyes. It is possible to add to the swinging the very helpful addition of shifting. Facing a corner of the room, with small objects or pictures along each side, blinking the eyes slowly, and looking always straight ahead, the eyes will shift in passing from one object to another. There must be a fixed idea that the mind is not paying attention to the objects as they pass the eyes, but that the eyes are looking softly into the distance. Another method, when there is a long distance outlook from a window, is to look softly at the scenery while swinging and blinking, and let the eyes shift constantly from the different points in view.

There is a method of swaying the head, while seated comfortably, and blinking the eyes softly. One may hold the first finger of the right hand six inches in front of the face and six inches to the right of the eye. Close the left eye (Modern teachers state to keep the eye that is not in use open: Cover it with an eyepatch, open under the patch, both eyes open.) and blink the right eye, and rock the head back and forth, looking always straight ahead. After one or two minutes, close the eye and hold the head still. Repeat, alternating, until an after-image appears, of the finger and the hand swinging back and forth in the opposite direction to the rocking of the head. Practice the same way with the left hand and the left eye, the right eye closed. Continue for fifteen or twenty minutes. This sometimes gives a better result if one is facing a window, or sits facing a good light in the evening. Strong contrasts are more impressive on the eyes. A method that has a similar effect, is to look softly ahead, blinking the eyes and holding the head still, while the elbows rest on the body, and the hands, closed except the first finger straight up, are rocked back and forth in front of the face, so that they cross each other and return.

In that procedure, the fingers are shifting across the line of vision, and the effect is to relax the eyes by the passive change of central fixation. The eyes in that procedure are shifting with the moving fingers. One can use any small object the same way, a pen handle or a ring, by passing it across the line of vision rhythmically, while the eyes blink softly and look directly ahead. A helpful practice is to sway the head back and forth across the partitions of a window, especially the small panes of a leaded window, while blinking the eyes. A good test of the success of any of these practices is the appearance of the after-image when the eyes are closed after a few minutes with them open.

It is helpful to remember that swinging or swaying, when the eyes are open, is another way of shifting, that is, moving the central fixation from one spot to another, with an added value in the relaxing effect of the soft swaying movement. There are different techniques which can be practiced, to secure these two effects. One can devise individual efforts. A piece of chain, or rope, or cord, or ribbon, hanging at a given distance, less or more, in front of the eyes, with a background of light, or a background selected-Snellen Test Card, a picture, a window frame, a white sheet or a black cloth, likewise placed at any given distance back of the hanging cord or what not, or back of a tall thin object placed on a table half way between.

One can place three Snellen Test Cards, three, six and nine feet in front of the eyes, or use home-made cards, say twelve by sixteen inches, and paint on black letters of similar sizes. They should be suspended on upright strips or hung on strings stretched across the room, and placed so that they almost overlap. Stand, or sit, so that when the head is swayed with slow rhythm back and forth, the eyes softly blinking, the cards will seem to overlap and to show the clear between them, according to the direction the head moves in. Pick the same letter on each of the cards, and watch for it, and ignore the other letters. That will facilitate the apparent movements of the letters in the direction opposite to the way the head is moving. Close the eyes in periods, but continue to sway, and watch for the letters to appear as after-images. Practice with either eye closed, or/and with both open. Practice while sitting, and using a pen or pencil with a book for a background, holding it still while the head moves, or moving it while the head is still. Whatever the details of these practices involving swinging or swaying, the effort is to have the object under observation move back and forth across the line of vision so that it is alternately seen and not seen, as it goes in a direction toward the right and then back toward the left and out of sight. If, with the eyes closed, an after-image is not produced, there is some fault in the technique.

Palming

This is a practice in which the hands are used to softly cover the eyes. The cheek bones rest on the heels of the hands, and the fingers cross above the eyes, with the eyes resting softly on the palms. The hands shutout all light. It is difficult to carry out this practice with a satisfactory result unless the elbows rest on a table in such a manner that all the muscles of the body are relaxed. The further effect is that such a deliberate and unusual gesture impresses the mind. To complete the procedure it is necessary to engage the mind continuously in some specific line of thought and not let it wander as it usually does.

Even with all the light shut out, there will be the appearance of lights and colors and fragments, which seem to be seen by the eyes. These are illusions. They are produced in the visual center of the brain itself. To put it more simply, it is just imagination, since there is no light admitted to the eyes. Sometimes these appearances are persistent. Occasionally they are quite vivid. In other cases they are not pronounced and they may fade promptly. When there is no least stimulation of the optic nerve by light rays, the visual center of the brain should show no reaction, and there should be a perfect blackness.

When there is no tension in the mind, the field will be black. One can command the mind by keeping it attentive to the field that appears, and expecting the blackness to come, which is proof that the mind is in a normal condition of relaxation. If one has an urge to eliminate the fragments in the field, the effect is to prevent relaxation. But there must be a firm, earnest confidence, and a specific desire which keeps the mind intent.

The more habitual tension there is in the mechanism of vision, the more intense will be the illusions which persist. When there is some unusual disturbance of the mind or body at the moment, there is even more difficulty in securing the required relaxation. It is true, however, that some persons, even with extreme abnormal conditions of vision, secure a most satisfactory relaxation quite easily. That is because they occupy the mind so completely with the practice they are carrying out, that all other thoughts are thus prevented from intruding and distracting. Want of success is always caused by the fixed habits of the mind. Consciously or unconsciously the patient is allowing an intrusion of thoughts to distract the attention. This distraction is a direct interference. If the mind is earnest enough in purpose, it will become conscious of the interference and brush it aside.

One sees a perfect black only when the mind is completely at rest. The more at rest the mind is, the deeper the black. When one sees an area of black in the field, it is likely to increase. With proper technique one may improve the blackness until the field is completely black. There may be floating spots of pure black. There may be dull gray areas. There may appear different colors instead of black-just the fancy of mind. If one continues to see red, or yellow or other colors sharply marked, it is better to be

satisfied with these colors as they come, instead of combating that picture, and to keep the mind occupied watching the different colors. A good plan is to imagine in the field a small patch of white, such as a piece of white paper. If such a white patch is seen, when secured intentionally, the background of the field will probably show quite black. Proceeding further, one may imagine in the white spot a black letter, for instance an O. When one can imagine a black letter in a white spot already imagined, the letter will be blacker than the background on which one imagines the white spot.

When there is special difficulty in clearing the field which is seen when the eyes are covered, some other practice will probably be helpful in attaining the degree of relaxation necessary in order to see a black field. For instance, one may use the memory of a black object to assist. Blink softly at some familiar black object placed where the color is most pronounced, then close the eyes and watch for the image to appear. By looking at the object for some minutes with the eyes closed, alternately, sooner or later the object will appear clearly when the eyes are closed. This is called an after image. The successful outcome may take quite a while, or it may develop promptly; the result depends upon the exactness with which the mind carries on the process. When the object is seen, black and clear, with the eyes closed, one may proceed to palm as directed above, and the field will probably appear black.

There are two factors operating such a practice. There is the impression of black on the mind, and the relaxation which has been secured by the game one has played with the black spot. It will hasten the success if one uses what is called central fixation, and imagines one spot on the black object to be blacker than the rest of the surface, ignoring with the mind the remainder of the object. One can practice changing the spot on the object to another area, or even changing the contemplation from one black object to another black object. To change is sometimes a relief from monotony; but the longer one practices with the same spot, or the same object, without losing an alert interest, the more vivid the reaction, that is, the more perfect the after-image. This is true of any practice in this method. To continue the technique longer, if it is properly carried out, will develop a progressive increase in the degree of the result.

This technique, or practice, called palming, is one of the clearest and most impressive illustrations of the mechanism and the value of this method for relieving the abnormal condition commonly called eyestrain. One must realize that palming consists essentially of an attitude of mind, and that the details of that procedure are simply expedients which facilitate the shutting out of distractions from the mind.

It becomes more than a negative procedure as soon as one calls upon the mind to imagine, or make believe, the various conceptions which can be used in the practice. It is a very simple idea to impress upon the mind that one wants to see a small white patch. In the technique of psychologists, it is a common practice to persuade a patient to develop in a muscle a sensation of soft languor, and then to have a feeling that the arm is so heavy it cannot be lifted. It is just as easy to have the same mind order the vision center to picture a patch of white, and then to make believe that there is a black O on the white spot. A designer of dresses, an architect, an artist, a leader in any field, is seeing things in his mind just as literally, as a common habit.

Palming Cures Cataracts

A patient whose eyes were almost useless because of three different types of defects in vision, was distressed by the prospect of inability to retain his position. The **developing cataracts** were the culminating interference with his vision. He had been told there could be no relief until they were what is called "ripe" enough to be removed, and his lenses replaced by glass lenses. Having been instructed how to **palm**, **he practiced it intensively for many hours with little interruption. His earnestness and persistence so influenced the condition of his mind that his sight became a very good normal in twenty-four hours, and continued normal.** This case, reported by Dr. Bates, was unusual, but I can report many cases of improvement that are equivalent. The commonest difficulty is the want of a vivid conception of the simple mechanism of the process involved, and the next in order, perhaps, is a lack of the fine determination that constrained that man to keep on demanding success, hour after hour, until his courage and patience were rewarded.

The practice of palming was designed by Dr. Bates as an expedient which is simple and easily carried out, and has a direct effect on the vision center in the brain. He believed it to be, perhaps, the most effective of all the techniques he suggested. I have found that even children can understand what is necessary to do, and they often have fine success in seeing a very black field when their eyes are closed. Dr. Bates even suggested that the measure and the degree of the blackness which is imagined when the eyes are closed may be used as a test of the degree of relaxation secured.

When a sufficient degree of relaxation has been secured, it will be found that the eyesight has been improved accordingly. There may be flashes o£ clear vision which are replaced by the same old want of sight, or there may be a progressive improvement in the conduct of the eyes. I have personally experienced some fine thrills when lines of letters have appeared with a vivid clearness that was startling. Others have reported being astonished by the same revelations of power in their eyes, which they could not have imagined. Letters and words appeared blacker than the ink, and they stood out with a vividness never realized before.

There is nothing unreal or unnatural or miraculous in such an experience. It is simply the result of interesting the active and sympathetic attention and co-operation of that part of the brain which has charge of the mechanism of vision. There can be no doubt that millions have a constant power and vividness of eyesight that is unknown to most of us. **This is true of the savage, and the plainsman, and the man of the sea, who see plainly what most of us cannot see at all. The same is true of the artist who reads the lines of the face and the form and the color and beauty of the picture which his sight enables him to reproduce so the rest of us can be helped to imagine something of that which, to him, is an open book.**

In the practice of palming, several factors serve to assist the endeavor to secure a special condition of mind. We speak of the condition as a relaxation. It is, however, a positive mental attitude. But it must be impersonal and objective-some pleasant contemplation which enlists the interested attention so completely that one forgets self entirely and becomes absorbed in the

subject. This unusual gesture facilitates, as well as the darkness; but the paramount element is the complete domination of the mind by the idea in charge.

Each mind finds its own natural line of thought, and some will try very different imaginary pictures. Since the vital element in the techniques is the degree of exclusive attention which is given to the specific idea that is to occupy the mind, it is imperative that no other thought be allowed to merge into the process. It is easy to think that one is giving complete and undivided attention, when actually the mind is only half-heartedly in its effort, and the greater part of the opportunity is lost.

Suppose we undertake to make believe we are swinging in a hammock. I have questioned some who agreed to that expedient, and found they could not tell a detail of the proceeding. They could answer only that they just made believe they were swinging in a hammock. Those who really do it, can describe the hammock, the short rope that held it to the house at one end and the long rope that held it to the tree some feet away. They can describe the pillow, and the cord they pulled on to keep up the slow swinging which produced the soft drowsiness that was so restful. I have even been told how they climbed into the hammock, and how they later woke up and were amused to find that they had fallen asleep.

Suppose we imagine, make believe, we are going to drift down the stream in a canoe. Let us begin at the float by looking the canoe over and deciding just how we will sit. Let us then carry out the proceeding by stepping carefully into the canoe, with the same deliberate care one should always use. No one familiar with the conduct of a canoe would share the close attention necessary to every move, with any other thought. I have seen a few incidents where even one familiar with the requirements of balance and movement has failed to give the attention the canoe demands, and has demonstrated his carelessness by a spill.

Now let us recline quietly and float lightly down the stream. If the mind forgets the canoe, and wanders to some other subject, at that moment it stops carrying out instructions. The conscious part of the mind, I mean, stops obeying instructions and allows itself to be misled; and right then it forfeits the advantage of having the subconscious part of the mind help in the proceeding, instead of hindering, as it commonly does. But if one watches the water, and the shore, and the sky, one keeps the mind intent and active on the side of the endeavor. One imagines the details of the scenery, observing specifically a house, a boat, a rock, a tree, the hill, the sky, the turn in the stream, the opposite end of the canoe. If one answers that it is not possible to do this, I know that one has not really tried. One has not held the idea. One has not been earnest enough in purpose. One has not learned what his own mind will do for him, even in his first efforts. If the feeling is strong enough to persist continuously for thirty minutes, with a quiet determination, the subconscious part of the mind will become interested in the new adventure, and will reveal to the adventurer something of its power. I have explored a little into that new country myself, and others who went further and found more, have confided in me. As long as one keeps the conscious mind occupied with any impersonal, objective idea, the unconscious mind is at the command of the purpose implied in the idea.

It is a great help to remember the way a little girl plays alone with her dolls. As well as she knows that it is all make-believe, her conversation proves how perfectly the autosuggestion works. Her mind is not hampered with confirmed mental habits. It is simple and direct. With a strong, primitive impulse she gives her whole mind to the idea, and no hampering doubts or reminders interfere with what she is doing. That is the subtle meaning in the sentence: "Unless ye come as little children, ye cannot enter the kingdom of heaven." The cures I have seen occur in a few minutes have all been accomplished by a profound and positive conviction acting on the control center in the mind.

It is necessary to forget the eyes entirely, or to think of them objectively, as one thinks, for instance, of a sprained ankle, or a cut finger. There are no mental reservations with those. We think of them as we would of some other person's cut finger, or somebody else's sprained ankle-just do this or do that with it, as one does this or does that with any other predicament.

There are many different lines of thought with which one can interest the mind in an endeavor to secure an abstract condition of mental relaxation. Each mind has its own predispositions and aptitudes. As illustrations, the following practices may encourage original ideas better suited, perhaps, to individual students.

While palming, imagine the soft rolls of water, lapping the sand on the seashore. When the water is seen, picture a large rubber ball, black or red, bobbing on the rippling rolls. Always in motion, the ball will slowly recede from the shore. As you see it in your mind, it must recede farther and grow smaller, until finally it is lost in the hollows of the swells, and you do not see it any more. If the mind is given with feeling to this interesting experiment, the ball will seem very real, and all other thoughts will be excluded from the field.

Imagine a dog romping and swerving on a large lawn. See him stand, with head up, facing you, asking you what you think of his speed and grace. Make believe a fly is crawling over a large pane of glass in front of you, reaching a corner and starting over again to find a path with no obstruction. Picture a cat racing up a tree trunk to a low limb, and standing there with back and tail and hair raised, daring the dog to come up and see which eye she will put her claws into. Look from the cat to the fool dog, trying to stand on his hind legs, and yelping "coward" at the cat for not staying on the ground, even if he is four times as big as she is.

If any of these suggested techniques, practices, efforts of the imagination, are to be of value, they must be carried out with a will to win. Beginning with a conscious feeling of soft relaxation in all the muscles, put into them by the will of the mind, the same purpose must pay close attention to each detail in the procedure, and not be satisfied until some specific success rewards the close devotion and enthusiastic expectation which will be aroused if the spirit is right. When one really works that way, the conscious mind is actually demanding, and it will secure, the help of the inner mind. All these simple requests, the ceaseless activity of that inner mind can grant in marvelous fullness, if only the spirit of the worker dominates the mechanism.

Some simple procedures are very helpful, especially if they are practiced frequently and for a sufficient period, and with patience, and with an earnest expectancy.

One may blink at a soft, dull finish piece of black cloth, the size of a large pillow case, hung at a distance of two or three feet. While blinking softly for half a minute, one confines the attention to a point on the surface, then closes the eyes for the same period, and continues to think of that spot. Blinking again, with the attention confined to a different spot, and then closing the eyes, one thinks of the new spot. In twenty or thirty minutes there will come some most interesting after-images. There will probably be a white oblong at first, and there may be some spots seen. Later the surface may be seen black, while the eyes are kept closed and the mind attentive. With the eyes closed that image will fade, and if one waits, it will appear again, not so black, and disappear and appear again, less black; then come gray and faint, and not return, until the blinking is renewed, and the eyes closed expectantly. Black, soft and not shiny, is generally most relaxing, and is a favorite objective with many.

Some find a white pillow case more effective. Practicing the same way, the after-image seen is black at first, in the shape of the pillow case. Later, when more relaxed, the image will come white, fading and recurring as gray, and finally showing again black and faint.

If one changes the practice, and blinks longer, transferring the attention so as to see the four corners, one after another during a full minute, when the eyes are closed the after-image will be white very soon, and the recurring image will hold longer the white.

Another variation is to sew a small period of white cloth on the black cloth, and confine the attention to it while blinking; or to sew a black period of cloth on the white pillow case, and practice with it the same way.
Let the eyes shift, move, even when looking at a small part. Shift point to point on the tiny part. Let the eyes shift away from the part then back to it… Blinking causes the eyes to shift automatically.

In various practices sometimes inconsistent after images appear, or even when looking at letters or figures, one will see double, overlapping outlines, or half letters appearing while the eyes are open. Or, again, the outlines may be more or less blurred. I think of these hybrid appearances as sideline stuff, which are easiest eliminated by smiling them off, and proceeding expectantly to the result which is correct. Careful attention to directions very soon gives the better results which lead on to success.

There are different kinds, as well as degrees of eyestrain. Some with good vision find trouble in various ways. For instance, in continuing to read after twenty or thirty minutes, an astigmatism begins to blur the print.

A remedy for that is found in the simple procedure of ignoring the print, and confining the attention to the white paper close under the line. Have the eyes observe the paper from the beginning of the line to the end, then treat the space beneath the next line the same way, and so on down the page, and to the next page, as in reading. Continue this practice the first evening for ten minutes. Add a few minutes each night, observing directions consistently. It has not failed to cure that specific tension in the several cases I have seen.

Related perhaps most closely to any difficulty in reading is the technique with a very fine white line, imagined, made believe, to be close underneath a line of print.

Clipping some heavy small type, suppose a short insert advertisement in a magazine, paste it in the middle of an oblong white card, say five by eight inches, across the short diameter. Blink softly at some line in the middle of the set of lines. While blinking, and looking, and blinking, make believe, hold the idea that there is, close under that line of print, a line as fine as a hair, and whiter than the rest of the card. After half or a whole minute, close the eyes for the same period. While they are closed, keep thinking of the imaginary white line. Sooner or later, either first under the print, or first when the eyes are closed, as an after-image, the vivid white line will appear. This is an expedient which secures the co-operation of the imagination acting through the mechanism of vision. It is one of those practices which correct and improve the vision in whatever experience the eyesight is occupied with.

The Period

This technique is a practice designed to develop a custom which will secure a specific help whenever one finds difficulty in getting a sharp image of any object.

The idea is that one will rely on actually seeing a period, and that expedient will secure a clear image of the object that has not been clear.

Doctor Bates said that "To see a period is the optimum of relaxation." To realize the import of that, one must remember that one sees the period in the visual center. This involves relaxation, meaning normal conduct of the mechanism. The result is the "optimum" because it is an endeavor never tried before.

A first reaction is that trying to see a period would add to the difficulty rather than relieve it. But Dr. Bates explains that seeing a period, in that way, does not relax. One will not see the period unless already relaxed. In short, one must practice and learn to see the period, without any concern being aroused, just as one finds an answer, in the mind ready, in response to some simple question, as for instance, "What will I do now, this or that?".

The way I learned this technique was to put a large period in the middle of a good sized white card, and learn from practicing to get a bold after-image of the period. Progressing with the practice, I learned to close my eyes and see the period, not after looking at it, but as a memory, just as one can recall from memory, other objects.

Shift small point to small point on the period with the eyes open, then in the mind with the eyes closed, then with eyes open again. Blink when the eyes are open.

One cannot understand the import of this proceeding at once. It involves a conception of the higher functions of the mind at work. But one can readily realize that it is a mental reaction, in response to a specific desire. Accepting this reason as the truth, one will surely achieve success. I know it from experience, and from the enthusiasm of others who have made it work. It is a most helpful practice.

Dr. Bates says not to fill the atmosphere with periods. That means to be concise in your expectations. He had a small room with a red linoleum, and the patient was to select a spot which gradually he could imagine to be redder in contrast. It might be easier to imagine a difference in redness that in blackness.

In my own endeavor, after securing an after-image of a period, I made believe that the period, while l was looking at it, moved from side to side, back and forth, by the diameter of itself. (Oppositional Movement - the result of eye movement, shifting on the period.) Dr. Bates explains that the normal eye moves continuously back and forth just that much. Otherwise, not moving, there would be a constant specific tension. The visual center ignores, in its adjustment, the effect such a back and forth movement would produce, if not automatically ignored.

Seeing a period, as in this practice, when the period is only in the imagination, is simply a technique. But it is a great little helper when one has accomplished what Dr. Bates has directed.

ATTENTION

It seems timely to repeat a few words about this most important element of the practices prescribed. One should constantly recall that seeing is attention, because seeing actually constitutes attention, because when we pay attention, we see.

Supplementing the specific detailed directions involved with the Snellen card and other practices, it is worth while to devote periods to just paying attention. Thus we see one spot after another, deliberately and alertly. Without any intention of seeing, the practice is to involve the interest, may we even say a certain degree of discipline of the visual center. I do not say of the eyes, because the eyes are forgotten. The measure of discipline and of control involves the mind itself. It is the mind which is used as long as we remain attentive to whatever we are designating.

Such periods may often be found, in a room, or when walking for just that purpose, even for perhaps half an hour. Simple as it may seem, this is fundamental. Those who have tried it earnestly have found it a great help.

Attention is a factor in human life which we began to make use of when we started to live. If one ponders the history of what Mark Twain, a thinker, called "The Damn Human Race," it is obvious that only a very few have made in their lives more than a very little use of it.

How many great men have neglected entirely to realize that they have failed to pay attention to the most important factor in the mighty problem it was their mission to solve?

Note the attention of an infant-learning every minute. Certainly each has an endowment that is different. But as one watches the procession, the "big shots" and the "man on the street," how often it is evident that their contrasting success was due only to the deliberate thought that marked the distinguishing difference in the quality or the conduct of the individual who left the crowd behind.

My concern here is to impress on the seeker for success in the practices of the method of Dr. Bates, the value of attention. This means for us the specific exactness with which we examine and differentiate the factors in the mechanism involved, our own conscious reactions, and the evidence of that progressive improvement which is the result that we are working for.

Often a patient who has succeeded in perceiving finally some letters on the Snellen card, or on a sign from the window, generally after practicing with me for twenty or thirty minutes, forgets on the next office visit that he saw those letters the last time, and we must start again.

I have impressed a beginner to pay earnest attention to every item seen with eyes blinking softly twenty or thirty times at a 300-watt clear glass bulb inside a reflector, or at a 1000-watt light. Then to pay close attention to any vision at all while the eyes are closed for the same period of time. Often enough, when I question after ten or fifteen minutes of such practice, about the details registered, the first answers are almost empty. Gradually, the patient may recollect, under persistent questioning, that the filament did appear to change its shape, and did have one, yes, finally even three or more different colors, as the blinking continued. Then, almost surprised, the memory prompts the answer that when the eyes were closed there were a large number of colors seen, some solid shapes, or the filament, changing color, and even several filaments of a much smaller size. Such reactions illustrate some want of the necessary attention. Do not get too close to a strong bulb, it can burn the eyes, especially if it suddenly blows out. Keep a safe distance, use a new bulb, good wiring, surge protector… Plain sunlight is best.

MEMORY

Only a little deliberate thought is required to realize that memory is a most important part of the mechanism of vision. We know that constantly it is our memory of objects, human faces and every other thing, which enables us to identify them. Such an obvious truth, however, is constantly ignored by us, INASMUCH as we do not think of it, much less take care to use the advantage of it in our daily lives.

Memory is born of experience. The value of an experience depends on the degree of attention we may pay at the moment. How often our conception of an incident involves the picture which is conveyed to the mind by the mechanism of vision. It happens constantly that our interpretation of an image is determined by the judgment of the memory; and that judgment is dependent upon previous attention during the reception of other images. It is just as true that the care with which we observe an image is the measure of the stimulation imparted to the mind. How much more the mind learns from the mechanism of vision than from any other one of our faculties.

Considering the story in the previous chapters, I feel that this reminder of the necessity, and the value of our memory, is the best suggestion I can offer to the beginner. Give a most earnest attention to the attention you use when you are asking something of the outside contact with the world-your eyes. Such a deliberate careful attention will register a more correct image, will store up a more permanent memory, and will develop the habit of using the mechanism of vision correctly, allowing that function to conduct itself automatically without the intervention of an abnormal strain.

In the medical dictionary memory is defined as: That mental faculty by which sensations, impressions, and ideas are recalled. Has anyone added to that? Going higher, can anyone suggest how the changes, record of alterations in the brain cells, might perhaps be explained; and more of it, can anyone tell us how the unknown changes are retained, notwithstanding the renewal of the cell tissue by the constant repair. It is not necessary to know those facts. It will be a very profitable indoor sport, however, for a beginner, undertaking the practices of the method of Dr. Bates from the reading of this book, to ponder carefully what is written here.

If one will please read again, deliberately, the preceding paragraph, it will help in the realization of what Dr. Bates tries to impress in the many pages he spends on the memory itself. The different ways one can develop, and can be helped to get value out of the practices he directs, by building up and using constantly the memory.

Although he majors on black, he remembers that some do better with another color, or even changing colors. Always the endeavor is to remember, as perfectly as possible, some familiar object in its color which is being used to practice on. A dress, a shoe, a hat, a book, a colored wall, even some colored object or surface never seen. He emphasizes that the more perfectly one does REMEMBER, the more perfectly one is relaxed, that is, without abnormal tension. To be successful one must be without any urge. One must EXPECT of the memory. Its function is to recall. How often it does recall, vividly, objects or incidents, perhaps in a past which to the memory never has ceased to exist.

Constantly our registered vision is a procession of more or less attention to routine incidents. Memory is functioning automatically; but we are drifting with the tide. How many have ever considered the thoughts here involved. To obtain value from our memory, we must study the subject, and then practice the method.

IMAGINATION

Imagination is allied with memory. It depends very much on memory. Memory depends on experience. Experience depends on attention, as it may have been used in the past. But imagination is not static. It is creative. It can build, however, only with the power it has. Therefore imagination depends on previous experience, previous attention. I am discussing this reminder only as it concerns the practices used in this method.

In the accumulated conceptions of the mind there is power to fulfill any reaction that is required. The figured imagination here required is an aggressive attitude of mind. With that attitude there follows what I call an expectancy. That must be built on two factors, conviction and determination. Conviction will come only after one has considered the evidence presented. Determination must be founded on a realization of the value which is contained in the simple practice that is engaging the attention of the mind.

These are simple statements, and their meaning easily understood. It is my experience, nevertheless, that a few questions from me to the patient demonstrate to most of them how incorrectly they are attempting to carry out the unaccustomed mental procedure which has been described in the instructions with deliberate care. Emile Coue, a miracle man who proved his claims to many thousands during twenty-five years, reminds us that the will is only the engine, and that the imagination, which he tells us is finally just the idea, is the engineer. Suppose we consider as our model in this undertaking the engineer whose constant responsibility requires a deliberate and unremitting memory and imagination, concerning and involving not only the smallest detail of his mechanical commander of life and death, but also the immutable laws of the signals and the switches of the track which tell him, and dominate his conduct, which according to the mechanism of his mind, will be right or wrong.

STRENGTHENING THE EYES

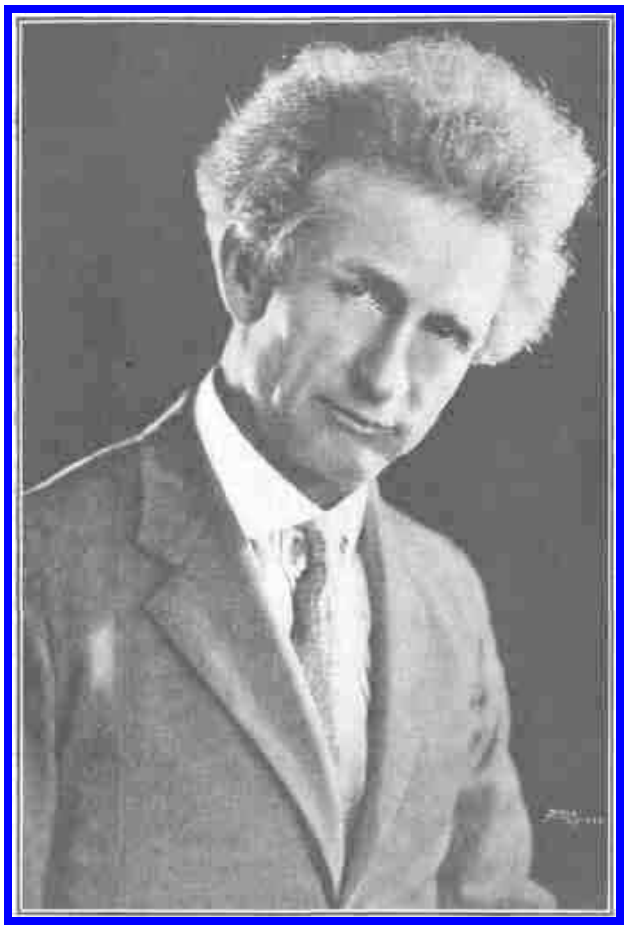
A New Course in Scientific Eye Training in 28 Lessons

By
BERNARR MACFADDEN
and
WILLIAM H. BATES M.D.

Published by
Physical Culture Publishing Company
New York

Strengthening The Eyes

By Bernarr A. MacFadden



Strengthening The Eyes

A System of Scientific Eye Training

BY
BERNARR MACFADDEN

NEW YORK
MACFADDEN PUBLICATIONS, INC.
1924

Strengthening The Eyes was published 25 years after MacFadden's first book:

Strong Eyes: How Weak Eyes May Be Strengthened and Spectacles Discarded

Strengthening the Eyes was written after MacFadden met Ophthalmologist William H. Bates, studied Dr. Bates Method and integrated it into the new 1918 book.

The earlier editions of the 1918 book were authored by MacFadden and Bates. In later editions Bates name was not on the book.

MacFadden published many books on Physical Fitness, Natural Health Treatments.

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NEW YORK CITY
In the United States, Canada and Great Britain

Strengthening
The EYES

A System of Scientific Eye Training

BY

BERNARR MACFADDEN

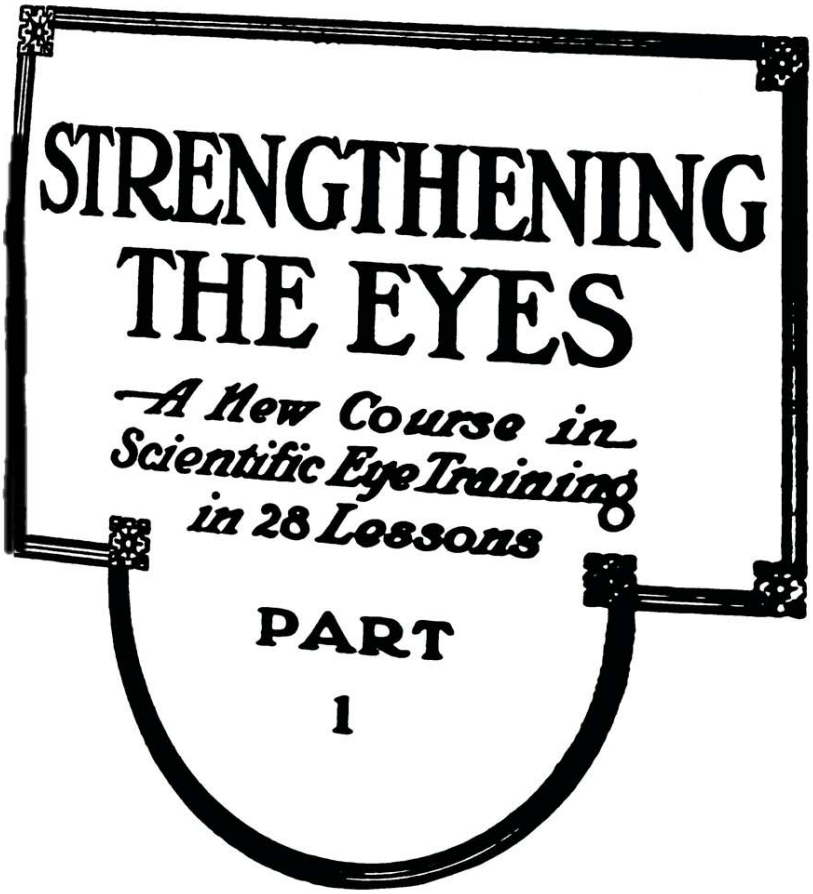
AUTHOR OF "MACFADDEN'S ENCYCLOPEDIA of PHYSICAL CULTURE," "EATING FOR HEALTH AND STRENGTH " "HAIR CULTURE" "MANHOOD AND MARRIAGE," "PREPARING FOR MOTHERHOOD" "PHYSICAL CULTURE FOR BABY," "THE WALKING CURE," AND OTHER WORKS ON HEALTH AND SEX

NEW YORK
MACFADDEN PUBLICATIONS, INC.
1925





A typical advertisement from *Physical Culture* advertising the "course" prepared by Dr. Bates and Bernarr Macfadden in collaboration.



By
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and
WILLIAM H. BATES M.D.

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NEW YORK CITY

Ophthalmologist William H. Bates and Bernarr MacFadden originally published 'Strengthening The Eyes'.
Later Editions contained only MacFadden's name as author.
Strengthening the Eyes is MacFadden's second book. It was written after studying Natural Vision Improvement with Ophthalmologist William H. Bates.
MacFadden was one of the first Natural Health Crusaders.
A few of the Eye Exercises and treatments in this book are not taught/practiced by Bates Natural Vision Improvement Teachers/students or, the exercises have changed, improved.
I have placed notes in blue to specify which exercises are not to be practiced. In this way the original book is preserved and students can be aware of the difference between the Bates Method and other eye exercises.
See last page this book for more directions. Clark Night Clearsight Publishing Co. - www.cleareyesight.info

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This Course in eye strengthening is presented in 28 lessons, each lesson being called a Part. To render the study and use of the Course more convenient, the lessons are published in a series of fourteen booklets. Depending on their length, from one to three lessons appear in a booklet.

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PREFACE – INTRODUCTORY - I

Eyes speak all languages; wait for no letter of introduction; they ask no leave of age or rank; they respect neither poverty nor riches; neither learning nor power, nor virtue, nor sex, but intrude and come again, and go through and through you in a moment of time.—Emerson.

NEARLY twenty-five years have passed since my interest was aroused in the problem of strengthening the eyes. It was the result of an experience that came near to being tragical.

No one can adequately measure the value of sight; but when we feel it failing we can in some degree realize what that value is. Such was my case on the occasion referred to. At the time I was assuming unusual responsibilities in the editorial and business management of the PHYSICAL CULTURE MAGAZINE, the publication having recently leapt into a prominent position, making the work extremely difficult. I had also undertaken to write an important book, the correspondence I was receiving having led me to see that there would be a large demand for the information that I expected to include therein.

Before having done any work on the book, except to divide the important phases of the subject into chapters, I advertised it, thinking it could well be finished and printed, ready for sale, at the time announced. My other duties, however, were so exacting that I was unable to begin writing when I expected to.

The demand for the work was extraordinary; orders poured into the office at the rate of two or three hundred a day, and further delay was out of the question. No one could assume my particular duties in editing and publishing the PHYSICAL CULTURE MAGAZINE; and moreover, at that time I had no assistant editors, or proofreaders, to relieve me of details. Therefore, in order to get any time for the book I was obliged to labor far into the night. By working night and day, however, I was able to finish it in about thirty days.

But the morning after the last corrected proof had been returned to the printer, I was appalled by the condition of my eyes. Vision was imperfect in many ways, and on picking up a newspaper, the printed page appeared like solid black.

I realized in a few seconds the value of my eyesight, and I did some rapid and serious thinking.

I had no faith in oculists and less in other doctors; the thought of consulting them did not even occur to me. I knew that my eyes must have been affected both locally and constitutionally, for not only had they been subjected to extreme overwork, but this overwork had lowered my general vitality. Whatever my business responsibilities might be, I saw that a vacation was now necessary, and I accordingly took it.

After returning to my duties in about two weeks, my eyes were greatly improved, but their condition was still far from satisfactory. I finally concluded to **take a fast of one week in order to cleanse thoroughly my physical organism. This benefited my eyes tremendously.** Thereafter I began to experiment with various eye exercises together with the eye bath, massage, etc., and my eyes soon acquired their former vigor.

Oculists with whom I came in contact during this period warned me of the dangers of adhering to my views. Blindness, they said, would surely be my fate.

In recent years I have been informed on numerous occasions that the eyes naturally begin to deteriorate after forty years of age, and that total blindness might result if I did not assist them with glasses. About ten years ago (I am now in my fifty-fifth year), when I was treating hundreds of patients at the Bernarr MacFadden Healthatorium in Chicago, one of my patients, an oculist, was very emphatic in his warnings as to the danger I was running by not wearing glasses, and he finally induced me to promise him that I would try a pair if he sent them to me after he returned home. The glasses arrived in due time, but after wearing them for about ten minutes my eyes pained me so severely that I had to discard them. No doubt they were not adjusted to the condition of my eyes, but I did not try to improve upon them. I have refrained from adopting the "eye crutch" up to the present time, and I hope that for many years to come I shall be able to avoid them. As a result of the natural methods of treatment already explained, my eyes are excellent and I work strenuously with both brain and eyes regularly six days per week, and long, tedious days at that.

When my book, "STRONG EYES," was first published, the principles presented therein were to a certain extent new, but I was thoroughly convinced of their correctness and thousands of readers have attested their value since the first edition of the book was issued. More than fifty thousand copies of the book have been sold, and in no instance have I heard of an injury to the eyes because of the use of the methods outlined therein; but, on the other hand, thousands have borne witness to extraordinary benefit derived from them, while numbers have been able to discard their glasses altogether as a result of their use.

Consequently this book is presented, not as a mere set of complex and untried theories, but as an aggregation of definite and practical facts.

Some years ago I came in contact with the work of a prominent eye specialist (William H. Bates) who is a scientist of high standing in the field of ophthalmology and a graduate of the College of Physicians and Surgeons, Columbia University, New York. This physician began his studies in connection with his revolutionary theories in 1886. It was in this year that he cured his first case of myopia (near-sight). Encouraged by this success, he treated many patients at the New York Eye Infirmary with benefit, accomplishing some complete cures. **While he was at the New York Post Graduate, his success was such as to bring about the loss of his position, the eye specialist in charge there maintaining that such cures were impossible, and this notwithstanding the fact that the proof was there for investigation.**

In 1903 this physician discovered that teachers could not only prevent the occurrence of myopia among their pupils, but could cure it by the use of the "Snellen test card." This was the first successful method for the prevention of myopia and other cases of imperfect sight in school children, and in itself is a discovery that will greatly benefit humanity. (See New York Medical Journal,

July 29, 1911.) In 1912 this method was introduced into some of the public schools of the city of New York, the results being published in the New York Medical Journal, August 30, 1913. The teachers cured one thousand children of imperfect sight without the help of glasses.

During the last ten years, this scientist has made many experiments on rabbits, fish, cats and dogs for the purpose of gaining information about the action of the external muscles of the eye. By this means he has been able to bring to light many facts which are entirely opposite to the theories about the eye published in text books at the present time. These experiments, some details of which may be found in the New York Medical Journal for May 8, 1915, together with his untiring studies of the human eye, have further led this physician to formulate a system of eye training by means of which not only errors of refraction but almost every irregularity of the eye can either be cured or materially benefited without the help of glasses.

Directly opposed to the methods and theories of orthodoxy, this system is not only revolutionary in character, but far-reaching in its practical importance.

I feel sure that in adopting the ideas of this eminent scientist I have been able not only to stamp my own theories with the approval of up-to-date science, but to present to the public a course of eye training which will bear the most searching criticism.

It is scientific and practical, and has been proven conclusively to be of inestimable value. It should enable you to so strengthen your eyes that glasses will not be needed later in life, while in many cases it will enable you to discard the glasses which you may now be wearing; it should also enable many to avoid the loss of a possession priceless in value—the sense of sight.

This book is sent out in the hope that it will be a boon to many who need the invaluable information which it contains. That its methods sometimes require considerable time and patience for their successful practice should not lessen their value. The rewards which await those who follow the instructions given will be beyond price.



CHAPTER II
Strong, Beautiful Eyes

Eyes, of microscopic power, that would discern
the population of a dewdrop.

—Montgomery.

IT is undoubtedly true that man comes into more intimate contact with the outer world through the sense of sight than through any other, or perhaps through all the others combined. In the case of the other senses, outside impressions: or "stimuli" seem to come to the man—to impinge *upon* him, as it were; but in the case of sight, he apparently goes outside himself, and actually seems to project himself into the outer world—seeing what is there, actually existing. We know now that this subjective impression of the facts is not true; but the feeling is there none the less. We can also direct or govern the sense of sight more fully than any other. We can "turn away" from sights we do not wish to see, while we cannot readily stop listening to sounds we do not like or shut out smells which are disagreeable to us. Sight seems to be, more than any other sense, in touch with the true personality—the godlike self within.

Yet, in spite of their great value, the eyes are among the most delicate organs in the human body. They are composed largely of liquid, are extremely sensitive, and can very readily be destroyed altogether. It is only the marvelous protective measures of nature which prevent a greater number of fatal injuries to these organs.

Man, more than any other animal, depends upon his sense of sight, for in his case the other senses, such as smell and hearing, are more or less "atrophied," or stunted, as compared with their keenness in other animals. They are sometimes almost lost through lack of use. To a certain extent this is true of the sense of sight also, but it is less true here than in the other instances, the conditions of modern life requiring the almost constant use of the organs of vision.

The eye in the lower animal, as well as in man, is one of the most highly specialized structures in the body, and so wonderful in contrivance that it is rightfully alluded to as one of the marked instances of the beneficences of God as displayed in creation. Yet, in spite of the profundity of the researches which the ingenious mind of man has made, of late years, in the domain of science, this most important and wonderful organ has not received the amount of attention given to many other subjects.

Not only are the eyes important in themselves, but if they are strained or injured they in turn affect the general nervous system. It must be remembered that what we call "the eye" is only the eyeball; the whole optical apparatus is far more extensive than this, and is hidden away in and back of the socket, including a part of the brain itself. By means of the optic nerve the eye proper is connected with the sight-centers in the brain; and, again, the eye is nourished by the blood, which circulates to and in these parts. All treatment of the eyes must, in a certain sense, be *constitutional* (that is, general) and not local only. The latter method of treatment would be very inadequate, failing to take into account the fundamental fact that the eyes are a part of the body and dependent upon and influenced by it.

Emotions and expressions are mirrored in the eye. The "love light in the eye" has been the theme of amatory verse in all ages and times, and throughout literature we find endless references to the expression of the varying emotions of the human soul by the eyes. Passionate, burning, cruel, mystic, gentle, cunning, hot, cold, etc., are among the adjectives applied to them. The character is depicted by the eye more plainly, perhaps, than by any other organ of the body, courage, dignity and power being expressed by the organs of vision when other external indications of these attributes are lacking.

Yet, though these varying emotions and expressions can doubtless be read in the eyes, it is extremely difficult to say just *how* and *why* the eyes betray and portray them.

Some authors are of the opinion that the eye itself never changes, but only the muscles directly around it. "These muscles vary the expression," and the theory seems to be more or less borne out by the fact that, in many cases, if the parts adjacent to the eyes be covered up, no change of expression can be detected. Other authors, on the contrary, contend that the eye itself changes in expression and have advanced arguments which seem to prove it. This is an interesting line of inquiry which the student might follow for himself with interest and profit.

The eye, to be beautiful, must be clear. It must be free from defects, such as squint or dullness; the lashes must be of the proper length, the lids healthy and the whites free from the discolorations of impure blood. A perfect digestion, a healthy and energetic circulation of the blood, a delicate nervous poise, are all physical prerequisites to beautiful eyes. Form, color and size avail nothing without the luster and brilliancy of expression imparted by general physical health and tone, and though the shape and color of the eyes can never be changed, they can be greatly improved in appearance by the rational system of constitutional and hygienic treatment to be considered later.

The unfortunate tendency of modern medical science is to specialize too much; and under the influence of this tendency, general conditions are often ignored. In the majority of cases the eye specialists are no exception to this rule. They are too often inclined to treat the eye along purely local lines, instead of recognizing that it is a part of the general nervous system and treating it also along constitutional lines. Effects have been treated instead of causes; yet it is plain that the causes must be removed if we are ever to cure the effects.

The prevalence of defective eyesight is indeed alarming, did we but realize it. It has been estimated that from 25 to 50 per cent of the inhabitants of the United States are more or less short-sighted—to cite this one defect alone. At the lowest possible estimate, therefore, at least 25,000,000 people in this country suffer from myopia, and probably a good many more than this! And if, to this, we add those suffering from hypermetropia (or far-sight), presbyopia (old-age sight), astigmatism, squint, color-blindness and other defects of vision, we are surely safe in saying that the great majority of the inhabitants of America are afflicted with imperfect vision, and all the ills that follow in consequence.

CHAPTER III

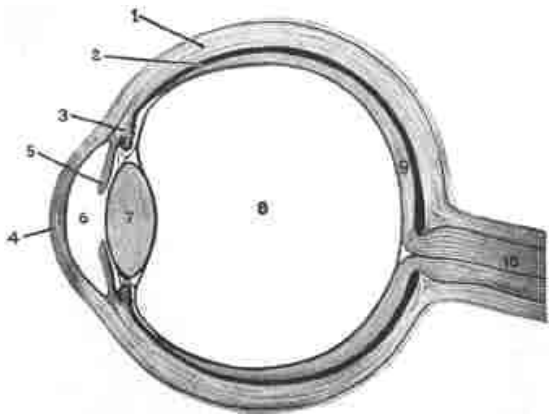
The Anatomy of the Human Eye

A SIMPLIFIED exposition of the structure of this wonderful organ is imperative in a course of this character in order that the pupil may understand the terms which follow, but only a very brief summary can be attempted. For a more detailed account of the structure and physiology of the eye the student is referred to larger works.

Normally, the eyeball is nearly spherical in shape, and has three *membranes*, or coats, and three *humors*. The external coat is a thin, tough membrane, which maintains the form of the ball; it is called the *sclerotic*, and forms what is known as the "white of the eye," and includes the anterior four-fifths of the outer coat; the anterior one-fifth is the *cornea*, a transparent disk joined to the sclerotic somewhat as a watch-glass is set in its case. It can be plainly seen by looking at the eye sideways.

The next coat which lies against the inner surface of the sclerotic and is very vascular, is called the *choroid*.

The *choroid* is composed of a network of blood-vessels, and is lined with a layer of pigment cells, whose duty it is to absorb an excess of light.

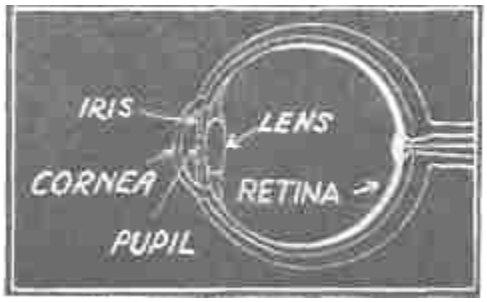


Horizontal and sectional view of the structure of the eye. (1) Sclerotic coat; (2) Choroid coat; (3) Ciliary body; (4) Cornea—the "watch glass" in front of the eyeball; (5) The iris; (6) Anterior chamber, containing aqueous humor; (7) Crystalline lens; the pupil is between 6 and 7; (8) Vitreous Humor, filling the eyeball; (9) Retina; (10) Optic nerve.

The *iris*, which forms a thin curtain behind the cornea, gives the eye its special color and to a large extent its beauty. The color of the iris in newly born babies is blue, and the differing colors which come later in life are due to the addition of a greater or lesser amount of dark pigment. The color is usually more or less in uniformity with the general coloring of the individual.

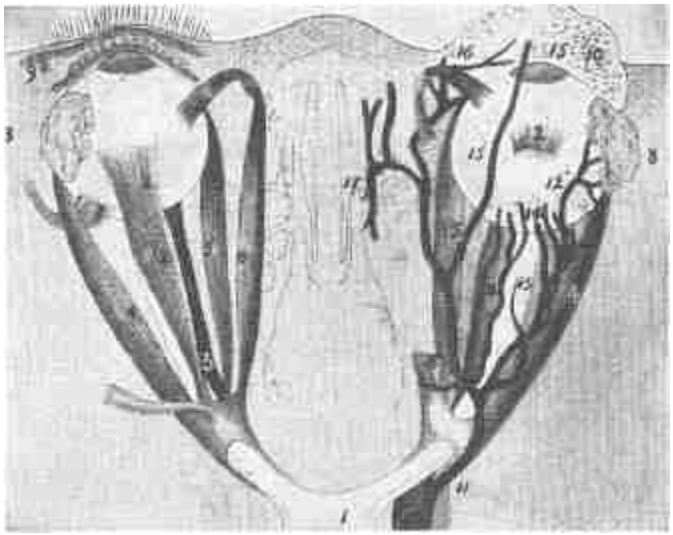
The *pupil* is merely an opening in the center of the iris, and appears black because of the darkness of the interior of the eye. Through it the rays of light, coming from any object, must pass. The pupil has the power of contracting or expanding under the influence of light; and certain drugs, such as opium and belladonna, cause it to contract or dilate unnaturally for long periods of time. The pupils of cats, tigers and other animals appear to shine in the dark; and for long it was thought that this phenomenon was due to some form of phosphorescence, but it is now known to be merely a reflection from the cornea.

At the junction of the iris and choroid is found a narrow band of delicate muscular fibers, called the *ciliary muscle*. This little muscle has been thought to play a very important part in the workings of the eye, notably in its "accommodation," and should be remembered, as it will be referred to repeatedly further on.



Simplified diagram, corresponding to the figure on page 10.

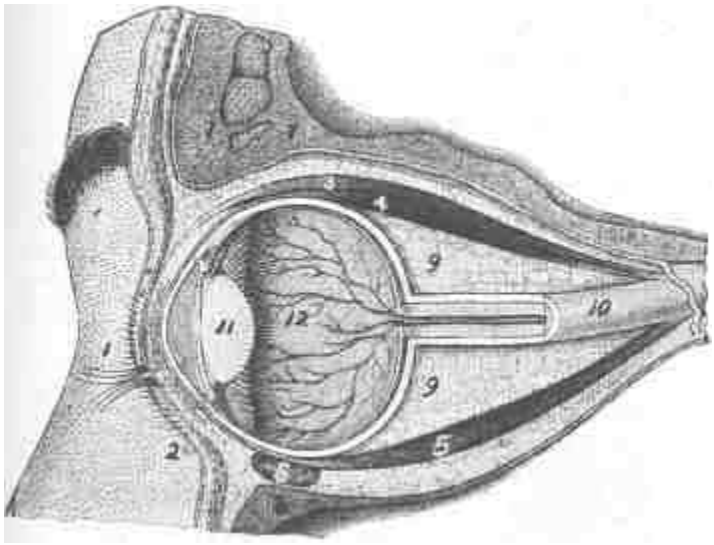
The *retina*, the third or nervous membrane, lies at the back of the eye-wall, and upon it the light-rays entering the eye are thrown or "focused." It is an exceedingly delicate and sensitive structure, liable to injury and less than one-hundredth of an inch thick. Nevertheless about **ten different layers have been found within it!** The outermost of these, called "Jacob's membrane," has been found to consist of minute columns arranged side by side perpendicular to the choroid, while the internal, or nerve-fiber layer, is composed of delicate nerve-fibrils forming a surface parallel to the choroid.



View of eyeballs from above, showing the muscles and arteries. (1) Crossing of the optic nerve; (2) Superior rectus muscle; (3) Inferior rectus muscle; (4) External rectus muscle; (5) Internal rectus muscle; (6) Superior oblique muscle (7) Inferior oblique muscle; (8) Lachrymal glands; (9) Eyelid in section; (10) Eyelid from inside; (11) Infra-orbital artery; (12) Branch to the tear gland; (13) Branch to the retina; (14) Branch to the iris; (15) Branch to the upper eyelid; (16) Branch to the eyebrow; (17) Branch to the cavity of the nose.

The *optic nerve* passes from the eye to the brain, and carries the nervous impulses which, in the sight-centers of the brain, are converted into the "sensation of seeing." There is evidence that the optic nerve carries impulses that result in pain, but apart from this it can carry only one kind of nerve impulse, that of sight. Hence, when it is stimulated, by whatever means, whether normally

by light, or by an electric current, or by a blow, we get the **impression of light or "seeing stars."**



Section through the right eye. (1) Upper eyelid; (2) Lower eyelid; (3) Eyelid lifting muscle; (4) Superior rectus muscle; (5) Inferior rectus muscle; (6) Inferior oblique muscle; (7) Frontal bone; (8) Superior maxillary bone; (9) Fat; (10) Optic Nerve; (11) Crystalline lens; (12) Vitreous humor.

The three humors are the *aqueous*, *crystalline* and *vitreous*.

The *vitreous humor* occupies about four-fifths of the interior of the ball; it is colorless and transparent, and somewhat resembles a very thin jelly. It is solid enough to maintain the shape of the eye, while at the same time yielding readily under pressure. It is firm, yet elastic.

The *crystalline humor*, or *lens*, is firmer than the vitreous, but not solid, and is shaped somewhat like an ordinary magnifying glass. It grows denser with age. This also is a very important part of the eye, and will be dealt with more fully in the discussion of accommodation and errors of refraction.

The *aqueous humor* is nearly pure water, and is contained in the space between the cornea and lens.

The *orbit* is the hollow cone of dense protective bone in which the eye is set. The roof of the orbit, however, is very thin, and upon this the fore-brain rests. It may be injured by a blow from beneath; and duelists are said to have selected this spot for a fatal sword-thrust. King Henry II of France was accidentally killed at a tournament by a lance point which pierced his brain through this fragile bone.

The eyebrows are formed of bone, muscle and thick skin, covered with hairs, and protect the eyes from drops of sweat, water, dirt, etc., which might otherwise find their way into them.

The eyelid is also a protective covering, composed of a layer of loose skin, and covers the eyes during sleep, when the ball is "everted," or turned upwards, also from dust, smoke, etc.

The polish and transparency of the cornea are maintained by frequent unconscious winking, (blinking) which keeps its surface moist and free from dust. The mucous lining of the eyelids is always more or less moist, and is continuous with skin at the margin of the lids. After lining the inner surface of the lids it passes over to the ball, forming a loose fold, which is the only direct connection between them; hence its name, *conjunctiva*. It covers the front part of the sclerotic, the whole of the visible portion, and lining the walls of the tear-duct, **becomes continuous with the membrane of the nose and throat, and, therefore, usually takes a part in a "cold in the head," or influenza.** It is usually transparent, but may become bloodshot, or yellow, as in jaundice. Yellowness results when the coloring matter of the bile is deposited in the conjunctiva.
(Sinus pressure, congestion can cause pressure on the eyes, affect eye movement, disrupt eye shape, focus of light rays, cause slight astigmatism, headache, dizziness.)

The opening between the lids is called the *commissure*, and the apparent size of the eyes depends chiefly upon the width of this space. The almond shape of Oriental eyes is due to the unusual length of the fissure between the lids, apparently increased by the absence of the *plica semilunaris*—the small triangle of flesh at the inner angle of the eyelids. In the Chinese, the outer angle of the commissure is much higher than the inner, giving the cleft an obliquity upwards and outwards. This has a marked effect upon the whole expression of the face.

The lachrymal apparatus consists of the gland for secreting tears and the passages for draining them off. The "tear glands" are situated just above the outer angle of the eye, and a number of small ducts carry the tears, when secreted, to the eye itself. After passage across the surface of the eye, the tears are taken up by passages, which commence near the inner angle of the eye, and are conducted into the nose. The tubes carrying the tears to the nasal passages are called the *lachrymal canals*. Two tiny holes or outlets permit the tears to enter these canals from the surface of the eye. Tears are usually drained off in this manner, and only "overflow" and drop off the lids when the glands are excited by excessive emotion or by local irritation. "Sniffing" is usually the

first stage of a "good cry." Infants do not shed tears before the third to fourth month, and the elephant is the only one of the lower animals accused of this human weakness—statements concerning the crocodile to the contrary notwithstanding!

The eyeball is moved in various directions by a number of muscles, attached to it at the back, top, bottom and sides. It can thus be turned upwards, downwards, inwards or outwards, or may be rotated. When these muscles are uniformly relaxed or acting in unison, the eye is normal. When, from any cause, one set of muscles exerts a stronger pull than its opposites, a squint is produced. When the muscles contract excessively, they squeeze the eyeball out of shape, elongating it or the reverse. The importance of this fact we shall see when we come to the chapter devoted to errors of refraction.

CHAPTER IV

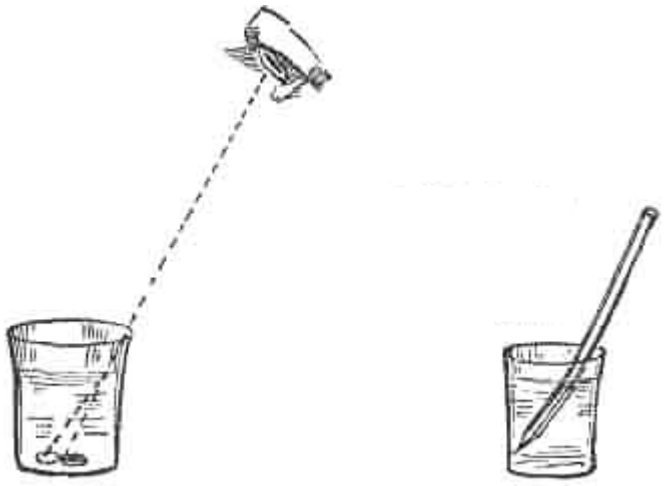
How We See: The Physiology and Physics of Vision

THE act of seeing is one of the greatest mysteries in the world. To the ancients it was an even greater mystery than to us, and continued to be so until the great astronomer Kepler noted the resemblance between the human eye and the camera, and demonstrated that images of external objects are formed by the organs of vision exactly as they are by the photographer's apparatus. In the eye, the rays of light, coming from the object seen, traverse the eyeball and fall upon the sensitive retina (the "plate" of the camera), from which they are conveyed to the sight-centers of the brain by the fibers of the optic nerve. That is, the impression which they have created upon the retina is so conveyed.

In order that the reader may understand the optics and physics of the eye, and of sight, it is necessary to say a few words concerning light, and reflecting and refracting bodies and surfaces.

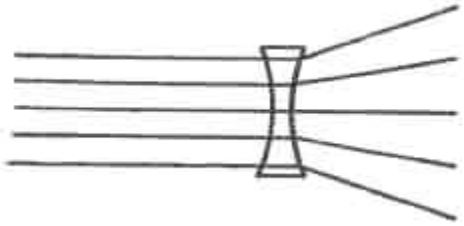
Light is primarily given forth by self-luminous bodies, such as a candle or the sun; and everything else is *reflected* light. The earth reflects the rays of the sun, and this gives us our "daylight." When this reflection is cut off, dense blackness prevails. The spaces between the stars are inky black, for there is no solid body to reflect the rays coming from the sun. Rays of light are reflected when the body on which they shine sends them back. And if the light strikes a reflecting surface at an angle, the reflected angle—the so-called "angle of reflection"—is always equal to the "angle of incidence," or the direction of the shaft of light striking the object.

The white light we see is composed, as we know, of seven primary colors. Some bodies absorb some of these vibrations, and reflect others; and when this is the case such bodies are said to be colored in various ways. The color of any object is not inherent *in* it, but is due solely to the fact that some of the light-rays are reflected and some absorbed. Those which are reflected constitute its "color."



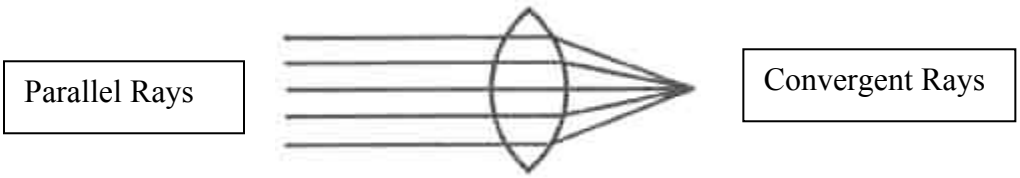
Refraction of light by the surface of water, illustrated by the coin which in an empty cup may be invisible and which appears to move upward and come within the range of vision when the cup is filled with water. Refraction is also seen in the appearance of the bending of a stick or pencil immersed in water, when looking at it from above.

When rays of light pass from one medium into another of different (shape, curvature, structure, density…) they are bent of their previous course, which in the case of rays coming from a distance, is one of parallel lines. A simple experiment which demonstrates this is that in which a small coin is thrown into a basin of water. It appears to be in a certain place, but if an attempt be made to touch it in this place it is found to be not there at all, but somewhere else! "Appearances are deceptive." This is due to the fact that water, being of a density different from that of air, bends the rays of light and makes them take a different direction; they are, in short, *"refracted."* By suitable means, these light-rays can be straightened out again; they may also be refracted any number of times and in various ways.



Refraction of light-rays passing through concave lens, becoming divergent.

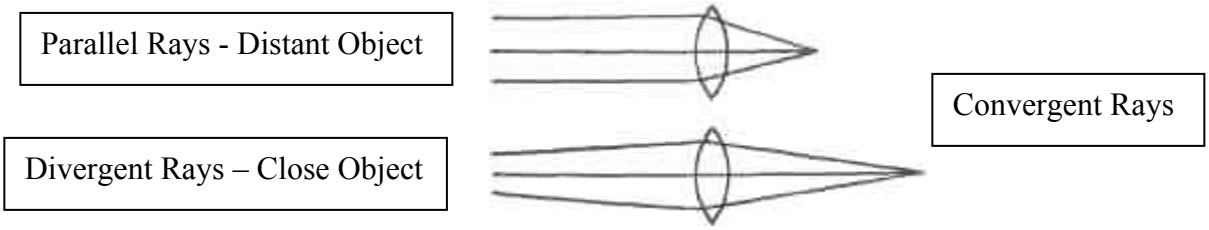
Thus, a plain, flat sheet of glass will bend all the light-rays which pass through it at the same angle. They are neither *diverged* (scattered), nor brought to a point *(converged)*. When, however, the glass is double "convex," the rays of light are brought together into a *"focus."* When it is double "concave," the light-rays are scattered, or diverged.



Refraction of light-rays passing through convex lens, becoming convergent.

We have seen that (divergent or parallel) light-rays passing through a double convex glass or lens converge at a certain point, and if, at that point, we place a screen, we catch an image of the object from which they proceed. In the eye, precisely this phenomenon takes place. The cornea and crystalline lens focus the light-rays upon the retina at the back of the eye, which catches the image, and from this point the impression is carried along the optic nerve to the brain, as before described. When the rays are focused exactly upon this delicate surface, the impression is clear and distinct. Otherwise it is blurred, or sight may fail altogether.

All parts of the retina are not equally sensitive to visual impressions. The most sensitive portion is a little depression directly in the line of vision, called the *fovea centralis*, literally, the central pit. Indeed, this is the *only* spot which admits direct vision. In all other places it is more or less blurred. We can see only one thing at a time clearly; the rest becomes blurred and fades out as it recedes from the central point. Not far from this most sensitive spot there is a *blind spot* on the retina, which is unable to see anything. We have one in each eye, but the eyes are so adjusted that when one eye is blind the other sees, and *vice versa*. This blind spot is at the entrance of the optic nerve to the retina, and its locality can easily be seen in the diagram on the preceding page.



Illustrating the refraction of rays of light from distant and nearby points. The parallel rays, from a distant point, are concentrated at a point much closer to the lens than the divergent rays from a nearby point, which are focused further back. This is also demonstrated by the familiar experience of focusing light-rays in a camera.

The eye is set in normal shape/state to focus light rays from distant objects onto the retina.
The eye must accommodate, lengthen and/or the lens must move or change shape to bring the light rays from close objects onto the eyes retina.



A diagram for demonstrating the "blind spot" on the retina which is the point at which the optic nerve enters.
Closing the left eye and holding the diagram horizontally ten or twelve inches in front of the right eye, look fixedly upon the cross and gradually bring the diagram nearer.
At from seven to nine inches the black spot will suddenly disappear from the vision because the image falls upon the "blind spot."

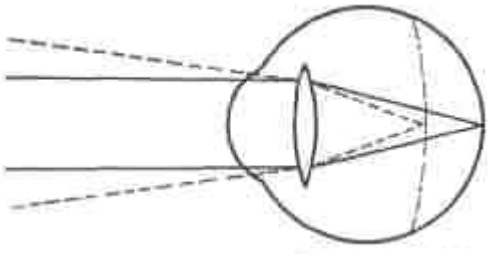
Light rays from the round spot focused on the eyes blind spot.



To prove the existence of the blind spot:

Close the left eye and direct the right eye to the small cross on the left hand side of the figure. Hold the page vertically before the eye, ten or twelve inches off, and then gradually bring it nearer, still keeping the gaze fixed upon the cross. The round spot will also be visible, except at a certain distance from the eye—about seven inches—when it will disappear from view. Its image falls upon the point of entrance of the optic nerve, (Blind Spot) which is incapable of perceiving light.

In the diagram on this page is illustrated how the image is thrown upon the retina in the "blind spot" experiment. The eyeball in this diagram is proportionately small. The cross marks the spot of entrance of the optic nerve.

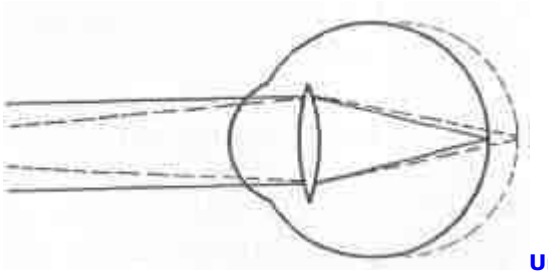


Unclear Close Vision

Diagram illustrating hypermetropia or far-sightedness, light-rays from nearby points (indicated by broken lines) being focused behind the retina. This old picture is imperfect. The abnormal eye shape that causes unclear close vision is a shortened eye shape (shown by the light vertical line in the diagram?) that causes the light rays to focus beyond the retina, scattering unfocused on the retina.

The normal eye lengthens slightly to focus divergent light rays from close objects onto the retina. The picture shows that the eye has remained round, or shortened, has not lengthened to adjust/enable the light rays from the close object to focus correct on the retina. Close vision is unclear. Light rays in the picture is a misprint–Light rays from close objects diverge before entering the eye. The eyes lens also focuses light rays.

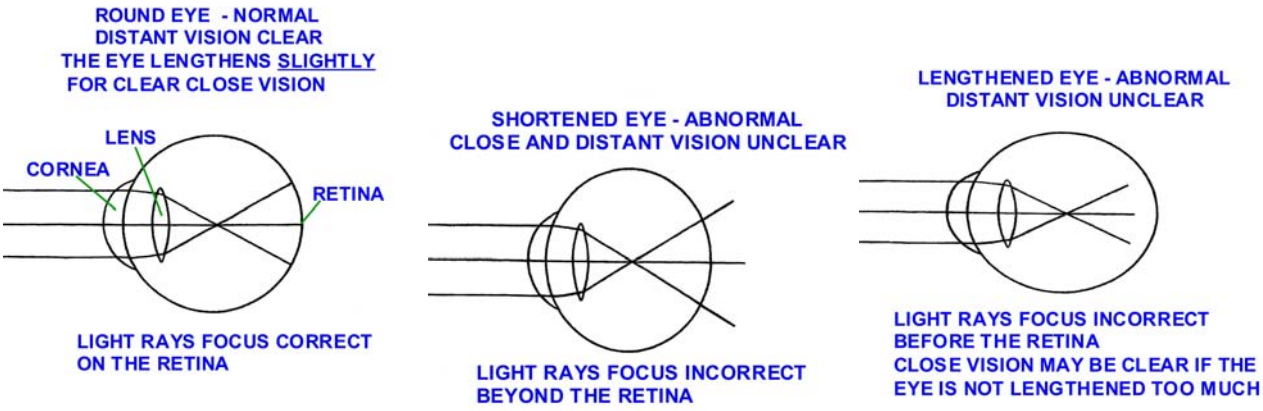
We have seen that a double convex lens will focus light-rays at a certain point or distance beyond it; this distance will depend upon the degree of convexity of the lens. If it is only slightly convex, the focal point will be some distance away, while if it is very much curved, the focal point will be very near. We have only to alter the degree of convexity of the lens to insure the focusing of the rays at any desired distance (within limits).



Unclear Distant Vision

Diagram illustrating myopia or near-sightedness, rays of light from a distance (indicated by broken lines) falling in front of (before) the retina. The abnormal eye shape that causes unclear distant vision is a lengthened eye which prevents the light rays from reaching, focusing on the retina. Distant vision is unclear.
A round eye shape produces clear distant vision. The eyes lens also focuses light rays.
Light rays from distant objects are basically parallel.

See these correct, modern eye pictures;

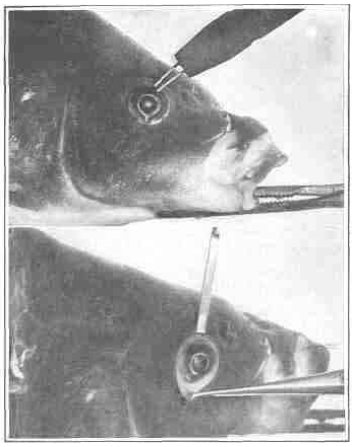


Now, the lens of the eye is like any other lens in this respect; and it was long ago pointed out that if it were slightly altered in shape, by means of muscular tension or otherwise, rays of light coming from different distances could be focused accurately upon the retina. It has been believed for many years that the eye adjusts itself for vision at different distances by this means, and the theory, which was accepted mainly upon the authority of Helmholtz, is the basis of the teaching in all the text books on ophthalmology today. This change of focus is called "accommodation," and is supposed to be effected by means of the ciliary muscle.

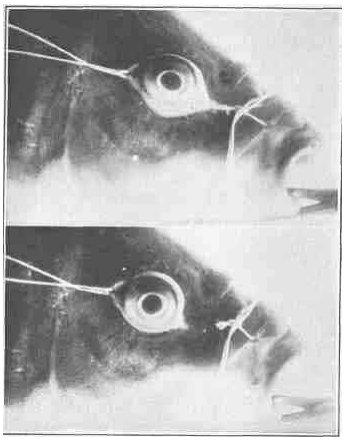
When the eye does not adjust itself properly for vision at different distances it is said to be suffering from an *error of refraction*. These errors, with the exception of presbyopia (old-age sight), are attributed to a wrongly-shaped eyeball (occasionally to a wrongly-shaped lens), and are believed to be either congenital (present at birth) or acquired. Presbyopia is attributed to the

hardening of the lens and its consequent inability to change its shape. It is stated in all the text books on ophthalmology that these conditions are incurable and almost entirely unavoidable; but, by altering the shape of the lens, the ciliary muscle is supposed to be capable of compensating to some extent for deviations from the normal in the shape of the eyeball, and when the patient is not physically at par this is believed to impose a great strain on the eye and the nervous system.

The Bates method relaxes the mind, body, eyes, outer eye muscles, inner eye muscles (lens, Iris…) and improves the clarity of vision by returning the eye, lens to normal shape, function, improves health of the eyes, mind, body, nervous system.



An experiment on the eye of a carp demonstrating that the lens is not a factor in accommodation. In the upper picture the eye is normal and accommodates normally when stimulated by the electrode. In the lower the lens has been pushed out of the line of sight by an instrument the point of which can be seen in the pupil. The eye is then stimulated by electricity and accommodates precisely as in the upper picture.



Production of astigmatism in the eye of a carp by changing the shape of the eyeball. In the upper picture the pull of two strings attached to the conjunctiva has made the cornea oval, thereby producing astigmatism. In the lower one the string has been cut, the cornea has resumed its natural shape and the eye is normal.

It is upon these doctrines that the treatment of refractive errors by means of glasses is based. So long as the lens and the ciliary muscle worked, and the eyeball was of the normal shape (or the lens and ciliary muscle were capable of compensating for its deficiencies), the light-rays, we have been told, were focused accurately upon the retina, and the eye required no help. But when this was no longer possible or easy, for any reason, then an extra lens was prescribed to assist in bending the light-rays so that they should be properly focused. This often improved the vision and seemed to relieve strain. In other cases it did neither, and the patient wandered hopelessly from one specialist to another in the vain search for relief.

As we shall see, however, when we come to the further discussion of accommodation and refractive errors (Chapter VI), these theories are erroneous.

CHAPTER V

Asthenopia: Weak Eyes

NORMAL, healthy eyes should be strong, clear, alert and full of expression. When they are dull, weak or lacking in expression, we may be sure there is something physically or mentally wrong with their possessor. Everyone has noted the meaningless expression in the eyes of the drunkard—how they roll about in a heavy, lusterless way in their sockets. This sufficiently demonstrates the intimate relationship between the eyes and the general nervous system. Indeed, it may be said that the eyes are a fair indication of the condition of the stomach and of the whole system. Excessive eating, drinking, smoking, worrying or other debilitating practices are sure to be recorded sooner or later in these delicate and sensitive structures.

When the body is normal and healthy, the blood furnished to the eyes is pure and clear. Strong eyes are the result. If, on the other hand, the digestion is out of order and the blood is impure, or loaded with unassimilated material, then the eyes grow dull and heavy; their power of vision is impaired no less than their beauty, and a wholesale degeneration of their tissues results. **Eye defects of this character are almost invariably due to some constitutional weakness or defect, and not to the local causes to which they are often ascribed.** This will become more apparent as we proceed. Most oculists and opticians have a

tendency to treat the eye as a detached organ, without any relation at all to the rest of the body, the blood stream or the nervous structure. This is irrational, and it is impossible that any permanent good should come of it. The connection between the eye and the rest of the body is most intimate, and any form of poisoning, or weakness, in the latter at once manifests itself in the former. Under these circumstances local treatment is useless without improvement of the general physical condition. **Only vigorous bodily exercise, proper diet, deep breathing and general invigoration can build up the system and place it on that high plane of energy which is essential to the health, strength and beauty of the eyes.**

The causes to which the deplorable condition of civilized eyes is usually ascribed, such as prolonged use for near work, improper lighting, etc., are only injurious, as we shall see later, when the eyes are not properly used.

It usually takes a long time to tire out the eyes, and they recuperate very rapidly under proper care. Of course, if things have been allowed to go too far, a long course of treatment may be essential, but even then it is astonishing to see how rapidly recovery will take place.

Resorting to glasses as soon as any visual discomfort is experienced is a mistake—for reasons to be set forth later. The eyes are thus supplied with a crutch which partially supports them, but which, at the same time, keeps them artificially strained. The natural result is that they call for more and more powerful lenses. The proper thing to do in such cases is to find out and remove the cause of the condition, whether constitutional or local. Then all palliative measures will become unnecessary.

CHAPTER VI

The Imperfect Sight of the Normal Eye

In the following discussion, based upon the experience of a scientist who has specialized in the field of ophthalmology, are presented facts of the greatest practical importance, not only to all those who desire to have perfect sight, but to those whose safety depends upon the sight of others. Revolutionary as these statements are, they are supported by such wealth of evidence that they cannot well be questioned.

IT is generally believed that the normal eye has perfect sight all the time.

It has been compared to a perfect machine which is always in good working order. No matter what the object regarded may be, whether new, strange or familiar, whether the light is good or imperfect, whether the surroundings are pleasant or disagreeable, orthodoxy teaches that the normal eye is *always* normal and its sight *always* perfect. Even under conditions of nerve strain and bodily disease, the normal eye is expected to have perfect sight always.

This idea is very far from the truth. A careful study of the refraction of the eye extending over a period of many years has proven that no eye has perfect sight continuously. It is unusual, in fact, to find persons who can maintain perfect sight longer than a few minutes, even under the most favorable conditions. Of twenty thousand school children more than half had normal sight, but not one had perfect sight in each eye every day. The sight of many of them might be good in the morning and imperfect in the afternoon, while many with imperfect sight in the morning would have perfect sight in the afternoon.

Many children could read some letters of the alphabet perfectly, but were unable to distinguish others of the same size under similar conditions.

The degree of the imperfect sight varied within wide limits from one-third of the normal to one-tenth or less; duration was also variable. Under some conditions the imperfect sight might continue for only a few minutes or less. Under other conditions, however, a small number of students (sometimes all with normal eyes) would have sufficient loss of sight to prevent them from seeing writing on the blackboard for days, weeks, or even longer.

The sight of adults of all ages varies in a similar manner. Persons over seventy years of age with normal eyes have had attacks of loss of sight variable in degree and duration. A man aged eighty with normal eyes had periods of imperfect sight which would last from a few minutes to several hours or longer.

Both adults and children with normal eyes may have attacks of color blindness, and all persons, when their sight for form is lowered, are less able to distinguish colors than at other times. One patient, with normal eyes, perfect sight and perfect color perception in the daytime, had always been color-blind at night; he had no perception of colors after sunset.

There can be no doubt that accidents on railroads, at sea and on the streets often occur because the normal eyes of the responsible persons, *for a time*, had imperfect sight.

Unfamiliar objects almost always produce eye strain and are imperfectly seen. School children with normal eyes who can read small letters one-quarter of an inch high, at a distance of ten feet, always have trouble in reading strange writing on the blackboard, although the letters may be as much as two inches high. Strange maps always produce imperfect sight in the normal eyes of school children because they cause a strain to see. Temporary myopia, or myopic astigmatism, is always produced under these conditions, and if the strain is frequently repeated it may become continuous.

The strain may be conscious or unconscious, and may or may not produce pain, discomfort or fatigue.

Unfamiliar objects seen at the near-points are also a cause of eye strain. For this reason school children or adults learning to read, write, draw, or sew, suffer from defective vision, although they have normal eyes. In such cases temporary hypermetropia, or hypermetropic astigmatism, is produced, and with frequent repetition of the strain it becomes permanent. Learn to avoid strain, staring, squinting. Blink, shift, central fixation, relaxation for clear vision.

This matter is of such great practical importance in the education of children that the attention of teachers should be called to the facts. (New York Medical Journal, August 30, 1913, Myopia Prevention by Teachers.)

Many children lose interest in their school work and become truants and incorrigibles from this one cause.

Light has a very important effect on vision of the normal eye; an unexpected strong light always produces defective vision. The vision of all persons is imperfect when the eyes are first exposed to the strong light of the sun, or to any strong artificial light. Rapid or sudden changes in the intensity of the light always produce defective vision, not sufficiently great to be manifest to the individual, but always to be demonstrated by careful test of the vision and by use of the retinoscope. The defective vision produced by strong light may be temporary, but it has been observed to continue in many cases for a number of weeks, frequently running into months, although it is never, probably, a permanent disability. If the eyes are gradually accustomed to strong lights, however, they will be benefited, and one may even become able to look directly at the strong light of the sun without any loss of vision whatever.

Noise is a frequent cause of defective vision in the normal eye. All persons see imperfectly when they hear any unexpected loud sound. Familiar noises do not usually lower the visual power, but unfamiliar, new or strange noises, which cause shock, always do, with the production of a temporary error of refraction. Country children from quiet schools, after they move to a noisy city, often suffer from defective vision for long periods of time. In the classroom they rarely do well with their work because of impaired sight. It is a gross injustice for teachers and others to criticize, scold or humiliate such children.

The reading of small distant familiar letters, for a few minutes at least every day, is very successful in preventing these fluctuations of sight, as it tends to prevent strain in looking at unfamiliar objects. Not only the Snellen eye chart, but a calendar, a sign with small letters, or even a single small letter, may be used for such practice. The good results of this simple system of **eye training justify its use in schools, in the Army and Navy, in the Merchant Marine and on railroads,** as well as by everyone who desires or needs continuous perfect sight.
Avoid eyeglasses during times of fluctuating, temporary changing visual clarity. Learn The Bates Method, improve the vision to better than 20/20 and normal fluctuations of vision will be minor, occur less often and fluctuate less to only about 20/20, 20/30 then will return back to clearer than 20/20 - to 20/15, 20/10…
Eyeglasses prevent the eyes natural return to normal clarity, function. Glasses cause, maintain, increase vision impairment.

CHAPTER VII

Errors of Refraction: Their Cause

In the two chapters following are presented the results of over thirty years of labor upon the part of a physician of high scientific standing. Until he discovered that errors of refraction were merely functional derangements, it was universally believed that they were incurable. His experiments have proved beyond the possibility of doubt that these conditions are due to the abnormal action of the muscles and that their cure is therefore a mere matter of muscular control. The details of these experiments may be found in the New York Medical Journal, May 8, 1915.

ERRORS of refraction are responsible for most cases of defective vision and often lead to actual disease of the eye. These errors fall into four classes: Myopia, Hypermetropia, Astigmatism and Presbyopia.

In *myopia*, commonly called short-sight or near-sight, rays of light coming from a distance are focused in front of the retina.

In *hypermetropia* they are focused behind the retina. This condition is usually called long-sight or far-sight; but in reality the sight is defective both for near and for distant vision.

In *astigmatism* the rays are not brought to a single focus, because the curvature of the refracting surfaces is greater along certain meridians than along others. There are six different kinds of astigmatism.

When one meridian is correct and the one at right angles to it myopic or hypermetropic, the condition is called simple myopic or hypermetropic astigmatism; when both meridians are hypermetropic or myopic, but one more so than the other, we get compound hypermetropic or myopic astigmatism; while a combination of myopia and hypermetropia is known as mixed astigmatism. Simple hypermetropia or myopia, without any astigmatism, is rare.

Presbyopia is that condition of the eyes which comes on usually between forty and fifty, and compels the subject to wear glasses for reading or sewing, the vision at the distance being at first apparently unaffected.

As already stated these conditions are generally supposed to be both incurable and largely unavoidable; but abundant evidence is available to show that they are purely functional troubles, and therefore both curable and preventable.

It can be and has been demonstrated, both clinically and by means of experiments on the eyes of rabbits, fish and other animals, that the lens and ciliary muscle have nothing to do with accommodation; and that, on the contrary, the shape of the whole eyeball is changed when the focus is changed, through the agency of the external muscles. When the lens has been removed from the eyes of experimental animals, or pushed out of the line of vision (as on p. 24, Chapter III), they have continued to accommodate just as before. So long as certain muscles, known as the obliques, were intact, electrical stimulation of the eyeball, or of the nerves of accommodation, always produced accommodation, but when one of them was cut accommodation could not be produced. When the severed muscle was sewed together again, however, accommodation took place as before.

These observations are in harmony with records of accommodation in the lensless human eye which may be found scattered through the literature of the subject for over a hundred years. Many persons, unfortunately, lose their lenses through the operation for cataract, and usually they are supplied afterward with two sets of glasses, one for reading, and one for distance; but occasionally such a person is able to see at both distances without any change of glasses. The correctness of these observations

used to be disputed but it is no longer possible to do so, and in consequence the idea that the lens cannot be the only agent of accommodation is creeping into the orthodox literature.

From these facts it would appear that whatever may be the cause of that failure of sight which comes to most people living under civilized conditions during their later years, it cannot be the hardening of the lens; and since the change of focus in the eye depends upon the action of the external muscles, we would naturally expect that failure to focus properly would be due to failure in the action of these muscles. The accuracy of this conclusion has been demonstrated by numerous experiments upon the eye muscles of animals.

These muscles (Oblique) form an almost complete band around the eyeball and lengthen it when they contract, as the camera is lengthened to take pictures at the near-point.

+In these experiments myopia was produced by operations increasing the pull of the obliques, leading to a lengthening of the eyeball;
+hypermetropia by increasing the pull of a set of muscles known as the recti, thereby shortening the eyeball;
+and astigmatism by operations causing an unsymmetrical change in the shape of the eyeball (as on page 25, Chapter III). Cutting one or more of the obliques, moreover, prevented the production of myopia, while hypermetropia was prevented by the cutting of one or more of the recti.

These observations leave no room for doubt that when errors of refraction exist in any eye it is because the outside muscles are squeezing it out of shape, making it, for the time being, too long or too short, or lengthening it or shortening it unevenly.
+Myopia is evidently due to an abnormal contraction of the oblique muscles,
+hypermetropia to the abnormal contraction of the recti,
+and astigmatism to the unequal contraction of these two sets of muscles, causing a greater elongation or shortening in one part than in another.
+In presbyopia the abnormal action of the recti is evidently confined at first to those periods during which the subject is looking at near objects, leaving the distant vision but slightly affected, but later on the distant vision fails also.

That these conditions cannot be due to any permanent change in the shape of the eyeball is further proven by the fact that they can be produced at will in a moment of time, as demonstrated by the retinoscope, and that they have been cured in thousands of cases, while they often disappear without treatment.

The cause of this abnormal action of the muscles is a strain, conscious or unconscious, to see, and as such is both preventable and curable. Poor diet, stress, tension, eye immobility, Eccentric Fixation, body, neck… immobility/lack of exercise, neck muscle tension, incorrect posture, mis-alignment of neck, body vertebrae can cause eye muscle tension, dysfunction.

The underlying causes of this strain are, obviously, those factors which have marked the change from primitive savage life to ultra-civilization. Improper dietetic habits, bad air and shallow breathing, insufficient exercise, too little bathing and sunlight, constipation, the excessive use of stimulants, city noises, hurry, worry, rivalry—all the physical and mental abuses ordinarily associated with civilized life—result in tension and strain of the whole body, including the eyes. Hearing and the other senses suffer as the sight does.

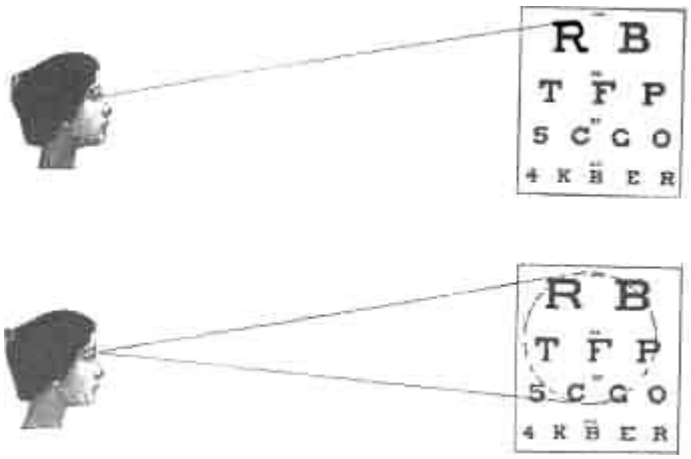
Of course some of the evils of civilization can not be completely overcome. The average man is likely to succumb to the powerful combination of its adverse influences if he follows the line of least resistance and makes no effort to rise above the example of his associates. But a person of average intelligence, if he understands the problem that confronts him, can, as a rule, live in the most congested centers of civilization with very little or no detriment to his health and sense organs.

CHAPTER VIII

Errors of Refraction: Their Cure

IN the chapter on "The Imperfect Sight of the Normal Eye" it was seen that no refractive condition is ever continuous. Eyes with ordinarily normal sight may suffer from errors of refraction at times, and eyes which are ordinarily near-sighted or far-sighted or astigmatic, may become less so, or even normal. It is obvious that this must be so, from the fact that the refraction is controlled by muscular action. But glasses cannot change as the eyes change, and therefore the mind, which wants to see, and which has a great capacity for adapting itself to adverse conditions, tries to maintain continuously the refractive condition they are designed to correct. That this tires the eyes is the experience of everyone who has worn glasses; that it must make the condition worse is obvious; and that it must be particularly harmful during the plastic years of childhood goes without saying.

The thing to do if one has an error of refraction, therefore, is not to wear glasses but to learn how to use the eyes correctly. This means seeing best with the center of sight, (Center of the visual field) the fovea centralis previously alluded to, and this means that a very small part of everything one looks at is seen best and everything else less distinctly in proportion as it is removed from the central point. This is called *Central Fixation* and is the basis of the treatment of errors of refraction without glasses. When the eye looks at objects with central fixation it is at rest, the muscles which control the refraction act normally, and maximum vision is attained.



+In the upper picture the sight is centered upon one spot, the upper left-hand corner of the letter R, which is seen more clearly and appears to be blacker than the rest of the field of vision. This is central fixation.
The eyes shift on the spot, point to point. All areas of the letter are seen clear by shifting part to part on the letter; moving the center of the visual field from part to part, (point to point.)

+In the lower picture the subject is endeavoring to see every part of her field of vision equally well at the same time. This is eccentric fixation and always accompanies eye strain. Person is not shifting part to part on letters and not shifting letter to letter. She is trying to see all parts, all letters at the same time, without moving the eyes, without shifting, without central fixation.

It is impossible, however, for the eye to look at any point for more than a fraction of a second. If it tries to do so, the point disappears and the whole visual field blurs. Perfect vision is thus seen to depend on clear vision of the smallest possible area and constant movement of the eye from one such area to another. (Shifting point to point.)

Central fixation is opposed to *Eccentric Fixation*, in which the eye partially or completely suppresses the vision of the center of the retina and sees a considerable area all alike at one time, or even sees the outer part of the visual field (peripheral field) better than the center. In such cases not only is the central point seen less distinctly than it normally should be, but the outer parts of the field are less distinct than when the center is seen best. Black letters appear less black, white letters upon a black background less white, and colored letters of a lighter shade than they normally would. The outlines of the letter are not clear, the margins being shadowy. Their size is altered and they appear larger or smaller than with normal vision. Their shape is distorted, and a square letter may seem to be round. Illusions of various kinds occur, and multiple vision is common. Pain, fatigue, or discomfort of some sort is usually felt, and headaches are frequently produced.

A common symptom, also, is twitching of the eyeballs or eyelids. This is usually unconscious, but may be felt if the patient lightly touches the closed eyelid of one eye while the other is looking at a letter by eccentric fixation. The appearance of the eye is usually expressive of effort, and **a greater or less degree of squint is always present.** Even redness of the margins of the lids and dark circles under the eyes may be produced by eccentric fixation.

Most people whose vision is not markedly defective can demonstrate the facts of central fixation for themselves. Let such a person try to see two printed words, or even two letters, equally well at the same time. At first he will probably find himself looking from one word or letter to another, and if he really tries to see both at the same time he will find it so difficult that he may give it up before anything happens. If he is able to keep up the strain for a very brief period, however, the words will blur and become indistinguishable. If he is able to look at a small letter, however, and see it better than the others in its neighborhood, or look at one side of the letter and see it better than the other he will experience a feeling of rest.

Eccentric fixation is a symptom of strain (in which the whole body participates). The first thing for the patient who wants to improve his vision to do, therefore, is to relax this strain. One of the best ways to do this is to close the eyes, cover them with the palms of the hands in such a way as to exclude all the light, while avoiding pressure on the eyeballs (see illustration), and think of something that will keep the mind at rest. Many people like to remember something black, but any other color will do just as well if one prefers it. **It is necessary to shift the attention from one part of the remembered object to another,** because, as any psychologist knows, it is impossible to be continuously conscious of an unchanging object, and if one tries it he will only increase the strain. With practice it becomes easier to think of very small objects, like a period, or a very small letter, but in the beginning most people prefer something fairly large. One can also for a change think of other things, but the memory of a small object of vision seems to produce the best results.



How palming is done for relaxing the strain on the eyes.

Rest the elbows on a pillow on the lap or on a table... to support the arms and prevent muscle tension in the arms, shoulders, neck, head, eyes.

If one succeeds in obtaining perfect relaxation in this way the entire visual field will become black, apart from any memory image one may have formed, because, as explained in Chapter II, the optic nerve cannot carry any sensation but that of light (unless it be the sensation of pain). If no light enters the eye, and the visual mechanism is perfectly at rest, one sees nothing—that is, black. If it is not at rest, however, one will continue to see lights and colors even without the stimulus of light. As a rule the colors are grays and browns, but in some cases they are kaleidoscopic in character. It is best, however, not to think very much about the nature of one's visual field, because as soon as he begins to do so he is liable to begin to strain. An approximate black indicates a satisfactory degree of relaxation, and most people attain it with very little trouble.

These periods of rest may be as long and as frequent as time and inclination permit. A few minutes will help, but a half-hour period, two or three or more times a day, is usually necessary for adults. Some people are more greatly benefited by an hour, or even several hours; but it is useless to attempt these long periods unless one can do it without becoming mentally worried or physically restless. In that case they become periods of strain, not periods of rest. The ability to relax in this way grows with practice.

After the eyes have been rested by palming, or by simply closing them, one should look at the letters of the Snellen test card, or at a bit of reading matter which one could not see before, and almost invariably he will find that his sight has improved, sometimes only slightly, sometimes to an astonishing degree. Occasionally this improvement is permanent, but usually it lasts for a moment only. This is the germ (flash) of improved vision from which the full flower of normal sight must grow. As soon as the strain returns, and the vision begins to lapse to its old condition, one should rest again for as long a time as is found necessary, and proceed as before. If one keeps up the practice, the flashes of improved vision come oftener and stay longer until at last they become permanent. In reading the letters on the test card one should, of course, never stare at them. If one does not see a letter, he should immediately look away, close the eyes, or palm. If one does see it, and wants to go on looking at it, he can shift from one side of it to the other. Blink.

Between periods of regular practice one can rest by closing the eyes for a moment or longer, as occasion permits, with or without the memory of a period or other small object, and sometimes one has an opportunity to palm with one hand. And one can practice on the letters of advertisements and signs, or on any small objects in one's line of vision. Some people think they are benefited by carrying about with them continually the memory of a period or small letter, but others find it a strain to remember such an object with the eyes open.

Another way to obtain central fixation is to notice that one sees a *part* of everything he looks at best, and the rest of it less distinctly in proportion as it is removed from the central point. The Snellen test card is useful for this practice. One can begin by looking from one end of a line to another, noting that he sees each best alternately. Then he can look from one letter to another and finally he may become able to look from one side to another of the smallest letters at a distance of ten or more feet and see each side best alternately.

A good way to practice at the near-point is to make a dot of about the size of a pica-type period, and after finding the distance at which it is seen best, try, by the methods given above, to bring it out with equal clearness at greater and lesser distances. **By daily practice it should become possible to see it clearly as close as three inches and as far away as twenty.** Or one may do the same thing with diamond type.

When the eyes are different it is best to begin practicing both together. Later, if it is found necessary, the eye farthest from normal can be practiced separately and to a greater extent.

Diamond type is condemned by most Ophthalmologists and Optometrists as being too fine for any eye except under most favorable conditions. My experience has been that **considerable benefit can be derived from reading this because it practically necessitates central fixation. It cannot be read except when the eye is relaxed.**

Many Bibles and Testaments are printed in Pearl type. This small print is considered by some to be responsible for much eye weakness, but we can prove that the eye defects are the results of other causes than the small print.

It is claimed by the secretary of one of the State Boards of Health that an attempt of a boy to read a Bible printed in Agate type caused the eyes to be so weakened that school work was abandoned for two years. I claim other causes were instrumental in producing this eye weakness.

Nonpareil is used for some papers and children's magazines, but is condemned by those who have a wrong idea of the use and abuse of the eyes.

It is claimed that Minion may be safely used by adult or young eyes, though it is, erroneously, considered injurious for children.

Brevier is frequently seen in newspapers. This should be a satisfactory type for anyone.

Bourgeois is a favorite type for magazines and is very similar to Brevier.

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And in all cases it should be kept constantly in mind that **the sight cannot be improved by effort. Strain cannot be relieved by effort, but only by "letting go."**

In addition to the foregoing practices everything possible should be done to relax the mind and the whole body. It is well to begin the day with general bodily exercises. A warm or tepid sponge bath, followed by a cool or cold sponging and brisk rubbing with a rough towel, will help to maintain normal skin action. A cool eye bath, gradually growing a little cooler, but never cold enough to be uncomfortable, is an excellent local treatment for the eyes.
Dr. Bates and Modern Bates Teachers do not advise eye baths. Placing liquids of any kind on the eyes, including eye drops, contact lens solutions… impairs the eyes natural tear structure, production and protection, nourishment of the eye and eye moisture. Opening the eyes under the water when swimming in pure, unpolluted, salt ocean water may be healthy but do not over-do it. If irritation is felt, keep the eyes closed. Use an under-water eye-mask. Chlorine, fluoride and other chemicals, germs, toxins in tap water, fresh water sources and pollution in sea water can also impair eye health. Choose a healthy beach, ocean to swim in.
One should take whatever measures are necessary to secure normal action of the bowels. A daily walk as long as time and strength permit, introducing short runs at intervals, will prove a great benefit unless there is some contra-indication in the way of serious disease. Increased vitality is needed for health of body and eyes, and it cannot be obtained without exercise, taken in gradually increasing doses. One should breathe fresh air all night and every hour possible during the day. One should obtain sufficient sleep if one hopes to have normal eyes.

These measures are usually successful in curing myopia, hypermetropia, astigmatism and presbyopia. **Patients with presbyopia, combined with other errors of refraction, and even incipient cataract, have been cured at sixty, seventy and even eighty years of age. Persons with high degrees of myopia have been cured by practicing only a few of the directions presented here.** It is not necessary to understand anything about the anatomy and physiology of the eye—however interesting and useful it may be to know these things—to be cured of errors of refraction. All that is necessary is to follow, literally and persistently, the simple directions given, every day for a sufficient length of time.



In the picture at the left the subject is looking at a Snellen test card with normal vision.
At the right she is trying to see a picture at twenty feet, and the strain has produced compound myopic astigmatism.
Trying, straining, using effort to see = blur.

Avoid Glasses

Glasses should be discarded if possible. Some people are able to make progress in spite of wearing them part of the time, but they are always a great handicap, undoing, to a greater or less degree, what has been gained by practice. If worn without change after the refraction has changed, they may also cause great discomfort.



Seeing without strain, the all-important factor in preserving normal and healthy sight.
This is possible only through central fixation. (and shifting.)

If the methods recommended later for the prevention of myopia in schools were practiced by people generally, whether they are old or young, or whether their eyes are good, bad or indifferent, that one thing alone would be of inestimable benefit. If any child under twelve who has never worn glasses **reads the small letters of the Snellen test card, or any small letter, every day, or letters, at a distance of ten feet or more, with both eyes together and each eye separately,** he will be cured of errors of refraction in from three months to two years, without any supervision or any other treatment. Adults of all ages will also be benefited by this practice, and may be cured, if they are sufficiently persistent. By such practice both children and adults will usually discover for themselves the facts about central fixation, strain, and other fundamental truths about the eyes. The time required for a cure varies greatly in different cases. Some persons are relieved immediately. In other cases weeks, months and even years of training are required. The practice should always be continued for a few minutes daily to avoid relapses. Even the normal eye requires practice in normal vision to avoid falling into errors of refraction.

CHAPTER IX

Amblyopia

Most physicians at the present time believe that amblyopia is incurable, but it has been proved that it can be successfully treated by means of new methods of eye training. During the last ten years numerous patients, ranging in age from six to seventy-five years, have secured normal vision by this means. The facts were first reported in La Clinique Opthalmologique, December, 1912.

AMBLYOPIA is a term applied to a condition of the eyesight in which there is a lowering of visual power which can not be relieved by glasses and is not dependent on any visible changes in the organ of vision. It has been facetiously defined as a condition in which neither the patient nor the doctor can see. The patient suffers from poor vision, while the doctor can find nothing wrong with his eyes. The condition usually affects only one eye, and is so often associated with squint that it has been erroneously supposed to be both the cause and the effect of that condition.

The text books enumerate many different types of amblyopia. The one known as amblyopia exanopsia was so named because it was supposed to result from a suppression of the sight of the affected eye during early youth, owing to some defect, such as a squint or error of refraction. Such defects were supposed to prevent the retina from attaining the functional capacity of normal eyes, and the literature of the subject is full of the impossibility of cure. "The function of the retina never again becomes perfectly normal," says Fuchs, "even when the cause of the trouble has been removed."

There are, nevertheless, many cases of spontaneous cures on record, these usually occurring when the perfect eye has been lost by accident. In such cases the amblyopic eye in the course of time frequently becomes normal.

It is gratifying to be able to state that the ailment is a purely functional one, and that the authorities are quite wrong in supposing that it cannot be cured. All cases have been relieved by eye training, and complete cures have been effected when the exercises were faithfully practiced. The progress has sometimes been very rapid, the sight occasionally improving in a few minutes from one-fiftieth of the normal to one-tenth.

Amblyopia Treatment

In order that patients may understand the condition, they are taught how to produce amblyopia in the better eye and how to increase it in the amblyopic eye by improper efforts to see. After they have learned to lower their vision voluntarily they become better able to improve it. The following case illustrates the method:
A girl of fifteen had had amblyopia and squint since childhood. The vision of the right eye was 1/40 (of normal), while that of the left was 2/3. Glasses did not improve either eye. The patient was seated twenty feet from a Snellen test card and the right or poorer eye was covered with an opaque screen. She was then directed to look with her better eye at the large letter on the card and to note its clearness. Next she was told to look at a point three feet to one side of the card, and her attention was called to the fact that then she did not see the large letter so well. The point of fixation was brought closer and closer to the letter until she appreciated the fact that her vision was lowered even when she looked only a few inches to one side of it. When she looked at a small letter she readily recognized that an eccentric fixation of less than an inch lowered the vision.

After she had learned to increase the amblyopia of the better eye, this eye was covered, while she was taught how to lower the vision of the other or poorer eye by increasing its eccentric fixation. This was accomplished in a few minutes. She was told that **the cause of her defective sight was her habit of looking at objects with a part of the retina to one side of the true center of sight. (Placing the object in the peripheral field, using the peripheral area of the retina to see the object.) She was advised to see by looking *straight at* the letters she wished to see. (Place the object in the center of the visual field, use the center of the retina, fovea centralis to see the object.)** (In less than half an hour the vision of the left eye became normal, while the right improved from 1/40 to 1/10. The cure was complete in two weeks.

Unconscious of the fact that they were looking at objects with their eyes turned to one side, many amblyopic patients had difficulty in realizing that this was the case. When they did come to understand it, it helped them to secure central fixation, and their sight immediately improved.

CHAPTER X

Color Blindness

BOTH because of its scientific interest and its practical bearings, this curious defect of the eyes occupies a large place in ophthalmological literature. Although it must have existed for centuries, the first case on record was discovered in the practice of a Dr. Tuberville in 1684. Nearly a hundred years later an English chemist by the name of Dalton, who was color-blind himself, and could see no difference between the color of a laurel leaf and that of a stick of red sealing wax, published the first accurate description of the condition. For this reason continental scientists gave it the name of Daltonism.

Although it would seem to be obvious that a condition of color blindness must be very dangerous, when it exists in persons responsible for the lives of others on railroads and steamers, it was not until the latter part of the nineteenth century, after much agitation by the medical profession, that its practical bearings were recognized. Owing to the remarkable tendency of color blindness to conceal itself both from the subject and his associates, managers of transportation companies distrusted the scientists and could not be brought to believe that such a defect could exist in persons who had been in their employ for years without its being discovered.

Sweden was the first country to pass a law forbidding the employment of any man upon a railroad until his color vision had been tested. This action was taken as the result of the investigations of Prof. Holmgren of the University of Upsala, who discovered thirteen color-blind men among 266 railroad employees, and his book on "Color Blindness in Its Relations to Railroads and the

Marine," had the effect of concentrating the attention of the world upon the subject. Today most shipping and railway companies require employees whose duties include the recognition of variously colored lights and signals to submit to a special examination for color blindness.

There are various degrees of **color blindness**. The condition in which no color can be recognized, and the world looks like a steel engraving, is rare, and its existence is denied by some. In cases where this total lack of color perception has been recorded, there has also been a considerable reduction of visual acuity in other respects. Usually only one color is lost by the subject in this odd manner, but sometimes more than one. Thus the subject may be color-blind for red, for blue, for green, etc., as the case may be. The most common form is that in which red is deficient. Many theories have been advanced to account for color blindness, and it is generally supposed to be incurable, but the evidence at present available indicates that it **is simply a functional trouble like errors of refraction.** It has been relieved, even when of considerable degree, by the methods presented in this book. Practice should be taken to acquire this habit, (Correct Vision Habits, Correct, normal, natural use of the eyes – Bates Method) even when there may be no other apparent trouble with or defect of vision.

CHAPTER XI

Strabismus: Squint

In the following is presented a cure, the efficacy of which has been tested in numerous cases, for one of the most distressing and disfiguring of eye complaints. Only approximately curable by any of the means heretofore used, it has been found that ***squint always yields to eye training when persistently and intelligently used.***

SQUINT, or strabismus, as it is called scientifically, is one of the vexed problems of ophthalmology. Many curious suggestions, both popular and scientific, have been made as to its cause. None of these theories come anywhere near to agreement, and while some seem to fit some cases, they leave many others unexplained.

The first definitely scientific theory advanced to account for squint was that it was due to an abnormality of the muscles which turn the eyeball in the socket. This theory seemed so plausible that it was almost universally accepted at one time, and an era of operations ensued, with many disastrous results.

Then Donders advanced his accommodation theory, which immediately came into vogue. This theory is based on the fact that when the eyes look at a near object there is not only a change of focus, but the visual axes, eyes which are parallel when the object of vision is a distant one, are turned slightly inward. These two acts, **accommodation and convergence, being always performed together,** have become associated by hereditary habit so that it is difficult to converge without accommodation. Donders concluded, therefore, that an abnormal effort of accommodation resulted in abnormal convergence.

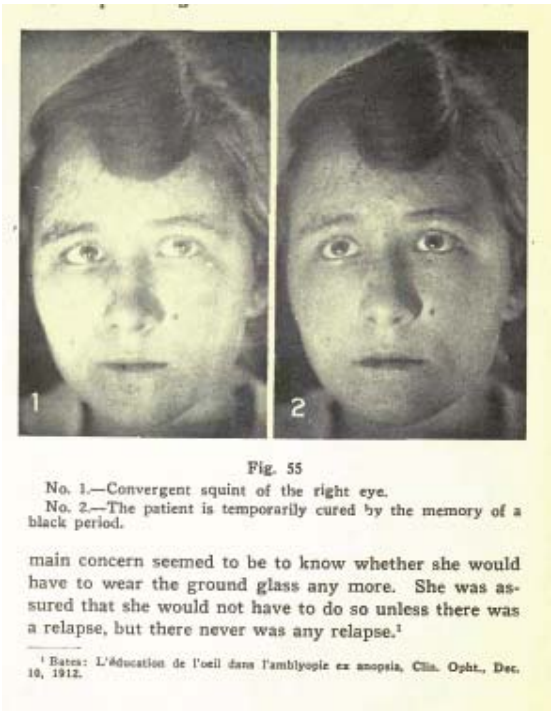


Fig. 55

No. 1.—Convergent squint of the right eye.
No. 2.—The patient is temporarily cured by the memory of a black period.

main concern seemed to be to know whether she would have to wear the ground glass any more. She was assured that she would not have to do so unless there was a relapse, but there never was any relapse.[1]

[1] Bates: L'éducation de l'oeil dans l'amblyopie ex anopsia, Clin. Opht., Dec. 10, 1912.

1 -A typical case of convergent squint or "cross eyes."

2- The same patient cured by rational/natural methods of eye training.

According to another theory, the essential or underlying cause is a congenital defect in the "fusion faculty," of the power of co-coordinating the two visual images, resulting in the development of a squint on the slightest provocation.

The truth is that squint is a purely functional defect. **Some persons can produce it at will, and it is frequently produced in persons with normal eyes, both children and adults, when they try unsuccessfully to read the Snellen test card. When the eyes are not properly used, the optic axes are never parallel, although the defect is not usually sufficient to attract attention.**

Squint can be cured by the same methods recommended for errors of refraction, and it is also helpful to learn how to squint voluntarily. These methods not only straighten the eye, but cure the imperfect sight which is almost invariably associated with squint. Operations, even when successful—and often they make the condition worse—are not expected to do anything more than approximately straighten the eye. They do not improve the sight.

CHAPTER XII

Saving the Sight of the Children

In the following pages the first successful attempt to cure defective vision and prevent myopia in schools is described. The details may be found in the New York Medical Journal, July 29, 1911, and August 30, 1913, and are worthy of more attention than they have received. The prevention of myopia among school children is of vital and far-reaching importance. Eye defects, with the nervousness, headaches and irritability for which they are responsible, not only prevent children from availing themselves of the educational opportunities offered to them by the state, but are often a serious handicap as well as a discomfort and an expense in later life. If there is any way of preventing such tragedies it ought to be adopted without a moment's delay. Meantime parents can protect their children by using the methods advocated at home. Since it is difficult to prove a negative proposition, it cannot, of course, be absolutely proven that these methods actually prevented myopia, but since all cases of defective eyesight were improved by them there can be no reasonable doubt that they also prevented this condition.

ONE of the most serious problems which civilization has been called upon to solve is that of saving the sight of children. Ever since the introduction of popular education it has been recognized that the system was disastrous to the eyesight of the rising generation. Voluminous statistics, collected both in this country and in Europe, show that whereas most children on entering school have perfect sight, the percentage of eye defects steadily increases during the educational process, reaching its climax in the higher institutions of learning.

In Europe, where the military system has made the matter one of great practical importance to the State, much effort has been made to find a remedy for the evil, and millions of dollars have been spent in carrying out the suggestions of the eye specialists. The lighting of the schools, the furniture, the print in the school books, the position assumed by the pupils at work, were all regulated in accordance with expert opinion. In some cases the suggested reforms were carried out with such thoroughness that "face-rests" were attached to the desks to prevent the children from getting their eyes too near their books. This limits movement of the body, head, eyes, causes muscle tension and unclear vision.

The injurious effects of the educational process were not, however, appreciably arrested. Cohn reports, indeed, an increase both in the percentage and degree of myopia in those schools in which he had especially exerted himself to secure reforms, while Just found that the excellent hygienic arrangements in the high school of Zittau, where he examined the eyes of 1,229 of the pupils, had not in any degree lessened the percentage of myopia.

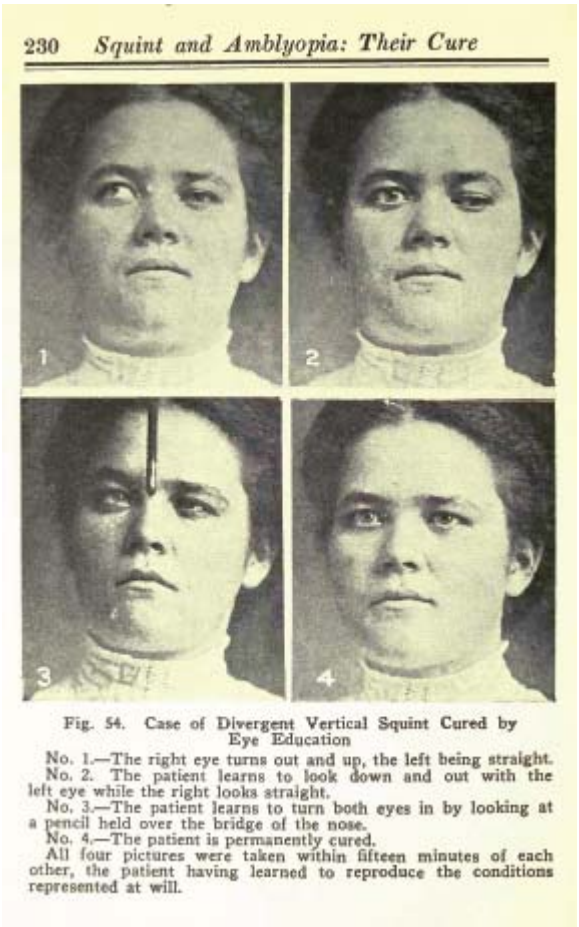

230 *Squint and Amblyopia: Their Cure*

Fig. 54. Case of Divergent Vertical Squint Cured by Eye Education

No. 1.—The right eye turns out and up, the left being straight.
No. 2. The patient learns to look down and out with the left eye while the right looks straight.
No. 3.—The patient learns to turn both eyes in by looking at a pencil held over the bridge of the nose.
No. 4.—The patient is permanently cured.
All four pictures were taken within fifteen minutes of each other, the patient having learned to reproduce the conditions represented at will.

All these efforts to prevent myopia failed because they were based on a wrong conception of the cause of the condition. It was naturally supposed that the cause of the failure of the eye to see distant objects was its too constant use for near work; but this theory is gradually giving way before statistics, and the orthodox writers have now fallen back on that convenient scapegoat, heredity, for an explanation. Since some people are able to use their eyes continuously for near work without getting near-sighted, and others get near-sighted without any appreciable amount of such work; since the limitation of such work fails to check the progress of the trouble; and since domestic animals and wild animals in captivity, although they neither read nor sew, develop high degrees of myopia (as shown in numerous investigations);—there is obviously some other influence at work, and this influence is now supposed to be heredity.

Squint, Crossed, Wandering Eyes Cure

A case of divergent vertical squint ultimately cured by educational methods.

1- In the picture at the left the right eye turns out and up, while the left eye looks straight.

2- At the right the patient has learned to look straight with the right eye, while the left turns down and out.

3- A part of the treatment. The patient has learned to turn both eyes in by looking at a pencil held over the bridge of the nose. Later she became able to turn them in without the pencil, or to turn either eye in while the other remained straight.

4- The same patient after a complete cure had been effected.
All four pictures were taken within fifteen minutes of each other, the patient having learned to reproduce voluntarily the conditions represented.

It is known that people are rarely if ever born myopic, but they are supposed to be born with a tendency to that condition, and near work is generally believed to accentuate this tendency. As there is no way of finding out who has this unfortunate bent and who has not, the old precautions are, therefore, still insisted upon for the most part, although some authorities attach very little if any importance to them, maintaining that when one has the myopic tendency one might as well resign oneself to one's fate and not bother with tiresome precautions.

As a matter of fact the retinoscope has demonstrated that straining to see at the near-point never produces myopia, but, on the contrary, hypermetropia, as already noted in Chapter V, on "The Imperfect Sight of the Normal Eye." Myopia is produced by straining to see distant objects, and it has been found that it is produced whenever children with normal vision strain to see unfamiliar distant objects. (See also Chapter V.)

When regarding familiar distant objects it is quite otherwise. Daily exercise in the distant vision of familiar objects, therefore, suggests itself as the best method of preventing the tendency to strain in viewing unfamiliar distant objects and thus of preventing permanent myopia and hypermetropia. This method has been tried in many public schools during the last fifteen years and has been uniformly successful, not only in preventing myopia, but in curing it where it already existed.

The Snellen test card was found to be the best distant object for exercises in distant vision. When memorized it becomes a familiar distant object. **Its daily use for half a minute or longer both prevented and cured myopia, and also improved the vision for near objects,** many pupils stating that they were able, after its introduction into the classroom, to study with less or no discomfort. The test card was placed permanently where all the pupils could see it from their seats, and the children were instructed by the teachers to **read it daily with both eyes together and with each eye, separately,** the other being covered with the palm of the hand in such a way as to avoid pressure on the eyeball. Records of vision were made either with the same card or with an unfamiliar one. This method of preventing myopia was used for eight years continuously in the public schools of Grand Forks, North Dakota, and reduced the percentage of myopia from six to one per cent.

Later it was introduced into a number of public schools in New York with a total attendance of ten thousand children. The cards were received with considerable skepticism, the teachers being unable to believe that such a simple method, and one so entirely at variance with previous teachings on the subject, could produce results. Some of the teachers neglected to use them, but others, in spite of their miscellaneous and often trying duties, gave the matter serious attention, and were able to present complete reports covering five thousand children. Of this number three thousand had defective eyesight and the reports showed that more than a third of this number gained perfect vision in both eyes after the test cards were introduced.

In one case in which there had been twenty-seven defectives in a class, twenty-five were reported cured and two much improved, while one incorrigible and one truant had become good students because, after they had obtained normal vision, they were able to study without pain or discomfort.

The Snellen test card was devised by Herman Snellen, Professor of Ophthalmology in the University of Utrecht, for the purpose of testing the sight by means of letters and figures of different sizes, but it has been found equally valuable for eye training. Each line is designated by a number indicating the distance in feet at which it should be read, **but this is only a minimum standard. Many people become able to read the various lines at twice the distances marked and a few at three times these distances.** The records of vision are written in the form of a fraction, the upper line (numerator) indicating the distance in feet of the reader from the card, and the lower (denominator) the line read. When the numerator and denominator are equal, the sight is normal. The school records were made as follows, the vision of each eye being recorded separately:

	February, 1913		April, 1913		June, 1913	
	R.	L.	R.	L.	R.	L.
John D.....	20/100	20/50	20/50	20/40	20/20	20/20
Sanford G...	20/50	27/70	20/30	20/40	20/15	20/20

That the improvement shown by the records was due to the use of the cards was demonstrated not only by the fact that when the cards were removed relapses occurred where improvement had not been sufficient to establish its permanence, but also by comparative tests made with and without cards. In one case six pupils with defective sight were examined daily for one week without the use of the test card. No improvement took place. The same six pupils were then given daily exercises in distant vision with the test card. At the end of that time they had all improved and five were cured. In the case of another lot of six defectives in the same school the results were similar. No improvement was noted during the week that the card was not used, but after a week of exercises in distant vision all had shown marked improvement, while at the end of a month all were cured.

In a considerable proportion of cases the children learned in a few minutes how to look at things without effort and were thus cured of their myopia. Many of the teachers were also cured of eye troubles and enabled to discard their glasses.

CHAPTER XIII

Injuries to the Eye

THE eye is one of the most delicate portions of the human body; and although Nature has endeavored to protect it from injury by embedding it deep within the skull, surrounding it, so far as possible, with a circular orbit of bone, and veiling it with lids that close at the slightest hint of danger, it can not always escape injury. This chapter will treat of the most common of the accidents to which it is liable, and of the speediest and most efficient measures that can be adopted in such cases.

FOREIGN BODIES IN THE EYE. Probably the most common form of injury from which the eyes suffer is that resulting from the intrusion into it of small particles of dust, cinders, etc. These cause extreme discomfort, if not actual pain, accompanied by a flow of tears. This watering of the eye is really an effort on the part of nature to expel the offending substance, the water tending to wash the particle from the eyeball, and into the lachrymal canals, which carry it into the nose. If the particle lodges in the corner of the eye, it can be removed by means of the corner of a handkerchief, or a point twisted into it. Most foreign substances can readily be removed in this manner—**provided the eye be not *rubbed*. If you rub the eye, it tends to embed the grit, or whatever it may be, more deeply in the eyeball, and if the substance has sharp points, it is liable to become so deeply embedded that it becomes difficult to remove.** If, when a foreign body finds its way into the eye, the temptation to do this be resisted, the substance can readily be removed in practically every case.

Smooth bodies rarely cause much trouble, but bodies having rough cutting edges may often lodge in the conjunctiva and cause intense pain. The right method of extraction is to *evert the eyelid*, when it will be found easy in the majority of cases to remove the cinder, or whatever it may be, by means of a small, clean, soft paint brush or the corner of a handkerchief. Direct the patient to look downwards, if the body has lodged on the upper eyelid, then turn the eyelid back over a toothpick, match or pencil. If the body is seen to be near the edge of the upper lid, it can often be removed by lifting the lid up by means of the eyelashes, and bringing it over the lashes of the lower lid. These then act as a sort of broom, and sweep out the foreign body. As in all such cases, the free flow of tears is helpful.

When a foreign body has lodged in the firmer tissue of the cornea, its extraction is not so simple a matter, and rubbing only presses it in more firmly. In such cases, the particle is often driven in with considerable force, and it is usually so small that a magnifying glass must be employed to see it clearly. **If the body be of iron or steel, it may be extracted by means of a magnet made for that purpose, otherwise a surgeon had best be sent for at once, as lasting injury may result if the substance be left in the eye too long, or if the eye be perforated, and the interior liquids allowed to escape.**

WOUNDS made with pointed instruments, such as a knife, scissors, pin, etc., sometimes injure the cornea and lens, and the after-effect is frequently a cataract, when the eye is not totally lost. These, the formation of connective tissue, are usually absorbed in young people, but in older persons they may require an operation for their removal.

LIME may be splashed in the eye, and this is a dangerous form of injury. Quicklime is a powerful caustic, and often causes complete blindness by destroying the cornea. When this substance gets into the eye, it should be washed out as quickly as possible with water, and then with a solution of weak acid and water—say, a teaspoonful of vinegar to a glass of water. An equally efficient and more soothing method, however, is to bathe the injured eye in sweet oil.

In case of injury by *acids*, one part of lime-water to three of water may be used, or the eye may be freely bathed in milk. These alkalis neutralize the acid, and make it harmless or less harmful.

SYMPATHETIC INFLAMMATION. When one eye is injured by the entrance of some foreign body, or by a wound, the injury does not always limit itself to that eye. The other eye is also affected, and becomes inflamed through sympathy. This is noticeable even in slight injuries; but in grave cases it may become so serious as to necessitate the removal of the injured eye (that is, if the injured eye is so badly hurt as to render it blind and useless). In our days, this operation is not so serious as it used to be.



Showing the method of everting the upper eyelid for examination or removal of cinders or other foreign bodies.

CHAPTER XIV

Common Diseases of the Eye

IN addition to "errors of refraction," there are certain diseases of the eye and its appendages which require special mention, since these are quite frequently met with, and their treatment is often limited, in orthodox practice, to purely local measures, neglecting the constitutional treatment which is usually so necessary, and also the measures for relief of eye strain which we are advocating.

The eye is made up, as we have seen, of numerous parts, and each of these parts may become diseased; thus we have diseases of the iris, conjunctiva, retina, eyelids, optic nerve, etc., as the case may be. We shall mention the most important of these, giving their chief causes and most effectual means of cure in each case.

CONGESTION OF THE CONJUNCTIVA. This often results, in a mild form, after exposure of the eyes to smoke, or even to strong winds. The conjunctiva is, however, nearly always inflamed in measles, and frequently in scarlet fever and smallpox. Occasionally a diphtheric membrane is formed over it, either with or without an accompanying infection of the throat. These, however, are exceptionally severe cases. In most instances, a more or less readily curable congestion results—partly from the causes mentioned, and partly from the general physical condition of the patient. If the blood is full of impurities, it aggravates the congestion. These cases are relieved from within by those hygienic and cleaning measures which tend to purify the blood stream, and carry away poisonous material.

As regards the external treatment of the eye, frequent eye baths in moderately cold pure salted water will be found beneficial. These may be followed by the application of cold wet cloths to the eyes, changing them as frequently as occasion may require. The patient must keep the eyes closed as much as possible. Modern teachers state that eye drops, baths destroy the natural structure, production of the eyes tears resulting in dry, red eyes, infection, unclear vision. Blink, yawn, shift, use a warm steam humidifier with purified water, clean air for natural eye moisture/tear production.

CATARRHAL CONJUNCTIVITIS, or "Catarrh of the Eye," results largely from a prolonged continuation of conditions similar to those which produce congestion. Those suffering from this complaint often feel as though sand were in the eyes. It is frequently met with in large cities, where dust and smoke tend to keep the eyes inflamed. The eyes are often found glued together on awakening. The mucous membrane of the eye is affected in much the same way as those of the nose and throat, and often at the same time. The eyes, nose, throat, ears are connected, affect, eachother. Congestion in one can affect the other organs, areas. A neti-pot used to flush the nose, sinuses clear with warm organic salt water helps clear congestion. Health of the teeth can also affect all these areas and other body organs, systems.

Constitutional and local treatment, as advised for congestion, with complete rest for the eyes, is unquestionably about the best remedy for this trouble. When the lids are swollen and the eyes red and hot, an eye bath in salted water may be employed to advantage several times a day. If inflammation is especially severe, a weak solution of boric acid, ten grains to an ounce of water, may be employed. Poultices, eye waters and remedies of that sort should be avoided. Burning of the lids can nearly always be **alleviated by an eye bath**. **Check with your eye doctor first! Try natural methods first. Try to avoid eye baths. A natural anti-biotic, anti-infection eye bath may be needed if a doctor cannot be contacted, but get the recipe from a Bates Method Ophthalmologist.**

GRANULAR CONJUNCTIVITIS: TRACHOMA: GRANULATION OF THE EYELIDS.—All these are names for the same malady, which is merely a severe form of the two former complaints. Violent inflammation of the eye, which is covered with numerous nodules, is the principal characteristic. It is a tedious and obstinate complaint, unless treated in a prompt and efficient manner. The inner surface of the lids often becomes thickened and rough, like sandpaper, and, by constant friction, impairs the transparency of the cornea. Trachoma is very contagious and in all cases precautions should be taken to avoid communicating the disease by allowing the smallest particle of the discharge from the eyes to come into contact with a healthy eye. Appropriate antiseptic treatment will be helpful. An eye-wash made from sulphate of zinc—about one grain to an ounce being the usual strength—is often effective in terminating the symptoms of this trouble, though this suggestion does not in any way eliminate the necessity for careful constitutional treatment.

PURULENT CONJUNCTIVITIS is often found in the newly born, and results from gonorrheal infection from the mother. It often produces blindness, unless promptly treated with nitrate of silver under proper medical supervision. This should be followed by the strictest care and cleanliness. The discharge, which is thick and yellowish, and, in bad cases, very copious, is undoubtedly and virulently contagious. Fortunately, the disease is rarely met with among adults.

STYES are a very painful species of small boils which form generally on the edge of the eyelids. The disease usually follows more or less the course of ordinary boils, and is nearly always brought about through constitutional causes, general debility, a disordered stomach, impure blood, etc., though eye strain is the usual immediate cause. If treatment is begun at the first sign of the appearance of the styes, they may be absorbed without suppuration, but if well started, relief may be secured more speedily by allowing them to come to a head. Hot compresses will hasten this desirable end. Usually they will open themselves when ready to discharge the pus, though in some cases it is necessary to open them with a lance. A permanent cure can be effected only by adopting constitutional treatment and learning how to use the eyes properly, thus avoiding strain. It is hardly necessary to say that strict cleanliness and adequate drainage of the parts are essential in this condition. The practice of eye relaxation and of central fixation should be observed by everyone subject to styes.
Pulling out eyelashes attached to a forming stye can prevent the stye from growing and reverse, remove it.

DISEASES OF THE CORNEA. These are troublesome and often difficult to treat and still more difficult to diagnose properly by an unqualified practitioner. Says Dr. Black, in his work on the eyes:

"Diseases of the cornea may destroy or impair its transparency, or the ulcers that are frequently formed may extend through its substance, allow the aqueous humor to escape, and involve the iris. Even when such ulcers heal most favorably, they leave a permanent scar in the form of a white speck. (Bates method can remove these scars.) Inflammation of the cornea is usually painful and accompanied by distressing sensitiveness to light. It occurs most frequently in persons whose health has been subjected to some depressing cause, or in children who have inherited a delicate constitution. Many of the latter are subject to

repeated attacks for years, but the tendency to their recurrence generally disappears before adult life, and if care be taken to prevent each attack from leaving a permanent mark, the eyes may finally remain sound and strong… A large, white opacity of the cornea is often mistaken for cataract, and not many years ago, when a knowledge of diseases of the eye was not so general as now, this mistake was sometimes made by physicians, and such patients were sent hundreds of miles to have the cataract removed."

It is hardly necessary to point out that, though "delicacy of constitution" might predispose certain person to this disease, the actual causes are an overloaded circulation, poor digestion, poor light, excessive use of tobacco and alcohol, etc.

This being the case, the treatment for all forms of these diseased conditions is obvious. A rigid diet, preceded, if possible, by a few days' fasting; plenty of water-drinking; eye baths; fresh air; exercises which tend to build up and strengthen the general bodily tone, etc., are all essential. Plenty of good light and sunshine are imperative at all times.

IRITIS, or inflammation of the iris, often destroys the sight by closing the pupil and shutting off the light from the interior of the eye. It may be accompanied by inflammation of the conjunctiva, and hence be overlooked until well developed. It should always be suspected when, in an acute affection of the eye, the sight is decidedly diminished and there is some pain in the ball, and particularly in the brow, the latter being always more severe at night. The cause is usually syphilis or rheumatism, and one of the chief aftereffects to be feared is the permanent contraction of the pupil. Local treatment is of little avail, but the application of hot and cold cloths alternately to the eye will usually assuage the pain. The patient should be careful not to use the eyes more than is absolutely necessary.

CATARACT is a disease of the crystalline lens, in which this body gradually loses its transparency. The pupil thus loses its natural blackness, the whitish surface of the opaque lens being seen just behind it. Cataracts are not "on the eye," as is commonly supposed, but in it. Until lately, it has been contended that the surgeon's knife was the only remedy, but other methods of treatment are now coming in, and it is highly probable that as soon as these newer methods become more widely known and recognized by the medical profession, operations will not be found necessary in any but advanced cases.

There are two kinds of cataracts—the old, hard cataract, and the so-called "soft" cataract. In the majority of cases the lens becomes hard and stonelike, and sight is restored by removing it, the operation having been successfully performed in many instances. In such well-advanced cases, it is probable that all the physical culturist can do is to encourage such a condition of good health that the operation can be well borne, and keep the blood as pure as possible, to carry on the good work of repair afterwards. By preserving the health, however, and using the eyes properly, cataract may be prevented; and prevention is better than cure here as elsewhere. In their earlier stage, cataracts have been permanently cured by hygienic treatment and eye education.

The reason for this is simple enough. It is this: The lens is composed of a number of transparent layers superimposed one upon another—like a number of sheets of glass laid flat one upon another. When these all lie flat and even, the light can penetrate them all equally and without interference; but if they become separated or warped, then the light-rays are bent and warped, and the otherwise transparent medium becomes more or less opaque. This is what happens in the case of cataract. By improper use of the eyes these delicate layers are disarranged. Instead of lying flat, some of them are bent or warped, preventing the free passage through them of the light-rays. If this state has been permitted to continue long enough a degenerative change within the eye takes place. When this happens, probably the only relief procurable is by removal of the lens, and thanks to the advance of modern surgery, this may now be done in the majority of cases with relative safety.
The Bates Method has cured even advanced cases of cataract.

Both clinical and experimental proof that this theory is correct is forthcoming. If you take a bullock's eye, and squeeze it, you can instantly produce cataract—with the typical white, glassy look in the pupil. As soon as the pressure is removed, the eye again becomes normal. The little "plates" have been bent and warped, and functional cataract has been produced. This theory of cataract is also sustained by the fact that such patients actually do get well, under the influence of eye education, whereas formerly there was considered to be no help for them. All they could do was to wait, in gradually increasing blindness, until the lens was "ripe" for removal.

Constitutional causes also contribute to the production of cataract. The lens has to be nourished, like any other part of the body; but if the circulation is sluggish and the blood impure and lacking in its normal water content, the layers dry out, becoming not only less transparent, but more liable to disarrangement by the abnormal pressure of the outside muscles associated with errors of refraction.

The regime which sufferers from incipient cataract should adopt, therefore, is the following: Comply strictly with all the laws of health, including an abstemious diet with plenty of fruit, green vegetables, and water, and no alcohol; take regular exercise and use all other methods of improving the circulation; use eye baths and similar local measures of relief; and practice daily the exercises necessary to relax the external eye muscles. Bates Method and healthy diet improves eye circulation without eye baths.

These methods have, in many cases, either cured or greatly relieved the condition, or checked its progress, the results depending on the condition of the eye at the beginning of the treatment, the general health of the patient, his mental responsiveness, and the amount of time available for eye training. If they are adopted at the very beginning of such cases, there is every reason to believe that the majority of cataracts can be overcome in their initial stages, and before they develop to the point where they become organic.

GLAUCOMA is a disease which frequently results in blindness and about which little is known. It is thought that an excess of fluids in the eye makes the ball tense and hard, and exerts injurious pressure upon its delicate contents. In acute cases, it is intensely painful, and rapidly destroys sight by pressure upon the optic nerve. In its earliest stage, its progress has been checked by the removal of a piece of the iris, or of tapping or incision through the sclerotic coat, but the operation is very uncertain in its results and sometimes seems to make the condition worse. When the optic nerve is once affected other complications arise.

In no other disease is early diagnosis and treatment more important, and many of its victims have been condemned to blindness by delay. **No one with a violent pain in the eye and head, particularly if it is accompanied by flashes of light, rainbow colors and dimness of vision, should allow himself to be lulled into a sense of security by thinking it is "neuralgia."**

Although the ultimate and true causes of glaucoma are as yet unknown, the thing to do, immediately it has been diagnosed, is to adopt a very abstemious diet, following a fast of a few days, if possible; use all those measures which tend to build up the general health; discard glasses if possible, and practice the various methods of eye education. Frequent cold eye baths may also be useful. In all cases a specialist should be consulted at once, if the victim has not the courage to adhere to the treatment suggested here. Reduced 20/40 eyeglass lenses can be used for driving, safety on the job... but use little as possible.

DISEASES OF THE CHOROID AND RETINA. These diseases can be detected only by means of the ophthalmoscope, but may be foretold by increasing dimness of vision. They usually develop painlessly, and hence are as insidious as they are unfortunate. Long continued eye strain is one of the causes of these conditions. The excessive use of tobacco and alcohol is also, probably, an important factor; hence the necessity of giving them up completely when treatment is begun. Syphilis and kidney disease are common causes.

ATROPHY OF THE OPTIC NERVE. This is a very serious progressive disease, resulting in total blindness. Syphilis is a frequent cause, and it goes without saying that such condition would be impossible in a healthy body, or in one wherein the seeds of disease had not been sown.

THE HEREDITARY TRANSMISSION OF EYE DISEASES. There is evidence to show that a certain number of eye diseases—or rather the *tendency* to these diseases—may be acquired by means of heredity. In color blindness this is particularly marked, as well as in certain peculiarities or conformations of the eyes. Actual *diseases* are probably not inherited, and errors of refraction are probably acquired in each generation. A tendency to gouty or rheumatic iritis, it has been contended, may be inherited; but here again it is probable that no more than the *tendency* is ever passed on in this way. A peculiar affection, **"retinitis pigmentosa,"** which is recognized, with the ophthalmoscope, by the presence of black spots upon the retina, shows a marked tendency to hereditary transmission. It also occurs in several members of the same family, though there may be no history of it in the family. The prominent symptoms are **"night blindness"** and a gradually increasing contraction of the field of vision. (This is also a characteristic of certain forms of hysteria.) It is also probable that **"nyctalopia,"** or the reverse condition—ability to see in the dark—is to some extent hereditary. But it may be laid down as a general rule that eye diseases—like all other diseases—are not hereditary, but are acquired by each generation, and by each individual for himself or herself.

EYE HEADACHES. As already mentioned, the eyes and the whole nervous system are very intimately connected; and it is well known that a constant strain upon the eyes will induce a general condition of **strain, nausea, backache, etc.**, in addition to frequent and sometimes **severe headaches**. Strain occurs when the person uses incorrect posture, staring/eye immobility, not taking a break to get up and move around, look to the distance, get some sunlight. Neck, shoulder tension is a main cause of headache, eye pain and unclear vision. Some physicians have gone so far as to assert that true and organic diseases have been induced in this manner; but this view is no longer generally held by the medical profession. Hewetson, Noyes, Weir Mitchell and others, however, have published numerous facts showing the **close connection between defective eyesight and headache**, **with general nervous and physical impairment of the health**; and when we consider the **constant strain** involved, the reason for this is obvious. Some of the early symptoms are a feeling of **fatigue and tension, especially above the eyes, with indistinct and confused vision in reading, writing and other close work.** Following this, **slight headaches will be experienced, at the base of the brain; and these will be followed or accompanied by nausea, vertigo and general nervousness.** Other physical and mental symptoms may follow. When these appear, it is high time to begin treatment of the eyes. And the posture… Diet – Avoid dehydration, caffeine, chemicals in food, drink, aspartame, high fructose corn syrup, processed sugar.

The usual treatment in cases of this kind is a prescription for glasses; and there is no doubt that relief has often been obtained by their use.

Such measures, however, are only palliative and not ultimately curative. When the external muscles are squeezing the eyeball out of shape, glasses may correct some of the results of that condition, and by so doing may make the patient more comfortable; but they can not relieve the fundamental trouble. On the contrary, as has already been shown, they must make it worse. The only real remedy is to be found in the methods described in "Errors of Refraction; Their Cure." In the absence of such treatment glasses may prove useful, in some cases. In others they fail entirely. If it seems necessary to resort to them, and there can seldom be any legitimate excuse for such a course, they should be carefully fitted by a competent oculist and should not be worn any more than is absolutely necessary, as they serve to confirm the eyes in their bad habits. Eye headaches can often be relieved in a short time by proper hygienic methods. It is hardly necessary to say that the general health should be built up.
Massage of the back of the neck and head will often bring material and instantaneous relief from the pain, and cold wet compresses to these parts will soothe and relieve the local congestion. A salt eye bath often relieves.

CHAPTER XV

Eye Exercises

NOTHING could be more evident than the fact that exercise of the eyes will strengthen these organs just as exercise of any other part of the body will strengthen that part. The Bates Method relaxes, coordinates eye muscle function, activates relaxation and contraction of the muscles. This is the natural way to keep the muscles strong – Shifting, Central Fixation, Switching Close and Far..,

Exercise of any group of muscles not only tends directly to strengthen those muscles, but it so improves the circulation as to improve the condition of the adjacent parts. If any part of the body is weak, flabby, ineffective, exercises which involve the use of the muscles in that region will have a strengthening and toning-up effect. This applies with special force to exercises for the muscles of the eye.

Most persons will be surprised, perhaps even amazed, at the improvement in the condition of the eyes, resulting from two or three weeks of proper exercise of the eye muscles. This does not mean that one should keep up this work for only two or three weeks. If you will make it a daily practice you can expect to enjoy strong eyes and good vision to perhaps the end of life.

You will find that these exercises are very simple indeed. You should practice them not once a day, but a number of times each day. You can practice them while dressing in the morning, while undressing in the evening, while out on your walks, while sitting in the car, or even while taking your meals. But you should set aside some particular time for this special purpose, whether it be morning or evening, else they are more than likely to be crowded out. At this time you should follow the eye exercises by a little of the massage treatment described in Chapter XVII, and in the end use the eye bath, described in Chapter XVIII.





Exercise 1.—Turn and stretch the eyes far to the left.
Exercise 1 (Continued).—Then turn and stretch them far to the right, continuing the movement back and forth from left to right ten times or more.

No force! No Strain. The head/face, body must move with the eyes in the same direction. Moving the eyes without moving the head/face with the eyes causes eye muscle tension, neck muscle tension.

The Bates Method does not teach eye exercises. Shifting, central fixation, blinking normally, relaxation and easily moving the head/face, body with the eyes, in the same direction, at the same time is the True Bates Method.

Exercises that cause pulling, stretching, resistance of the eye muscles causes tension and strain in the muscles, head, neck and unclear vision. Let the head/face, neck, body move with the eyes and feel ease, relaxation, freedom of movement in the eyes, head, neck, shoulders and body.

Moving the eyes, head/face… in opposite directions causes tension, strain in the eyes, eye muscles, head, neck, shoulders, back, body, impairs eye shifting, central fixation, causes diffusion, (Eccentric Fixation), headaches and unclear vision. Tension in the neck also impairs ear function, balance.

Do the Figure Eight/Infinity Swing for full movement of the eyes, to improve eye movement. The eyes, head/face, body moving relaxed, together, at the same time, in the same direction. Do the Long Swing and Sway.



Exercise 2.—Turn the eyes upward, that is to say, look as far upward as possible without raising the head.



Exercise 2 (Continued).—Then, without moving the head, lower the eyes, looking as far down as possible. Continue raising and lowering the eyes ten times or more.



Exercise 3.—Raising the eyes, look upward obliquely to the left.



Exercise 3 (Continued).—Then lower them obliquely to the other side, looking downward toward the right. Repeat ten times or more.



Exercise 4.—Raise the eyes upward obliquely to the right.



Exercise 4 (Continued).—Then stretch them obliquely downward to the left. Continue back and forth ten times or more.

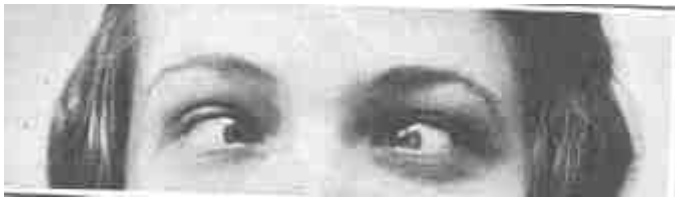


Exercise 5.—Roll the eyes around in a circle, to the left upward, to the right downward, so on around. Then reverse, rolling them the other way around. Continue until slightly tired.



Exercise 6.—Shut the eyes tightly and vigorously, squeezing the eyelids together as firmly as possible. Open and repeat ten times or more.
I do not recommend this exercise. Too much tension.
I do notice that many of Dr. MacFadden's exercises are natural things people do automatically and to a gentle, safe extent may be beneficial.

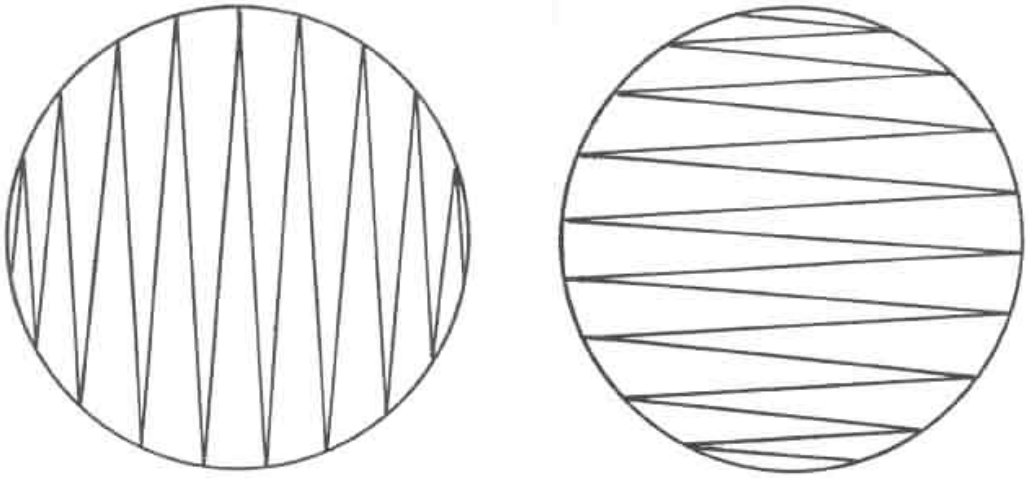
Looking up, down, left, right, diagonally… exercise can be done if the head/face is moved with the eyes, in the same direction, at the same time. A relaxed head roll clockwise and counter clockwise. Do not stretch the eyes, do not force, pull them in any direction. Let them move easy, freely with the head. Blink easy, soft, relaxed. Do not let the eyes feel strained or tired. Do not force the eyes to remain in any left, right, up, down… position. Avoid feeling tired.
Then do the Modern Infinity Swing.



Exercise 7.—This is an exercise that should be performed without strain, and at first with only two to four repetitions at a time. Simply look cross-eyed as though trying to see the bridge of the nose with both eyes at once.
Shift point to point on small parts of the nose. This will prevent staring, tension. Place a ring, stone between the left and right eyes, center of the visual field, at eye level. Practice shifting point to point on the small details of the object. Blink, relax. Read fine print at close distances.
Practice at a variety of close distances; 2-6+ inches from the eyes.

One of the most vigorous of eye exercises, and one extremely effective for gaining voluntary control of the muscles of the eyes, is the practice of looking cross-eyed. A great many persons will naturally shrink from the thought of such an exercise from the fear that it may produce a permanent condition of strabismus.

The fact is that the ability to look cross-eyed voluntarily indicates a good muscular condition and good control of the muscles concerned, and a person with a tendency to involuntary squint will find the practice one of the best ways in the world to correct that condition.

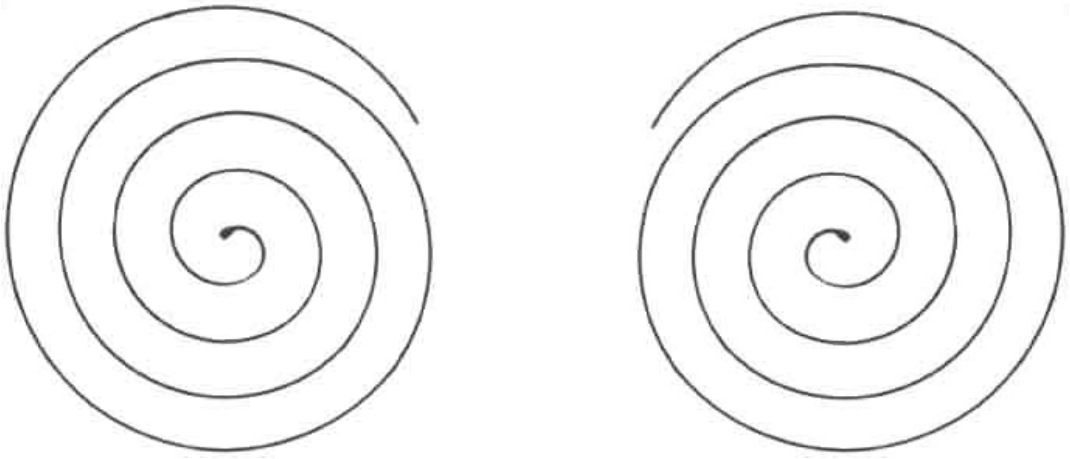


Trace along the lines, blink, shift on the lines.

Eye Exercise Diagram No. 1.— (Explanation in text.)
Eye Exercise Diagram No. 2.— (Explanation in text.)

Another very simple method of exercising the eyes will be found in a system of following lines drawn within a large circle, or an imaginary system of lines based upon any diagram, such as those illustrated in the accompanying drawings. Suppose that the circle represents the complete range of vision attained by rolling the eyes around. Imagine, then, that this circle occupies the space on the wall of the room, in front of you, that you can see by rolling your eyes around. Then imagine a series of lines or a continuous line running from side to side, as in Eye Exercise Diagram No. 1, from the top of the circle to the bottom. Now, starting at the top, follow on the wall with your eyes just such an imaginary scheme of lines as that in the diagram. Practice this a few moments with one eye first, then with the other, finally with both eyes together, and then go on to the exercise suggested in Diagram Mo. 2. In Diagram No. 3 the eye starts in the center, then traces out a circular, or to be more exact, an imaginary spiral line, until the circling of the entire range of vision is attained. The head must not be moved.

This last sentence is incorrect. Modern teachers state to move the head with the eyes.



Eye Exercise Diagram No. 3.— (Explanation in text.) If you follow the eye exercises offered in the photographic illustrations there will be no need of adding these imaginary line-tracing exercises. But you may find them interesting as a change.

Print this diagram different sizes. Trace with the eyes, (center of visual field) on the diagram, along the line of the spiral counter–clockwise and clockwise. Trace inward and outward on each spiral. Blink. This improves eye movement and activates, integrates the left and right brain hemispheres. Move the head/face with the eyes. Removes blur and astigmatism.

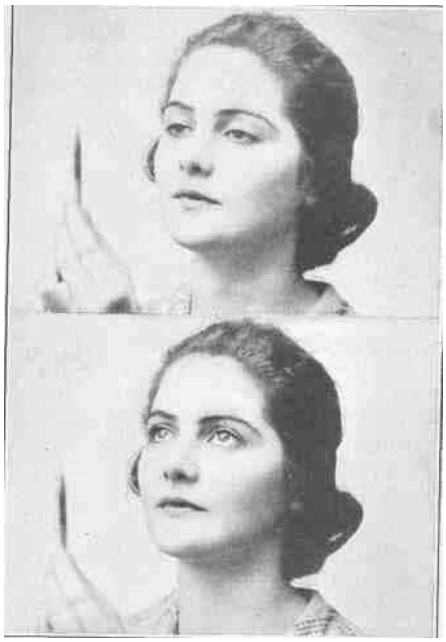
CHAPTER XVI

Eye-Focusing Exercises

THE exercises given in this chapter are of a type quite different from those recommended in the preceding lesson. They are designed to strengthen the power of accommodation, that is, the power of changing the focus of the eyes for vision at different distances, and will be particularly valuable to those who are either near-sighted or far-sighted.

Improving accommodation and un-accommodation at a variety of close distances and far distances automatically improves convergence at all close distances and un-convergence at farther close distances and far distances.

Shut one eye (do not shut one eye – new method teaches to cover the eye not in use and keep it open under the eye patch) and look at a pencil point held five or six inches in front of the other eye. (shift on the pencil) Now, look through the window at some point on the horizon or any distant object. (shift on the distant object) After looking for two or three seconds at this distant point, focus the eye on the pencil point. (shift on it) If your eyes are normal you will be able to change the focus without any consciousness of effort, but otherwise you may experience very clearly the sensation of muscular effort in and about the eyeball. Muscular action, whether one is conscious of it or not, accompanies all changes of the focus of the eye, and the power of making these changes must obviously be improved by the daily practice of some such exercise as this.



1 - An eye-focusing exercise for <u>both eyes</u>. (See text.)
Pencil upright between the left and right eyes, at eye level.
Align the pencil/close object with a distant object.
Both objects between left and right eyes, center of the visual field, eye level. Place a cap on the pencil point for safety.

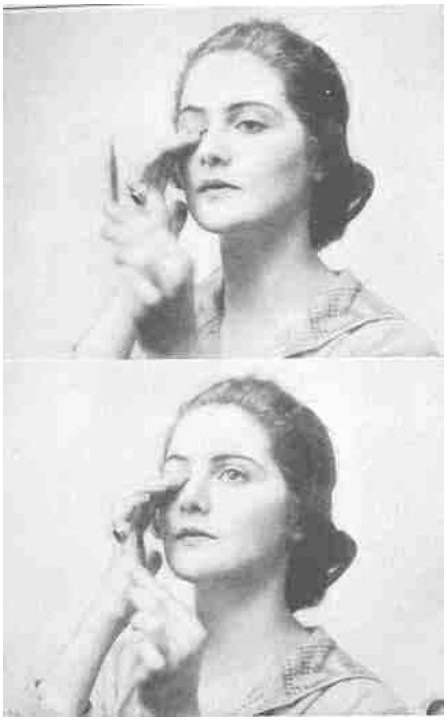
+Look first at the point (cap) of a pencil held near by, as in the upper photo; (Shift on the pencil)

+ Then shift (switch) to a distant cloud, or some tree or building on the horizon. (Shift on the distant object.)

+Immediately upon seeing the distant object, shift (switch) back again to the pencil point. (Shift on the pencil. Repeat.)

When looking at the pencil or the distant object: shift on the object part to part, (point to point) even if it is for only 1-3 seconds before switching back to the other object/distance. Shifting prevents staring (staring-a main cause of blur), shifting keeps the eyes moving, relaxed, vision clear. Shift, Blink, Relax. Avoid staring.
The eyes do not have to always immediately move back to the other distance. Spend a bit of time shifting on the object before moving back to the other object/distance. Use central fixation: shift on small details of objects.

+Practice with both eyes together, then
+one eye at a time, then
+both eyes together again.
+If vision is less clear in one eye, practice extra time with that eye.
+End with both eyes together again for equally balanced, clear vision in the left and right eyes at all distances.
Use a eye patch over the eye not in use and keep both eyes open.



These 'looking close and far' exercises greatly improve central fixation, shifting eye movement, convergence, divergence, accommodation, un-accommodation, clarity of vision in each individual eye and gets both eyes working together, fusion, binocular vision, depth, distance, 3-Dementional perception, perfect, equally clear vision in the left and right eyes at all distances close, middle, far.

Bates Method combined with Behavioral Optometry.

Additional directions for directions on the right.
Although close and far objects are lined up, in line with eachother when practicing switching, it is ok to move the eyes, visual attention to other objects in the visual field as long as the eyes, head/face move and face directly at the object of attention placing it in the center of the visual field.

2 - A similar eye-focusing exercise, using <u>one eye at a time</u>.
(Pencil and distant object still between the left and right eyes, at eye level, center of the visual field.)

Look at the nearby pencil point or any close object, (shift on it) then at some distant object; (shift on it) return to the pencil point and continue.

When looking at any close or distant object with one eye: keep it between the left and right eyes, center of the visual field as it would be when using both eyes. Move the head/face with the eye as the eye moves about the object, visual field.
+If vision is less clear in one eye, practice a little more with that eye to bring the vision equally clear, perfect in the left and right eyes. Working the less clear vision eye will also improve brain function for that eye.
+Then, work the other eye and then both eyes together again for equal clear vision in both eyes and balanced, equally activated, integrated left and right brain hemispheres, all areas of the brain working correct with the eyes, eye muscles, nerves...

There is a exercise when using one eye that is different and very effective: "Secret Switching Method"
When using one eye, the <u>close and distant objects can be lined up</u> and <u>placed directly in front of the eye in use</u> but this is advanced training:
Like a kid looks at a marble up close with one eye, marble in front of that eye, then looks to the distance beyond the marble, then back to close marble...
The close object can be placed one inch to a few feet from the eye.
+Practice switching back and forth on the close and distant objects lined up in front of the one eye. Shift on the objects at close, middle, far distances.
The objects must never be placed outward or too far inward away from the eye that is being used, never away from the eyes central field.
(Each individual eye has its own central field and it moves with the eye.)
The eye must not pull, not feel strain.
Placing the object too far out or in can cause wandering/crossed eyes.
Let the eye move natural, keep the objects the eye is looking at directly in front of that eye without feeling rigid, tension, no immobility.
If moving to another object in the visual field: move that eye and the head/face/body with the eye, placing the object in front of the eye.
The eye may move inward naturally if a object is moved inward toward the nose. <u>Do not place the object too far inward past the nose, toward the other eye</u>. The object must also not be placed outward to the outer side of the eye in use.
Keep the object at eye level.
Practice with one eye at a time: left, then right, left, then right...
Practice extra time with a eye that has less clear vision.
The eyes, head, face, neck, body are relaxed and move freely.

Always end the exercise by returning to the basic exercise with the <u>close and distant objects between the left and right eyes</u>, eye level as objects are when using both eyes together.
Objects are still lined up with eachother.
+Practice in this way again with; both eyes together, then
+one eye at a time - left, then right, then left, right...
+Then practice with both eyes together again.
Practice switching close and far, shifting, central fixation... with both eyes together, one eye at a time, little more with a less clear vision eye, then both eyes together again. This will completely balance the vision in both eyes, brain Hemispheres. Practice a few minutes per day, 3-7 days week as needed. Practice in daylight and at night for clear night vision.
This extra 'Secret Switching' exercise is being placed in our other book and explained in more detail with pictures.

+Never place the objects in front of only one eye when both eyes are being used or unbalanced vision, crossed, wandering eyes, impaired convergence, divergence, accommodation, un-accommodation can occur.

+Do not close the eye that is not in use and do not touch it.
Use an eye patch over the eye not in use and keep the eye open under the patch. Both eyes open, one covered.
+Holding the hand/arm up to cover one eye causes muscle tension in the arm, shoulder, neck, eyes and lowers the vision.
+Closing one eye causes tension in the face, around the eye, neck, shoulders, and eye muscles leading to unclear Vision.



3 - Another eye-focusing exercise. Closing one eye,
+look at the end of the nose with the open eye, as in the upper photo,
+then at some distant point. Repeat.
+Same with the other eye.

The eye shifts point to point on the nose.
Then shifts on the distant object.
A small close object: stone, ring can be used in place of the nose. Place it between the eyes, at eye level, close to the eyes.
Do not touch the eye, eyelid with the hand or eyepatch; Just cup the palm of the hand over the eye not in use and keep the eye not in use open under the hand. Both eyes open. (Closing one eye causes muscle tension in the face, around the eyes, and in the outer, inner eye muscles.) It is also best to use an eyepatch to prevent muscle tension, fatigue in the hand, arm which can travel to the shoulders, neck, head, eye muscles from holding the hand up a long time.



A combination eyeball exercise and eye-focusing exercise.

+First try to see the end of the nose as in the photo. Shift on the nose, relax.

+Then shift the gaze to some distant point for a moment. Shift on the distant object.

+Look again at the end of the nose and continue, repeating only four or five times at first.

Shift point to point (small part to small part) on the nose, then shift point to point on the distant object, then on the nose... Central fixation, shift on small details. Blink.
This exercise can also be done by shifting, central fixation on tiny details of a small object (stone, ring...) placed close to the eyes, between the left and right eyes, at eye level. Practice at a variety of close distances. Practice ¼ -1 inch from one eye, object in front of that eye. Then with other eye.
Read fine print up close. Practice with both eyes and one eye at a time.
For perfect convergence, accommodation, eye movement, clarity of vision at close distance and divergence, un-accommodation, eye movement, clarity of vision at far distance.
These switching, shifting exercises really work!!

The exercises should be practiced with both eyes together, unless one is weaker than the other, in which case it may be necessary to practice the weaker one separately. At first you may not be able to see things very close to the eyes, but gradually you will find yourself able to diminish the distance. Begin by holding your pencil at whatever point you can see it most clearly, focus the eyes upon it for a moment, and then look at some distant object, such as a cloud, a tree, a house, or a chimney. You can vary the exercise, if you like, by looking at intervening distances, from a few feet up to fifty feet, one hundred feet, three hundred feet and so on. Then you can begin to hold the pencil point, thimble, needle, printed card, or whatever it is you choose to use, nearer to the eye. (Do not place a needle close to the eye. Be careful- do not place any pointed, sharp object close to the eye. Avoid injury.) You will, in time, find that you can easily shift your vision from a distant object to your pencil or thimble held perhaps four or six inches in front of the eye, and see clearly and sharply at each distance.

A fairly good plan is to go to the window, and instead of using a pencil find some speck or imperfection in the glass which you can utilize as the nearby point, and then alternately shift the sight from this point to a cloud or distant tree. Open the window for a perfect clear view, full spectrum sunlight. Hang a pencil in the open window.

Another plan is to throw the head back, shutting one eye, and with the other trying to see the end of the nose, afterward looking to the distance and then back to the end of the nose. This exercise, when practiced with both eyes together, combines the

advantage of looking cross-eyed with those of rapidly changing the focus.
I do not recommend this exercise. Throwing the head back to see objects is unnatural, tenses the muscles in the eyes, head, neck, body.
Do the exercise with the head, body straight/upright, relaxed and replace the nose with a small stone or other close object to shift on, and place the close and distant objects up to eye level, between the left and right eyes.

CHAPTER XVII

Exercises for the Pupil of the Eye

IT is a comparatively simple matter to exercise the little dilator and sphincter muscles which have to do with the enlarging and diminishing of the pupil of the eye. Under normal conditions of vigor these muscles scarcely need attention. It is only when the eyes are weak, and these muscles do not respond readily in accommodating the opening to various degrees and intensities of light, that special exercise is required.

Naturally, the only practical way to exercise these muscles is to find a method of exposing the eye in rapid succession to degrees of light of varying intensity. At night this may be done by turning an electric light on and off repeatedly for a minute or two. In the daytime one can stand in a room with one window, pulling the shade down to darken the room, and then raising it and looking out of doors. In either case try to see the various objects in the room when it is darkened. It is through this attempt to see in the dark that the dilator muscles will be especially stimulated, as the pupil enlarges as much as possible to enable you to see.



Exercising the pupil of the eye. This is best done in a dark room. At first, do not look directly at the light but at some white object, turning the light off and on at intervals of two or three seconds. You can soon accustom yourself to looking squarely at the light while turning it on and off. One minute or less will be sufficient.

When the electric light is turned on, or the shade raised, the greatest stimulation will be derived from looking directly at the light, or at the sun, for an instant, provided this does not involve the sensation of eye strain or discomfort. It might not be wise, however, to do this unless you are sure that your eyes are fairly strong. You can get sufficiently good results by looking at any white object when the light is turned on, for instance, the blank page of a book. Turn the light on and off at intervals of two or three seconds. If your eyes are sensitive to artificial light it may be better to practice this exercise in the daytime, pulling down the window shade and then raising it. One or two minutes of this exercise usually should be sufficient.
Artificial lights produce unbalanced, partial spectrum light. Pure sunlight is most healthy for the eyes. Sunlight contains healthy, balanced, full spectrum light.
Alternating Palming, then Sunning/Sunlight, Palming, Sunning/Sunlight, Palming… improves pupil, retina function, adjustment of the eyes to light and dark.

CHAPTER XVIII

Eye Massage and Resistance

IN conjunction with the various methods for strengthening and invigorating the eyes outlined in this book, massage of the eye and adjacent tissues will be found, in many cases, to be of great practical value.

Massage is known to be beneficial in its effects upon all parts of the body. The nerves are stimulated, the blood stirred into greater and more active circulation, and the muscles and tissues generally stimulated into more vigorous life. It is now employed to advantage in many forms of disease.

The professional beauty knows these facts, and lays the greatest stress upon both facial and bodily massage, while athletic trainers rub and massage the bodies of their charges before and after any event of importance.

Why, then, should some form of modified massage not be of value in the treatment of the eyes? Of course, one can not very well massage the eyes in the same way one would a muscle, but they can certainly be strengthened and invigorated by manipulation which quickens the circulation of the blood and stimulates the nerves.



Probably the best eye massage is applied with the heel of the hand, either at the base of the thumb or opposite as in the above photo. With gentle pressure give the hand a twisting movement. At the same time, contract and relax the eyelid muscles.
This is in line with the natural impulse often felt to "rub the eyes."
I do not recommend this exercise. Do not press or rub on the eyes or eyelids.
I do notice that many of Dr. MacFadden's exercises are natural things people do automatically and to a gentle, safe extent may be beneficial.



Placing the thumb and finger upon the upper and lower eyelids as illustrated, impart a very gentle massaging motion. You should gently "feel" the eyeball in applying this massage. A half a minute or less should be sufficient.
Apply no pressure on the eye. I do not recommend this exercise.



With two fingers placed one on each side of the eyeball make a gentle upward and downward movement. Use no pressure. The gentlest movement will suffice.
I do not recommend this exercise. Do not press/place any amount of pressure... on the eyeball, even through the lids. The Bates method, shifting, blinking... naturally massages, relaxes the eye muscles, eyes and normalizes pressure, circulation in the eyes.
Use Acupressure points without pressing on the eyes. See book: 'Do It Yourself – Natural Eyesight Improvement – Original and Modern Bates Method' free with this book.



A gentle resistance exercise. Either close or partly close the right eye, placing the forefinger at the right of the eye. Then turn the eye to the right and resist very slightly with the pressure of the finger upon the eyeball. Relax and repeat a few times only.
I do not recommend. The eye must move freely without resistance.



A continuation of the preceding resistance exercise. Shift the same finger to the inner side of the left eye, resisting slightly as before while turning the eye to the right. The left forefinger can be used on the left side of each eye.
I do not recommend these exercises. Do not press on the eye. The finger can easily irritate/injure the eye. Do not resist against the normal movement of the eye. Let the eyes move freely and on their own. These are examples of old eye exercises that can cause strain and impair the vision.
Practice of Bates Method: shifting, central fixation, blinking and other natural eye functions is best.
Modern treatment applies acupressure points near these areas but without touching, without pressure on the eyeball.

This massage treatment, if used, should follow the eye exercises. It is a good plan to follow the massage with the eye bath.
No eye baths! Breaks down the natural tear structure of the eye. Do only if advised by a doctor for a specific condition.

The illustration showing the "heel" of the hand over the eye shows the position for straight pressure, which is frequently very helpful in case of the acute stabbing pains that sometimes shoot through the eye as the result of straining. When there is a definite acute inflammation this treatment must not be applied, but otherwise it gives considerable relief—not only from pain but from strain and tiredness. It may be given gently in case of glaucoma, but care must be taken in this instance to observe immediate and after effects and avoid a degree of pressure that is irritating.

Other good movements are, placing the balls of the fingers between the eyeball and the bony socket above, below, and to either side, and giving gentle pressure in the opposite direction.

When the eyes are tired either hot or cold cloths may be placed over them and gentle massage given through the cloth. In this case the heel of the hand is usually better than the balls of the fingers.

When there is pain in the eye or when they are fatigued, or when there is that occasional small twitching of the eyelid, a good treatment can be given by placing the ball of one finger over the small notch felt at the edge of the eyebrow slightly inward from the center, and giving pressure here. Pressure may be given at the notch over each eye at the same time. It is usually better to give a steady pressure for at least two or three minutes. This may follow or be followed by the hot applications and gentle massage. A similar treatment may be given to the notch at the very edge of the bony socket immediately in the center below the eye.

The ball of each forefinger or of each thumb may be applied to the inner edge of the eye, but above the margin of the lower lid where the drainage canal is situated. Steady pressure may be applied here in case of eye-ache or a headache resulting from eye strain.
Some of these applications are beneficial but some are not! See the modern books mentioned above for the true acupressure points. Palming, sunning, shifting, central fixation.., massage of the neck muscles and acupressure are the best treatments.

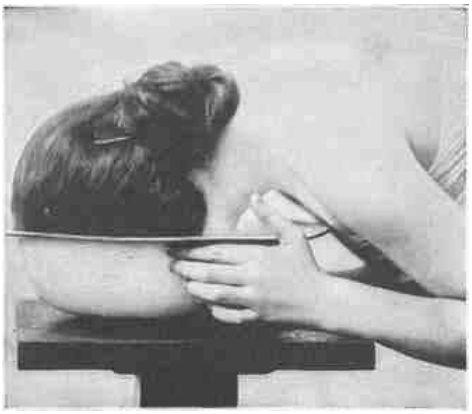
CHAPTER XIX

The Eye Bath

IT is a good plan to follow the massage of the eyes with an "eye bath." A *weak* solution of salt and water or a dilute solution of boric acid and water, is the best for this purpose, under ordinary conditions. These solutions must on no account be *strong*. The water must not be brine, nor the boric acid solution too strong. The water should usually be cool, or lukewarm; but the temperature must depend upon circumstances. In certain inflammatory conditions of the eye, it is often advisable to have the water quite cold, while, on the other hand, in all injuries and local affection which render the eye sore or tender, it is best to bathe it in warm or hot water—at least at first. The bath, as a rule, should not last more than twenty or thirty seconds for each eye, and should be followed by a blinking of the eye—which, however, will probably follow automatically.

The eye bath may be taken in two ways. The first method is to fill an ordinary bowl with water, hold the breath, immerse the face in the water, and then open and close the eyes a number of times while the eyes are well under water. This may be repeated two or three times. This is the first method, and while it has the disadvantage of wetting the whole face, has the advantage of lack of suction, which the second method entails.





For taking the eye bath, the simplest plan is to fill an ordinary wash bowl with a weak solution of salt water or dilute boric acid.

Taking the eye bath in a basin. Immerse the face in the salt water or boric acid solution and open the eyes under water, then move them from side to side, up and down, and roll them around.
I do not recommend eye baths.
Boric acid sounds too strong! Dangerous? Ask an eye doctor first. Bates Teachers state that any type of artificial tears, eyedrops, eyebaths for the eyes will break down the natural tear structure of the eyes, impair tear production, cause dry eyes and dependence upon eyedrops, baths. Use a warm steam humidifier with purified water, (no chlorine...) to prevent dry air, dry eyes. Get fresh air. Blink, yawn, shift to produce natural tears.





The eye-cup. A convenient device for taking the eye bath with a minimum of solution.

Taking an eye bath with the eye-cup. The eye-cup filled with the desired solution is so placed as to fit the eye socket with the head bent forward over it. Then tip the head back as in the illustration and open the eye and move it about in the solution. My Mom used the eye cup to remove dirt from the eye.

THE EYE-CUP. Eye-cups are now easily obtained, at a low figure, and are very useful little appliances, enabling one to bathe the eyes, without immersing the whole face, as in the method just described. In this case, the eye-cup is filled with whatever solution is to be used, the head leaned forward and the cup placed over the eye; then the head is tilted backward, and the eye under the cup opened and closed a number of times. The same operation is repeated with the other eye.
It is a good thing not to keep the cup against the eye for too long a time, owing to the suction which develops in consequence. It should be removed and re-applied several times.

People use the eye cup to flush a foreign object out of the eye.
I know a man that had a very small object in his eyes cornea. It was almost like a small bubble, ulcer on the cornea. It was blocking his vision, causing blur, astigmatism. He could not get to a doctor. He used his own saliva, the slippery saliva from under the tongue and gently rubbed it on the bubble on the cornea. It broke the foreign object free from the cornea without irritating the cornea and the vision immediately returned to normal. Dogs... use their saliva to heal wounds. Saliva can contain bacteria, especially if the teeth are decayed, but in this experience, the mans eyesight, eyes were benefited from the treatment. Many years gone by and no return of the eye problem.

As regards medicinal substances to be used in the water, there are but few of these which can be recommended. A small percentage of salt is often strengthening to the eyes, but a heavy brine is irritating and injurious. A dilute solution of boric acid is often beneficial, as it tends to cleanse the eye and wash out irritating substances. Apart from these solutions, it is safe to say that ordinarily, the further the patient keeps from "eye lotions" and concoctions of that sort, the better. These eye baths should have the effect of strengthening and stimulating the eyes in a wholesome, hygienic manner, without irritation. Cases of weak and dull eyes are especially helped by them, and they are helpful in practically every case of eye disease and defect, where they are not distinctly contra-indicated.

I do not recommend eye baths unless an infection, object is in the eye and an eye doctor has taught the patient how to do the eye bath and the correct (preferably natural) ingredients, solutions to use.

A old remedy to remove metal from the cornea, eye is to place a magnet near the metal and let it pull the metal out of the eye. In some cases only a doctor can remove an object from the eye. Doing it yourself can result in breaking blood vessels, other parts of the eye and result in more injury.

People claim to have removed eye floaters with a specific eye bath solution of Cheyenne Red Pepper and water. Cheyenne opens the capillaries, veins in the body and may help improve eye circulation, removal of waste, strengthen capillaries... I do not know if these are safe or effective. Cheyenne Pepper may be used in pepper Spray defense weapons which do not cause damage to the eye. Eating foods that open, clear out the body, eyes blood and lymph vessels is a safe way to improve circulation of blood, lymph, fluids in the eye. Eat healthy food, nutrition for the eyes.
Check with your eye doctor first. Bioflavonoids in bilberry fruit and white part, whole peel of oranges, lemons, lutein, dark greens also strengthen the blood vessels, improve health of body, eyes.
Lemon juice and water solution is used in other eye baths for cleaning the eye. (Lemon Juice Eye Bath By Dr. William Apt, Eye specialist in the mid-1900's, learnt this from a 105 yr. old man who had perfect health and clear

I have experienced pepper spray on the face, eyes without damage but only a eye doctor can give advice on this. I do no recommend Cheyenne pepper eye bath on the eyes but eating the peppers is a safe alternative if the stomach can handel it. People have claimed to be cured of ulcers by eating red cheyenne peppers but I find that they can also irritate the stomach.

eyesight). Use only purified water, 3-4 drops lemon juice with pure water in an eye cup. All ingredients must be pure, organic, no chemicals... Ask your eye doctor first!
The author of this book was trained in Natural Vision Improvement Bates Method School to never use any type of eye drops, baths (except in a emergency when a doctor is not available to remove dirt.. from the eye when the eyes natural tears are not expelling the object) because eyedrops, baths will break down the eyes natural tear structure, layer (oil, water, antiseptic, nourishment and other ingredients) prevent natural eye tear production, protective coating over the eye, cornea and result in dependence on the eyedrops, baths, and cause dry eye, infections, cornea abrasions, astigmatism, blur. Contact lens solutions have caused eye infections, loss of eye and blindness.
The eyes natural tears also contribute to the correct focus of light rays in the eye and act as a natural contact lens bringing the vision to an increased level of clarity.

CHAPTER XX

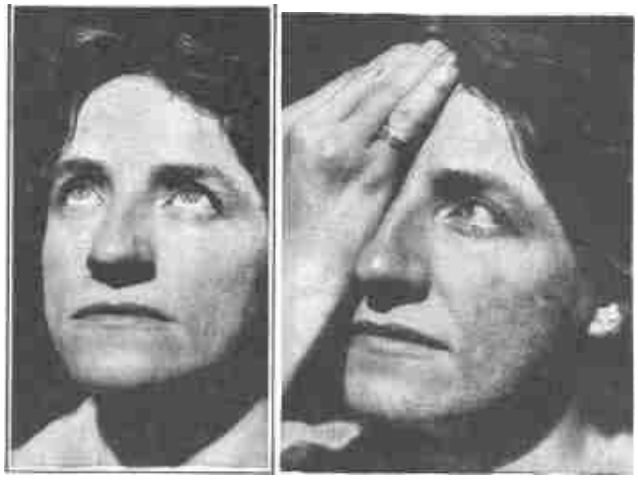
Eye Strength Through Sunlight

Here is presented a most remarkable discovery to the effect that the rays of the sun have not only a beneficial, but a curative effect upon the eyes. The physician who conducted these researches, and who affirms the validity of these statements, does not attempt to explain this benignant influence of the sunlight, but fact is attested by numerous proofs.

The author, however, suggests caution in attempting any home treatment of this kind. The policy of "safety first" has come to be a recognized principle of modern life, and it would undoubtedly be wise to experiment carefully with radical measures of this sort. Anyone can experiment with sun-gazing in the early morning or late afternoon, but caution is suggested in attempting to outstare the noonday sun in June. The burning glass should never be used by inexperienced persons.

WHILE it is recognized in a general way that light is good for the eyes, most people entertain a fear of what they call "strong light." For this reason, as well as because the light often causes them actual discomfort, people protect their eyes from the sunlight with smoked or amber glasses and broad-brimmed hats and parasols, while persons working under artificial light use eye-shades and similar devices. All this is, to a large extent, superstition.
Sunglasses block full spectrum sunlight and impair the health of the eyes, brain, body, clarity of vision, hormone production, regulation, sleep cycle.

The eyes need no protection either from the light of the sun or from any other light. No artificial light can equal the rays of the sun in intensity, and the sunlight, far from being harmful, is the best thing in the world for the eyes. The eyes were made to react to the light, and in its absence they deteriorate and become weak. **Fishes which live in sunless caves become blind; miners and people living in dark tenements develop all sort of eye troubles.** Their eyes become increasingly sensitive to the light-rays until after a time they cannot look at strong light at all without pain. Then they are advised not to do so, but to rest the eyes by remaining in a dark room until they have recovered! As a matter of fact, the eyes are weak just *because* they have lacked the benefit of the sun's rays; and what they need more than anything else, in order to get well, is the thing of which they have been deprived. Sunlight is one of the best curative agents we can employ for the eye. Persons with weak and defective eyes should look in the direction of the sun every day, until they are able to look straight at it without pain or injury.



Persons with normal sight can look directly at the sun without injury or discomfort. Note that the eyes are wide open, with no evidence of pain and no watering.

Demonstrating again that the normal eye can regard the orb of day without injury. With the sun shining almost directly into her eye, the subject reads the Snellen test card with normal vision.

Modern teachers teach only closed eye sunning. Looking at the bright sky on a sunny day is healthy but do not stare into the sun. Some people still sun-gaze – look into the sun but they keep the eyes moving, shifting on the sun side to side, top and bottom, look away from it and back, across it..., head/eyes moving and do not look at the sun for more than a few seconds at a time. No staring.



+Concentrating the rays of the sun upon the eyeball (sclera, white part of the eye) with a lens or "burning glass," sunglass, demonstrated to be an effective curative measure in conjunctivitis, iritis, ulcers of the cornea and other diseases of the eyes and blindness.

Person looks down with the pupil under the lower eyelid so the sun does not shine into the pupil through the glass. Upper lid is lifted up.
The sunglass must be kept in movement on the white of the eye and for a short time, 1-2 seconds or less to prevent overexposure, burning the eye.

The Sunglass must be used by a professional Bates Method Ophthalmologist only! Applied wrong, it can burn, injure the eye.

The sunglass does block out part of the suns light spectrum, causes unbalanced, not full spectrum light to shine on the eye, but its intensity does awaken the cells, cones, rods... in the eyes retina, cells... in other parts of the eyes. This can improve vision, reverse some forms of blindness.
Sunning, daily full spectrum sunlight is a safe alternative.

Not only is it beneficial to look at the sun, but in most diseases of the eyes the sun's rays concentrated upon them by means of a burning glass exert a remarkably curative effect. The following are examples of hundreds of similar cases that might be cited:

A man suffering from inflammation of the eyelids was unable to attend to his work, because, as soon as he left the house and went into the sunlight the discomfort he experienced was so great that he could not keep his eyes open, and had to return home. He had been in this condition for more than fifteen years, and had received all kinds of treatment from many physicians. After a few treatments with the burning glass he was able to return to his work without further trouble.

Another man suffering from trachoma was unable to open his eyes in the sunlight and therefore had great difficulty in finding his way about. One treatment enabled him to open his eyes and go into the sunlight without discomfort.

These cases are interesting, not only in themselves, but because they strikingly illustrate the baselessness of the present fear of strong light.

Modern Natural Vision Improvement Teachers advice only closed eye sunning (no sunglass) and the head, eyes are moved side to side... while sunning.
Opening the eyes and looking at the bright sky is healthy. Use common sense, avoid sunburn.

CHAPTER XXI

Constitutional Improvement for Strengthening the Eyes

IF your eyes are weak or your sight impaired in any manner whatsoever, one of the first requirements for improvement is to build up a better state of the general health.

It may have been your experience, just as it has been that of countless others, that signs of weakness of the eyes, failing of the sight, twitching of the eyelids and a smarting and burning sensation have accompanied a condition of depleted vitality. After your health has been restored you have found that your eyes grew stronger and better, giving you little or no further trouble.

Practically everyone has had some such experiences. At all events, it is undeniably true that the condition of the general health is very largely reflected in the eyes, just as it is in the voice, in the complexion, in one's whole mental and physical bearing. As soon as you build vitality, strengthen the nervous system and improve the condition of the blood, the eyes acquire new vigor.

The reason for all this is obvious. The eyes depend upon the blood supply. If it is of the proper quantity and purity it will tend to keep these organs vigorous, just as all parts of the body are thus kept vigorous. If the blood is in poor condition, filled with impurities and sluggishly circulated, then you can not expect to keep your eyes, or any other part of your body, in the best condition. It is for this reason that good digestion, active elimination and general functional vigor must be considered if you wish to improve the condition of your eyes. In other words, constitutional treatment is necessary. No processed white sugar.

One of the first lessons for every man, woman and child to learn is that illness is one's own fault. It is purely a matter of cause and effect. Sickness comes as an inevitable result of habits and conditions of life which would logically produce such a result. Health is merely the effect of normal and natural habits of life. If you live in accordance with the laws of Nature you make illness practically impossible.

The truth is that it requires more energy to be sick than to be well. In a state of health the organs function properly, naturally and easily. There is no special effort upon the part of anyone of them. Life proceeds smoothly and easily. But when one is sick the body has to struggle against poisons, against various handicaps, and the work of each organ of the body becomes a serious effort. Sickness means hard work for the body. Good health means freedom from all these troubles. It is, therefore, far easier to be well than to be sick.

If you have strength enough to resist illness and still live, you certainly will have energy enough to recover normal health, and to keep it. But you cannot secure health in a drug store. You cannot build health simply by conversing with a physician and paying him regrettable sums of money. You can build health only by obeying the laws of Nature, by cultivating habits and conditions such as will increase your strength, help your organs to function more perfectly and smoothly, and purify and improve the condition of your blood.

The cornerstones of health may be said to be exercise, air, food and sleep.

Exercise is probably the most neglected of all these vital health essentials. The first characteristic of all life is movement or the capacity for movement. You see an insect, a reptile, a lobster or any other animal lying motionless, and you wonder whether it is alive or dead. Perhaps you poke it with a stick. If it moves you know that it is alive. Our lives are based upon the capacity for movement. This applies not merely to the muscles which move the body about, but to the muscular organs which maintain the vital processes, such as the heart, stomach and blood-vessels, which have muscles in their walls to keep the contents circulating.

Forty per cent or more—that is to say, from two-fifths to one-half—of the weight and bulk of the body in a state of health and vigor is made up of muscular tissue. Most of the food is consumed in the muscles. It is inevitable, therefore, that a healthy state of the muscular system is a prime condition of what we call health. We are essentially muscular creatures. Therefore, to permit our muscles to degenerate and deteriorate means not only a loss of strength, but it means a poor and weak circulation, a loss of tone in all the organs, and consequently a general impairment of the health.

You will see from all this that muscular activity is absolutely essential to health. Inactivity means stagnation. Stagnation not merely of the muscles, but of the blood and of all those vital forces which together make up what we call life. Out-of-door exercise is undoubtedly the best. You should make it a point to get enough of it. But whether you can spend much time outdoors or not, you should certainly take enough exercise of a strength-building character in your own home, or in your own room, to maintain the muscular system in a state of full development and normal vigor. More detailed consideration of the subject of exercise for constitutional purposes will be given in the next chapter.

CHAPTER XXII

Exercises for Constitutional Improvement

THE value and necessity of exercise as a factor in constitutional improvement has already been pointed out. Everyone needs a proper amount of exercise for the sake of the general health, irrespective of the effect upon his eyes.

Without going too deeply into the physiology of exercise, it may be said that there are two general results to be gained from any good system of physical training. In other words, exercise may affect one in two ways. It may have chiefly a muscle-building value. Or it may have what is commonly called a constitutional or health-building value. Muscle-building exercises are intended chiefly to build strength and enlarge the muscles. Constitutional exercises chiefly affect the heart, the lungs, the vital organs generally, and, in consequence, the purity and quality of the blood.

Now, nearly all exercises partake of this twofold purpose. They strengthen and enlarge the muscles and, at the same time, they build up the general health through their effect upon the heart and lungs, the digestive and eliminative systems. That is why almost any form of activity, if one secures enough of it, is likely to fulfill all requirements in both these respects. At the same time there are some exercises which are particularly of the muscle-building type and are only slightly constitutional in their influence. There are others which have only a small muscle-building value, being useful mainly because of their effect in toning up the vital organs.



Exercise 1.

With the hands at the hips bend far forward in the manner illustrated. Repeat five or ten times according to strength. It is best to commence with a few repetitions and increase the number with the increase of strength.

Touch the palms of the hands to the floor as your muscles become more relaxed, used to the stretch. A old gymnastics exercise.



Exercise 2.—Bend well backward in the manner illustrated.
It is usually most convenient to combine exercises 1 and 2 in one movement.
Repeat as desired.



Exercise 3.—With feet well apart to give a better base of support, bend the body far sideways, to both sides, five or ten times.



Exercise 4.—Twist first far to one side then far to the other. This is a spine-twisting and organ-stretching movement. The more action, the better.



Exercise 5. Fingers extended, stretch vigorously upward, lower arms, then stretch upward again. Vary by stretching forward and sideways.



Exercise 6. Raise the body high on the toes as illustrated. If too easy, do it on one foot at a time.

Walk up a long hill on your toes daily.

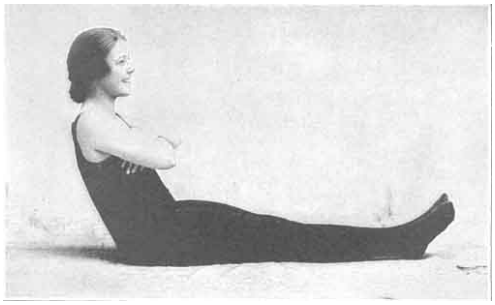


Exercise 7. Starting in a standing position with the arms at the sides, bend the knees and lower the body to the squatting position. It is easier to maintain balance and requires less effort if the arms are swung forward and upward as the body is being lowered, as illustrated.

Squat down and up to standing with both legs and then with one leg at a time, 5-10 times.



Exercise 8. Bring one knee at a time upward as high as possible with a snappy, kicking movement. A little more action is secured by swinging the arms upward at the same time. Repeat five or ten times or more with each leg.



Exercise 9.—Lying on the back with arms folded, raise body to a sitting position. Repeat according to strength and fatigue. If necessary, use a weight over the feet.

Do this on a slanted sit-up board or body slant with the head at the lower level. Combines exercise with inversion, improved circulation of blood, lymph, oxygen to head, ears, eyes.



Exercise 10.—Lying on the back with the arms at sides, raise the legs to the perpendicular position illustrated. Repeat as desired.



Exercise 11.—This is a variation and extension of the preceding movement. It is a little more vigorous but also more interesting. Continuing the preceding movement, raise the hips and back from the floor as illustrated.
Push the feet up higher into the air, back straightens leaves the floor. Repeat up and down movement.
Chiropractor teaches this.

All those types of exercise which call for endurance are of the greatest value from a constitutional standpoint. In other words, any exercise which may be continued for a considerable length of time and which, therefore, keeps the heart working energetically and causes one to breathe deeply and freely during that period, will inevitably tone up the internal organs.

The shallow breathing of the inactive man or woman is not calculated to fill the blood with oxygen, and the brain and all of the structures of the body suffer more or less from the lack of this life-giving element. Exercises which cause prolonged deep breathing will naturally increase the oxygen intake until your entire body from top to toe is literally charged with it. This will make you more alive. It will make you brighter and more energetic, and the improved circulation will tend to tone up every cell and every structure of the body.

It is for this reason that a long walk is one of the best of all forms of constitutional exercise. Every time you step you lift the weight of your entire body and move it the distance of your stride. Although there may be little effort in walking, nevertheless considerable energy is consumed, and the largest muscles of the body are brought into play. It is because walking is accomplished by the largest muscles that the effort seems easy. Nevertheless it calls for a large supply of blood and of oxygen. This means increased circulation and deeper breathing. Walking for a distance, therefore, means the continuation for a period of time of moderate exercise for the body's largest muscles, without involving any strain. There is the very least expenditure of nerve-force in proportion to the physiological benefit.

There are other forms of constitutional exercise which do not involve any severe strain upon the muscles, and which are beneficial largely because of their endurance-building quality. Cycling at moderate speed, hill climbing, rowing for pleasure, horseback riding, golf, gardening, and other varieties of exercise, may be included in this class. Of course, some of these, like gardening or rowing, may be made very strenuous indeed if one wishes to exert oneself.

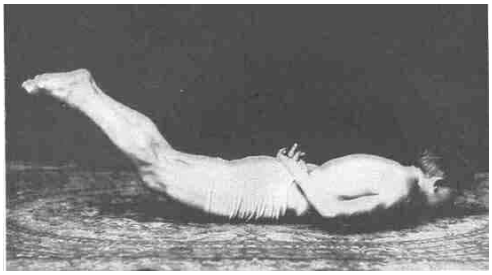
The exercises which we are illustrating herewith are useful both for their constitutional and their muscle-building value. They are particularly designed to keep the trunk of the body firm, strong and vigorous. Exercises that bend and twist the trunk of the body not only build up and strengthen the external muscles, thus supplying the lower trunk with strong, firm muscular walls, which prevent any prolapses or sagging of the internal organs, but they indirectly affect the internal organs, toning them up and making them far more vigorous. They also help to keep the spine and its cartilages strong, flexible and youthful.

Either the system of exercise presented herewith, or any other system which answers the same purpose, should be practiced at least once each day. It will be best to take the movements in your bedroom before dressing. If taken in the morning, they will wake you up and warm you up, so that a cold bath will be not an ordeal but a pleasure. You will find it advantageous to give the skin of the entire body a brisk rubbing following the exercises and preceding your bath. If you do not find it convenient to take the exercises in the morning, however, they may be taken either late in the afternoon or in the evening—a half hour before retiring.

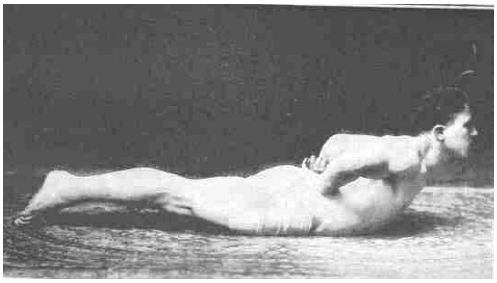
Special attention is called to the exercises for the neck which are illustrated. There are two ways in which they are especially valuable: first, in improving the circulation about the neck and head; and second, in improving the upper spine, or, to be more exact, the cervical spine.

The question of active circulation is always important. These neck exercises will not only affect the neck itself, strengthening and building up the neck muscles, but they will improve the circulation throughout the head because of the quantity of blood sent in this direction in response to the exercise.

See Paul and Patricia Bragg books on breathing, fasting…



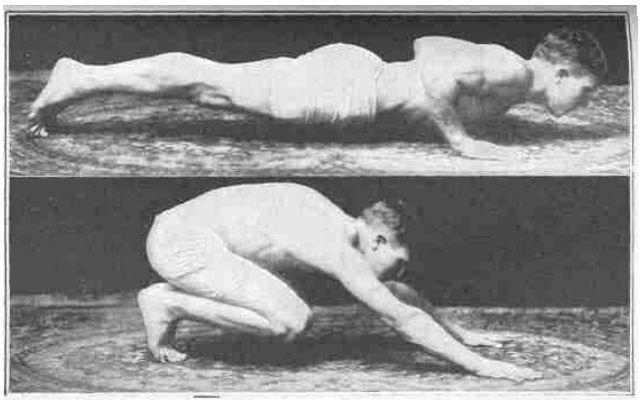
Exercise 12.—Lying prone with hands behind the back, raise feet and, if possible, the entire length of both legs as high as possible. This involves the muscles of the lower region of the back and the hips, up the neck muscles, but they will also improve the circulation throughout the head because of the quantity of blood sent in this direction in response to the exercise.



Exercise 13.—Again lying prone, raise the head and shoulders as high as possible as illustrated. This involves the muscles of the middle and upper back.



Exercise 14.—Starting from a standing position, bend down and place the hands on the floor in the manner illustrated. Then with a jumping movement, kick the feet back until the body is straight with the weight on hands and feet. (See next photo.)



Exercise 15 and 16.—Next lower the body as shown in the upper photo. Push up and repeat until slightly tired. A variation is shown in lower photo. Keep arms stiff, straighten the legs, projecting the body forward with head well in front of supporting position of hands. Swing back, repeat.



Exercise 17.—A vigorous and stimulating exercise is found in shadow boxing as shown in the above photo. Strike out forward vigorously first with one fist and then with the other, continuing to alternate until slightly tired.



Exercise 18.—The "stationary run." A running action without going forward. A splendid constitutional exercise, inducing free respiration and perspiration. Excellent for finishing up any type of indoor exercise.
Running in place is very beneficial to people working indoors, at computer. The 'Bragg' Health books advise this.

Congestion about the neck is known to produce a "fullness" in the head with consequent congestion in and about the eyes. Measures which relieve this condition will naturally tend to lessen the strain upon the eyes themselves, making for more perfect and easier sight.
Deep breathing, water drinking and relaxation, as well as exercise, are useful for this purpose. Conscious relaxation of the neck muscles with deep breathing will often relieve congestion in the head very quickly, but active exercise promoting a vigorous circulation is one of the most effective means known for overcoming either a state of congestion or an anemic condition of any part of the body.

These neck exercises will also tend to keep the upper spine flexible and in normal alignment. Exercise for spinal strength and flexibility is, perhaps, even more important, generally speaking, than exercise for muscular development, for the reason that the spine would otherwise tend to become rigid, and the little cartilages or cushion-like disks between the vertebrae in the back, neck…hardened and compressed. Exercise will prevent this, keeping these cushions elastic and healthy. Furthermore, any displacement of the vertebrae causes a pinching of the spinal cord, or spinal nerves, and consequent interference with the currents of nerve force, with more or less derangement of various functions of the body.
Osteopaths claim to accomplish very marked results in many cases of eye trouble through the proper mechanical adjustment of the spine and the freeing of the nervous impulses. Proper neck exercise will prevent adhesions of the vertebrae and tend to keep the upper spine in such perfect alignment that the spinal cord is free from any disturbing factors of this kind.



Exercise 19.—A neck resistance exercise. Placing one hand back of the head, bring the head backward, resisting the movement with the hand in the manner illustrated.
Five to ten movements.



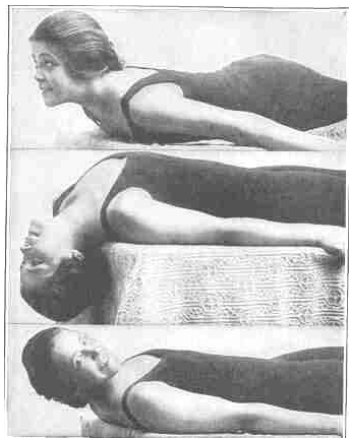
Exercise 20.—Neck exercise. Place hand against forehead and bring head forward and downward against resistance.



Exercise 21.—A simple neck exercise. Bring the head first far to one side, then to the other, placing it upon the shoulder on each side. Vary by a head-circling movement, and neck-twisting movement.

Avoid if ear ringing, dizziness, pain occurs. Misaligned vertebrae, pinched nerves may need to be corrected first. There are easier Physical Therapy Exercises for the neck.
Neck rolls clockwise, counter-clockwise, shoulder rolls forward, backward, the Figure Eight/Infinity Swing, Sway, Long Swing relax the neck and improve neck movement. Combine muscle strengthening and movement exercises.
Strong neck muscles keep the muscles relaxed, contracting, releasing normally, vertebrae aligned.

If you have not been accustomed to muscular exercise, a word of caution is necessary in order that you may not overdo the work the first day, and thereby produce a condition of **lameness and stiffness of the muscles** that is likely to be very discouraging. Enthusiasm in the beginning may lead one to take too much exercise. It is best to try only about half as much as you think you could comfortably do to start with. Never carry any exercise to the point of pronounced fatigue. As you get stronger you can increase the vigor of your movements.



Exercise 22, 23 and 24.—In this series of free movement neck exercises, the horizontal position is assumed so as to secure the natural resistance provided by the weight of the head.

+In the first position, lying upon the stomach, the head is first lowered as far as possible and then raised high, as in the upper photo.

+In the next exercise, lying on the back, the head is first lowered as shown, and then raised straight upward and brought over the chest.

+In the last exercise (lower photo), the raising of the head is combined with a head-turning or neck-twisting action, very valuable for its effect upon the vertebrae of the upper spine.

If you should experience any lameness or stiffness of the muscles, the local application of hot water, or a complete hot bath, will give relief, especially if followed by energetic rubbing of the parts. In any case, the soreness will disappear in a few days and should not prevent your continuing with the exercise.

It is, of course, understood that all exercises will be taken with the windows open, so that you may have the advantage of fresh, pure air. Much of the benefit of your exercise will be lost if you breathe stale or stagnant air while you are taking it. Much of the benefit and energy that you derive from your exercises will also depend upon how much energy you put into them. Exercise vigorously. Put life, vim, determination into every movement. Ten or fifteen minutes energetically spent in these exercises will keep you vigorous and fit.

In addition, try to spend at least two or three hours a day in the open air. It may be well to start with a walk of one or two miles. Then increase the distance by a quarter of a mile each day until you are covering anywhere from five to six miles and upward. If in addition to the vigor-building exercises which are illustrated you will make it a point to take at least one good walk each day, you will have established for yourself an ideal scheme of physical culture.

CHAPTER XXIII

Eating for Health and Strength

IF your eyes depend largely upon the condition of your general health and your general health depends very largely upon the condition of your stomach, you will see that it is highly important that you make no serious errors in the matter of what, when and how you eat.

What you eat is important. Your sustenance and strength depend upon it. But there are other important factors in the food problem. The question of how you eat, how much you eat and how often you eat requires nearly as much consideration, and people go wrong in these matters, perhaps, even more often than in regard to what they eat.

The first thing to learn is to follow your appetite. This means not only that you should eat when you are hungry, but also that you should not eat when you are not hungry. The greatest dietetic crime in the world is eating without appetite. Do not eat merely because the custom of the country calls for three meals per day at stated hours. If you are not hungry when meal time comes, or if you are excited, nervous, sick, or for any other reason without an appetite, then do not think of eating. Wait until appetite appears.

In other words, you should put your stomach on a natural and not on a forced regime. To force food down your throat when you do not desire it and cannot enjoy it means that you are placing an unnatural burden upon your stomach. If you are not hungry and your stomach seems a little bit upset, then drink water. **The quickest relief for any form of stomach trouble is found in the drinking of hot water. This is an old-fashioned, old woman's remedy, but the best in the world.** If you are "sick at your stomach" and the hot water induces vomiting, this will be the best thing that could possibly happen, for it will relieve you of the burden of the fermenting and poisonous load. And if the drinking of more water is followed by further vomiting, it will mean that the stomach has been well washed out. You will then quickly recover.

In any case the drinking of hot water has a tendency to flush or wash out the stomach, as well as the entire alimentary canal, particularly if you drink enough of it. Nothing in the world is so effective in the case of indigestion or loss of appetite, as several cups of hot water, taken at intervals of five or ten minutes, or even more frequently, if you can take it faster. I mention this for the sake of any emergency in which you may have lost your appetite or suffered from temporary indigestion. You will find that hot water, taken before meals, will improve your power of assimilation. It is to be hoped, however, that you will not need even this simple treatment for this purpose. If you have no appetite, the omission of one or two meals can be depended upon to give you an appetite such as even a child might have reason to envy. Avoid eating late at night.

Do not think that you must eat three times a day irrespective of appetite just because farmers and piano-movers have that kind of an appetite. For many people, especially office workers, the two-meal-per-day plan is far superior. You may take your meals either morning and evening, or noon and evening, as you choose. This is no untried theory. Millions of people eat such a light breakfast that it is practically no breakfast at all—merely coffee and rolls. In fact such a meal is worse than none at all. Thousands of others have found by experiment that the two-meal-per-day plan means a better appetite, better assimilation and consequently better health.

Almost as bad as eating without an appetite is eating too fast. Do not swallow your food without thorough chewing. The work of digestion is commenced in the mouth, through the treatment of the food with saliva. You should try to chew your food to a liquid before passing it on to the stomach.

On the subject of what you eat one may well hesitate to give any sweeping advice. There is no special menu or diet that will suit everyone. It is not strictly true that "what is one man's meat is another man's poison," and yet there is a small measure of truth in this old saying. Do not eat anything advised by dietetic experts as ideal if you cannot enjoy it. On the other hand, do not follow the course of eating "palate ticklers" to the exclusion of plain and substantial foods.

If you have a normal and natural appetite this should dictate as to your food requirements. To a large extent the entire problem of diet may be narrowed down to the question of eating natural foods, as against those which are too much refined, or tampered with, in the process of preparation.

For instance, take the case of wheat. Wheat is a perfect food just as it is grown. It will nourish every part of the body. In the making of white flour, however, much of the best nutrition in the wheat is thrown away to be fed to stock.

A similar food crime is committed in the polishing of rice. The best part of the rice is in the natural light brown coating. When this is removed in the polishing process, leaving practically pure starch, rice is no longer an adequate or satisfactory food. The same thing applies to the refining of sugar. White granulated, or fine white powdered sugar, does not contain the nourishing elements found in the juice of the sugar cane from which it has been made.

To a large extent, the nutrition loss involved in the refinement of food is due to the wastage of the mineral salts. Old books on dietetics, after discussing the importance of protein, fats and carbohydrates (sugar and starch), were accustomed to refer to these mineral salts under the collective term of "ash," and then to dismiss them. These organic minerals form only a very small percentage of any food, but they are a vitally important percentage, nevertheless. Because they are limited in quantity it is all the more important that they should not be eliminated from any of our foods.

Not only are mineral salts lost in the commercial manipulation of flour, rice, sugar, corn and other foods, but they are often lost, also, in the kitchen. The woman who boils her potatoes, cauliflower, peas, beans and other vegetables and then throws the water down the drain commits an equally serious food crime, inasmuch as these **mineral salts are, to a large extent, dissolved in the water and thus lost when the latter is thrown away.** What to do about it? These vegetables should be cooked in no more water than is necessary, and simmered down so that only a moderate amount of juice, which should be served and eaten with them, is left. Don't follow the cookbooks that tell you to boil your vegetables and then "drain." Too much cannot be said about the criminal stupidity of this wastage of **iron, lime, phosphorus and the many other organic mineral salts which Nature has so carefully built into the structure of plant life.** The same consideration applies to draining water from other foods.

To make this discussion of food as brief as possible, therefore, it is earnestly recommended that you endeavor to follow the plan of eating foods in their natural condition as nearly as possible. If cooked, they should be as unchanged as possible. Honey is a more perfect, more digestible and more satisfactory form of sweetening than sugar. Brown sugar, being less refined, is better than white sugar.

As foods contain elements which are destroyed by cooking, the diet should contain a liberal proportion of raw foods, such as lettuce, celery, watercress, onions, peppers, tomatoes and fruits. Fruits not only help digestion, but they are especially valuable for supplying mineral salts.

The question of meat eating is one which may be left to the individual with the caution that the use of large quantities of meat is neither desirable nor necessary to health. Nearly everyone would do better to eat one-fourth of the amount of meat which he consumes. It may even be just as well to **eliminate meat entirely, if one uses a sufficiency of eggs, cheese, milk or buttermilk in the diet. Lentils, beans and peas are also valuable protein foods, and may be used as substitutes for meat.**

Milk is the ideal food for infants and young children. It should continue to form the most important part of the diet of young children up to six or eight years of age, one quart a day being required for each child. Eggs are a substantial protein food and for tissue building may be classed with meat, fish, poultry, cheese, milk and buttermilk. Many men and women who do not care for milk will find buttermilk, or fermented milk, which answers the same nutrition requirements, more palatable and agreeable.

Constipation is an almost universal problem. It is invariably the direct result of improper diet and irrational habits of life. Given proper muscular activity, a natural diet and a sufficiency of water, constipation would be a rare condition.

What then is the victim of this stubborn and chronic complaint to do about it? The first thing is to revise the diet, using natural foods and especially a considerable amount of fruit and raw green salads. White bread is probably the greatest enemy of the constipation victim. An immediate change to whole-wheat, or graham flour and such whole-grain cereals as oatmeal and shredded wheat will be helpful. Rice, tapioca and spaghetti are likewise constipating. Macaroni, or spaghetti, with cheese, is particularly so, but when spaghetti and macaroni are served in the Italian style, with a plentiful sauce made of olive oil, tomatoes and onions, this objection is practically eliminated.

The drinking of a sufficient amount of water is an important factor in preventing constipation. The hot water suggested earlier in the chapter is very effective indeed. Laxatives or cathartics should never be used because of the detrimental after-effects. They tend to make the condition more stubborn. An enema should be used when necessary, although even an enema should be regarded as an emergency treatment. The refined mineral oil, which is sometimes known as Russian oil, and sometimes as liquid petrolatum, (petrolatum – I do not recommend, is a chemical) offers a very satisfactory means of relief and prevention. It is not assimilated, and serves merely as a lubricant. Old fashioned prunes is a healthy alternative.

The condition of the alimentary canal is such an important factor in the preservation of health that the above suggestions should be very carefully studied and assiduously followed. Keep at peace with your stomach and avoid constipation, and you will have little or no trouble in building up that condition of vigorous health which is conducive to the strength of your eyes.

CHAPTER XXIV

Eye Rest Through Sleep

THE health-building, strength-restoring influence of sleep is an important factor in those cases in which the condition of the eyes is particularly concerned.

Sleep restores the reserves of nerve force and gives an opportunity for exhausted tissues to rebuild and refresh themselves, and at the same time usually affords rest for the eyes. This is not always true, however, because one can strain the eyes during sleep. Persons with eye trouble, as well as all others who do not get the proper amount of rest from their sleep, should palm before retiring, in the manner described in "Errors of Refraction: Their Cure." How long the relaxation thus induced will continue in the individual case it is impossible to say, but some persons report great benefit from this practice.

Opinions vary as to the amount of sleep required. The truth is that different individuals vary in this respect. It is a well-understood principle among students of the subject that duration of sleep is not as important for constitutional purposes as depth of sleep. In other words, many hours of light sleep are not as refreshing as half that number of hours of profound slumber. Great depth of sleep means complete mental relaxation, whereas light sleep may mean dreams, or a degree of mental activity bordering on dreamland, which does not yield the same complete relaxation and the same degree of recuperation.

Spiritual – Physical and Sprit bodies are strengthened, energy restored, balanced while in deep stage sleep.
See Robert Monroe – Book – Journeys out of the Body and The Monroe institute in Virginia U.S.

There are two primary factors involved in healthful sleep. First, the surrounding conditions, and second, the condition of the slumberer himself.

Darkness and quiet are essential to refreshing sleep. One may train oneself to sleep in spite of more or less noise. Yet the more quiet and peaceful the surroundings, the easier it becomes to arrive at a condition of complete mental and nervous relaxation. Sounds tend to excite the nervous reactions, which are disturbing.

In the same way, light interferes with restful sleep, for even though the eyes may be closed the lids are not entirely light-proof and a certain amount of light penetrates. This light is more or less stimulating and prevents absolute relaxation of the optic nerves. Complete darkness is much more conducive to sound sleep and, for this reason, one should avoid having any light best that one should retire fairly early in the evening and rise early in the morning. Sleep in the late morning, during several hours of

daylight, is not conducive to complete rest. "Early to bed and early to rise," may not make a man wealthy and wise, according to the old saying, but it unquestionably does have some relation to making him healthy.

Fresh air is even more important than darkness or quiet as a factor in inducing restful sleep. The need for oxygen during the building-up processes of sleep is self-evident, but the influence of fresh air *as a means of enabling one to sleep more soundly* is not always appreciated. If you want to know what truly refreshing sleep, beginning as soon as the head touches the pillow, really is, try sleeping out of doors. The next thing to that is sleeping in a room with several windows wide open, so as to approximate the condition of outdoor life as nearly as possible.

In winter bodily warmth is a necessary factor in sleep. The feet, particularly, should be thoroughly warm. On the other hand, an overheated condition is always conducive to restlessness. Do not cover too heavily. The nerve pressure incidental to heavy coverings is disturbing. In other words, while warmth is necessary, one should have no more covering than is absolutely required to maintain warmth. Cotton blankets and quilts are extremely heavy, but have little warmth. Wool is light and, whether in the form of blankets or wool-filled quilts, is ideal for cold-weather use. Down comforters likewise provide warmth without weight. During the hot summer nights it is best to sleep absolutely without covering and sometimes even without any night apparel.

A reasonably hard bed with a good, firm mattress is preferable to undue softness of bedding. If one lies on one's back, it would certainly be better not to use a pillow. A pillow is likewise unnecessary if one sleeps on the chest, so to speak, or partially on one side. This is probably the best position for sound and refreshing sleep. If one sleeps on the side, then a pillow is desirable for comfort. Do not sleep on the chest/stomach because the neck becomes twisted, turned to one side causing muscle tension, leads to neck vertebrae misalignment. **Small soft** neck pillows or a soft roll of a **small** blanket edge under the neck can help keep the necks natural curve when sleeping on the back. When **sleeping on the side the sides of the neck should be straight.** A special neck pillow or the perfect amount of a soft edge of a blanket under the neck, (just the right amount, without causing the neck to pull up or down) can provide normal alignment. The natural curve in the back of the neck should occur on its own. If tension is felt, move onto the back. The blanket must be even on all areas to keep the support even. I never needed a neck pillow until after having a neck injury, and then after a bad, unprofessional chiropractor's alignment in Worcester, Massachusetts. Before that I just lied naturally, whatever is perfect comfort on a blanket. Never used a pillow. I believe many natural ways of sleeping are better. Learn to make your own soft, small neck pillows with a soft blanket and avoid expensive neck pillows. If the pillow or blanket is too large it can pull on the vertebrae, stress the nerves… in the neck especially if the neck has been injured.

The best remedy for sleeplessness is probably a hot foot bath, as it draws the blood away from the brain. This treatment may be supplemented by cold cloths applied to the forehead in case of mental stimulation, emotional excitement or congestion of the brain due to any cause. A drink of hot water or hot milk will draw the blood from the brain to the stomach.

A condition of normal muscular fatigue is always favorable to slumber, and if you have taken the exercises described in another chapter and spent sufficient time out of doors either in walking or in any other exercise, you can almost depend upon a condition of healthy fatigue that will enable you to sleep well.

The air bath is another invaluable means of soothing the nervous system and bringing about a condition favorable to sleep. Simply remove all clothing for a half hour before going to bed, providing the room is not too cold.

In many cases a walk in the open air just before bedtime is to be recommended. Although walking for the purpose of exercise should be brisk and vigorous in order to be beneficial, the walk before bedtime for the sake of inducing sleep will be more effective if taken at a leisurely gait, especially if deep breathing is practiced during a good part of the walk.

CHAPTER XXV

Fresh Air, Bathing and Other Health Factors

IT goes without saying that an outdoor nation will be infinitely more rugged than a race of people that lives chiefly indoors. We may not be altogether an indoor race, but we are far too much so. Great numbers of people can measure the average amount of time spent daily in the open air in minutes, whereas it should be measured in hours.

Outdoor life is one of the most potent of all factors in maintaining and restoring health. Pure outdoor air has a tonic effect upon the digestion, upon the quality of the blood, upon the nerves, upon the brain and upon the entire organism. Fresh air in large quantities is one of the first essentials to health.

Everyone should make it a point, therefore, to spend a certain part of each day in the open air, irrespective of the weather. It is not sufficient to spend fifteen minutes or a half hour out of doors. You should make it two or three hours at the very least, and more if possible. Many people will object that they cannot find time for such a purpose, but often it will be found that they devote more than the two or three hours in question to indoor recreation of one kind or another. It is a very simple plan to choose outdoor recreations in place of those taken indoors. Even motoring is commendable because it takes one into the open air.

The practice of bathing is one of the marks of civilization, although primitive peoples instinctively take to the water when they have the opportunity through pure enjoyment of the bath. Bathing has two functions. It serves as a means of cleanliness and as a tonic.

Cold baths may be said to be chiefly tonic in their influence. They are stimulating. They have a pronounced effect upon the circulation, and may be useful in strengthening the heart. They have, however, very little cleansing value, unless used in combination with plenty of soap.

A cold bath offers an ideal means of waking one up and toning up the nervous system, as well as arousing or stimulating an active circulation. In this respect it may supplement any exercise that one may take each morning. The cold bath should always follow the exercises which warm one up to such a degree that the sensation of the cold water upon the skin is a pleasure.

The benefit of a cold bath may be measured in a general way by the pleasure one finds in it. If the bath is something in the nature of an ordeal, if one dreads it and feels thoroughly chilled both during and after the experience, then it cannot be of any value. To those who are of too frail a constitution to be able to react or recuperate from a cold bath, it can not be recommended. It is absolutely necessary that one should react with the feeling of warmth and comfort immediately after.

Unless you are fairly rugged, therefore, do not attempt a cold bath except when you feel thoroughly warm, and can take it in a warm room. See that your hands and feet are not cold. Preliminary exercise is usually desirable for the sake of insuring thorough warmth. Following a hot bath also one is naturally disposed to enjoy cold water and a quick cold sponging or shower is usually desirable at such a time to close the pores.

A cold tub or cold shower will offer a rather strenuous form of cold bathing. If you are not vigorous enough for such measures, then try a sponge bath, if necessary, sponging only one part of the body at a time. A fairly good plan, if your recuperative powers are weak, is to take a preliminary hot foot bath, or to stand with the feet in hot water while taking a cold sponge. Do not try to use water that is too cold in the beginning. Use water of a moderate temperature at first and gradually accustom yourself to a colder bath. You will find it a delightful tonic when you have once hardened your body in such a way that you can thoroughly enjoy it.

A warm bath in soap and water is valuable not only for cleanliness, but for its quieting and soothing effect upon the nerves. A hot bath, in which classification may be placed any bath from 102 degrees up to 110 degrees, is very effective for breaking up a cold and for eliminating poisons from the system, in kidney trouble and various other diseases. A cabinet steam bath, or dry hot-air bath, will, to a large extent, serve the same purpose as a regular Turkish bath, but if a cabinet is unavailable an improvised Turkish bath may be arranged by means of a hot foot bath taken in a warm room while wrapped in blankets. Drinking hot water or hot lemonade will help. The hot water bath will, however, answer just as well in many cases and is far more convenient. It is best to use a bath thermometer so that you can determine the temperature beforehand.

Magnesium in Epsom Salts in the bath relaxes all body muscles. Helps bring movement to stiff joints and healing.

Air baths and sun baths are tonics of no small value, especially so far as the nervous system is concerned. Modern methods of clothing tend too much to smother the skin. Let your skin breathe. An air bath of half an hour or longer before going to bed, or at any other time of the day that may be convenient, will have a tonic effect upon the entire nervous system, besides stimulating the activity of the pores. The same is even more true of a sun bath. A little sunshine each day is almost a necessity. It may be said, however, that those of exceedingly fair skin should be careful not to expose themselves too much to the noonday sun in midsummer. The rays of the sun may be as harmful to blondes as they are beneficial to others.

A dry friction rub constitutes another very stimulating and refreshing form of dry bathing. This may be applied either with soft flesh brushes, a rough Turkish towel, or by vigorous rubbing of the entire body with the bare hands. Five minutes of this will have a splendid tonic effect, improving the circulation and also the smoothness and texture of the skin.

The condition of the skin and the care of the skin are important because this wonderful covering of the body is not merely an external coating, but an organ with very important functions. The skin constitutes one of the channels of elimination. Its health and activity are necessary to keep the blood pure. It is related to the nervous system in a most important way; our sense of touch is dependent upon its millions of infinitesimal nerve endings. Through the power of contraction or relaxation of this wonderful surface of the body, the circulation is controlled and the body enabled to adapt itself to the varying changes of the temperature. It will be seen, therefore, how and why the care of the skin is important.

For all these reasons the clothing that we wear has a decided effect upon the general health. The more porous it is, admitting the free circulation of air upon the surface of the body, the more satisfactory and healthful it will be found. Avoid tightly woven or air-tight garments. They do not permit of the "ventilation" of the skin. The loosely woven fabrics are also much warmer.

A very good general rule is never to wear any more clothing than is absolutely necessary. This does not mean that in severe winter weather one should go about in a chilled condition. It is better, however, to depend upon a good circulation for warmth than upon excessive clothing, or bed covering. In summer, the more nearly your clothing enables you to enjoy a continuous air bath the better.

Open-mesh linen or cotton underwear is especially recommended for summer. For those who work indoors heavy underwear is probably undesirable at any time of year, for the reason that homes and offices are usually heated to a summer temperature. Comfort outdoors should be secured by using sweaters, gaiters and overcoats.

Another factor in clothing of some importance and interest is the question of color. Black and dark-colored fabrics shut out the light, whereas white, tan, light gray and other light-colored goods permit the light to penetrate, thus giving one a light bath, so to speak, when in the sunshine. Light-colored clothes are superior for summer wear for the additional reason that they are cool. **White and light-colored materials reflect the heat and transmit the light.** Dark-colored clothes absorb the heat, but do not transmit the light. Black clothing in the sunshine is very hot indeed. It may be advantageous in winter for this reason. Some students of this and allied health problems have adopted the practice of wearing tan-colored or other light clothing the year round, holding that even during the evening the body receives some benefit from the electric light-rays.

CHAPTER XXVI

EYE HEADACHES

As already mentioned, the eyes and the whole nervous system are very intimately connected; and it is well known that a constant strain upon the eyes will induce a general condition of strain, nausea, backache, etc., in addition to frequent and sometimes severe headaches. Some physicians have gone so far as to assert that true and organic diseases have been induced in this manner; but this view is no longer generally held by the medical profession. Hewetson, Noyes, Weir Mitchell and others, however, have published numerous facts showing the close connection between defective eyesight and headache, with general nervous and physical impairment of the health; and when we consider the constant strain involved, the reason for this is obvious. Some of the early symptoms are a feeling of fatigue and tension, especially above the eyes, with indistinct and confused vision in reading, writing and other close work. Following this, slight headaches will be experienced, at the base of the brain; and these will be followed or accompanied by nausea, vertigo and general nervousness. Other physical and mental symptoms may follow. When these appear, it is high time to begin treatment of the eyes.

The usual treatment in cases of this kind is a prescription for glasses; and there is no doubt that relief has often been obtained by their use.

Such measures, however, are only palliative and not ultimately curative. When the external muscles are squeezing the eyeball out of shape, glasses may correct some of the results of that condition, and by so doing may make the patient more comfortable; but they can not relieve the fundamental trouble. On the contrary, as has already been shown, they must make it worse. The only real remedy is to be found in the methods described in "Errors of Refraction; Their Cure." In the absence of such treatment glasses may prove useful, in some cases. In others they fail entirely. If it seems necessary to resort to them, and there can seldom be any legitimate excuse for such a course, they should be carefully fitted by a competent oculist and should not be worn any more than is absolutely necessary, as they serve to confirm the eyes in their bad habits. Eye headaches can often be relieved in a short time by proper hygienic methods. It is hardly necessary to say that the general health should be built up. Massage of the back of the neck and head will often bring material and instantaneous relief from the pain, and cold wet compresses to these parts will soothe and relieve the local congestion. A salt eye bath often relieves.
Neck tension, headaches of all types affect the clarity, function of vision.
This chapter was repeated here in order to coincide with the original book contents/index.

CHAPTER XXVII

Eye Hygiene

MUCH that has been written about the care of the eyes is erroneous and misleading. We have been exhorted not to read in bed, and told with much detail just how the various positions in which the body and the book must be held disarranged our internal machinery. We have been warned against reading on the train, the only place, in many cases, where people have time to read. Even that delightful practice, reading at meals, has been condemned in unmeasured terms. We have been instructed as to the distance which should intervene between reading matter and the eyes, and even the angle at which the book we are reading, or the paper on which we are writing, should be adjusted. The effect of light has been discussed endlessly, and we have been warned against the evil effects both of too much and too little.

We have been told that reading was a dangerous practice at best, and that, if we must read, we should, as we valued our eyesight, avoid fine print, although the types of the newspapers are among those classed as too small to be safe in large quantities and we can't live without reading newspapers.

Most of us pay no attention to any of these instructions, reading when, where and how we please and can, and therefore, it is gratifying to learn that none of them have any material bearing upon the preservation of our sight. The essential thing is to learn how to use the eyes properly. Then all such details as the foregoing can safely be left to the inclination and convenience of the individual.

In the case of light there is much evidence to show that the views commonly held have no basis in fact.

Rabbit's eyes have been exposed to the most intense light known, avoiding heat, but subsequent examination of the eyes with the microscope revealed no change either in the retina, the optic nerve, or the brain. A teacher of fifteen years' experience complained that because her classroom was in the basement and the light poor, the sight of her pupils was worse at the end of every school year than it was at the beginning. The classrooms where the light was good, however, had the same experience; and when the Snellen test card was introduced into both the well-lighted and the poorly-lighted classrooms, and the children used it every day, the sight of all improved, regardless of lighting conditions. In Germany it was demonstrated by the statistics of Cohn and others that improvements in the lighting of the schools made in the hope of staying the progress of myopia did not have that effect.

These and other observations show that poor lighting has very little, if anything, to do with the production of eye defects.

The fact is that anyone who can read comfortably in a poor light is to be congratulated, and need not be afraid to continue the practice. If he were straining his eyes, he could not do it, whereas in a good light one can read in spite of the strain.

People who have perfect sight think very little about the light, but it is undoubtedly more comfortable to have it so arranged that no shadow is thrown upon the work, either from the head, hand, or any other object, and so that it shines upon the page which one is reading, or upon the desk at which one is writing, not into the eyes.

Protection of the eyes from strong light is not necessary. In fact, the light is beneficial, as we have already demonstrated. The glare from snow or water may be trying, and smoked or amber glasses will conduce to comfort, but, ordinarily, no harm will be done if they are not worn.

Since the moving pictures came in we have heard much about the strain imposed upon the eyes by this new appurtenance of civilization, and predictions of dire results to our already very bad eyesight, in consequence of our constant attendance upon these exhibitions, have been made. Theoretically, this view of the matter seems a reasonable one. The ordinary rate at which the film runs through the projecting machine is about a foot a second—sixteen pictures a second. That is to say, sixteen distinct pictures are thrown upon the screen in each second of time, and the shutter comes down and is raised that number of times each second also. Between each projected picture there must be a black period, for if this were not the case, the pictures would all run into one another, in a hopeless blur.

It might have been expected that these rapid alternations of light and darkness would be very trying to the eyes, and they often do produce much temporary discomfort, particularly in persons suffering from errors of refraction. Some years ago when the mechanical process involved was less perfect than it has since become, the strain was probably much greater than it is now. Today there is no reason for supposing that the movies are injurious to the eyes. On the contrary they have been found to be a great benefit. Instead of avoiding them, persons who do not suffer from them should go to them frequently, and those who do should accustom their eyes to them gradually, at the same time practicing the methods recommended in this book for the improvement of the vision. Often all that is necessary to relieve the strain is to close the eyes frequently, or look away from the screen, while viewing the pictures.

As for the dangers of fine print, those who understand the principles of central fixation will understand that it is easier, normally, to see small things than larger ones, and that the fear of fine print is, therefore, as baseless as the fear of light.

The fact is that the eye is a much less fragile instrument than we have generally supposed it to be. If properly used, it is fully able to withstand all the strains of modern life.

CHAPTER XXVIII

Test Your Own Eyes

IT does not require any special training, or even any expensive apparatus, to test the vision. With the aid of a Snellen test card anyone can test his own sight, and with the assistance of a second person a retinoscope can be used.

A test card, which is sometimes difficult to buy, accompanies this course. You can also make one for yourself by painting black letters of an appropriate size on a white background. Directions for using the card for the purpose of testing the vision are given in Chapter XI, "Saving the Sight of the Children." Each eye should, of course, be tested separately.

A retinoscope can be even more easily made than a test card, all the material required for the purpose being a small piece of looking-glass about one inch wide and three inches long. A small mirror that will answer the purpose can be bought at the five-and-ten-cent stores, and a glass-cutter, which is as easy to use as a pair of scissors, can also be bought at these stores. For a few cents, too, a glazier, or painter, will cut a piece of mirror glass of the right size. About three-quarters of an inch from the top of this mirror, and midway between the sides, scrape off the silver backing on an area a little larger than the lead of a lead-pencil. If it is a little larger, or a little smaller than this, it will not matter. By means of the mirror the observer reflects light from a lamp, or other source of light, into the eye which is being examined, and the opening serves as a sight-hole through which he looks into the pupil. The room must be darkened, and the light placed a little behind and over the head of the subject.



Fig. 8. The Usual Method of Using the Retinoscope
The observer is so near the subject that the latter is made nervous, and this changes the refraction.

Testing the eye with the retinoscope.



A simple homemade retinoscope, made by scratching a small hole in the silver back of a small mirror, to be used for self-testing in conjunction with another larger mirror.

When the observer, who stands or is seated a few feet from the subject, looks through the sight-hole, he observes that the pupil, instead of being black, is more or less red. This is the color of the retina, which is not ordinarily seen, because the eye of the observer is not placed in position to receive the rays of light coming from the interior of the eye. When the light is moved slowly in different directions across the pupil, a dark shadow will be observed at the edge of the retina.

If the eye is near-sighted, this shadow moves in a direction opposite to that of the movements of the mirror. If it is far-sighted it moves in the same direction the mirror moves. If it is normal, the shadow remains stationary. When the shadow moves in one direction in one meridian, and in the opposite direction in another, the eye has mixed astigmatism. The shadow may, for instance, go with the light when the mirror is moved up and down, and in an opposite direction to it when the mirror is moved from side to side. In the case of other kinds of astigmatism the observer may note that the shadow moves more decidedly in one meridian than in the other. When errors of refraction are corrected by glasses there will be no movement of the shadow.

The retinoscope can be used as an ophthalmoscope simply by lessening the distance between the observer and the subject. The principle is just the same as that involved in looking through a keyhole into a room. The closer you come to the keyhole the more you will see. At a distance of about half an inch, by looking a little toward the nasal side of the eye, one will begin to see the optic nerve, an area whiter than the rest of the interior of the eyeball and apparently about one-quarter of an inch in diameter. Radiating from the center one sees fine streaks of branching blood vessels, the darker being the veins, the lighter the arteries.

It requires no experience to make these observations, and children of ten have used the instrument successfully. The larger the pupil the easier it is, just as in the case of the keyhole. The larger the opening the more one sees in both cases. The normal eye is more easily examined than a defective one, and young adults than older or younger persons. **The light should be thrown on the blind spot, the entrance of the optic nerve, as the pupil contracts when it is thrown on the center of sight.** The red light should be seen constantly in the pupil. When it is lost the observer should withdraw a little and get it again, afterward bringing the instrument up close to the eye.

There are also various other ways in which the vision can be tested. If the subject, when looking at the letters on the Snellen test card, can remember anything blacker, the vision is imperfect, no matter what the light, or the distance. Another way is to squint the eyes, or to look through a small opening, such as a hole in a card, or an opening between the fingers. If this enables you to see better, your vision is imperfect.
Squinting- squeezing the eyelids close together, looking out of the small space between the lids brings a brief improvement in vision while the eyes are squinting, but leads to eye muscle tension, increased blur. Shift the eyes to replace squinting, staring. Think of something pleasant, let the mind drift, happy thoughts. This prevents effort to see, strain and then the vision clears.

Everyone should have the means of making these simple tests, for eye troubles when not accompanied by discomfort, are insidious, (insidious= slowly and subtly harmful or destructive) and may make considerable progress before they are discovered. This is particularly apt to be the case if one eye is principally affected. So long as one has one fairly good eye to see with one may not observe that the other is falling behind, and when an eye once begins to do this it can hardly fail to lose function rapidly, simply because it does not get enough work to do. If errors of refraction are discovered at the beginning, they can be quickly corrected by the methods presented in this book; but if they are allowed to continue for years, they may be very difficult to cure. **And if the eye is not allowed to develop any permanent errors of refraction and the general health is satisfactory, one need have no fear of organic diseases.**

CHAPTER XXIX

A Final Word to Those Who Wear Glasses

PERSONS coming to this country from Europe are always struck by the number of people using artificial aids to vision, for the United States seems to have pre-empted the position formerly held by Germany as the land of the eyeglass. Thousands of people in this country wear glasses whose vision for reading and distance is normal without them. What more they could expect of their eyes and why they wear glasses it is difficult to understand. They will tell you that glasses remove strain, enable them to read longer, or to do work that their eyes could not be expected to do without them. The fact is, as has been explained, that glasses can never remove strain, but must, on the contrary, be a cause of strain. It is also a fact that glasses, though fitted by the best of oculists, can never give as good vision as the normal eye enjoys without them.

Or they will tell you that they put on glasses in the first place because they were subject to frequent headaches, and as the pain was above the eyes, they were convinced that they were due to eye strain. This may have been true, because a very slight error of refraction will sometimes cause a great deal of discomfort. But the trouble may have been a temporary one that would have passed away if the patient had not resorted to glasses, and **headaches may be due to many things besides eye strain: improper diet, indigestion, constipation, lack of fresh air, insufficient exercise, sinus pressure, migraine and other headaches, neck vertebrae misalignment of plain old extreme neck, shoulder... muscle tension and too little sleep being the usual causes.** Headaches and the other causes listed above are a main cause of unclear vision. Glasses have probably caused a great many more headaches than they have cured, and an oculist's prescription for those conditions is extremely illogical. A correction of their harmful, energy-dissipating habits of living would soon convince the majority of such persons that there was little or nothing wrong with their eyes. All that stands between them and eye freedom, probably, is a few days of discomfort, the natural consequence of the readjustment to ocular self-dependence.

Whether the vision is normal or not, everyone who wears glasses should discard them as quickly as possible, and those who understand the facts will surely not delay a day longer than is necessary in doing so. It can be done in all but a very few cases, and has been done by thousands. **If one makes his living by the use of his eyes, and cannot see to do his work without glasses he cannot, obviously, discard the latter at once, but some people are able to make progress in spite of this handicap, reducing the strength of the lenses as their refraction improves,** if necessary, while others may be able to

make the necessary start during a vacation. The transition from glasses to no-glasses may be unpleasant, but usually the discomfort is not serious, and if glasses can be completely discarded, does not last long. **The wearing of glasses for work and other necessary purposes is a complication that had better be eliminated if it is in any way possible, because the refraction may change very quickly, and we all know how uncomfortable it is to put on glasses not adapted to our eyes for even a moment.** Myopic persons have a great advantage in the fact that they can see at the near-point without their glasses, and near vision is the kind most needed under modern conditions. Hypermetropic persons can often see well enough at the near-point to read without glasses, but are more likely to have headaches when they first try to get on without them than are the myopic.

Most people heartily dislike glasses, because of their effect on personal appearance, their inconvenience, and the imperfect vision secured through their use. Persons who have worn them for any length of time know by the evidence of their own senses that their eyes have grown steadily weaker under their influence. That the conditions for which they are worn are curable cannot be disputed by anyone who will impartially examine the facts. Yet, most people cannot be persuaded to give the new way a trial. Ignoring even the facts of their own experience, they cling to their glasses for fear they may lose their eyesight if they go without them. The process of cure, moreover, is often tedious, though in the majority of cases it takes only a moderate amount of time, and many people would rather put up with the inconvenience of glasses than make the necessary effort to get rid of them. Modern Bates Teachers teach easy, relaxed Correct Vision Habits to imitate, activate automatic, normal, correct eye function, clear vision. Reduced, weaker and weaker 20/40… less straining eyeglass lenses are used if needed until vision improves and the student can to go without glasses.

For all these reasons the gospel of no-glasses spreads slowly, and opticians who have accepted it say they have no fear of its injuring business.

There remains, however, a considerable minority who insist on doing their own thinking, no matter how much their conclusions may be opposed to the teaching of tradition and authority, and who are willing to take as much trouble as may be necessary to preserve that most precious of all possessions, their sight. To them this book is addressed, and on them we must depend to lead the way where a new generation will follow.

[THE END]

PART XXVII

Eye Hygiene

MUCH that has been written about the care of the eyes is erroneous and misleading. We have been exhorted not to read in bed, and told with much detail just how the various unnatural positions in which the body and the book must be held disarranged our internal machinery. We have been warned against reading on the train, the only place, in many cases, where people have time to read. Even that delightful practice, reading at meals, has been condemned in unmeasured terms. We have been instructed as to the distance which should intervene between reading matter and the eyes, and even the angle at which the book we are reading, or the paper on which we are writing, should be adjusted. The effect of light has been discussed endlessly, and we have been warned against the evil effects both of too much and too little. Most of us pay no attention to any of these instructions, reading when, where and how we please and can, and therefore, it is gratifying to learn, that none of them have any material bearing upon the preser-

vation of our sight. The essential thing is to learn how to use the eyes properly. Then all such details as the foregoing can safely be left to the inclination and convenience of the individual.

In the case of light there is much evidence to show that the views commonly held have no basis in fact.

Rabbit's eyes have been exposed to the most intense light known, avoiding heat, but subsequent examination of the eyes with the microscope revealed no change either in the retina, the optic nerve or the brain. A teacher of fifteen years' experience complained that because her classroom was in the basement and the light poor, the sight of her pupils was worse at the end of every school year than it was at the beginning. The classrooms where the light was good, however, had the same experience; and when the Snellen test card was introduced into both the well-lighted and the poorly-lighted classrooms, and the children used it every day, the sight of all improved, regardless of lighting conditions. In Germany it was demonstrated by the statistics of Cohn and others that improvements in the lighting of the schools made in the hope of staying the progress of myopia did not have that effect.

These and other observations show that light has very little, if anything, to do with the eye-

sight becoming defective. On the contrary, reading by a poor light successfully is a rest to the eyes because it cannot be done unless they are free from strain, while in a good light people with defective eyesight can read in spite of the strain.

People who have perfect sight think very little about the light, but it is undoubtedly more comfortable to have it so arranged that no shadow is thrown upon the work, either from the head, hand or any other object, and so that it shines upon the page which one is reading, or upon the desk at which one is writing, not into the eyes.

Protection of the eyes from strong light is not necessary. In fact, the light is beneficial, as we have already demonstrated. The glare from snow or water may be trying, and smoked or amber glasses will conduce to comfort, but no harm will be done if they are not worn.

Since the moving pictures came in we have heard much about the strain imposed upon the eyes by this new appurtenance of civilization, and predictions of dire results to our already very bad eyesight, in consequence of our constant attendance upon these exhibitions, have been made. Theoretically, this view of the matter seems a reasonable one. The ordinary rate at which the film runs through the projecting machine is about a foot a second—sixteen pictures a second. That

is to say, sixteen distinct pictures are thrown upon the screen in each second of time, and the shutter comes down and is raised that number of times each second also. Between each projected picture there must be a black period, for if this were not the case, the pictures would all run into one another, in a hopeless blur.

It might have been expected that these rapid alternations of light and darkness would be very trying to the eyes, and they often do produce much temporary discomfort, particularly in persons suffering from errors of refraction. Some years ago when the mechanical process involved was less perfect than it has since become, the strain was probably much greater than it is now. Today there is no reason for supposing that the movies are injurious to the eyes. Instead of avoiding them it is well to go to them frequently, practice central fixation and become accustomed to the flickering light. Afterward other lights and reflections from smooth surfaces will be less annoying.

The fact is that the eye is a much less fragile instrument than we have generally supposed it to be. If properly used, it is fully able to withstand all the strains of modern life.

PART XXVIII

Test Your Own Eyes

IT does not require any special training, or even any expensive apparatus, to test the vision. With the aid of a Snellen test card any one can test his own sight, and with the assistance of a second person a retinoscope can be used.

A test card, which is sometimes difficult to buy, accompanies this course. You can also make one for yourself by painting black letters of an appropriate size on a white background.

A retinoscope can be even more easily made than a test card, all the material required for the purpose being a small piece of looking-glass about one inch wide and three inches long. A small mirror that will answer the purpose can be bought at the five-and-ten-cent stores, and a glass-cutter, which is as easy to use as a pair of scissors, can also be bought at these stores. For a few cents, too, a glazier, or painter, will cut a piece of mirror glass of the right size. About three-quarters of an inch from the top of this mirror, and midway between the sides, scrape off the silver backing on an area a little larger than



Testing the eye with the retinoscope.

the lead of a lead-pencil. If it is a little larger, or a little smaller than this, it will not matter. By means of the mirror the observer reflects light from a lamp, or other source of light, into the eye which is being examined, and the opening serves as a sight-hole through which he looks into the pupil. The room must be darkened, and the light placed a little behind and over the head of the subject.

When the observer, who stands off a few feet from the subject, looks through the sight-hole, he observes that the pupil, instead of being black, is more or less red. This is the color of the retina, which is not ordinarily seen, because the eye of

the observer is not placed in position to receive the rays of light coming from the interior of the eye. When the light is moved slowly in different directions across the pupil, a dark shadow will be observed at the edge of the latter. If the eye is near-sighted, this shadow moves in a direction opposite to that of the movements of the mirror. If it is far-sighted it moves in the same direction. If it is normal, the shadow remains stationary. When the shadow moves in one direction in one meridian, and in the opposite direction in another, the eye has mixed astigmatism. The shadow may, for instance, go with the light when the mirror is moved up and down, and in an opposite direction to it when the mirror is moved from side to side. In the case of other kinds of astigmatism the observer may note that the shadow moves more decidedly in one meridian than in the other. When errors of refraction are corrected by glasses there will be no movement of the shadow.

The retinoscope can be used as an ophthalmoscope simply by lessening the distance between the observer and the subject. The principle is just the same as that involved in looking through a keyhole into a room. The closer you come to the keyhole the more you will see. At a distance of about half an inch, by looking a little toward the inside of the eye, one will begin to see the optic nerve, an area whiter than the rest of the

interior of the eyeball and apparently about one-quarter of an inch in diameter. Radiating from the center one sees fine streaks of branching blood vessels, the darker being the veins, the lighter the arteries.



A simple home-made retinoscope, made by scratching a small hole in the silver back of a small mirror, to be used for self testing in conjunction with another larger mirror.

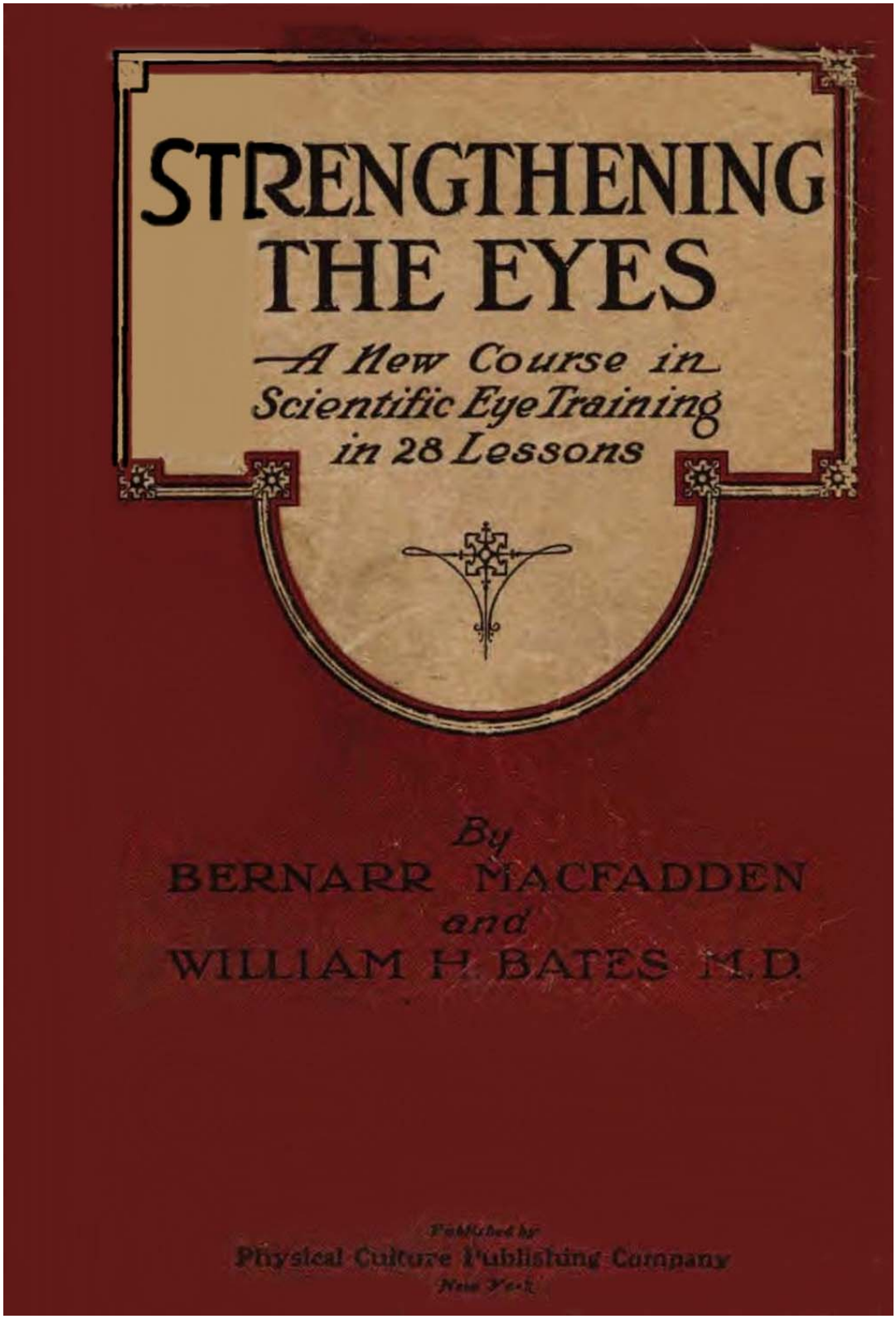
It requires no experience to make these observations, and children of ten have used the instrument successfully. The larger the pupil the easier it is, just as in the case of the keyhole. The larger the opening the more one sees in both cases. The normal eye is more easily examined than a defective one, and young adults than older or younger persons. The light should be thrown on the blind spot, the entrance of the optic nerve, as the pupil contracts when it is thrown on the center of sight. The red light should be seen constantly in the pupil. When it is lost the observer should withdraw a little and get it again, afterward bringing the instrument up close to the eye.

The Snellen test card is an arrangement of letters and figures

of different sizes, and the distance at which the normal eye can read each row is marked in small figures above it. Letters half an inch square should be read in a good light at thirty feet by the normal eye, and if they can be read only at fifteen feet the vision is half normal and would be indicated by the fraction 15/30, whereas 30/30 would indicate that the sight was normal. Letters to be read at two hundred feet are about 3½ inches square and those to be read at fifteen feet ¼ inch square. Each eye should be tested separately.

There are also various other ways in which the vision can be tested. If the subject, when looking at the letters on the Snellen test card, can remember anything blacker, the vision is imperfect, no matter what the light, or the distance. Another way is to squint the eyes, or to look through a small opening, such as a hole in a card, or an opening between the fingers. If this enables you to see better, your vision is imperfect. A third method is to look at any distant object from the window of a moving train—a tree, an animal, a house, etc.—and try to remember a perfectly black period. If you can not do so, your vision is imperfect. The ability to remember anything else will serve as a test, but the period is the most convenient object to use for

the purpose, as with it the accuracy of one's memory can always be tested. If the train is moving very rapidly the ability to remember the period will be impaired when the sight is imperfect at the same time.


STRENGTHENING
THE EYES
A New Course in
Scientific Eye Training
in 28 Lessons
By
BERNARR MACFADDEN
and
WILLIAM H. BATES M.D.
Published by
Physical Culture Publishing Company
New York

Blue edits in this book are by Clark Night. Most of the edits are to provide the Original and Modern Bates Method opinion on a few Eye Exercises in this book. Dr. Bates does not teach eye exercises. Bates Method teaches relaxation of mind, body, eyes, eye muscles, deep, perfect and dynamic, active relaxation, how to imitate normal, natural eye movement, functions to bring the eyes, brain, body back to normal function with clear vision.
I also notice some of Bernarr MacFadden's exercises are similar to Yoga Eye exercises. Bates teachers state that some yoga eye exercises, staring, eye immobility, forcing the eyes to remain immobile, in one position cause eye muscle tension, strain unclear vision. Bates Method prefers to teach relaxed, natural, eye movement.

When I speak of moving the head/face with the eyes I am referring to vision, looking at objects in the visual field; moving the attention from object to object, part to part on a object.
It is normal for the eyes to move up, down when trying to remember something or thinking other specific thoughts, emotions without the head/face moving with the eyes. This is natural.
It is also normal for the head/face to move with the eyes when this occurs.
See example; EFT (Emotional Freedom Technique) Acupressure/karate Pressure Points exercise at -
http://www.youtube.com/watch?v=6i33V2EcVlY&feature=related
Notice that the mans eyes move easy and he does not apply tension, not forcing the eyes to remain for a long time in one position. EFT is a successful method to release negative emotions, thoughts, energy blocks in the mind, body, eyes. This relaxes the mind, body, eyes, returns the brain, eyes to normal function, clear vision.
Many cases of unclear vision are caused by a stressful past or present emotion, experience, situation, way of thinking. See our other books for more methods.

I do not mean to discredit Mr. MacFadden. He has contributed much to eye health in this book. Edits are only to state new, modern improvements in Natural Vision Improvement.

For complete, true, old and new Bates Method books I advise - in historical order:

+The 'Cure of Imperfect Sight by treatment Without Glasses' and 'Better Eyesight Magazines' by Ophthalmologist William H. Bates.
+'Use Your Own Eyes' and 'Normal Sight Without Glasses' by William B. MacCracken M.D.
+Sight Without Glasses by Dr. Harold M. Peppard.
+Relax and See by Clara Hackett.
+'Help Yourself to Better Sight' and 'A Quick Guide to Better Vision; How to Have Good Eyesight Without Glasses' by Margaret Corbett.
+The Art of Seeing by Aldous Huxley.
+Natural Vision Improvement by Janet Goodrich and her two children's eyesight books.
+Relearning to see and Better Eyesight by Thomas Quackenbush.
Even a few of the older books contain methods that have been improved/changed.

More books listed in our main book.

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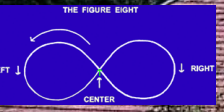

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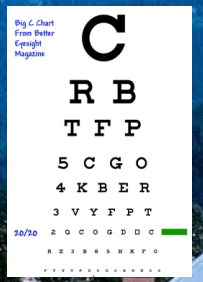

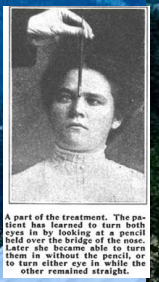
A part of the treatment. The patient has learned to turn both eyes in by looking at a pencil held over the bridge of the nose. Later she became able to turn them in without the pencil, or to turn either eye in while the other remained straight.

Audio Video

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Dr. William H. Bates - M. D. Ophthalmologist. Eye, Ear, Nose & Throat. Discovered the True Principles of the Eyes Function, Original Bates Method of Natural Eyesight Improvement. 1860-1931.



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Ophthalmologist
William H. Bates

Do It Yourself - Natural Eyesight Improvement Original and Modern Bates Method


Emily C. Lierman Bates

Improve the clarity of eyesight to 20/20 and clearer at all distances, close and far with; The Bates Method of Natural Eyesight Improvement discovered and taught by Ophthalmologist William Horatio Bates This website is dedicated to Dr. Bates and Emily C. Lierman (A. Bates). It is written by a Bates Method Natural Eyesight Improvement Graduated Student and Self-Trained Bates Teacher that has kept her eyesight 20/20 and clearer for 37 years using the Bates Method - Original and Modern Natural Eyesight Improvement. The author preserves Dr. Bates and his wife, assistant Emily Bates' books, magazines, medical articles and teaches friends, family, the public how to obtain clear eyesight, healthy eyes. *Free Training.* See Author's Certification, 5 Schools, Driver's Licenses-proof of clear eyesight here;

http://cleareyesight-batesmethod.info/id60.html http://www.cleareyesight-batesmethod.info/id95.html

Free Original and Modern Bates Method and other Bates derived Natural Eyesight Improvement lessons with diagrams for fast, easy learning, clear eyesight are posted on this website. See Navigation Page # 1 < for first training starting with the cause (strain, tension, *eyeglasses*) and correction of unclear eyesight.



First lesson; See the cat. The eyes blink. See the green house; Move 'Shift' the eyes, 'mental-visual attention' part to part on a object and blink, relax for clear eyesight. (See navigation page 5.)







Read Ophthalmologist Bates 'True Life Story', discovery and practice of The Bates Method of Natural Eyesight Improvement and his 'Battle with the Optical Industry, Eye Doctors, Surgeons' for the right to practice, teach and preserve Natural Eyesight Improvement for all people on his *Better Eyesight Magazine Page* ; Dr. Bates original books, 132 magazines are available for free download/printing. Click Here for his *On-Line Magazines with Language Translator, Speaker*. An Adobe PDF E-Book version and Paperback Illustrated with 500 Pictures and Photos of all Dr. Bates Original Magazine pages attached can be purchased. Better Eyesight is a monthly magazine Dr. Bates wrote, published from 1919 to 1930. The magazines contain true life stories of his patients, their various eye, vision conditions and the many natural treatments, practices Dr. Bates applied without use of eyeglasses, eye surgery, drugs to restore their eyesight to 20/20 and clearer at all distances. Myopia, Presbyopia, Farsight, Astigmatism, Cataracts, Glaucoma and other eye conditions were cured.

Read the *Bates Method history*, Dr. Bates life, books, the best teachers trained by Dr. Bates (For best webpage view; Click Here)

Most Eye Doctors, Surgeons, Optical businesses hide the truth about Natural Eyesight Improvement. Eyeglasses, contact lenses are addictive, lead to stronger and stronger eyeglass lens prescriptions, increased blur, astigmatism, cataracts, macula degeneration, detached retina and other eye health, vision impairment. Laser and other cornea eye surgeries cause a variety of vision impairments and many people have developed blindness after the surgery.

Natural Eyesight Improvement Teachers Must Give Free Training. Honest teachers will charge a decent price. Choose a teacher carefully. Dishonest Teachers hide-withhold training until a high price is paid. They are secretive about their sources and hide Ophthalmologist Bates Books, Better Eyesight Magazines, Medical Articles; the true source of Natural Eyesight Improvement. There are hundreds of schools, websites, advertising Natural Eyesight, Vision

Surgery, Most Cataract Surgeries, Contact Lenses.
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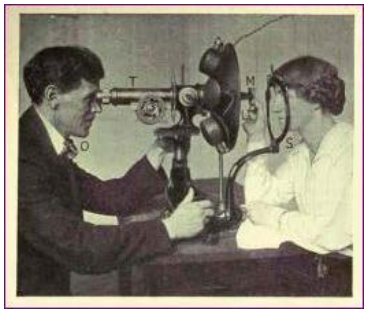
HISTORY
The Bates Method, Natural Eyesight Improvement - Best Teachers, Books, Websites, Blogs, Training, variety of Information. 1800's, 1901 to Present Date

BETTER EYESIGHT



COLOR BREATHING RELAXATION CHART

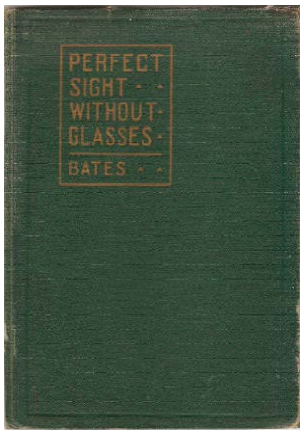
Practice Abdominal Breathing, Palming, Color Visualization, Deep Relaxation and Correct Vision Habits in the Alpha, Theta and Delta brain wave states with the Color Breathing Relaxation Chart to relax the mind, eyes, eye muscles, neck and body for clear eyesight. Notice that eyesight is clear when the mind, body, eyes are relaxed, in a positive state. See chapter 22-23.



Improvement for about $40.00 to $500.00+ and up to $7000.00 to be Trained, Certified as a Natural Vision Improvement Teacher. Very few provide free, complete, genuine training. A teacher on the east coast of the U.S. in Massachusetts raised her price for my Teacher Training, Certification to $5500.00 stating it may go higher when she realized who I was, that I teach for free, place everything I learn about Natural Eyesight Improvement on this website and in books. A few Graduated Teachers have told me their Teacher Training School content was basically the same as the Student Course.

I understand that teachers must charge a fee to exist as a teacher, pay their bills for housing... but some teachers are becoming as greedy as the Optical, Medical, Drug Industry. There are teachers that have organized together and are trying to raise the price to be trained as a Bates Method Natural Vision Improvement Teacher to $10,000.00 and up and may be trying to pass laws preventing students, the public from being teachers unless they pay this price. If that law passes, the price will be raised again. This is exactly like the corruption that exists in the Medical Profession, Drug companies. Colleges are corrupt, charging thousands of dollars to be a Doctor, Optician, Optometrist, Ophthalmologist... 30 to 40 thousand dollars for the first year of Optometry College! Only the wealthy can go to college.





**It is legal for a mother, father to teach a child to walk, read, learn.
Teaching the Bates Method is a human right.**

A person that has clear eyesight, successful Bates Method Natural Eyesight Improvement experience can teach other people to obtain clear eyesight. Dr. Bates describes in his books, magazines how many patients, (including children) cured of unclear vision teach others to see clear. Many people were trained to be Bates teachers. Read the *True Story of the Two Little Girls that Restored a Blind Mans Eyesight*' in the Oct. 1925 Magazine Issue. Another article describes how a child cured another child of crossed eyes. Many people that have never been taught the Bates Method begin to use it naturally, an automatic eye, brain function (especially when eyeglasses are avoided) and their eyesight improves because; 'it is the normal, natural function of the eyes.' Removing the eyeglasses, then learning how to Shift, understand Central-Fixation and practice a little Switching is often all that is needed to return the vision to 20/20 and clearer at all distances. Relaxation is a main practice. When eyeglasses are avoided, relaxation occurs automatically. Memory, imagination, all functions of the visual system are perfect as the Bates Method is applied and the eyesight improves.

Here is the main practice; #1, #2, #3, #4a, #4b, #5, #6, #7, #8, #9, #10, #11, Movement, posture... are also effective practices.

Sailors have used the Bates Method instinctively to navigate the ocean for hundreds of years. People with clear Eyesight use it all the time.

**Clear Eyesight is the Birthright of All People.
Clear Eyesight Improves the Quality of Life.**



The search bar on the bottom of this page is for searching this website for specific vision improvement information. Example; Type in the word 'Nearsight or Myopia' to find natural treatments for unclear distant vision. If the answer is not on the website; do word search in the Adobe Reader PDF E-books.

Most pictures on this website are drawn by the author. The pictures prove that Natural Eyesight Improvement works! The author is 57 years old and has clear close and distant vision (no eyeglasses). Pictures are drawn by hand, with the eyes 5+ feet away and up to 3,2,1 feet, 10 inches, 6 to 1 inches from the eyes seeing the fine details of pictures clear on paper. Author, Clark Night was cured of unclear close vision (presbyopia) at age 40 and distant vision improved to clearer than 20/20 in San Francisco, California by Thomas Quackenbush, one of the most skilled Bates Natural Vision Improvement Teachers, author of the book Relearning to See, Improve Your Eyesight Naturally (http://www.naturalvisioncenter.com/) and the teacher that preserved and brought Dr. Bates 'Better Eyesight Magazine' to the modern public. Before this time the magazines were destroyed and hidden from the public. Other Modern Natural Vision Improvement teachers before him did not provide their students with access to Better Eyesight Magazine. Better Eyesight Magazine is the original source of the Bates Method, and true Natural Vision Improvement. See video of his book, my experience in his school here; http://www.youtube.com/watch?v=Wy7666JJBO0

The print size for this website is small/medium to enable people with unclear eyesight to see it. The Bates Method teaches that small and fine print is easier to read,

MAGAZINE By Ophthalmologist William H. Bates', Introduction. 132 Issues, July 1919 to June 1930. Original Training, Cures from the Eye Doctor that Discovered Natural Vision Improvement

BETTER EYESIGHT MAGAZINE - Entire 132 Issues on One Page or Link to the Main Magazine Website, Individual Monthly Issues. Read, Listen Free on the Internet in any Language

AUDIOS For the Blind, Low Vision - Better Eyesight Magazine Treatments; Myopia, Presbyopia, Cataract Glaucoma, Retina Health, Strabismus, Astigmatism...

Dedication to My Mom Nancy

Native American Videos - Natural Life=Clear Sight

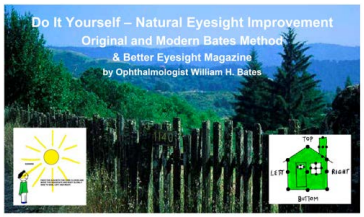
SKYPE, GOOGLE Live Video on the Internet - Telephone Natural Eyesight Improvement Training. Student and Group Training

1 - Natural Eyesight Training Starts Here, Page #1 to #40. MENTAL STRAIN, EYE MUSCLE TENSION CAUSES UNCLEAR EYESIGHT. Dangers of Laser Eye Cornea Surgery, Eyeglasses and Contact Lenses

2 - STRONG EYEGLASSES = Addiction, Progressive Vision, Eye Impairment Verses REDUCED,

relaxes the mind, eyes, improves central fixation and the clarity of eyesight at close and far distances. Change the print to smaller or larger size using the settings on the Internet server tool bar.
Text is in a variety of colors. Color improves the function of the brain with the eyes.

For people that are too busy to read this entire website; navigation page - chapter 9 describes the Ten Correct, Relaxed, Natural Vision Habits. These are the basic Bates Method activities that produce clear eyesight. Practice them in a relaxed, easy manner. Correct, Relaxed, Vision Habits are the normal function of the eyes. Practicing Correct Vision Habits 'Shifting, Central-Fixation'... is the act of imitating normal eye, brain (visual System) function that occurs when eyesight is clear. This 'practice' will gently coax the eyes, brain back to correct, normal function. After practice of Correct Vision Habits, the eyes, brain, eye muscles, entire visual system will activate correct vision habits, automatically, subconsciously (without the person thinking about it, without practicing) resulting in clear vision.



Video-Click Here

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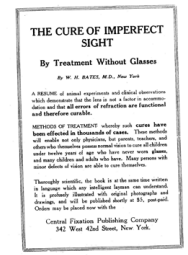
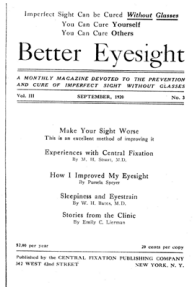
Natural Eyesight Improvement, Correct Vision Habits and other activities on this website are derived from Ophthalmologist Bates 'Better Eyesight Magazine' (11 years, 132 monthly issues), his books & Original, Modern Bates Teachers training, classes.

Click the pictures for Free Natural Eyesight Improvement Training Videos. 100 YouTube Videos. Videos show the internal Paperback, Kindle & PDF E-book chapters, pages for 'Do It Yourself-Natural Eyesight Improvement-Original and Modern Bates Method' and other books. All videos provide training steps for clear eyesight, guide you though the book chapters.


THE CURE OF IMPERFECT SIGHT

By Treatment Without Glasses

By W. H. BATES, M.D., New York


Imperfect Sight Can be Cured *Without Glasses*
You Can Cure Yourself
You Can Cure Others

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. III SEPTEMBER, 1920 No. 3

Make Your Sight Worse
This is an excellent method of improving it

Experiences with Central Fixation
By W. H. Bates, M.D.

How I Improved My Eyesight
By Pamela Smyser

Sleepiness and Eyestrain
By W. H. Bates, M.D.

Stories from the Clinic
By Emily C. Lierman

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Public GuestPage - Live Training, Share Natural Vision Improvement Experiences, News

WEAKER, TEMPORARY EYEGLASS LENSES = Vision, Eye Health Improvement.
EYEGLASSES Low Cost Reduced 20/40, 20/50 Weaker Prescription Lenses by Mail & Behavioral Optometrists.
Pass the Drivers License Eyesight Exam - Practice on the Govt. RMV, DMV... Eyecharts

3 - HUMAN EYE Function, Anatomy, Light Rays, Cornea, Iris-Pupil, Lens, Retina, Macula, Fovea, Optic Nerve, Eye Muscles...

4 - Front View of Eye. Pupil, Iris, Ciliary, Lens, Sclera.., Outer Eye Muscles; Oblique, Recti. THE EYE CHANGES LENGTH LIKE A CAMERA (with the lens) TO FOCUS CLOSE-FAR

5 - DO IT YOURSELF NATURAL EYESIGHT IMPROVEMENT; Practice Shifting and Other Relaxed, Natural, Correct Eye-Vision Functions.
The IMAGINARY NOSEFEATHER

Play with the Moving Pointer to get the Eyes Shifting, Relaxed. Move with the Figure Eight

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Ophthalmologist William H. Bates & The Bates Method History - Natural Eyesight Improvement, Better Eyesight Magazine - Free Sample - Click Here

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Better Eyesight Magazine Article by Dr. Bates - Click Here

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Watch the E-Books Page for new editions, methods, pictures. New pictures, practices added to this website are placed in the new book editions.

Dr. Bates Better Eyesight Magazines contain hundreds of different natural treatments he and his clinic assistant, wife Emily Lierman/Bates and other eye doctors applied to cure; unclear distant and close vision (myopia/nearsight, farsight), astigmatism, cataracts, glaucoma, cornea scars, wandering/crossed eyes, and other eye problems.
Dr. Bates discovered Natural Eyesight Improvement over 100 years ago in the 1800's.
The Optical and Medical Industry destroyed Dr. Bates books, magazines after his death in an attempt to hide the truth about Natural Eyesight Improvement from the public.
The Optical, Medical Industry prefers to sell eyeglasses, dangerous cornea laser eye surgery, other eye operations and drugs. They continue to suppress the Bates Method. They bribed dishonest politicians to pass laws preventing all people from teaching Natural Eyesight Improvement.
Due to Modern interest in Natural Cures, Dr. Bates magazines, books, work has been recovered from individual owners and brought back to the public.

Author Clark Night's Training is derived from 5 different Original and Modern Bates Method Natural Eyesight Improvement courses, study of 50+ Natural Eyesight, optometry, ophthalmology, natural healing, movement and other books. 38 years of study, successful application. Started the Bates Method in Tantasqua high School, 1974.

This website keeps Free Natural Eyesight Improvement available to the public. Part of the profits from book sales, donations are given to help the blind, visually disabled, Guide Dog Schools for the Blind, Disabled Military Vets, Perkins School for the Blind, Pet shelters for animal eye... injuries, adoptions. See page 38.
Receipts for donations are posted on the page and Clark Night (Mary I. Oliver), cleareyesight.info is on the donations list for these organizations.

Pictures on this website are drawn by author Clark Night. 10% from Microsoft free clip art. Text on this website is in a variety of colors. Color activates and integrates the left and right brain hemispheres, improves mood, activates different positive emotions, energy levels and improves the clarity of vision at all distances and balances the vision in the left, right eyes. See palming and color treatment chapters in the books and on the website.
The words eyesight and vision basically mean the same thing. Vision is used at times pertaining to the entire visual system; eyes, eye muscles, nerves, brain, body, thoughts, emotions, spirit.



Dr. Bates says: Throw Away Your Glasses And See CLear, At All Distances CLose and Far

The Bates Method Natural Eyesight Improvement

20 E-Books, Videos, Audios and Better Eyesight Magazine by Ophthalmologist Bates

The reader of this website/book, Natural Eyesight Improvement student must get routine eye exams to check the health of the eyes. An eye doctor can also determine a lot about the health of the body by looking into the eyes. Choose a Bates Method Behavioral Optometrist, Ophthalmologist that prefers to teach Natural Eyesight Improvement, discontinue use of eyeglasses, keep the eyes healthy and prevent use of eye surgery, drugs. Check *iridology*; detecting the state of health by the condition of the eye's iris.
Avoid eye doctors selling laser and other eye cornea surgeries, unnecessary lens removal, surgery, eyeglasses (especially strong over-corrected eyeglass lenses, astigmatism and bifocal prescriptions), contact lenses, mono-vision lenses, tinted, colored lenses, sunglasses and all forms of eyeglasses. See the eyeglasses page;

Mind-Attention Move 'Shift'

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Play With the Moving Pointer to Get the Eyes Shifting, Relaxed For Clear Vision. Shift on the Green House - Click Here

Click the links below for free Books. The books are older versions but the basics are provided;

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+Stories From The Clinic By Emily C. Lierman - Free-click here

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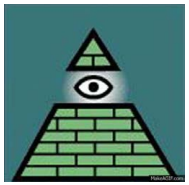

The eye in the pyramid on this webpage; Some people say it's a symbol of corrupt big business, politicians, power used for evil. My use for it is the true old source; Ancient Egypt, sprit world, great power used for good, spiritual growth, staying with heaven's forces. The 3rd eye, higher chakra and other sprit, energy/power development practice. Using the *inner vision,* memory, imagination. (Working on a blinking eye.)

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Dr. Bates Original Antique Better Eyesight Magazine

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. I JULY, 1919 No. 1

Foreword

Fundamental Facts

Central Fixation

A Teacher's Experiences

Army Officer Cures Himself

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24 - CORRECT, RELAXED NATURAL VISION HABITS CARD For Clear Close and Far Vision. THUMB-FINGER MOVEMENT, 'OPPOSITE SWING'

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30 - PHYSICAL

RE1
.B4

Do you read imperfectly? Can you observe then that when you look at the first word, or the first letter, of a sentence you do not see best where you are looking; that you see other words, or other letters, just as well as or better than the ones you are looking at? Do you observe also that the harder you try to see the worse you see?

Now close your eyes and rest them, remembering some color, like black or white, that you can remember perfectly. Keep them closed until they feel rested, or until the feeling of strain has been completely relieved. Now open them and look at the first word or letter of a sentence for a fraction of a second. If you have been able to relax, partially or completely, you will have a flash of improved or clear vision, and the area seen best will be smaller.

After opening the eyes for this fraction of a second, close them again quickly, still remembering the color, and keep them closed until they again feel rested. Then again open them for a fraction of a second. Continue this alternate resting of the eyes and flashing of the letters for a time, and you may soon find that you can keep your eyes open longer than a fraction of a second without losing the improved vision.

If your trouble is with distant instead of near vision, use the same method with distant letters.

In this way you can demonstrate for yourself the fundamental principles of the cure of imperfect sight by treatment without glasses.

If you fail, ask someone with perfect sight to help you.

Sight
Dr. W. H. Bates
Jan. 28. 1924

BETTER EYESIGHT

A Magazine devoted to the prevention and cure of imperfect sight without glasses

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Editor—W. H. BATES, M.D.
Publisher—CENTRAL FIXATION PUBLISHING CO.

Vol. I JULY, 1919 No. 1

FOREWORD.

WHEN the United States entered the European war recruits for general military service were required to have a visual acuity of 20/40 in one eye and 20/100 in the other.[1] This very low standard, although it is a matter of common knowledge that it was interpreted with great liberality, proved to be the greatest physical obstacle to the raising of an army. Under it 21.68 per cent. of the registrants were rejected, 13 per cent. more than for any other single cause.[2]

Later the standard was lowered[3] so that men might be "unconditionally accepted for general military service" with a vision of 20/100 in each eye without glasses, provided one eye was correctible to 20/40. For special or limited service they might be accepted with only 20/200 in each eye without glasses, provided one was correctible to 20/40. At the same time a great many defects other than errors of refraction were admitted in both classes, such as squint not interferring with vision, slight nystagmus, and color blindness. Even total blindness in one eye was not a cause for rejection in the limited service class, provided it was not due to progressive or organic change, and the vision of the other eye was normal. Under this incredible standard eye defects still remained one of three leading causes of rejection.

[1]Havard: Manual of Military Hygiene for the Military services of the United States, third revised edition 1917, p. 195.

[2]Report of the Provost Marshal General to the Secretary of War on the First Draft under the Selective Service Act, 1917.

[3]Standards of Physical Examination for the Use of Local Boards, District Boards and Medical Advisory Boards under the Selective Service Act, Form 75, issued through office of the Provost Marshal General.

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THERAPY - For Relaxed Body, Shoulders, Neck, Head and Clear Eyesight. Vertebrae C-1 Top of Neck to C-5 Upper Spine

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The GoogleBooks Viewer below shows 132 pages of Dr. Bates Better Eyesight Magazine 'PAGE TWO' consisting of the best of his Natural Eyesight Practices.

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Discovered & Taught by

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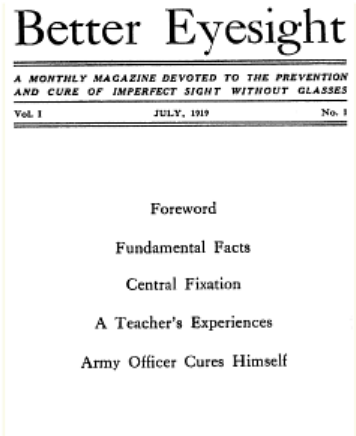

Better Eyesight

A MONTHLY MAGAZINE DEVOTED TO THE PREVENTION AND CURE OF IMPERFECT SIGHT WITHOUT GLASSES

Vol. 1 JULY, 1919 No. 1

Foreword

Fundamental Facts

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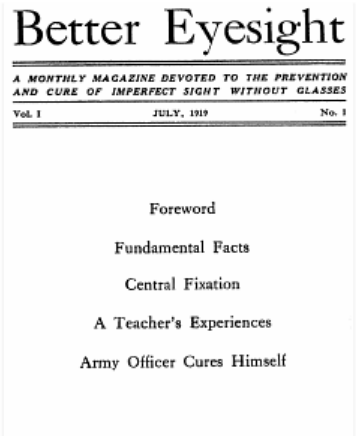

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Vol. IX MAY, 1925 No. 11

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Now do the same with the *a* letter on the test card. If the shifting is normal, it will be noted that the letter can be regarded indefinitely, and that it appears to have a slight motion.

To demonstrate that the attempt to concentrate spoils the memory, or imagination, and the vision:

Try to think continuously of a period on one part of an imagined letter. The period and the whole letter will soon disappear. Or try to imagine two or more periods, or the whole letter, equally black and distinct at one time. This will be found to be even more difficult.

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5—Shifting	.10
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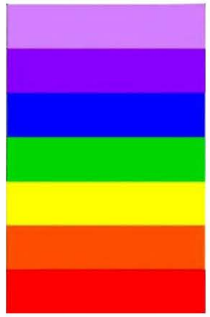

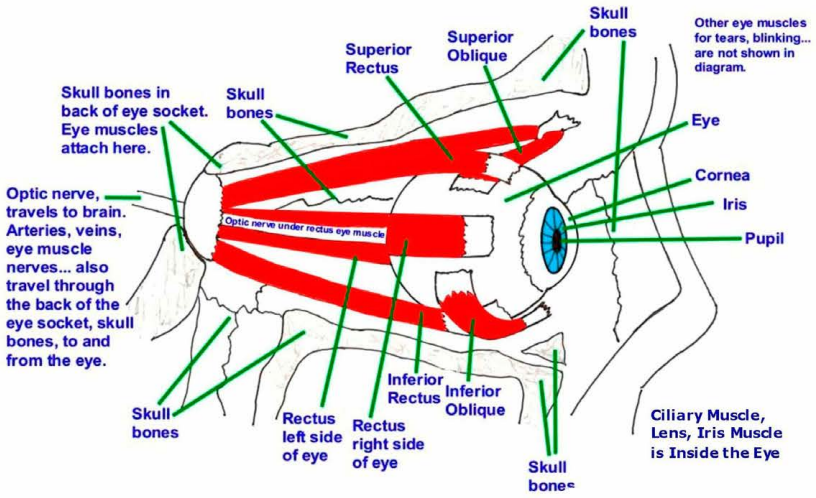



Ophthalmologist Wiliam H. Bates

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PERFECT SIGHT WITHOUT GLASSES



Ophthalmologist
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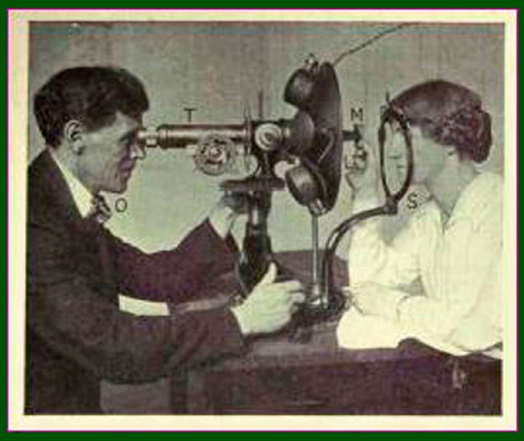

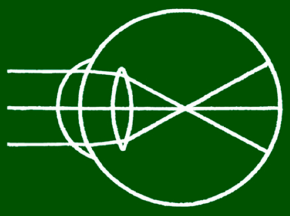

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1918 Chart in
Strengthening The Eyes
by
Dr. William H. Bates,
& Bernarr MacFadden

200 FEET



Read the chart with one eye at a time and with both eyes together.

100 FEET

R B

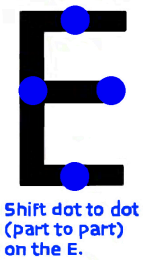
70 FEET

T F P

The Basics of Natural Eyesight Improvement taught with easy to learn steps, picture directions. Obtain Fast Clear Eyesight-Practice the 10 steps and see clear, often in a few minutes to 1-2 days practice!



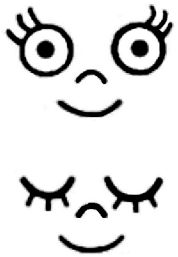
1-Relaxation



2-Shifting



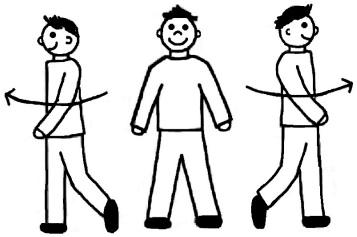
3-Central Vision



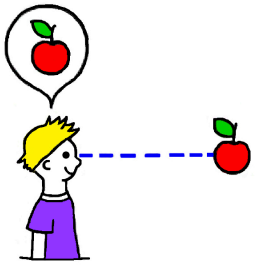
4-Blinking



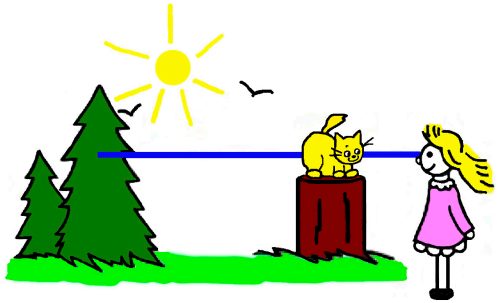
5-Breathing



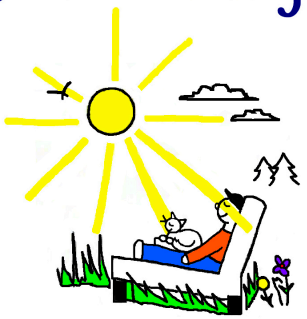
6-Movement



7-Memory, Imagination



8-Switching



9-Sunlight

10-Fine Print

Read Fine Print

ALL of our imperfect sight is just the result of our using our eyes wrong, and permitting bad habits to grow on us. Staring is only a bad habit, but it causes a great deal of trouble. When it is stopped and the eyes are rested by palming and blinking, the sight is immediately benefited.

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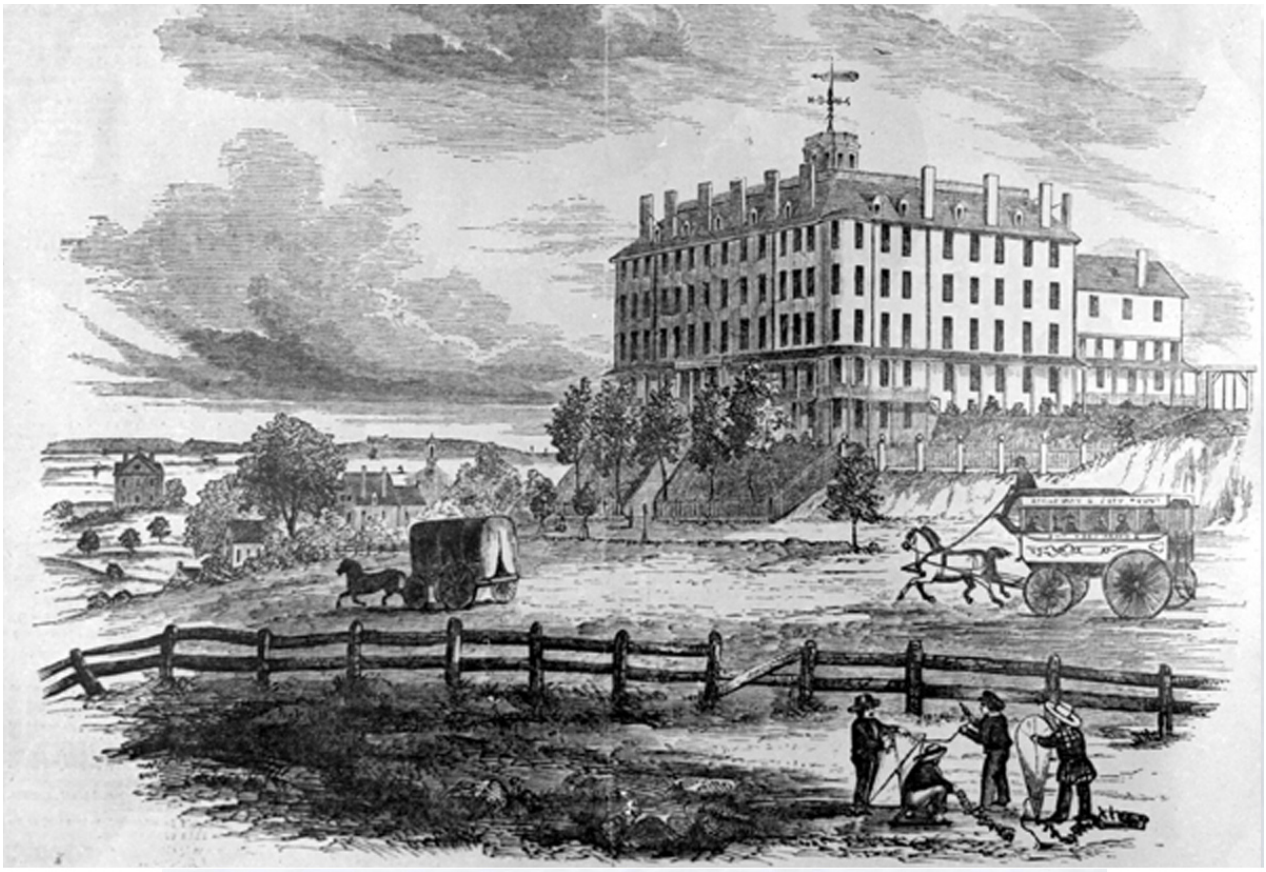
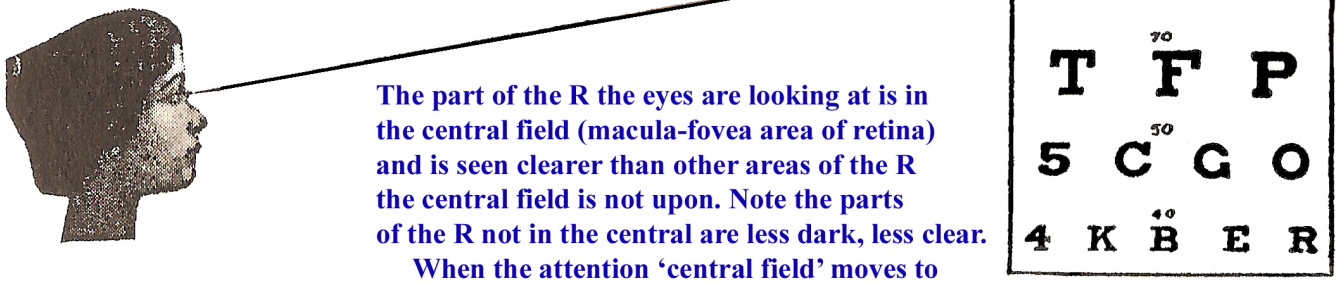
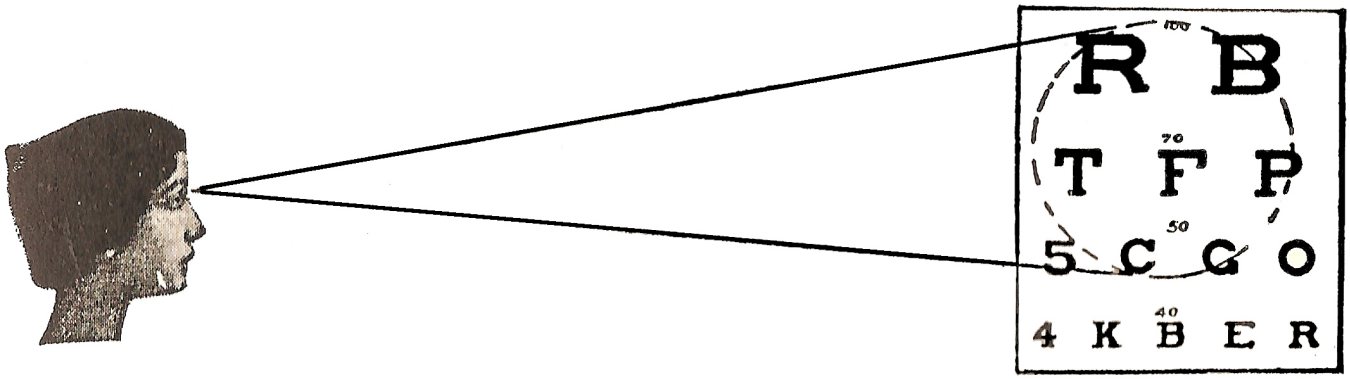


The Perkins Institution for the Blind. South Boston, c. 1840
Courtesy Boston Public Library Print Department.



The part of the R the eyes are looking at is in the central field (macula-fovea area of retina) and is seen clearer than other areas of the R the central field is not upon. Note the parts of the R not in the central are less dark, less clear. When the attention 'central field' moves to a new part; that part will be darkest, most clear.

Central-Fixation with Shifting.



In the upper picture the sight is centered upon one spot, the upper left-hand corner of the letter R, which is seen more clearly and appears to be blacker than the rest of the field of vision. This is central fixation. In the lower picture the subject is endeavoring to see every part of her field of vision equally well at the same time. This is eccentric fixation and always accompanies eye strain.

50 FEET

C

30 FEET

R B

20 FEET

T F P

15 FEET

5 C G O

10 FEET

4 K B E R

5 FEET

3 V Y F P T

4 FEET

2 Q C O G D □ C

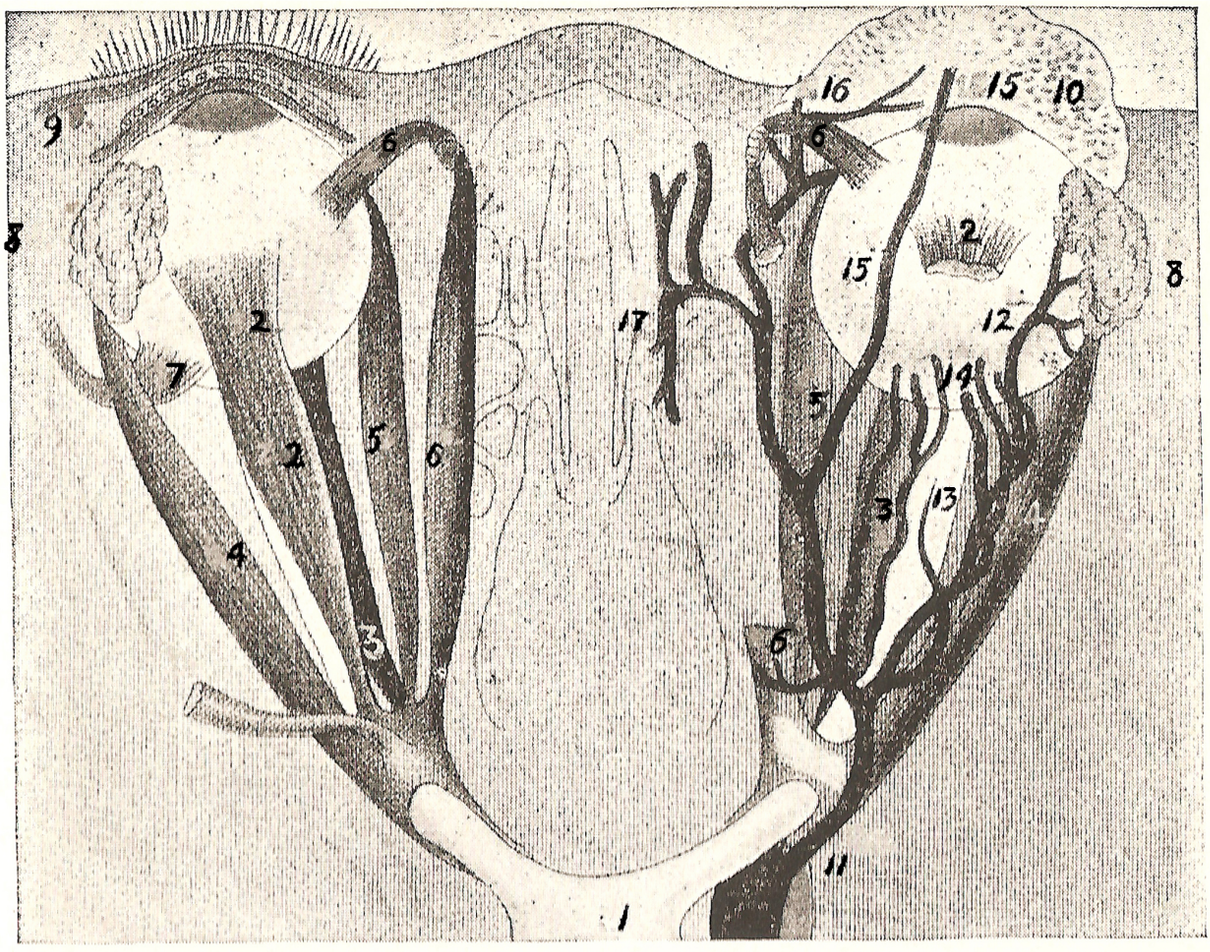
3 FEET

R Z 3 B 8 S H K F O

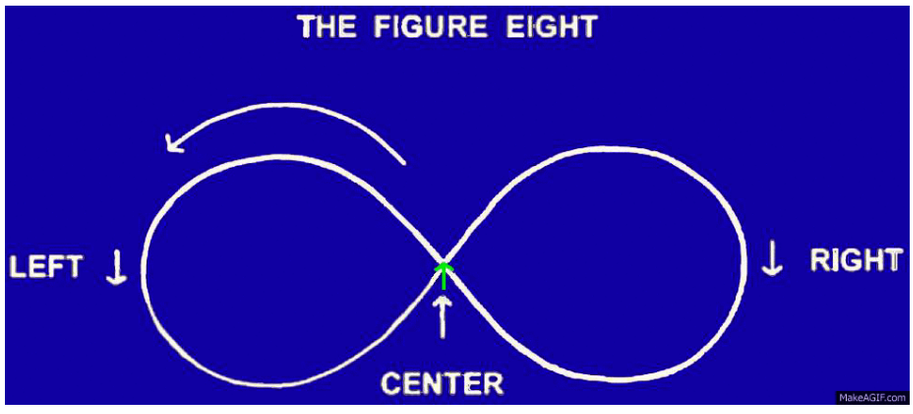
2 FEET

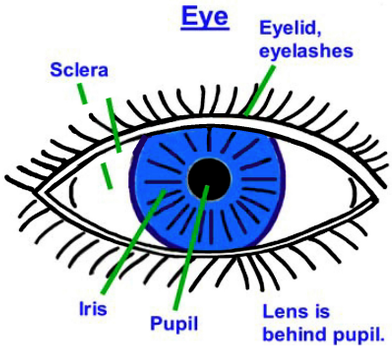
F T Y V P E C □ O B R K 5 6

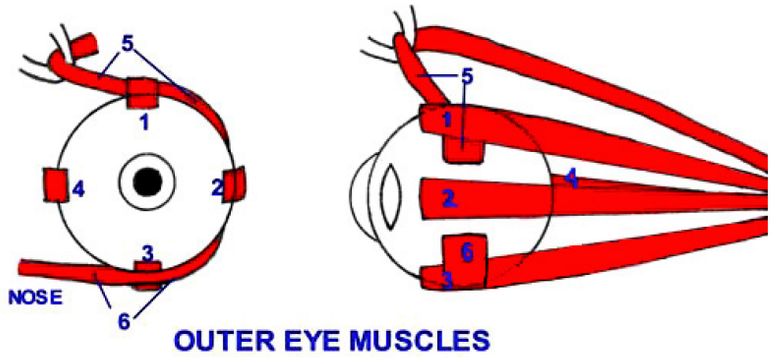
STRENGTHENING THE EYES



View of eyeballs from above, showing the muscles and arteries. (1) Crossing of the optic nerve; (2) Superior rectus muscle; (3) Inferior rectus muscle; (4) External rectus muscle; (5) Internal rectus muscle; (6) Superior oblique muscle; (7) Inferior oblique muscle; (8) Lachrymal glands; (9) Eyelid in section; (10) Eyelid from inside; (11) Infra-orbital artery; (12) Branch to the tear gland; (13) Branch to the retina; (14) Branch to the iris; (15) Branch to the upper eyelid; (16) Branch to the eyebrow; (17) Branch to the cavity of the nose.







OUTER EYE MUSCLES
RECTI - # 1, 2, 3, 4
OBLIQUE - 5, 6

E

F P

T O Z

L P E D

P E C F D

E D F C Z P

F E L O P Z D

D E F P O T E C

L E F O D P C T

F D P L T C E O

P E Z O L C F T D

This is a new edition of this book. An entire new book, final edition, lot more pictures, embedded videos... will be created for all books in 2015-2016.